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NATIONAL REPORT OF WET SEASON AGRICULTURAL PERFORMANCE SURVEY IN NIGERIA

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National Agricultural Extension and Research Liaison Services (NAERLS)
Ahmadu Bello University, Zaria
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National Report of Wet Season Agricultural Performance Survey in Nigeria 2022

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National Agricultural Extension and Research Liaison Services
Ahmadu Bello University
Zaria

National Agricultural Extension and Research Liaison Services,
Federal Ministry of Agriculture and Rural Development,
Ahmadu Bello University, Zaria

VISION

The foremost institute for agricultural extension research and capacity development for effective delivery services, increased agricultural productivity, sustainable agricultural growth and wealth creation.

MISSION

To develop, collate, evaluate and disseminate proven and relevant agricultural innovation and research on extension methodologies and provide leadership in capacity building of stakeholders to meet the present and future agricultural development challenges of the country.

NAERLS MANDATE

- Advance the frontiers of agricultural extension research and services.
- Conduct agricultural performance assessment and provide feedbacks.
- Build the capacity and skill of key actors for effective extension
- Plan, coordinate, monitor and evaluate REFILS activities nationwide.
- Package and disseminate improved agricultural innovations.
- Review and support the extension activities of agricultural research institutes.

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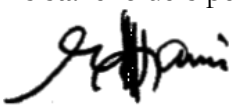
PREFACE

One of the core mandates of NAERLS is the annual assessment of agricultural performance in Nigeria. The 2022 Wet Season Agricultural Performance Survey was conducted from the 28th of August to the 4th of September. For the exercise, NAERLS collaborated with many Agencies and Organizations, including technical departments of the Federal Ministry of Agriculture and Rural Development (FMARD) - FDA, FDAE, P&PCD, FDF&A, FDAP&HS, FDV&PCS; National Agricultural Seeds Council (NASC); the National Bureau of Statistics (NBS); Nigerian Meteorological Agency (NiMET), Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL), National Animal Production Research Institute (NAPRI), Institute for Agricultural Research (IAR); Institute of Agricultural Research and Training (IAR&T), Lake Chad Research Institute (LCRI); Nigerian Institute for Oil Palm Research (NIFOR); National Roots Crops Research Institute (NRCRI); National Cereals Research Institute (NCRI), Sasakawa Global 2000 (SG2000), all the 36 States and FCT Agricultural Development Programmes (ADPs), as well as the 36 State Ministries of Agriculture and the FCT Department of Agriculture. Nineteen (19) teams, consisting of 58 scientists covered the 36 States and the Federal Capital Territory (FCT). A monitoring team of six scientists, one per agroecological zone, participated in the survey. This report provides insight into the 2022 cropping season with an emphasis on food production, crop pests and disease situation, postharvest losses, market situation, commodity prices, agro-meteorological conditions, and agro-pastoral situation across the country.

The report also provides awareness on the performance of policy as well as progress made on special interventions and programmes on agriculture by the Federal and States Governments. The outputs of the evaluation exercise formed the executive summary and the national report (copies are usually circulated to all States, relevant agencies and other stakeholders). The findings and statistical analyses are expected to guide and support real time and evidence-based policy formulation and focused research in agriculture.

In 2022, flood incidences had devastating effects on crops, livestock, and humans as it was experienced in 34 States of the country. The frequency, severity, and spread the devastating flood incidences increased significantly; and were monitored up to the second week of October 2022.

To improve the quality and reliability of data, NAERLS continually explores the best practices for strengthening the capacity of key partners in data collection and management in agriculture. The information presented in this executive summary is based on data provided by State Ministries of Agriculture, ADPs, farmers, agencies, and parastatals across the country. NAERLS sincerely appreciates farmers and farmers' groups, officials of ministries, departments and agencies at federal and state levels for their substantial contribution to the success of the fieldwork. We are highly indebted to the Honourable Minister of Agriculture and Rural Development, Dr. Mohammad Mahmood Abubakar and the Honourable Minister of State for Agriculture and Rural Development, Alhaji Mustapha Baba Shehuri for their untiring support. We greatly appreciate the support of NAERLS' Board Chairman and Vice-Chancellor, Ahmadu Bello University, Zaria, Prof. Kabiru Bala. As stakeholders peruse this report, suggestions, observations, and comments are welcomed.



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LIST OF ACRONYMS/ABBREVIATIONS

ADP	-	Agricultural Development Programme
AfDB	-	Africa Development Bank
APS	-	Agricultural Performance Survey
APSR	-	Agricultural Performance Survey Report
ASC	-	Agro-Service Centres
BES	-	Block Extension Agent
CAYS	-	Crop, Area and Yield Survey
CBARD	-	Community-Based Agricultural and Rural Development
CGIAR	-	Consultative Group on International Agricultural Research
COVID-19	-	Coronavirus Disease 2019
EA	-	Extension Agent
ECOWAS	-	Economic Community of West African States
FAO	-	Food and Agriculture Organization of the United Nations
FCT	-	Federal Capital Territory
FDA	-	Federal Department of Agriculture
FDAE	-	Federal Department of Agricultural Extension
FDF&A	-	Federal Department of Fisheries and Aquaculture
FDAP&HS	-	Federal Department of Animal Production and Husbandry Services
FDV&PCS	-	Federal Department of Veterinary and Pest Control Services
FNT	-	Fortnight Training
IAR	-	Institute for Agricultural Research
IAR&T	-	Institute of Agricultural Research and Training
ICRISAT	-	International Crops Research Institute for the Semi-Arid Tropics
IFAD	-	International Fund for Agricultural Development
LCRI	-	Lake Chad Research Institute
LGA	-	Local Government Area
MoA	-	Ministry of Agriculture
MOP	-	Muriate of Potash
MTP	-	Management Training Plot
MTRMs	-	Monthly Technology Review Meetings
NA	-	Not Available
NAERLS	-	National Agricultural Extension and Research Liaison Services
NASC	-	National Agricultural Seeds Council
NAPRI	-	National Animal Production Research Institute
NBS	-	National Bureau of Statistics
NCRI	-	National Cereals Research Institute
NEMA	-	National Emergency Management Agency
NIHSA	-	Nigeria Hydrological Services Agency
NiMET	-	Nigerian Meteorological Agency
NIRSAL	-	Nigeria Incentive-Based Risk Sharing System for Agricultural Lending
NRCRI	-	National Root Crops Research Institute
NPAFS	-	National Programme on Agriculture and Food Security
NPFS	-	National Programme on Food Security
ODK	-	Open Data Kit
OFAR	-	On-Farm Adaptive Research
PM	-	Programme Manager

P&PCD	-	Planning and Policy Coordination Department
RID	-	Rural Infrastructure Department
RTEP	-	Root and Tuber Expansion Programme
SG2000	-	Sasakawa Global 2000
SPAT	-	Small Plot Adaptation Technique
SEMA	-	State Emergency Management Agency
SRRBDA	-	Sokoto Rima River Basin Development Authority
SSP	-	Single Super Phosphate
T&V	-	Training and Visit
ZEO	-	Zonal Extension Officer

EXECUTIVE SUMMARY

The 2022 Agricultural Performance Survey (APS) was carried out from the 28th August to the 4th of September. The survey was carried out by the NAERLS, in collaboration with states' Agricultural Development Programmes (ADPs), Ministries of Agriculture (MoAs), Federal Ministry of Agriculture and Rural Development, Research Institutes, other relevant agencies, and NGOs. The survey was conducted using the Participatory Rural Appraisal (PRA) technique to collect data across the 36 states of the Federation, and the FCT. Structured copies of questionnaire, checklists, field visits, focus group discussions, key-informant interviews and document observation (archival) were used for data collection. The results and findings are summarized below.

Weather Situation

Rainfall was higher across the six agro-ecological zones in 2022 than in 2021, except in the South-East zone where the trend of rainfall was largely diffused. The number of rainy days as also comparatively higher in 2022. The onset of rainfall was late, irregular, and poorly distributed in most of the states, especially in the North-West and North-East zones. Despite heavy rainfall, there were moderate to severe cases of dry spell in all the states of the North-Central zone. Dry spells occurred between April and July in all the states in the North-East and North-West zones, as well as Abia, Anambra, and Enugu states (South-East zone); Cross River and Edo States (South-South zone). Rainfall intensity across the country led to flood incidences resulting in the destruction of farmlands and infrastructures.

Flood Damage Assessment

Flood incidences in Nigeria in 2022 were caused mainly by heavy precipitation, ill-managed run-offs, and unregulated river flow, especially from the River Benue. Our assessment of the situation showed that crops, farmlands, livestock and fish resources were damaged, washed away and destroyed respectively. Consequently, an estimated ₦700 billion was lost farmers and other Nigerians.

Procurement and Distribution of Agrochemicals, Fertilizers, Farm Equipment

Twenty-six states procured and distributed limited and inadequate volumes of seeds of cowpea, maize, millet, rice and sorghum. Abia State procured and distributed cocoa, coconut, oil palm, okra, fungicides, herbicides, pesticides and insecticides. Four States procured work bulls. Eighteen States procured and distributed fertilizers. The two major types of fertilizers distributed were NPK and Urea. The average cost of NPK and Urea in 2021 was ₦9,000 and ₦12,500 per bag, respectively compared to 2022 average price of ₦22,500 and ₦23,200. This meant that there was 150% increase in the prices of Urea and 85.6% for the NPK fertilizer. The wet blend NPK 15:15:15 and some other types of fertilizers were sold for above ₦30,000 per 50 kg bag.

Incidence of Pests and Diseases on Crops

Pests and disease infestations caused crop loss in many farms at an estimation of 1.5 to 200,000 hectares of land affected. Pests and diseases affected cereal and legume (maize, rice, sorghum, millet, soybean, groundnut, and cowpea) in 33 states. states. Maize was affected by fall armyworm, stem borer, leaf curl virus, grasshopper, snail, maize streak, bacterial blight, and leafy blight.

Fall armyworm infestation was heavy in FCT, Kwara, Plateau, Adamawa, Bauchi, Kaduna, Kano, Abia, Anambra, Enugu, Imo, Akwa Ibom, Rivers, Ekiti, Lagos, Ogun, and Oyo States but moderate in Benue, Kogi, Niger, Taraba, Gombe, Katsina, Cross River, Delta, Ondo and Osun States. Rice was heavily affected by rice blasts and quelea birds. Rice blast was severe in Adamawa and Kwara States but light in Bayelsa. Similarly, heavy quelea birds attack was reported in Borno, Kebbi and Sokoto states; which is anticipated to cause about 40 to 50% yield loss.

Pests and disease infestations on root and tuber crops (cassava, yam, cocoyam, and potato) were recorded in15 states. Cassava was affected by Mosaic virus, dieback, white flies, brown leafy spot, leaf blight and tuber rot. Yam was affected by nematode, yam beetle and cricket borer. Cocoyam was affected by leaf blight, fungal attack, root rot and nematode while potato was affected by blight, tuber rot and bug. The effect of potato blight in Plateau and potato tuber rot in Anambra states were heavy; and it is estimated to cause more than 60% yield reduction (a total of 500 hectares affected).
There were reports on pests and diseases on fruits and vegetable crops (plantain, onions, vegetable, melon and tomato) were reported in nine states. The type of pests and diseases recorded were black sigatoka, monkey pest, aphids, Cochlicella sp, fall armyworm, caterpillar, tomato wilt, nematode, white fly and fusarium wilt. Cashew, citrus, cocoa, and mango plantations were affected by pests and disease in seven states. These crops were affected by leaf locust, and dieback disease, nematode, white fly and fusarium wilt.

Agricultural Mechanization and Animal Traction
The North-East zone recorded the highest number of functional tractors (131) available for farm operations, while the South-West reported only 23 tractors. Most of the privately owned functional tractors (123) were domiciled in the North-West. Kaduna state reported the highest number of draught animals in the year. The number of bulls used for animal traction increased from 30,838 in 2021 to 41,697 in 2022 (a 35.21% increase). Also, the number of draught animals increased in Bauchi (142.18%), Taraba (20.63%), Borno (10%) and Kano (9.09%). Due to insecurity and cattle rustling, farmers were using power tillers for land preparation and transportation of their farm produce.

Cost of Tillage Operation
The South-South zone has the highest average cost of tillage operations with land clearing and ridging at ₦74,333 and ₦52,750 per ha, respectively. The high cost could be attributed to the nature of soil and vegetation in the zone which requires heavy-duty tractors which are expensive to purchase and maintain by smallholder farmers. Conversely, North-West zone has the lowest cost of tillage operations with land clearing at ₦14,875; due to the abundance of tractors and animal-drawn implements in the zone.

Post-Harvest Losses
Abia, Adamawa, Ebonyi, Ekiti, FCT, Kwara, Lagos, Nasarawa, Osun, Plateau and Rivers states reported post-harvest losses of crops that were up to 20%. Akwa Ibom, Bauchi, Gombe, Oyo and Taraba State reported post-harvest loss between 10 to 20%; while crop loss less than 10% was reported in Bayelsa State.

Grain Reserves
The total installed capacity of grain reserves in Nigeria in 2022 was 962,380 metric tonnes. The highest installed capacity was recorded in the North-West (470,250 MT) and the least was in South-the East (44,000 MT).

Cost of Producing Major Crops
There was general increase in the cost of production of crops per hectare across the country. The average national production cost of maize increased from ₦236,120 in 2021 to ₦296,027 in 2022; millet moved from ₦133,002 to ₦190,831; rice from ₦290,205 to ₦ 343,205; sorghum from ₦158,288 to ₦205,417; cowpea from ₦ 170,714 to ₦203,908; groundnut from ₦ 169,607 to ₦208,254; soybean from ₦233,057 to 287,157. Rice has the highest cost of production among cereals and legumes. Soybean increased up to 36%. In the southern states, the average production cost rose

for cassava (₦293,574 to ₦371,770), cocoyam (₦332,167 to ₦386,167), sweet potato (₦195,000 to 212,500), yam (₦562,172 to ₦920,493). The increase was over 50% in some of these crops.

Food Commodity Prices

All the states experienced a significant increase in prices of food commodities in 2022. The price of maize increased significantly in Kwara and Adamawa states by over 70% in January 2022; compared to January 2021. Most states experienced increase in the price of chicken, with the highest increase of 50% reported in Kwara State in January 2022. There was 70.5% increase in the price of milled rice in Jigawa between January 2021 and January 2022. This increase was attributed to the role played by middlemen (illegal exportation to neigbouring countries such as Niger). Bauchi States witnessed the highest price increase of 80% for cowpea. Akwa Ibom, Yobe, Kwara and Niger states had 136%, 122%, 80%, 77% price increase respectively for beef between the July 2021 and July 2022.

Production Estimates of Major Crops

Rice, Maize and Sorghum

The production forecast for rice in 2022 showed that Niger State was the highest producers with 664,520 MT. The total production estimates of rice in 2022 was 8,501,650 MT which is 1.9% increase over 2021. Kogi State has the largest land area of 293,680 ha for rice production in 2022. Kaduna State was the leading maize producer in 2022 with a record of 987,140 MT. The total production estimate of maize 2022 was 12,634,520 MT which is an indication of a 0.1% decrease over 2021 figures. The largest land area committed to maize production was 450,210 ha by Borno State.

Yam and Cassava

The production forecast of yam in 2022 showed Niger that State was the highest producers with 5,915,210 MT. The total production estimate of yam in 2022 was 62,562,230 MT which is an indication of a 4.47% increase from the value estimated for 2021. The largest land area committed to yam production in Nigeria was 751,130 ha from FCT.

Benue State was the highest cassava producer in 2022 with forecasted value of 3,732,880 MT. The total production estimate for cassava for Nigeria in 2022 was 57,278,270 MT, that is, 1.65% decrease compared with 2021. The largest land area committed to cassava production in Nigeria was 637,630 ha (which was recorded in Rivers State).

Cotton and Ginger

The production forecast of cotton in 2022 showed that Katsina State was the highest producers with 34,830 MT. The total production estimate of cotton in 2022 was 238,640 which is an indication of a 1.69% decrease from the value estimated for 2021. The largest land area committed to ginger production in Nigeria was 99,780 ha (recorded from Bauchi State).

The production forecast of ginger in 2022 showed that Kaduna State was the highest producers with 519,210 MT. The total production estimate of ginger in 2022 was 683,100 MT which is an indication of a 3.4% decrease from the value estimated for 2021. The total land area committed to ginger production in Nigeria was 99,780 ha.

Benniseed

The production forecast of benniseed in 2022 showed that Benue State was the highest producers with 101,480 MT. The total production estimate of benniseed in 2022 was 584,700 MT which is an indication of a 2.1% increase from the value estimated for 2021. The largest land area committed to benniseed production in Nigeria was 121,960 ha from Benue State.

Livestock Production

The total national population of cattle in 2022 was 20,944,893 as against 20,764,244. The increased number of cattle in the space of one year was 180,649 heads. The largest population of cattle per state was recorded in Zamfara State with a total number of 3,522, 855 heads of cattle. Apart from Zamfara State, eight other states recorded cattle populations above a million heads. These states were Jigawa (2,437,153), Kano (2,229,732), Borno (1,882,856), Nasarawa (1,456,254), Adamawa (1,245,038), Yobe (1,100,099), Kwara (1,072,399) and Kebbi (1,019,609) (with attached figures respectively.

Sheep population in 2022 was 49,124,553, relatively the same figures recorded in 2022. The largest population of the stock was recorded in Zamfara State with 7,684,296 sheep. There are 14 other States in Nigeria with more than one million sheep. The states were Katsina (5,766,780), Jigawa (5,729,653), Kano (4,237,407), Borno (2,790,462), Plateau (2,427,930), Kebbi (2,276,620), Kaduna (1,803,059), Adamawa (1,731,021), Yobe (1,519,116), Sokoto (1,381,992), Kogi (1,249,307), Nasarawa (1,103,391) and Akwa Ibom (1,019,640) (with attached figures respectively).

Among the ruminant livestock in Nigeria, the goats recorded the largest number at 88,293,636 in 2022. There was an increase of 153,503 from 2021 figure which was 86,140,132.

The largest population of goats was recorded in Katsina State (6,790,410). It is of note that 31 States and FCT had more than one million goats. Jigawa and Zamfara States had 6,611,749 and 6,023,512 goats, respectively. Benue, Kano, Plateau and Osun states had 4,899,178; 4,632,405; 4,590,642 and 4,487,183 goats respectively. Oyo and Kebbi States had 3,627,444 and 3,314,154 goats, respectively.

The total population of chickens in 2022 was 258,518,091 as against 240,481,945 in 2021. States such as Kano, Oyo, Zamfara, Niger, Imo, Kogi, Yobe, Katsina, Plateau and Kaduna had more than 10 million chickens.

Contagious bovine pleuro-pneumonia was prevalent in Nigeria during the survey. It was recorded as a big challenge to livestock as many cattle were reported to have died from the disease in 2022. In the North-East, high cases (9500) of *Peste des petits* ruminant (PPR) were reported. Cases of PPR and parasitism were the only diseases reported in the North-West.

State governments in the North-West zone provided vaccinations against PPR. Cases of PPR were also reported in all the other zones. The fewer cases of FMD reported was an indication of the effectiveness of animal vaccination interventions in states. It was observed that Nigeria's major endemic poultry diseases are Newcastle disease (NCD), Infectious bursal disease (IBD), coccidiosis, salmonellosis and fowl cholera. Avian influenza (AI) was another disease ravaging livestock production in Nigeria since 2006 – the year of the first outbreak.

Fisheries Production

Aquaculture production estimation across the states was not readily available during the survey, but few states were able to give estimations that could not be substantiated and were considered 'unreliable'. Thus, such data were no considered for national consumption in this report. However, data on artisanal fish production were available and were captured. The quantity of fresh and smoked fish sold showed that catfish accounted for over 78%, and was the most traded in all the states. Next was the tilapia fish at 15% (favourably cultivated and traded in many communities). Other fish species traded were *Heterobranchus* species, *Heterotis* species, Labeo species, and *Lates niloticus*. Captured fisheries provided most of the traded fish in both fresh and smoked forms in all the states.

Fish disease were reported across the 6 zones. There few skilled workers on fisheries and management across the states. Therefore, the few reported cases were could not be properly classified by farmers. It is argued in this report that that due inadequate skilled manpower to identify and classify some of the fish diseases, it was difficult for the farmers to give accurate records of the incidences. Major commercial fish farms and hatcheries available across the zones were privately owned; even though

they helped in reducing the unemployment, while increasing the livelihood of many people where they operate.

Problems Requiring Research

1. Research into disease that reduce yield of tomatoes such as *Tuta absoluta* control in tomatoes.
2. Characterization of economic trees for commercial explorations.
3. Livestock breeds improvement using biotechnological tools.
4. Research into low-cost feed ingredients.
5. Investigations into local herbs for treating livestock disease.
6. Research into low-cost fish feed production.
7. Use of solar water pumps, fabrication of simple agricultural processing machine, need of mechanical weed control, development of indigenous machines.
8. Production of mushroom spawn from locally sourced raw materials.
9. Premature fruit abortion adaptability of palm oil in different agroecological zone.
10. Development and promotion of flood-tolerant crop varieties.
11. Improving entrepreneurial skills of women for self-reliance.

Intervention Programmes

- 122,876 farmers benefitted from various projects in 358 sites that cut across 26 states and FCT.

General Constraints in Agricultural Production

Rainfall and Weather-related Challenges

The 2022 weather conditions were considerably better than 2021 (including higher amounts and better patterns of rainfall). However, there were severe incidences of flooding. Prolonged dry spells and poor rainfall patterns across Nigeria showed that agricultural production was highly constrained in 2022.

Farm Input provision, Availability and Accessibility

The 2022 survey showed that smallholder farmers in Nigeria faced multiple constraints - such as lack of access, unaffordability, lack of information, and lack of market relationships. Government inputs were largely inadequate in 27 states (for seeds and stocks) and 12 states (for chemicals); untimely distributed in 18 states (inadequate chemicals) and 11 states (inadequate seeds and stocks); unavailable/inaccessible in 15 states (chemicals) and 18 states (seeds and stocks).

Production-related Challenges (land, labour and diseases)

In 2022, high production costs were reported in 36 states. There was also a large-scale report of fall armyworm infestation on maize across the country, especially in almost all the North-Central states. There was rice blast, quelea bird attack, aphids, beetle on yam and weevil on cowpea; there were also widespread reports of Newcastle disease, 'gomboro' and coccidiosis on poultry; CBPP, tuberculosis and foot and mouth disease on cattle; PPR on sheep and goats; birds and snake attacks on fish. The costs of production were related to land preparation, planting, weeding and harvesting, spraying, vaccines for infested livestock, etc.

Agricultural Mechanization

There has not been much difference in the data on agricultural mechanization for the past three years (2020, 2021 and 2022) - except that the situation deteriorated in 2022. Nigerian farmers experience better situation for it in the two previous years than the year under review, especially in the areas of tractor availability/accessibility, suitability and hiring cost, as well as the availability of irrigation infrastructures).

Extension Provision Activities

Agricultural Development Programmes (ADPs) were highly under-staffed and underfunded-with about 23 States reported to have recorded zero funds in 2022.

Agricultural Broadcasts

Most of the ADPs were constrained by the high cost of television and radio airtime to effectively disseminate agricultural programmes. The consequences of not getting the right information to farmers are grievous. Their ability to make informed decisions and choices is low due to lack of, and low access to current and accurate information.

E-extension Comparative data on constraints in agricultural broadcasts

Electronic means of disseminating information to farmers (or e-extension) have various dimensions, including timelines and interactivity. In Nigeria, agricultural operations are time-bound, and associated with uncertainty; hence, e-extension intervention is proving to be the fastest and very reliable means of delivering advisory services to farmers. However, e-extension is still largely a means for farmers in Nigeria to seek and obtain information as valuable agricultural input. The survey data reveal that, although, the use of e-extension to get information to farmers and farmers utilization of e-extension in 2022 was comparatively better than the previous two years, there were still largely the challenges of poor network, inadequate support infrastructure and high cost of data. This condition thus constrained the nation's public extension providers in leveraging the crucial global superhighways for information dissemination and professional collaboration in order to serve the teeming number of Nigerians farmers with access to ICT technology such as mobile phone.

Security-Related Challenge

Apart from very high cost of production, Nigeria is witnessing high level of insecurity; although the government has done a lot to stem the tide. Many farming households have been displaced from their farmlands by bandits. Clearly, insecurity poses a threat to agricultural productivity and also national economic growth. However, there has been a drastic decrease in insecurity matters across the nation, especially with regard to insurgency, kidnapping, banditry and communal clashes—compared to the 2020 and 2021 data. Ironically, there were reports of increase in crop theft and herder/farmer clashes, with prevalence in 33 states and 25 states, respectively. Notwithstanding, these data generally suggest that government security investment and initiatives are yielding some good results.

1.0 INTRODUCTION

The Agricultural Performance Survey (APS) is one of the key mandates of the National Agricultural Extension and Research Liaison Services (NAERLS), Ahmadu Bello University, Zaria. Tools for the survey are reviewed each year; to improve our data, analysis and reports. Furthermore, as part of the review, stakeholders on agricultural data generation and dissemination consisting of Federal, States, National and International Governmental and non-Governmental Organizations validate the survey tools for inclusiveness of issues in agricultural development across the sector and related sectors. This year, officials from states' Agricultural Development Programmes (ADPs) and ministries of agriculture were trained through a virtual class on the use of ODK to capture data and how to correctly transfer the information in real time from the field into a server monitored by a group of ICT specialists in NAERLS headquarters, Zaria. Meanwhile, ahead of the field work, sample of the approved questionnaire and FGD guides were dispatched to relevant departments in the federal and state ministries of agriculture, the ADPs and collaborating partners. The instruments were expected to be assessed and used to provide some background information which should aid the teams for the fieldwork. Also, the tools were dispatched earlier to ensure that the agencies collate and certify the available data prior to the commencement of the survey.

The survey has four strategic objectives, that is, to:

- Assess the performance of the agricultural sector during the wet season and forecast the likely production outputs for the year;
- Identify constraints to increased agricultural productivity;
- Identify conditions affecting effective technology transfer and advisory services within the season; and
- Provide feedback on field situation and farmers' problems for improved research and policy action.

The 2022 APS fieldwork was conducted from the 29th of August to the 4th of September by NAERLS in collaboration with relevant agencies, ministries and organizations.

The APS Report is usually presented to the public during the World Food Day celebration by the Honourable Minister of Agriculture and Rural Development. Findings in the report assist the government in assessing the agricultural sector performance as well as providing policy direction in achieving the desired food security drive of the country.

2.0 METHODOLOGY

Nineteen (19) multi-disciplinary teams of three scientists each conducted the survey across the 36 states of the federation and the FCT using Participatory Rural Appraisal (PRA) techniques. Structured questionnaires, checklists, field visits, focus group discussions, key-informant interviews and review of official documents were used for data collection. Due to the challenges of insecurity, an innovative online training was adopted to build the capacity of the participating personnel from the ADPs and state ministries of agriculture on use the survey tools, as well as the ODK software for data collection. The primary data collection instrument was the questionnaire (copies were sent to ADPs, ministries and other relevant parastatals).

Sampling approach: two ADP zones per State, two LGAs per zone, one community per LGA and eight respondents per community were selected making a total of 1,184 respondents nationwide. The farmers' interview covered agricultural value chain activities.

Real Time Data Collection and Transmission: In furtherance of value addition (data reliability and validity), data were from farmers in their respectively community using a programmed tablets with functional GPS handler. Wrap-up sessions to validate generated data were held with states' ADPs and ministries of agriculture officials. Where possible and necessary, at the instance of the farmer or

farmers' groups data were presented for group validation and trust-building. Data collected were analyzed and results presented in simple descriptive statistics narration while tables, figures, charts and plates (pictures) were used to represent quantitative information, support data and strengthen information especially from FGDs, interviews and observations (realities) from the field.

3.0 WEATHER SITUATION

Earlier in the year, NiMet had predicted a moderate to heavy rainfall pattern in some parts of Kebbi, Katsina, Kano, Jigawa, Plateau, Zamfara, Kaduna, Kwara, Niger, Nassarawa, and the Federal Capital Territory (FCT). Bauchi, Borno, Yobe, Gombe, Taraba, Sokoto, Kogi, Cross River, Ebonyi, Enugu, Anambra, Imo, Abia, Rivers, and Akwa Ibom states were expected to be impacted. Further, some areas in Kaduna, Kwara, Yobe, and Kogi states were expected to experience low to moderate rainfall in 2022; according to NiMet.

Additionally, NiMet foresaw that Ekiti, Ondo, Ogun, and Oyo states would get little to no rainfalls. The organization equally warned of flash floods in some places and sparse land settlement, with rains predicted to be primarily intermittent across the south and isolated thunderstorms over the northern parts of Nigeria. Additionally, during the predicted period, strong winds were anticipated to accompany moderate to heavy rainfall occurrences, particularly across portions of of Kebbi, Borno, Gombe, Bauchi, and Yobe states. Observation from the fieldwork and data collected showed different degrees of weather change, rainfall patterns across the States; serving as a logical comparative template in this report.

3.1 Rainfall and Rainy Days

Except for the South-East zone, where the trend of rainfall was mainly diffused, rainfall was higher across the six geopolitical zones in 2021 than in 2022. (Table 3.2 and Table 3.4). In comparison to 2021, the number of rainy days in 2022 increased （Table 3.8 and 3.11）. In most states, especially in the North-West and North-East zones, in 2021, rainfall arrived late, irregularly, and with poor distribution. Despite flood incidents in 33 states, there were moderate to severe dry spell/drought in every state in the North-Central zone. Same rainfall pattern was recorded as well from April to July in the North-East and North-West states of Abia, Anambra, Edo, Enugu, and Cross River. Mild dry spells were noted in certain LGAs from May to July. In the North, Kebbi State had significant dry spell incidents.

North-Central

In 2022, all the states in this zone witnessed the onset of rains in March, with the exception of Benue State which experienced rain fall in April. In this zone, 13796 mm of rains were recorded overall in 2022. For monthly rainfall, the highest total of 2783.1mm was recorded in the month of June, which was less than the highest monthly total of 3304.3mm in August in 2021 (Table 3.1).

The states in zone saw the highest rainfall of 2499.6 mm in 2022. The zone received 90 rainy days on average in 2022 (out of 365 days), which was more than the zone saw in 2021 (85). Jos station in Plateau State recorded the most rainy days in 2022; that is 111 days.

North-East

Rainfall totals of 6213 mm and 5813 mm, respectively, were reported for the entire zone in 2022 and 2021, respectively, as indicated on Table 3.2. According to the North-East zone data, all zones—aside from Borno and Yobe states—saw their first rainfall in April. In the zone, Borno State had the highest rainfall total (1444.5 mm), while Yobe State's Nguru station received the lowest (615.5 mm), which was less than the 635.4 mm recorded in the State in 2021. The month of August in 2022, with 2088.4mm, had the greatest monthly rainfall total for the North-East zone. Gombe State recorded the rainiest days with 67 days. In 2022, there were 58 rainy days on average for the zone, which was more than recorded 49 days in 2021.

North-West

Except for Katsina and Kano states in 2022, many states in the zone recorded their first rainfall in April. As seen on Table 3.3, in 2022 Kaduna recorded the most rainfall with a value of 2156.1 mm, while Katsina recorded the lowest rainfall with a value of 802.2 mm. The zone experienced 66 days of rain on the average in 2022; that was more than the 58 days reported in 2021. The rainiest days record in this zone, in 2022 was 107, and it happened in Kaduna State.

South-East

Apart from Katsina and Kano States in 2022, many states in the zone recorded their first rainfall in April. As seen in Table 3.3, in 2022 Kaduna recorded the most rainfall with a value of 2156.1 mm, while Katsina recorded the lowest rainfall with a value of 802.2 mm. On the average, the zone experienced 66 days of rain in 2022; this was more than the 58 days experienced in 2021. The rainiest days record was 107, and recorded in Kaduna State in 2022.

South-South

In some States, the rainy season began in January. The rain started in March in Akwa Ibom, Cross River, and Delta states. Rain established in this zone in 2022 in March. Most rainfalls were recorded in September with a total measurement of 3825 mm. Table 3.5 shows that the overall quantity of rainfall across the zone in 2022 was 24358 mm; that was less than the total amount recorded in 2021 (26120 mm). A total of 4011.8 mm of rain fell in Warri, Delta State, in 2022, while 1580.5 mm of rain fell in Rivers State, making Warri in Delta State, the town with the highest and lowest rainfall respectively. For the entire zone in 2022, there were 131 days of average rainfall. The maximum number of wet days (170 days) were recorded in Warri, Delta State, while the fewest (96 days) was in Asaba.

South-West

In 2022, rain started falling in January and March in Oyo and Lagos states. Maximum amount of rainfall, that is, 3006 mm (Table 3.6) was recorded in June. The total amount of precipitation in 2022 (16006 mm) was less than that of 2021 (16550.1 mm). The highest total rainfall was reported in Akure, the capital of Ondo State, at 1694.2 mm, while the lowest total rainfall was experienced in Abeokuta, Ogun State at 1167 mm. The zone experienced more rain in 2022 (103 days on the average) than it did in 2021 (102 days) (Figure 3.6).

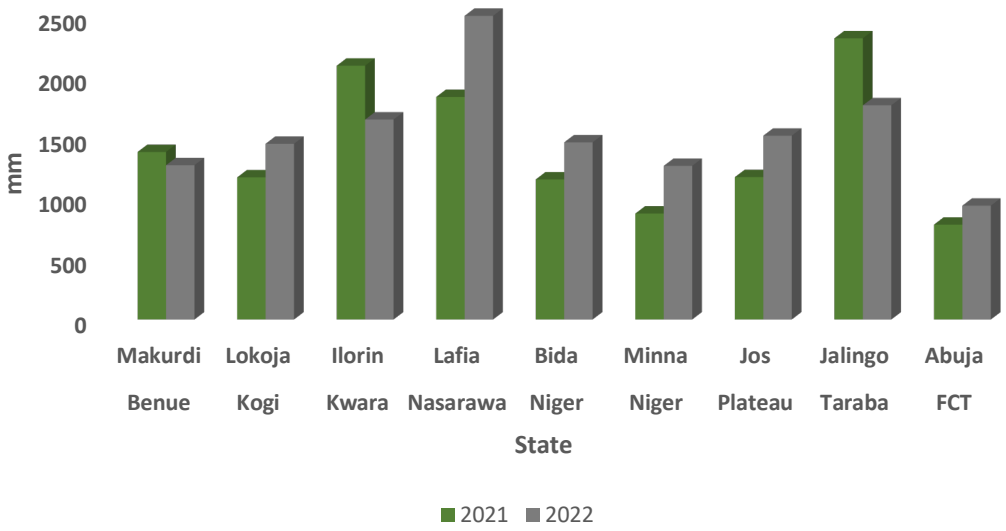


Figure 3.1: North-Central Total Rainfall (Jan-Dec)

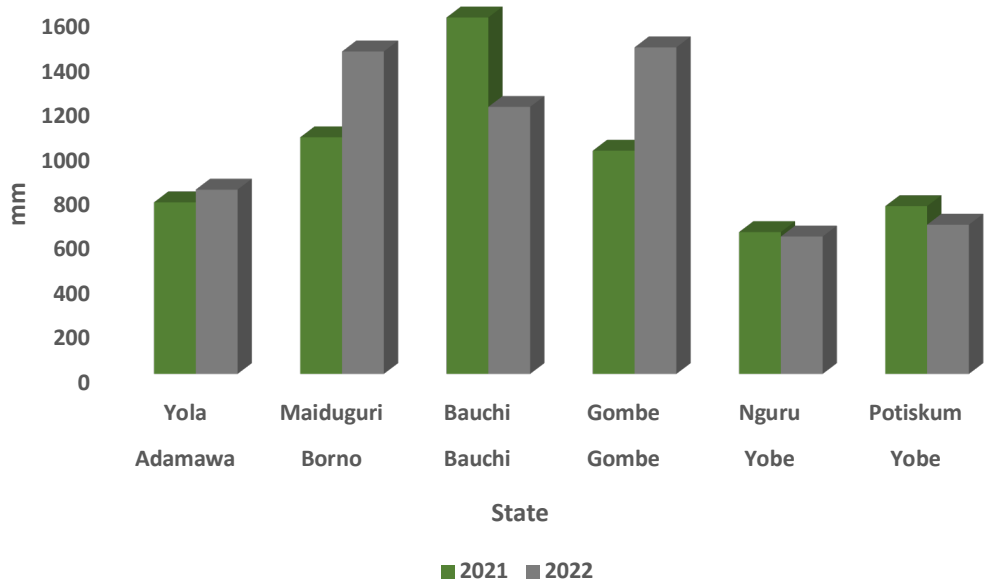


Figure 3.2: North-East Total Rainfall (Jan - Dec)

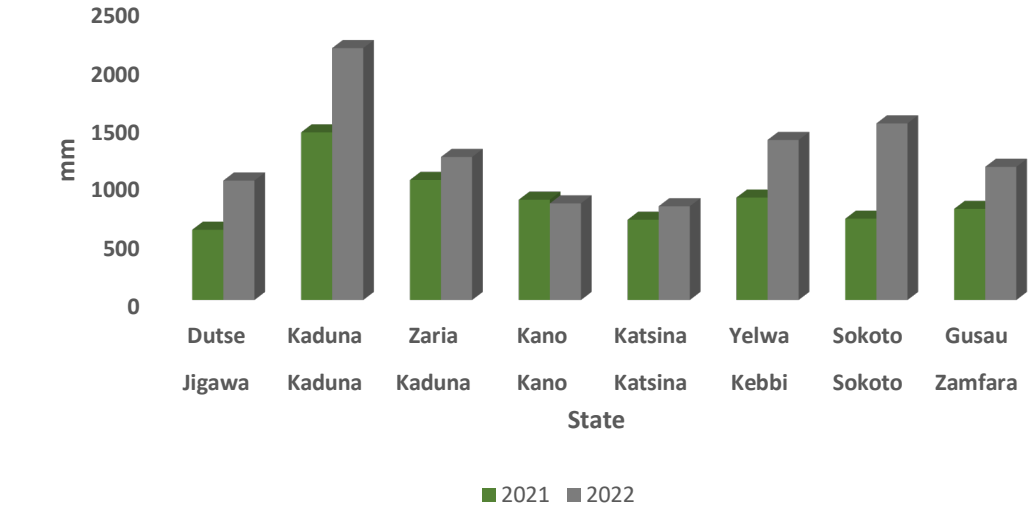


Figure 3.3: North-West Total Rainfall (Jan-Dec)

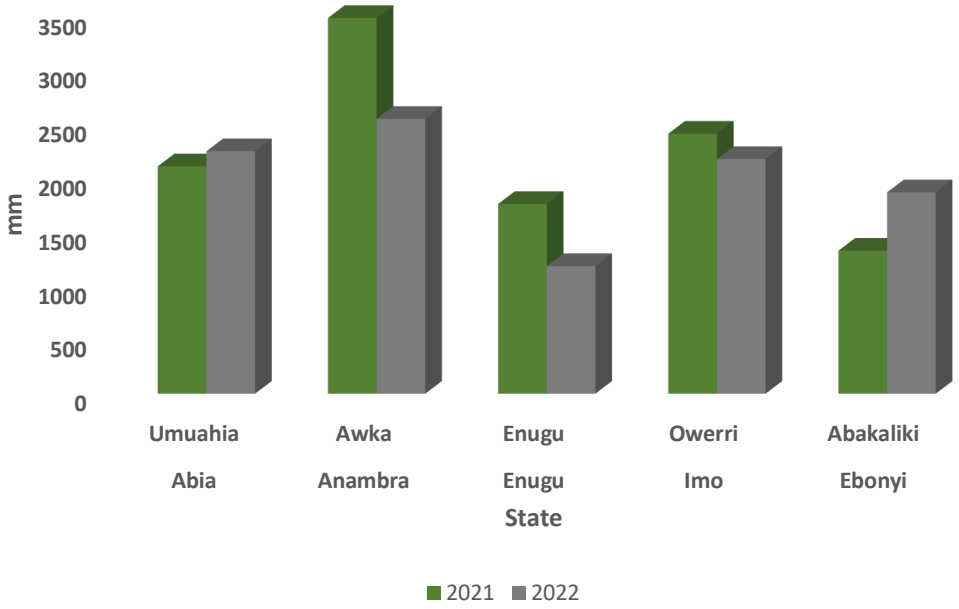


Figure 3.4: South-East Total Rainfall (Jan-Dec)

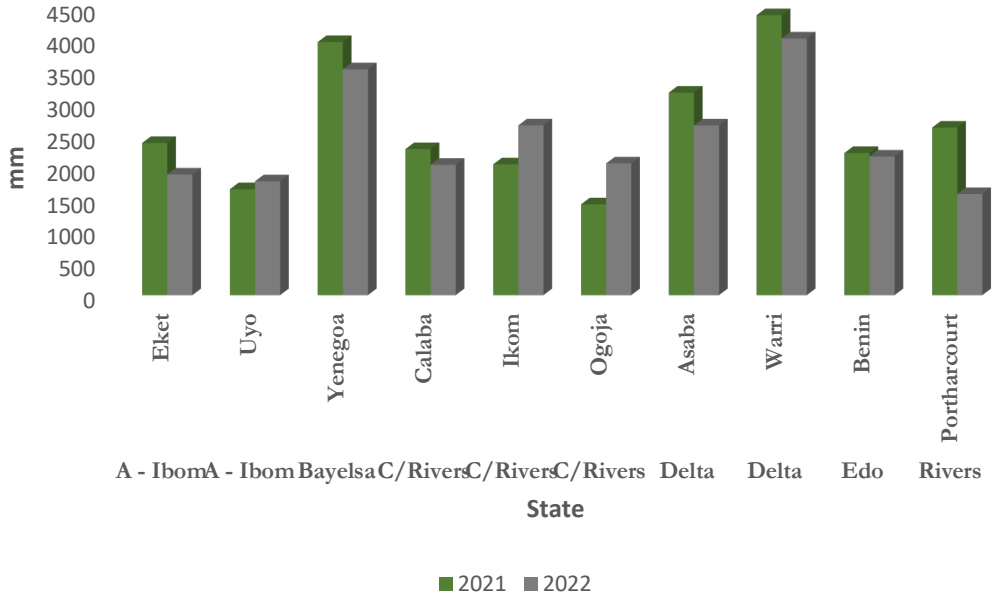


Figure 3.5: South-South Total Rainfall (Jan-Dec)

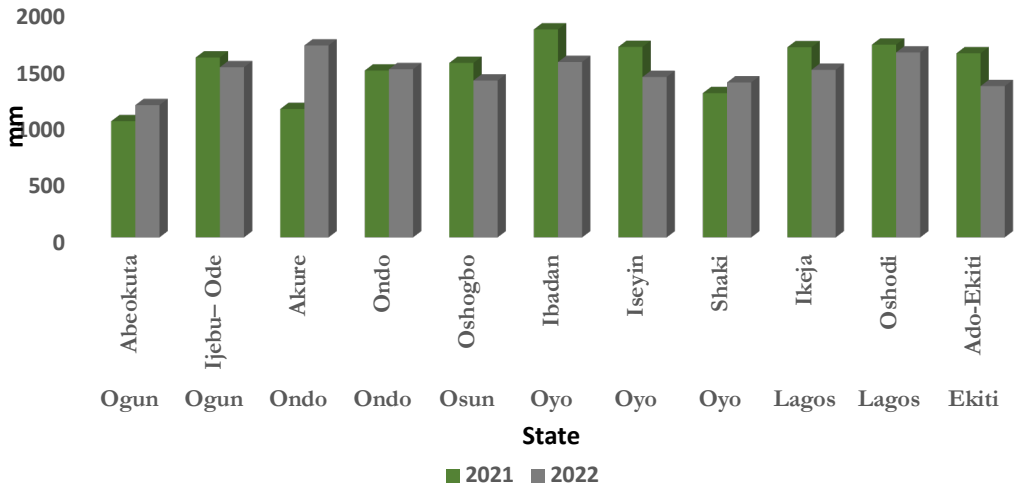


Figure 3.6: South-West Total Rainfall (Jan-Dec)

3.2. Temperature

North-Central

Except for Nasarawa State, all the states in the zone had a drop in temperature in 2022 in comparison to the 36.85^{0}C which was observed in the same month in 2021. The mean maximum temperature in March 2022 was higher at 37.72^{0}C. In 2022, Nasarawa State recorded the highest mean temperature at 34.70^{0}C, while Jos recorded the lowest at 27.80^{0}C (Figure 3.7).

Figure 3.7: Mean maximum temperature for North Central Zone

North-East

Except for Nguru in Yobe State where there was higher temperature, the mean maximum temperature across the zone in 2022 was lower than what was experienced in 2021. In 2022, Adamawa State recorded the highest mean monthly temperature (34.9^{0}C), which was lower than Borno State's 36.2^{0}C record from the previous year. Gombe State recorded the lowest mean temperature for 2022 at 32.8^{0}C (lower than the 34.0^{0}C) recorded in 2021 (Figure 3.8).

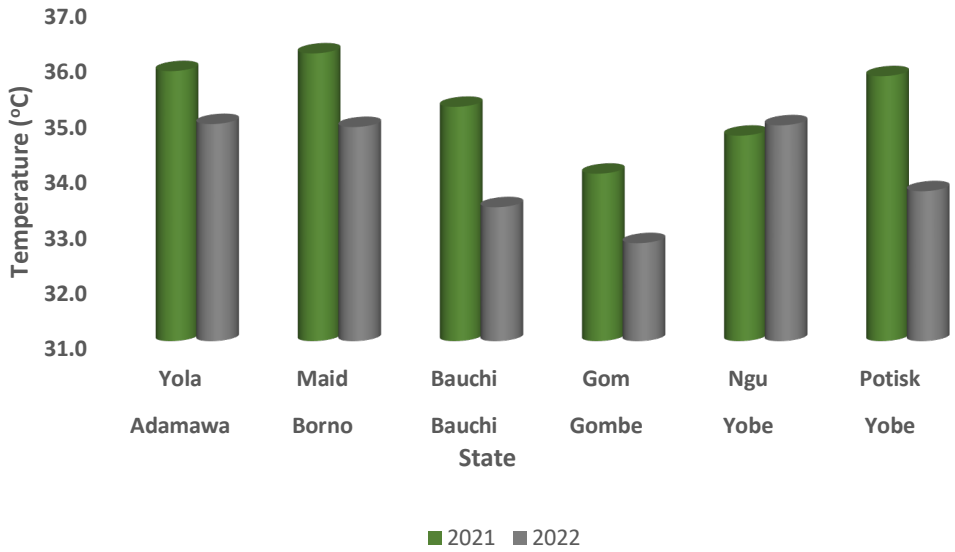


Figure 3.8: Mean maximum temperature for North-East Zone

North-West

In comparison to 2021 records, temperature decreased in all the States in the zone in 2022. The change may be due to climate change. In 2022, Sokoto State recorded the greatest mean maximum temperature of 34.9^{0}C, and Kaduna recorded the lowest mean maximum temperature of 31.7^{0}C. These values were lower than those recorded in 2021 for both states, which were 36.1^{0}C and 32.1^{0}C, respectively (Figure 3.9).

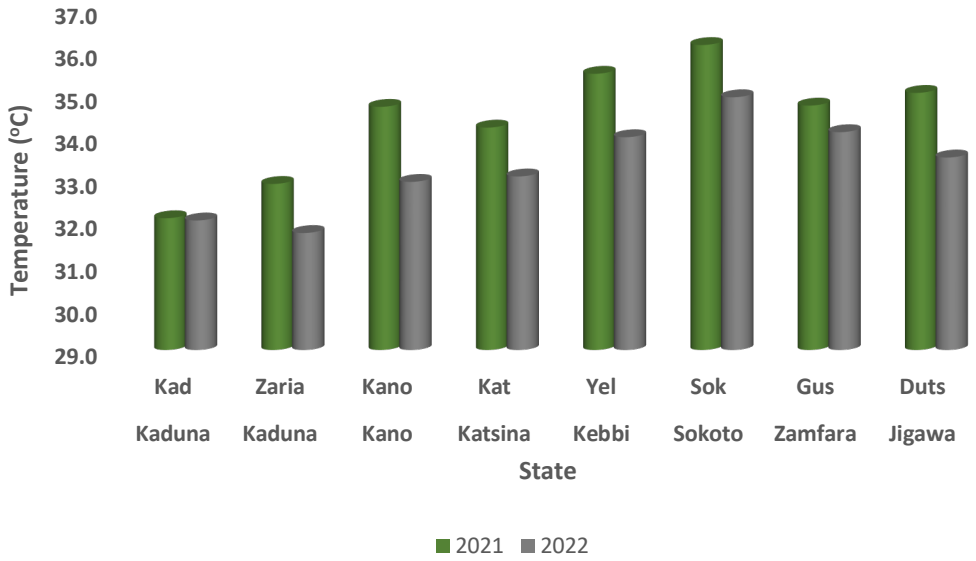


Figure 3.9: Mean maximum temperature for North-West Zone

South-East

While the zone's mean maximum temperature was 33.1^{0}C in 2021 in 2022, it was reported at 32.8^{0}C (indicating a drop in temperature). The month of February in 2022 saw the highest mean temperature (36.6^{0}C), while the month of August saw the lowest (39.5^{0}C) mean temperature. Ebonyi had the highest mean temperature (33.5^{0}C), which was lower than the 33.9^{0}C recorded in 2021. Imo State experienced the lowest mean temperature in 2022 at 32.3^{0}C, compared to Abia's 32.7^{0}C (Figure 3.10) recorded in 2021.

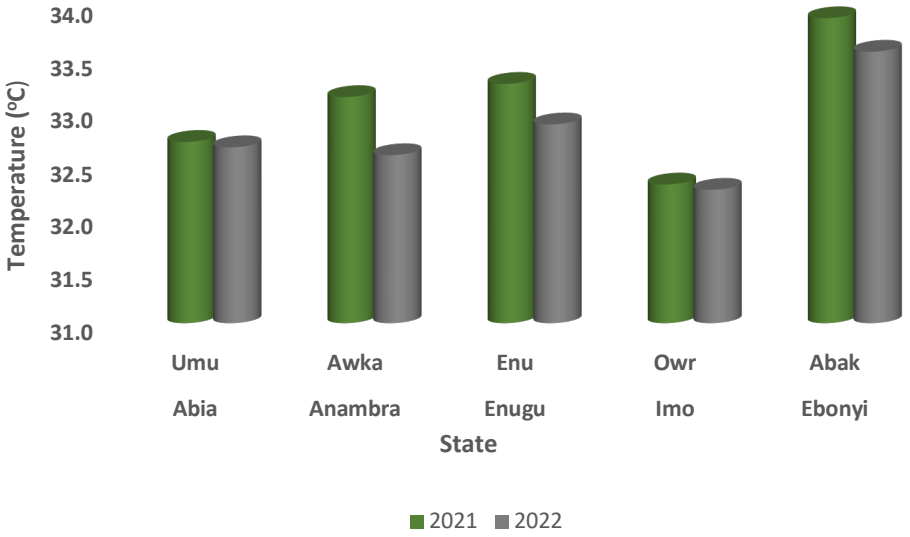


Figure 3.10: Mean maximum temperature for South East Zone

South-South

In some states, the temperature dropped, while it increased in some cities—including Obudu and Ikom in Cross River State and Warri in Delta State. The mean temperature for 2022 was reported as 32.2^{0}C, (colder than the 32.3^{0}C temperature) recorded in 2021. In 2022, Eket in Akwa Ibom State recorded the lowest temperature at 29.0^{0}C while Ogoja in Cross Rivers State recorded the highest temperature at 34.1^{0}C (Figure 3.11).

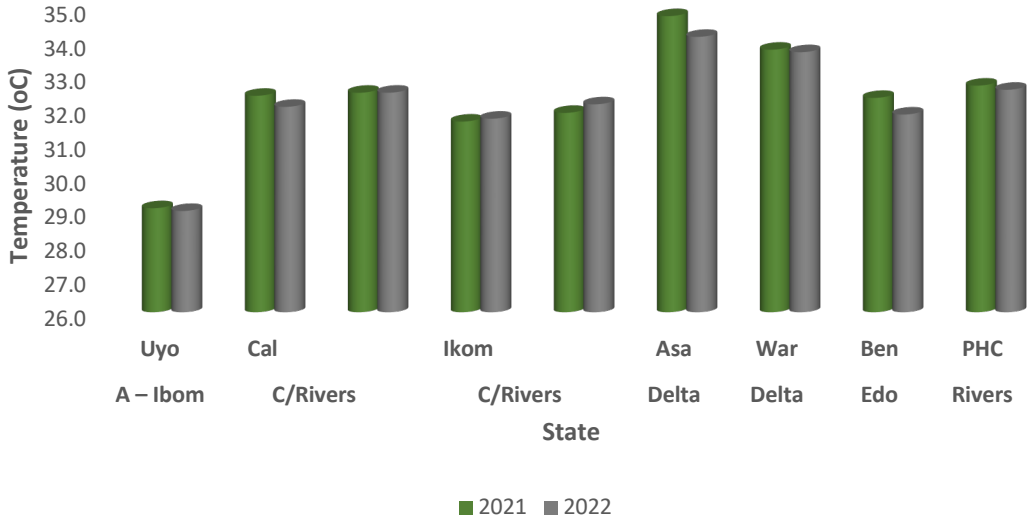


Figure 3.11: Mean maximum temperature for South-South Zone

South-West

Most of the states in this zone experienced a drop in temperature from 2021 in 2022. The average temperature in 2022 was 32.1^{0}C, which was lower than the 32.4^{0}C average in 2021. In Abeokuta, Ogun State, the highest monthly temperature was lower than 33.8^{0}C recorded in 2021". If not, then it should read "In Abeokuta, Ogun State, the highest monthly temperature which was 33.8^{0}C was lower than what was recorded in 2021.

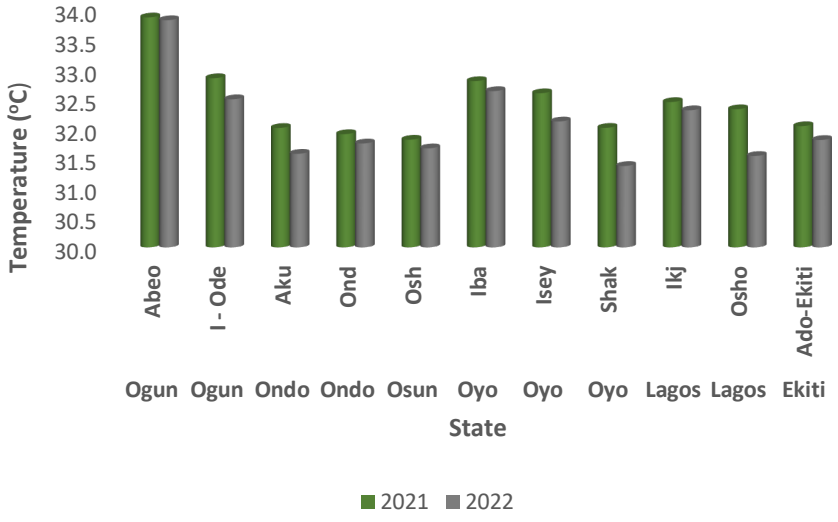


Figure 3.12: Mean maximum temperature for South-West Zone

Table 3.1: North-Central Total Rainfall (mm) January – December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Total	Total
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Benue	Mak	0	2	0	0	0	0	67	113	156	107	210	179	134	197	257	298	283	230	209	145	61	0	1	0	1379	1270
Kogi	Lok	0	0	0	0	23	39	78	164	201	158	273	213	67	290	240	345	168	116	107	121	12	0	0	0	1170	1446
Kwara	Ilor	0	0	0	0	143	33	157	179	196	156	341	431	31	101	560	246	372	318	184	178	105	5	2	0	2089	1646
Nasarawa	Laf	0	0	0	0	79	0	33	278	103	224	310	498	427	154	429	667	354	458	73	221	26	0	0	0	1832	2500
Niger	Bid	0	0	0	0	37	23	77	30	122	180	131	275	81	237	414	270	197	339	95	104	0	0	0	0	1153	1458
Niger	Min	0	0	0	0	2	15	15	75	77	67	99	262	91	231	311	268	126	245	149	102	1	0	1	0	872	1264
Plateau	Jos	0	0	0	0	22	0	89	159	236	209	165	331	182	206	261	242	158	287	59	79	0	0	0	0	1172	1513
Taraba	Jalingo	0	0	0	0	9	0	78	318	310	351	421	421	400	169	645	233	336	212	96	59	21	0	0	0	2315	1763
FCT	Abuja	0	0	0	0	14	6	23	47	107	86	79	174	57	95	187	120	180	207	113	202	21	1	0	0	781	937
Total		0	2	0	0	328	116	617	1361	1507	1538	2029	2783	1468	1679	3304	2689	2174	2411	1086	1211	246	5	4	0	12763	13796

Source: NiMET

Table 3.2: North-East Total Rainfall (mm) January – December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Total	Total
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Adamawa	Yola	0	0	0	0	0	0	4	11	130	43	131	218	101	104	205	235	186	178	13	36	0	0	0	0	769	826
Borno	Maid	0	0	0	0	0	0	0	43	9	11	122	138	346	438	254	521	329	284	0	10	0	0	0	0	1060	1445
Bauchi	Bauchi	0	0	0	0	0	0	18	42	45	50	216	222	417	249	485	351	335	229	81	53	0	0	0	0	1597	1196
Gombe	Gom	0	0	0	0	0	0	55	43	57	166	208	180	259	261	257	440	136	284	29	89	0	0	0	0	1000	1463
Yobe	Ngu	0	0	0	0	0	0	0	0	0	0	13	40	189	136	245	323	51	109	70	7	70	0	0	0	635	616
Yobe	Potisk	0	0	0	0	0	0	0	0	6	3	199	116	165	183	273	219	99	147	10	1	0	0	0	1	752	669
Total		0	0	0	0	0	0	77	139	245	272	889	915	1477	1370	1720	2088	1135	1231	202	196	70	0	0	1	5813	6213

Source: NiMET

Table 3.3: North-West Total Rainfall (mm) January – December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Total	Total
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Jigawa	Dutse	0	0	0	0	0	0	0	8	11	0	108	142	219	151	173	460	64	253	26	8	0	0	0	0	601	1022
Kaduna	Kad	0	0	0	0	0	0	45	139	153	211	243	275	238	472	343	424	332	477	82	157	0	0	0	0	1435	2156
Kaduna	Zaria	0	0	0	0	2	0	16	49	76	59	204	258	207	183	285	300	191	351	47	26	0	0	0	0	1027	1224
Kano	Kano	0	0	0	0	0	0	0	0	88	55	67	149	310	168	125	262	162	186	94	8	13	0	0	0	858	827
Katsina	Kat	0	0	0	0	0	0	0	0	0	2	59	92	193	185	290	302	145	184	0	38	0	0	0	0	687	802
Kebbi	Yel	0	0	0	0	0	0	6	123	53	168	148	151	156	265	316	302	162	303	35	57	0	0	0	0	877	1370
Sokoto	Sok	0	0	0	0	0	0	0	10	69	35	93	192	147	580	290	412	87	264	10	19	0	0	0	0	696	1512
Zamfara	Gus	0	0	0	0	0	0	0	47	41	118	168	132	114	204	326	335	113	261	18	42	0	0	0	0	780	1140
Total		0	0	0	0	2	0	67	368	479	647	982	1249	1365	2057	1975	2337	1191	2026	285	347	13	0	0	0	6360	9030

Source: NiMET

Table 3.4: South-East Total Rainfall (mm) January – December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Total	Total
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Abia	Umu	0	43	0	0	58	54	135	280	142	383	245	207	304	309	541	115	300	473	247	380	134	3	1	0	2106	2246
Anambra	Awka	0	0	0	0	84	88	228	504	241	531	470	334	353	198	683	249	232	240	207	402	983	0	0	0	3480	2546
Enugu	Enu	0	0	0	0	59	56	184	46	93	174	273	153	255	167	423	125	239	131	194	235	38	93	0	1	1757	1181
Imo	Owri	0	24	34	17	83	32	96	335	298	330	223	209	236	306	519	215	250	168	320	377	255	144	95	18	2408	2173
Ebonyi	Abak	0	0	0	0	14	45	90	101	169	179	183	222	169	547	229	274	242	242	173	256	55	0	0	0	1324	1865
Total		0	67	34	17	297	274	732	1265	943	1596	1394	1125	1317	1527	2395	978	1262	1253	1141	1650	1465	240	96	18	11075	10010

Source: NiMET

Table 3.5: South-South Total Rainfall (mm) January – December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Total	Total
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
A - Ibom	Eket	29	13	6	7	110	75	114	9	200	217	350	285	239	448	358	178	425	204	311	256	198	133	40	61	2378	1885
A - Ibom	Uyo	25	3	4	0	67	85	78	154	156	88	149	133	194	234	297	237	256	524	238	222	192	99	0	0	1656	1779
Bayelsa	Yen	39	71	112	40	184	203	561	347	535	496	180	774	169	369	678	99	668	632	827	384	`505	116	4	1	3956	3531
C/Rivers	Cal	44	9	0	2	98	34	200	187	232	208	343	304	301	298	361	247	389	337	81	326	169	87	66	0	2283	2038
C/Rivers	Ikom	0	4	6	0	38	105	190	372	302	384	366	285	267	244	257	346	379	484	156	417	85	2	0	8	2045	2654
C/Rivers	Ogo	0	0	0	0	31	0	54	343	206	250	196	161	145	315	230	258	279	307	223	424	55	0	0	0	1419	2058
Delta	Asa	0	0	0	0	38	4	231	372	369	433	382	260	168	489	661	191	370	380	242	525	705	0	0	0	3165	2653
Delta	War	102	111	56	66	51	251	225	511	405	707	697	400	278	666	701	150	541	493	645	536	647	74	28	47	4377	4012
Edo	Ben	41	4	70	53	135	27	212	420	137	284	285	289	261	350	380	154	284	301	217	265	198	19	0	0	2221	2167
Rivers	PHC	48	140	5	0	142	45	223	184	249	142	349	255	178	89	438	188	526	163	165	258	289	73	8	43	2619	1581
Total		327	355	260	168	893	828	2088	2900	2790	3208	3297	3146	2199	3504	4361	2050	4118	3825	3105	3614	2538	603	145	160	26120	24358

Source: NiMET

Table 3.6: South-West Total Rainfall (mm) January – December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Total	Total
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Ogun	ABE	0	0	0	1	66	107	53	167	107	43	160	340	116	132	192	64	96	153	160	161	76	0	0	0	1025	1167
Ogun	I – Ode	12	0	14	10	48	62	95	130	205	143	169	281	198	396	268	140	272	119	187	164	121	58	0	0	1588	1501
Ondo	Aku	8	0	1	3	48	16	91	244	66	141	142	379	96	240	252	246	197	244	130	134	92	38	10	9	1133	1694
Ondo	Ond	0	0	16	2	97	34	106	245	198	96	149	292	230	259	259	178	163	231	160	147	92	0	4	0	1473	1484
Osun	Osh	23	0	0	5	73	57	117	95	134	182	239	276	98	87	333	172	197	174	276	296	50	39	0	2	1540	1384
Oyo	Iba	0	0	11	3	126	179	92	168	47	62	315	193	156	292	436	138	250	335	320	166	84	12	0	0	1835	1548
Oyo	Isey	5	0	0	0	71	104	181	111	120	69	257	250	124	144	456	339	241	133	174	267	53	0	0	0	1681	1416
Oyo	Shak	0	24	5	0	85	40	136	114	121	48	142	272	60	70	319	285	317	326	86	189	1	0	0	0	1273	1367
Lagos	Ikj	14	0	26	0	104	50	117	172	117	88	312	260	194	248	79	80	367	293	143	146	205	133	0	9	1678	1479
Lagos	Osho	8	2	53	6	90	65	131	232	116	177	294	251	222	297	104	92	434	236	105	169	144	106	0	0	1701	1632
Ekiti	Ado-Ekiti	4	0	47	8	58	133	96	125	114	82	166	214	156	99	410	135	323	339	107	190	143	10	1	0	1625	1335
Total		74	25	171	38	865	847	1216	1802	1344	1130	2345	3006	1649	2265	3107	1867	2856	2580	1847	2028	1061	397	15	20	16550	16006

Source: NiMET

Table 3.7: North-Central Rainy days January – December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Total	Total
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Benue	Mak	0	3	0	0	0	0	6	10	10	12	16	15	16	12	15	15	17	20	11	10	4	0	2	0	97.0	97.0
Kogi	Lok	0	0	0	0	3	2	5	10	10	8	12	14	9	12	18	12	9	11	7	10	1	0	0	0	74.0	79.0
Kwara	Ilor	0	0	0	0	5	4	7	8	9	8	14	14	7	10	20	13	18	15	11	11	5	1	1	1	97.0	85.0
Nasarawa	Laf	0	0	0	0	3	0	2	10	4	6	14	11	12	9	18	22	9	12	6	10	1	0	0	0	69.0	80.0
Niger	Bid	0	0	0	0	1	1	3	3	11	7	13	12	9	13	18	10	13	18	8	9	0	0	0	0	76.0	73.0
Niger	Min	0	0	0	0	1	1	5	7	10	8	9	16	10	16	23	17	18	20	12	10	1	0	2	0	91.0	95.0
Plateau	Jos	0	0	0	0	2	0	8	12	8	15	16	16	17	19	21	23	17	18	5	8	0	0	0	0	94.0	111.0
Taraba	Jal	0	0	0	0	2	0	2	4	10	7	15	17	17	12	17	16	14	16	4	6	1	0	0	0	82.0	78.0
FCT	Abuja	0	0	0	0	3	2	4	6	10	13	12	15	9	22	16	14	19	22	12	14	3	1	0	1	88.0	110.0
Average		0	0	0	0	2	1	5	8	9	9	13	14	12	14	18	16	15	17	8	10	2	0	1	0	85	90

Source: NiMET

Table 3.8: North-East Rainy days January – December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Total	Total
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Adamawa	Yola	0	0	0	0	0	0	1	2	8	4	9	10	8	10	13	17	13	13	4	4	0	0	0	0	56.0	60.0
Bauchi	Bauchi	0	0	0	0	0	0	1	2	3	4	9	9	19	14	15	22	14	12	2	1	0	0	0	0	63.0	64.0
Borno	Maid	0	0	0	0	0	0	0	5	2	2	7	8	12	14	10	18	7	14	0	4	0	0	0	0	38.0	65.0
Gombe	Gom	0	0	0	0	0	0	1	1	6	3	10	8	13	15	13	17	11	17	3	6	0	0	0	0	57.0	67.0
Yobe	Ngu	0	0	0	0	0	0	0	0	0	0	3	3	11	10	10	15	7	9	1	2	1	0	0	0	33.0	39.0
Yobe	Potisk	0	0	0	0	0	0	0	0	1	1	11	7	15	12	13	18	8	11	1	2	0	0	0	0	49.0	51.0
Average		0	0	0	0	0	0	1	2	3	2	8	8	13	13	12	18	10	13	2	3	0	0	0		49	58

Source: NiMET

Table 3.9: North-West Rainy days January – December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Total	Total
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Jigawa	Duts	0	0	0	0	0	0	0	2	1	0	6	7	10	9	16	18	7	13	2	1	0	0	0	0	42.0	50.0
Kaduna	Kad	0	0	0	0	0	0	4	6	13	11	16	18	14	16	21	22	13	23	4	11	0	0	0	0	85.0	107.0
Kaduna	Zaria	0	0	0	0	1	0	3	3	8	7	16	15	14	12	19	20	13	22	2	1	0	0	0	0	76.0	80.0
Kano	Kano	0	0	0	0	0	0	0	0	3	3	7	8	12	10	16	17	11	15	3	1	2	0	0	0	54.0	54.0
Katsina	Kat	0	0	0	0	0	0	0	0	0	1	7	5	13	9	17	16	12	9	0	4	0	0	0	0	49.0	44.0
Kebbi	Yel	0	0	0	0	0	0	1	3	5	5	11	6	8	14	20	16	14	22	4	6	0	0	0	0	63.0	72.0
Sokoto	Sok	0	0	0	0	0	0	0	2	2	3	5	12	12	15	18	12	11	12	1	1	0	0	0	0	49.0	57.0
Zamfara	Gus	0	0	0	0	0	0	0	1	2	3	8	8	10	15	18	17	8	17	3	5	0	0	0	0	49.0	66.0
Average		0	0	0	0	0	0	0	1	2	3	8	8	11	13	18	16	11	15	2	3	0	0	0	0	58	66

Source: NiMET

Table 3.10: South-East Rainy days January – December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Total	Total
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Abia	Umu	0	4	0	0	6	6	10	16	9	16	13	17	16	19	20	18	18	24	12	21	7	1	1	0	112.0	142.0
Anambra	Awka	0	0	0	0	6	3	7	15	10	19	14	16	18	18	20	17	16	21	14	15	30	0	0	0	135.0	124.0
Enugu	Enu	0	0	0	0	4	2	5	4	11	13	14	11	17	19	20	13	14	20	13	14	4	6	0	1	102.0	103.0
Imo	Owr	2	4	2	1	5	3	6	12	13	13	13	15	17	16	25	15	21	18	14	21	14	6	8	2	140.0	126.0
Ebonyi	Abak	0	0	0	0	3	2	5	13	12	14	11	12	16	19	22	15	15	19	11	14	6	0	0	0	101.0	108.0
Average		0	2	0	0	5	3	7	12	11	15	13	14	17	18	21	16	17	20	13	17	12	3	2	1	118	121

Source: NiMET

Table 3.11: South-South Rainy days January - December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Total	Total
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
A – Ibom	Eket	7	2	2	1	15	9	9	3	18	19	17	24	16	22	21	18	21	26	21	23	18	11	6	6	171.0	164.0
A – Ibom	Uyo	2	1	1	0	6	5	5	11	9	9	14	14	15	13	21	12	16	22	14	18	14	8	0	0	117.0	113.0
Bayelsa	Yen	2	2	5	1	8	10	11	15	19	18	0	18	14	15	19	9	20	15	21	15	20	6	1	1	140.0	125.0
C/Rivers	Cal	2	1	0	2	11	7	9	14	14	17	22	19	24	21	25	19	21	22	2	20	17	9	2	0	149.0	151.0
C/Rivers	Ikom	0	1	2	0	5	5	6	19	21	18	19	17	19	0	21	23	19	25	12	20	12	1	0	1	136.0	130.0
C/Rivers	Ogo	0	0	0	0	3	0	2	12	10	13	14	13	9	16	16	10	17	15	13	18	6	0	0	0	90.0	97.0
Delta	Asa	0	0	0	0	4	1	7	11	9	20	10	9	10	18	21	16	11	13	9	8	30	0	0	0	111.0	96.0
Delta	War	7	4	3	5	8	10	10	17	17	20	18	18	15	24	25	14	21	16	21	22	20	16	4	4	169.0	170.0
Edo	Ben	3	1	4	4	11	7	9	17	12	16	15	21	15	20	24	12	17	23	20	15	12	5	0	1	142.0	142.0
Rivers	PHC	6	6	1	0	9	5	10	8	14	16	18	16	14	14	21	16	19	15	21	14	16	7	1	2	150.0	119.0
Average		3	2	2	1	8	6	8	13	14	17	15	17	15	16	21	15	18	19	15	17	17	6	1	2	138	131

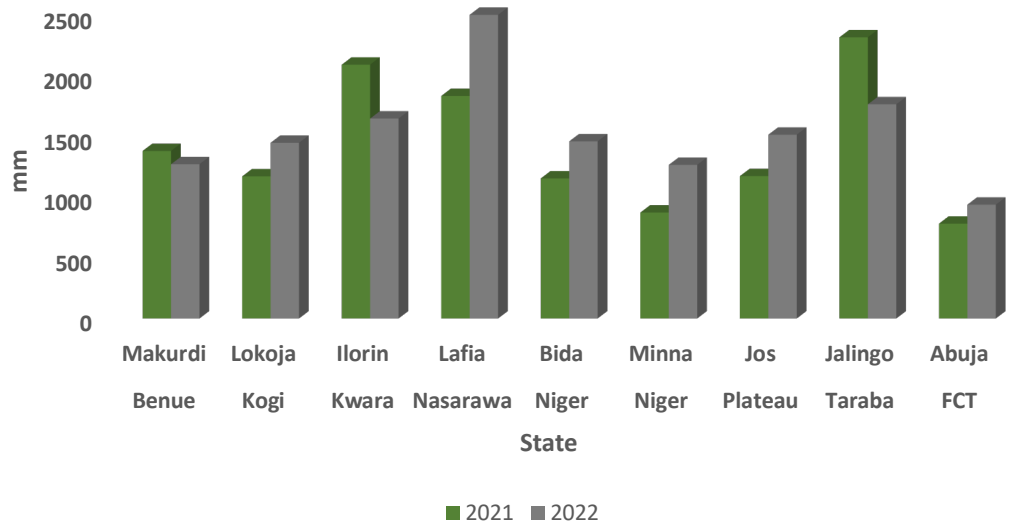
Source: NiMET

Table 3.12: South-West Rainy days January – December

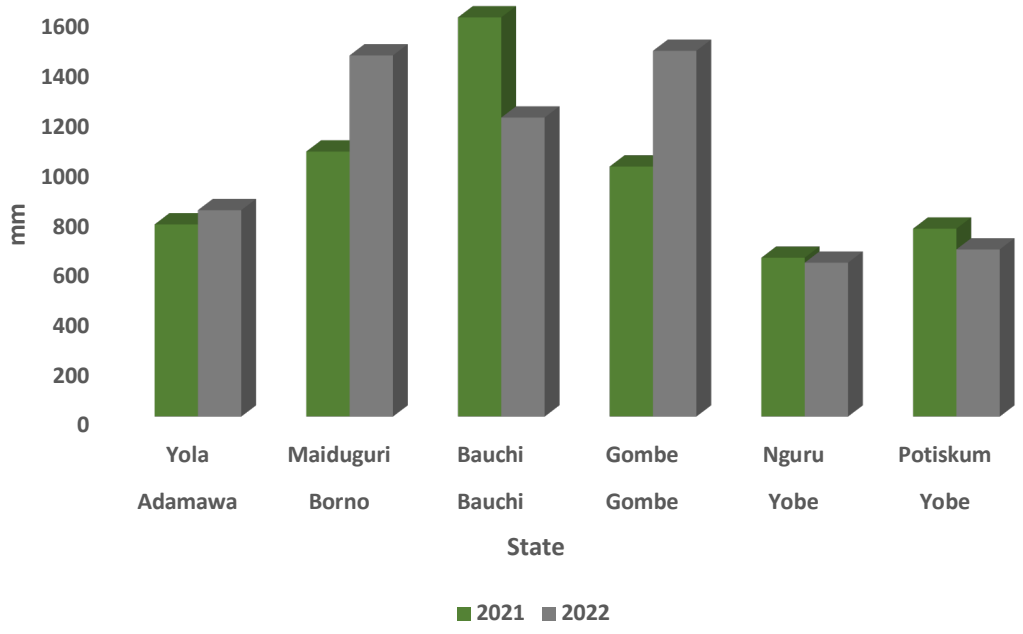
State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Total	Total
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Ogun	Abeo	0	0	0	1	7	11	5	6	9	7	16	14	9	7	15	9	13	19	17	10	8	3	0	0	99.0	87.0
Ogun	I - Ode	2	0	2	3	4	6	6	12	12	11	11	14	10	15	18	12	15	18	17	16	10	4	0	0	107.0	111.0
Ondo	Aku	2	0	1	1	6	1	8	11	7	12	14	15	14	14	19	11	13	17	10	14	5	3	1	1	100.0	100.0
Ondo	Ond	0	0	1	1	6	4	6	10	7	9	12	12	12	16	20	14	14	14	11	12	6	4	1	0	96.0	96.0
Osun	Osh	1	0	0	1	7	7	9	9	10	12	12	17	13	9	24	16	17	15	17	19	8	4	0	1	118.0	110.0
Oyo	Iba	0	0	1	1	4	5	7	7	4	6	15	15	12	8	18	12	13	14	14	10	6	3	0	0	94.0	81.0
Oyo	Isey	1	0	0	0	3	4	8	7	8	8	12	14	8	8	20	14	16	12	11	14	1	0	0	0	88.0	81.0
Oyo	Shak	0	2	1	0	5	3	9	9	9	7	9	10	8	8	19	10	15	18	10	8	1	0	0	0	86.0	75.0
Lagos	Ikj	4	0	4	0	9	5	9	9	8	14	17	17	10	11	12	12	15	20	15	11	8	9	0	2	111.0	110.0
Lagos	Osho	2	1	2	1	9	3	10	11	9	12	16	16	9	10	12	9	15	17	14	11	7	9	0	1	105.0	101.0
Ekiti	Ado-Ekiti	1	0	2	1	7	8	12	11	7	10	14	16	10	16	25	13	15	75	12	20	10	15	1	1	116.0	186.0
Average		1	0	1	1	6	5	8	9	8	10	13	15	10	11	18	12	15	22	13	13	6	5	0	1	102	103

Source: NiMET

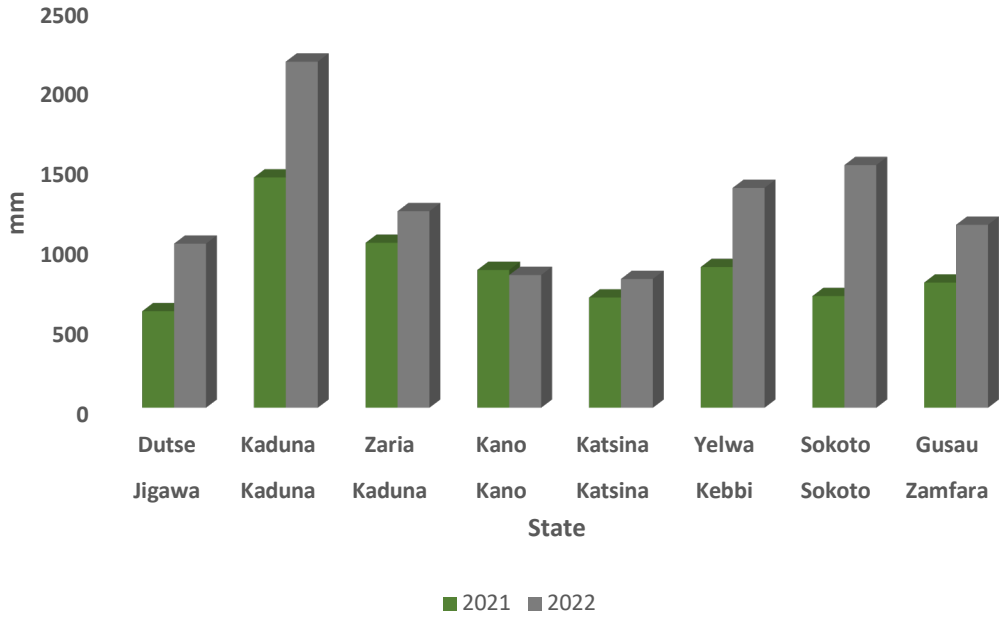
Rainfall Distribution



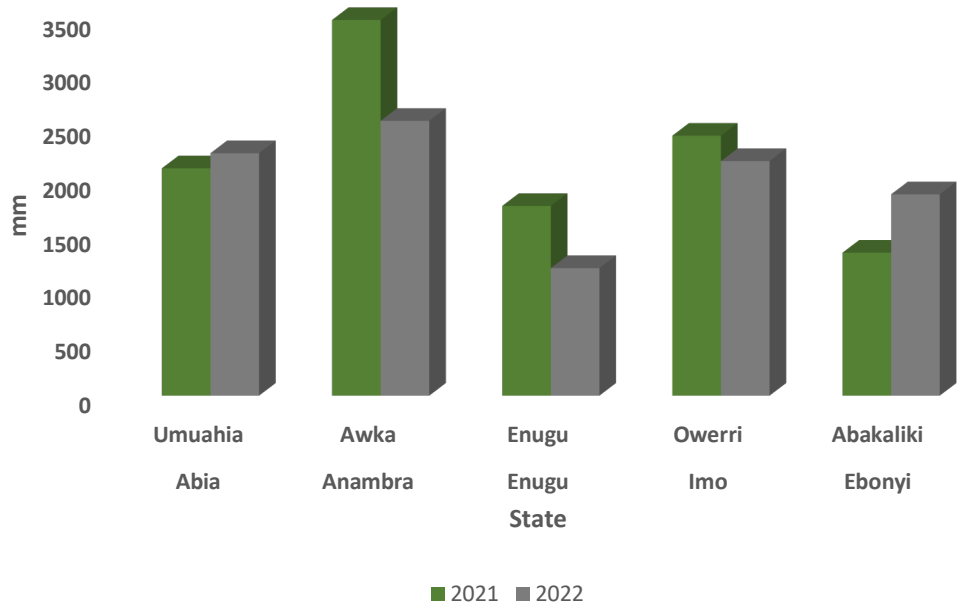
North-Central Total Rainfall (Jan-Dec)



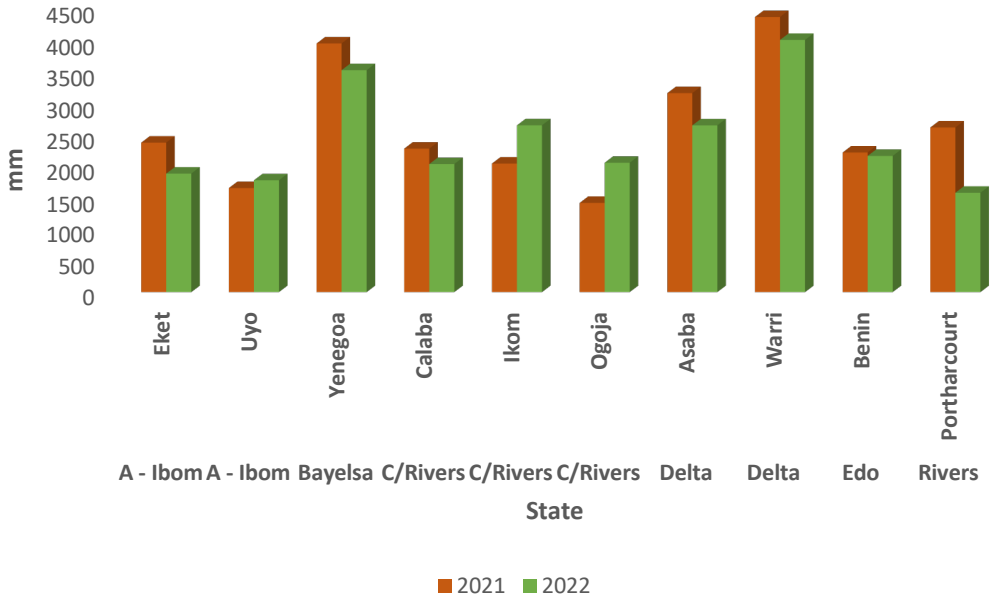
North-East Total Rainfall (Jan - Dec)



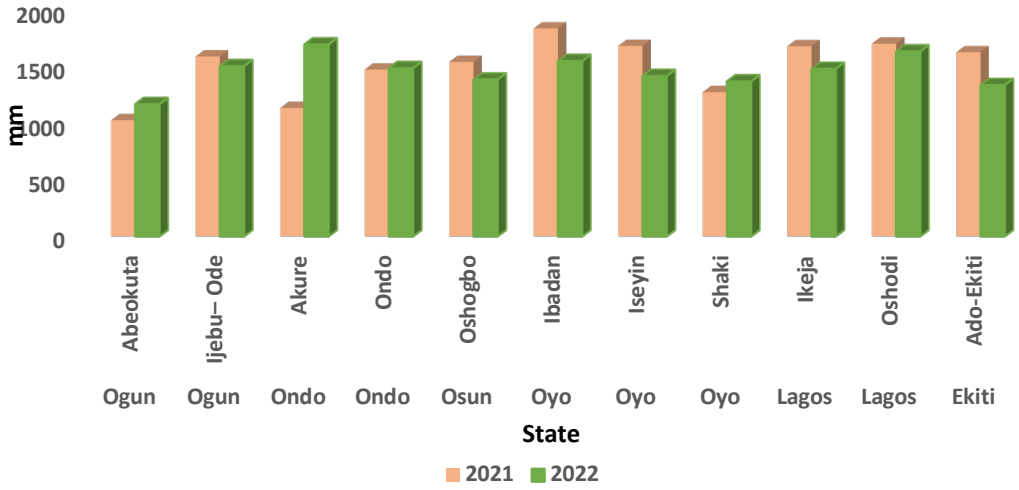
North-West Total Rainfall (Jan-Dec)



South-East Total Rainfall (Jan-Dec)



South-South Total Rainfall (Jan-Dec)



South-West Total Rainfall (Jan-Dec)

Table 3.13: North-Central Temperature (⁰C) January - December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Average	Average
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Benue	Mak	37.1	34.7	38.0	37.4	37.5	38.7	37.6	34.5	33.6	33.3	31.8	31.5	30.3	30.9	30.7	30.0	31	30.5	32.8	32.0	34.3	35.4	35	35.2	34.14	33.68
Kogi	Lok	36.5	35.5	37.5	38.2	37.7	38.0	37.0	34.2	33.6	32.3	31.7	31.1	30.6	31.0	30.8	29.6	31.4	30.7	32.8	31.9	34.4	35.2	35.3	35.3	34.10	33.57
Kwara	Ilor	35.4	34.2	36.3	36.5	35.5	37.3	35.0	33.9	33.5	32.4	31.3	30.7	29.9	29.6	29.7	28.4	30.5	29.2	32	31.3	33.5	34.3	34.5	34.3	33.10	32.68
Nasarawa	Laf	37.0	35.5	37.5	37.6	37.3	38.3	37.6	34.1	34.7	32.5	31.4	31.6	29.9	38.4	30.1	29.2	31	38.5	32.6	32.3	34.3	36.1	36	35.6	34.11	34.97
Niger	Bid	36.8	35.2	37.3	37.7	39.0	38.6	38.0	36.4	34.5	34.1	32.3	31.6	30.7	31.0	30.2	29.8	31.2	29.9	33.1	32.1	35.7	35.5	35.8	35.4	34.54	33.95
Niger	Min	37.0	34.7	37.0	37.4	37.7	38.5	38.3	35.8	35.1	34.5	32.0	30.8	29.6	29.9	29.5	28.5	30.9	29.3	32.6	32.3	35	35.8	35.8	35.4	34.21	33.56
Plateau	Jos	29.1	27.7	29.7	30.2	31.6	32.7	32.2	29.9	29.2	28.4	27.3	26.3	24.4	23.8	24.9	23.3	26.7	25.5	28.7	27.5	29.2	27.8	28.1	27.2	28.42	27.53
Taraba	Jal	38.2	34.4	36.9	37.0	38.8	39.8	39.3	36.3	35.6	33.6	32.2	31.5	30.1	29.9	29.9	29.6	30.9	30.6	33.1	33.3	35.8	37.2	35.8	35.5	34.71	34.06
FCT	Abuja	36.9	35.3	37.0	37.6	36.6	37.6	36.9	35.1	33.8	33.2	31.4	30.9	29.2	29.6	29.6	28.3	30.7	28.7	32.2	32.0	34.1	35.3	36	35.8	33.69	33.28
Average		35.99	34.13	36.34	36.62	36.85	37.72	36.87	34.47	33.73	32.70	31.27	30.67	29.41	30.46	29.48	28.52	30.48	30.30	32.21	31.65	34.03	34.71	34.70	34.41	33.45	33.03

Source: NiMET

Table 3.14: North-East Temperature (⁰C) January – December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Average	Average
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Adamawa	Yola	37	33.6	37	36.3	39.7	40.2	41.4	38.3	37.4	37.4	34.2	33.2	32.6	31.6	30.8	31.5	32.2	31.0	35	34.1	37.6	36.6	35.3	35.0	35.85	34.90
Borno	Maid	37.0	30.8	37.0	32.4	39.7	38.4	41.4	41.3	37.4	41.1	34.2	37.1	32.6	32.4	32.3	30.1	33.4	32.1	37.6	34.9	39	34.6	32.5	33.0	36.17	34.85
Bauchi	Bauchi	34.6	29.1	33.9	32.5	39.2	37.2	41.9	38.3	41.3	36.7	36.9	33.1	33.6	38.8	30.1	28.8	31	29.7	34	32.4	35.3	33.0	30.7	31.3	35.21	33.40
Gombe	Gom	33.2	30.3	32.8	33.5	37.1	38.0	39.6	37.5	38.0	34.8	34.0	32.0	30.6	29.9	29.6	28.3	30.7	29.5	34	32.8	36.6	34.3	31.9	32.2	34.01	32.76
Yobe	Ngu	33.8	28.9	33.5	32.0	37.5	37.3	39.2	39.5	36.4	42.1	33.1	37.8	29.9	33.0	33.4	31.0	34.2	33.6	37	36.5	37.6	34.3	30.6	32.5	34.69	34.88
Yobe	Potisk	33.8	29.2	32.3	32.1	38.2	35.9	41.0	40.5	41.9	39.9	40.1	34.9	33.6	31.4	31.0	29.4	33.3	31.9	35.8	34.3	37.2	33.5	30.9	31.3	35.76	33.69
Average		34.48	29.66	33.90	32.50	38.36	37.36	40.62	39.42	39.00	38.92	35.66	34.98	32.06	33.10	31.27	29.52	32.52	31.34	35.68	34.20	37.14	33.93	31.98	32.54	35.28	34.08

Source: NiMET

Table 3.15: North-West Temperature (⁰C) January – December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Average	Average
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Kaduna	Kad	33.1	30.3	32.9	33.2	34.8	35.9	36.1	34.4	33.2	32.5	30.7	30.2	27.5	28.7	28.3	26.4	30.3	32.5	32.7	34.2	34	33.5	31.5	32.6	32.09	32.04
Kaduna	Zaria	32.2	28.8	32.1	32.6	36.0	36.4	38.2	36.4	35.8	35.5	31.9	31.2	28.9	29.3	29.5	27.6	30.9	28.7	33.7	31.1	34.8	32.4	30.7	30.9	32.89	31.74
Kano	Kano	32.0	28.4	31.4	31.1	36.8	36.5	40.1	40.0	40.1	39.1	37.4	35.2	33.8	30.8	31.0	29.1	32.1	30.0	35.1	31.9	36.1	32.6	30.4	30.5	34.70	32.94
Katsina	Kat	32.0	27.7	31.0	30.9	36.2	36.3	39.5	39.6	40.3	38.9	36.6	35.7	31.5	31.2	30.5	29.0	31.6	31.4	35.5	33.4	36	32.5	29.9	30.3	34.21	33.07
Kebbi	Yel	37.5	33.6	37.7	37.8	38.7	40.3	40.1	38.0	37.1	36.0	33.8	33.3	31.9	31.4	30.8	29.9	32	31.3	33.8	33.8	36.4	32.3	35.8	30.1	35.47	33.99
Sokoto	Sok	35.2	30.6	34.8	35.0	39.0	39.7	41.3	41.3	40.7	39.9	36.9	35.5	32.6	31.5	31.1	30.2	32.8	30.3	37.3	33.3	38.8	36.1	33.3	35.8	36.15	34.92
Zamfara	Gus	35.4	30.8	33.4	33.6	37.6	38.2	40.3	39.1	39.0	37.1	35.0	34.2	30.9	30.4	30.1	29.1	30.6	32.1	35	35.8	36.7	35.7	32.7	33.1	34.73	34.11
Jigawa	Duts	32.7	29.0	32.1	31.5	37.6	36.9	40.5	40.3	40.5	39.7	36.6	35.0	31.3	31.4	31.6	29.4	33.6	30.3	36.7	33.2	36.6	33.7	30.7	31.7	35.03	33.51
Average		33.78	29.90	33.15	33.21	37.07	37.53	39.53	38.64	38.33	37.34	34.85	33.79	31.06	30.59	30.37	28.84	31.74	30.82	34.98	33.33	36.18	33.60	31.88	31.90	34.41	33.29

Source: NiMET

Table 3.16: South-East Temperature (⁰C) January – December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Average	Average
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Abia	Umu	34.5	33.8	36.1	36.2	34.7	35.3	34.0	33.3	32.8	32.3	31.6	31.3	30.3	30.2	30.1	30.0	30.3	30.6	31.2	31.2	32.6	33.4	34.2	34.3	32.71	32.66
Anambra	Awka	35.5	34.7	36.8	36.7	35.6	35.7	34.9	32.7	32.6	31.6	31.5	30.6	30.4	29.8	30.2	29.2	30.5	30.0	32.3	30.9	32.8	34.0	34.5	35.0	33.13	32.58
Enugu	Enu	36.1	34.3	36.9	36.9	35.9	36.2	35.4	33.5	32.7	32.0	31.6	31.5	29.9	30.3	30.4	29.3	31.2	30.5	31.9	31.3	33	34.1	34.1	34.6	33.25	32.87
Imo	Owr	34.8	33.6	36.0	35.3	33.9	34.4	33.6	32.9	32.0	32.0	31.4	30.8	30.5	29.9	29.9	29.7	30	30.0	31.4	30.7	31.6	33.5	32.7	34.3	32.30	32.25
Ebonyi	Abak	37.6	35.2	38.2	37.8	36.6	36.9	35.4	34.4	32.5	32.3	31.5	31.6	30.3	30.4	30.9	29.6	31.4	31.0	32.8	32.6	33.6	34.7	35.6	36.1	33.87	33.55
Average		35.7	34.3	36.8	36.6	35.3	35.7	34.6	33.4	32.5	32.0	31.5	31.2	30.3	30.1	30.3	29.6	30.7	30.4	31.9	31.3	32.7	34.0	34.2	34.9	33.1	32.8

Source: NiMET

Table 3.17: South-South Temperature (^{0}C) January - December

State	Station	January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Average	Average
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
A – Ibom	Eket	30.2	30.1	30.5	31.0	29.7	30.1	30.3	30.2	29.3	29.5	28.7	28.5	27.5	27.2	27.3	26.0	27.6	27.1	28.3	28.2	29.1	29.3	30.4	30.7	29.07	28.99
A – Ibom	Uyo	34.8	34.0	36.1	35.8	33.7	34.4	33.9	32.6	32.5	31.8	31.2	30.2	29.7	29.2	29.3	29.2	29.5	29.6	31.9	30.5	32.4	32.7	33.7	34.6	32.39	32.06
Bayelsa	Yen	33.9	33.9	34.5	35.9	33.6	33.7	33.9	32.9	32.8	32.3	30.9	31.0	30.4	29.9	30.0	29.8	30	30.3	32	31.1	32.7	33.7	35	35.2	32.48	32.48
C/Rivers	Cal	33.5	33.2	35.0	35.2	33.5	34.3	33.0	32.0	31.4	31.4	30.8	30.4	28.8	29.0	29.3	29.0	29.3	29.8	30.8	30.5	31.3	32.2	32.8	33.5	31.62	31.71
C/Rivers	Ikom	35.0	33.0	34.2	36.3	34.6	35.5	30.1	32.8	29.9	31.5	31.3	31.2	29.5	30.5	30.6	28.8	30.5	28.8	31.6	30.6	32.1	33.6	33.2	33.0	31.88	32.13
C/Rivers	Ogo	37.2	35.7	38.2	38.2	37.0	38.3	37.1	35.7	34.4	33.2	33.1	33.6	31.7	31.1	31.5	29.7	32.3	31.4	34.1	32.6	34.6	33.5	35.5	36.5	34.74	34.12
Delta	Asa	35.3	35.6	36.6	37.6	35.4	36.9	35.7	34.3	33.4	32.8	31.8	31.7	31.3	31.0	30.9	30.4	31.4	31.0	33.6	31.9	34.2	34.8	35.4	36.2	33.75	33.67
Delta	War	33.8	33.6	34.4	34.0	33.4	33.6	34.2	33.0	33.3	31.7	31.2	30.6	30.6	29.2	29.9	29.3	29.9	29.6	31.5	30.9	32.3	32.7	33.3	33.9	32.32	31.83
Edo	Ben	34.5	35.2	35.4	36.3	34.2	35.3	33.8	33.2	32.8	32.0	31.1	30.9	30.1	29.1	29.8	28.9	30.6	29.6	32.3	31.8	32.7	33.8	34.9	34.7	32.69	32.56
Rivers	PHC	33.9	33.2	35.0	35.2	32.9	34.2	33.6	33.1	32.0	32.2	30.9	30.8	30.5	29.8	30.1	29.7	30.1	30.4	31.1	30.8	31.3	32.7	33.8	33.9	32.09	32.17
Average		34.2	33.8	35.0	35.6	33.8	34.6	33.6	33.0	32.2	31.8	31.1	30.9	30.0	29.6	29.9	29.1	30.1	29.8	31.7	30.9	32.3	32.9	33.8	34.2	32.3	32.2

Source: NiMET

Table 3.18: South-West Temperature (^{0}C) January – December

State		January		February		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Average	Average
	Station	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Ogun	Abeo	36.3	36.3	37.3	37.5	35.7	35.8	35.4	34.5	34.4	33.2	31.8	32.6	30.9	30.4	30.3	29.7	31.3	31.4	33.1	32.2	34	35.7	36.1	36.7	33.88	33.83
Ogun	I - Ode	34.8	35.6	35.4	35.9	34.4	34.7	34.2	33.0	32.3	32.4	31.3	31.1	30.0	28.8	29.4	28.5	30.8	29.5	32.5	31.8	33.8	33.7	35.3	35.0	32.85	32.50
Ondo	Aku	34.4	34.5	35.4	35.7	33.8	35.1	33.5	31.4	31.8	30.3	30.2	29.8	28.7	28.2	28.5	27.6	29.8	28.9	31.1	30.5	32.8	33.2	34.2	33.8	32.01	31.58
Ondo	Ond	34.1	34.7	35.5	35.8	33.5	34.7	32.8	31.9	31.8	31.0	30.3	30.1	29.0	28.0	28.3	27.7	29.7	29.0	31.6	31.1	32.4	32.9	33.9	34.2	31.91	31.75
Osun	Osh	34.0	34.7	35.2	36.3	34.0	34.9	33.5	32.1	31.8	31.0	29.9	29.8	28.4	28.3	28.1	27.0	29.5	28.4	30.5	30.4	32.3	32.8	34.6	34.4	31.82	31.67
Oyo	Iba	34.8	35.3	36.1	36.7	34.7	35.1	34.4	33.1	33.5	32.3	31.2	31.1	29.4	29.2	28.8	27.9	30.3	29.7	31.3	31.5	33.6	34.5	35.4	35.3	32.80	32.63
Oyo	Isey	35.1	35.3	36.4	37.1	34.8	34.9	33.8	33.6	32.9	32.0	30.4	30.3	29.2	28.7	28.5	26.6	30	28.8	32.4	30.4	33	33.5	34.7	34.3	32.60	32.12
Oyo	Shak	35.1	33.7	35.9	35.8	34.5	35.0	33.4	32.3	32.2	31.1	30.4	29.5	28.5	27.9	27.8	26.6	28.6	27.8	30.8	29.9	32.9	33.5	34.1	33.4	32.02	31.37
Lagos	Ikj	34.0	35.2	34.4	35.3	33.6	34.5	33.7	33.0	32.8	32.2	31.3	31.0	30.1	29.5	29.8	29.4	30.4	29.4	31.9	31.3	32.6	33.2	34.8	33.8	32.45	32.31
Lagos	Osho	34.1	34.8	34.1	34.9	33.5	34.1	33.4	33.1	32.6	32.4	31.0	30.8	29.9	29.3	29.7	29.1	30.3	27.0	31.9	29.6	32.8	31.2	34.6	32.1	32.33	31.54
Ekiti	Ado-Ekiti	34.7	34.4	35.1	36.0	34.2	34.4	33.9	31.9	32.0	31.3	30.2	30.4	28.7	28.7	28.3	27.4	30.2	29.4	31.3	31.3	32.3	32.9	33.8	33.6	32.04	31.81
Average		34.7	35.0	35.5	36.1	34.2	34.8	33.8	32.7	32.5	31.7	30.7	30.6	29.3	28.8	28.9	28.0	30.1	29.0	31.7	30.9	33.0	33.4	34.7	34.2	32.4	32.1

Source: NiMET

4.0 ASSESSMENT OF 2022 FLOOD IN NIGERIA: IMPLICATION ON AGRICULTURE

4.1 *Background Information*

Flood incidences in Nigeria during the 2022 rainy season have been argued to as the worst after the 2012 experience. Some of the negative impacts of the flood incidences were recorded in:

- **Agriculture:** The floods damaged crops and destroyed farmlands; that led to reduced agricultural yields and economic losses for farmers. Soil water contamination led to less fertile farmlands; thus, creating longer time (than the usual) for crops and animal production. Overall, it is feared that the flooding incidences may create long-term impacts on crops and animal production. The economic value of the agricultural-related losses due to the 2022 flood was estimated to be ₦700 billion.
- **Environment:** It is estimated that there are over 3000 gully erosion sites in the 10 most-affected States in the South-East, South-South, and Southwestern parts of Nigeria.
- **Infrastructure:** The 2022 flooding situation damaged roads, bridges, and other transport networks, making it difficult for people to travel and for agricultural goods to be transported. The flood also damaged agricultural stores and warehouses.
- **Communities:** The flood had serious consequences for human populations, including loss of life, injury, and displacement. It led to the spread of waterborne diseases and disrupted access to clean water and other necessities.
- **Health:** As of September 14, 2022, many communities in Borno, Adamawa and Yobe States regions had reported cholera outbreaks, with 586,110 and 320 cases, respectively, and nearly 300 have died. Communities and governments need to work together to implement these and other measures to reduce the risk of flooding and its impacts in Nigeria.

4.2 Causes, Occurrences and severity of Flood in 2022

A total of 1,798 communities were affected in 263 LGAs (Table 4.1). The main cause of flood in the South-South, South-East and North-Central zones was the release of water from the Lagdo Dam in Cameroon. The dam flows into major rivers in these zones making it possible for excess water to increase the water volume in many of the rivers in 3 zones. The incidences of flood in North-West and North-East were attributed to heavy persistent rainfalls and blockage of drainages. Communities in the South-West zone were flooded as a result of continuous rainfall, old and poorly managed drainage systems in affected communities.
As shown in Figure 4.1, Kebbi, Delta, and Cross River States with calculated index values of 0.3500, 0.2951 and 0.2218 were respectively the most and the severely affected states by flood in 2022. Nasarawa and Oyo states as well as the FCT with 0.0515, 0.0079 and 0.0243calculated index were the least affected in that order.

Early warning information was shared with farmers in most of the states through radio, television, social media, community leaders, and extension agents. The early warning messages were packaged and disseminated by NEMA, SEMA, NiMET, NIHSA, MOAs, ADPs, and IFAD. However, Akwa Ibom, Cross River, and Taraba states reported that farmers did not receive the early warning information in 2022.
Relief materials and packages for alleviating the effects of flood incidences were mostly distributed by twenty-three states while farmers in seven states did not receive relief materials or packages from any government intervention.

A National Emergency Management Agency report on the 11th November 2022 that 4,449,533 persons were affected by flood but 430,445 persons were displaced.

Table 4.1: Occurrences of flood in States, LGAs and communities

State	Total number of LGAs in the State	Number of affected LGAs	Number of affected communities
Kebbi	22	17	442
Delta	25	18	345
Cross River	18	14	127
Nasarawa	13	10	91
Kwara	16	6	89
Jigawa	27	15	54
Sokoto	22	14	50
Anambra	21	6	48
Plateau	17	8	47
FCT	6	6	43
Rivers	23	5	42
Abia	17	12	39
Akwa Ibom	31	14	36
Kogi	20	6	34
Lagos	20	7	30
Adamawa	22	7	28
Kano	44	9	26
Bayelsa	8	6	24
Taraba	16	6	23
Gombe	11	6	22
Yobe	17	5	20
Borno	27	10	19
Bauchi	20	6	18
Niger	24	13	16
Ebonyi	13	10	16
Edo	19	5	16
Benue	22	6	15
Enugu	17	7	14
Oyo	34	5	15
Imo	27	4	10

Source: Published news/information of flood incidences in official reports, national dailies, radio and television broadcasts

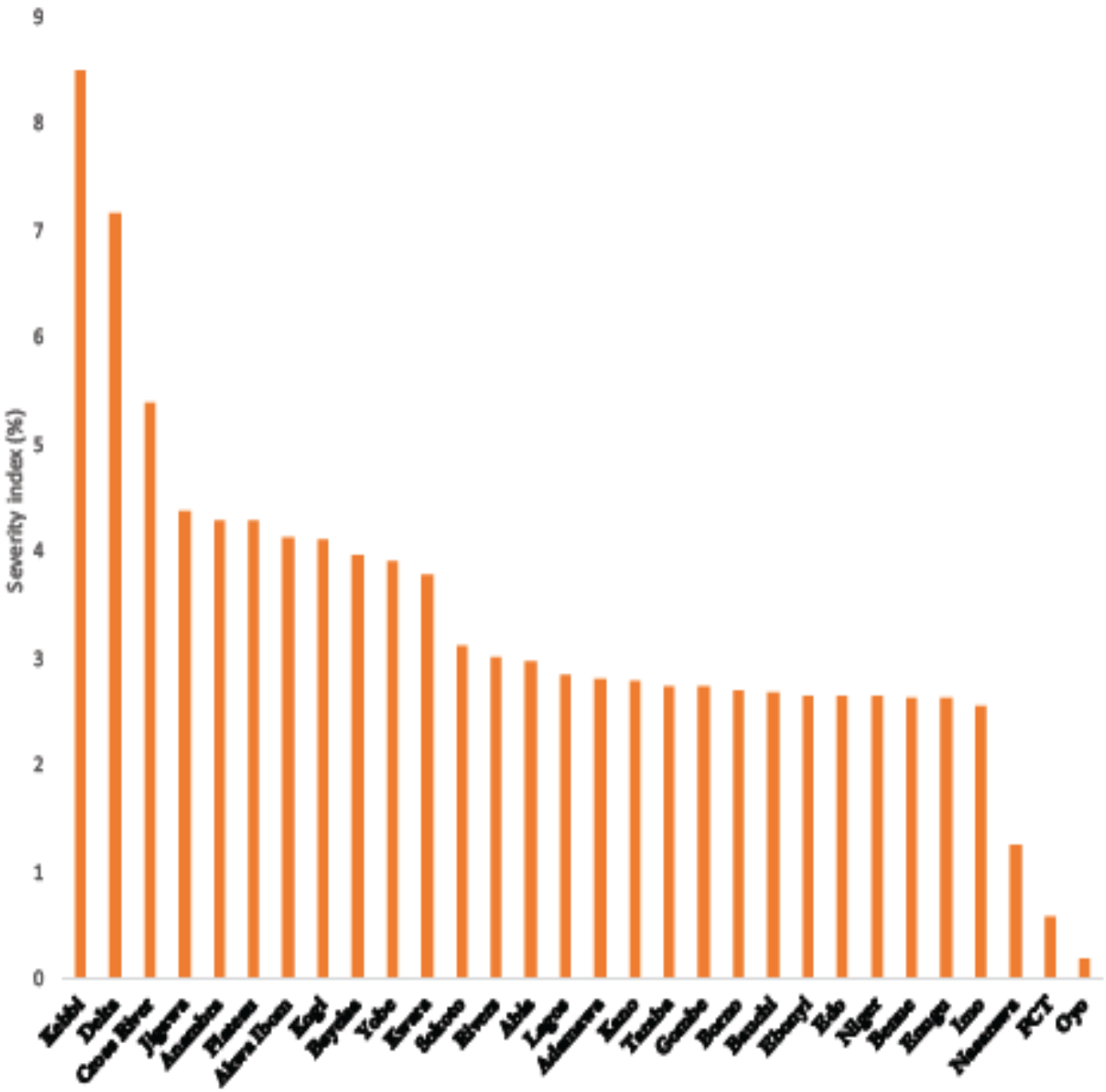


Figure 4.1: Severity index in percentages (%) across the 30 states that were surveyed

Estimated crop output loss and their values in Naira

Crop	Estimated output loss (tonnes)	Value in Naira
Rice	11526658.25	201,585,117,000
Plantain	60000000	60000000000
Maize	2478826.34	51634943140
Cowpea	775410.36	20325968448
Sorghum	643703	13517763000
Vegetables	206794	13059220000
Yam	947300	9473003000
Millet	708863.12	8211773920
Cassava	2446200	2446200000
Groundnut	36789.17	1601937160
Sesame	1683.93	1262946000
Soybeans	30013	630262500
Potato	600625	600625000
Tomato		16100000
Total	**80,402,866.17**	**₦384,465,859,168**

Impact of flood on livestock

Livestock species	Number lost (head)	Value in Naira
Cattle	143,352	71,669,125,000
Poultry	1,954,836	10,243,980,000
Goats	928,547	7,620,550,000
Sheep	206,208	2,008,860,000
Pigs	25,967	1,504,560,000
Snails	5,132	2,566,000
Total	**3,264,042**	**₦93,049,641,000**

Impact of flood on fish

Fish species	Number lost (head)	Value in Naira
Catfish	81,104,160	77,438,952,000
Tilapia	35,178,714	22,817,795,500
Total	**116,282,874**	**₦100,256,747,500**

Impact of flood on agricultural structures and farmland

Type	Quantity	Value (₦)
Farmland	863.648 ha	81,631,500,000
Roads and bridges	69	37,000,000,000
Farm buildings	3,882	400,500,000
Fish ponds	16,000	300,000,000
Warehouse	13	240,000,000
Farm store	4,003	138,570,000
Farm barns	150,387	137,103,000
Thatched houses	143	102,000,000
Huts	205,000	70,250,000
Pens	27	2,650,000
	Total	**₦120,022,573,000**

Farmland

State	Estimated number lost (ha)	Estimated value lost (₦)
Benue	4,240	424000000
Nasarawa	7,298	729800000
Kwara	8,370	837000000
Niger	1,631	163100000
Plateau	2,490	582,600,000
Taraba	21,157	2115700000
Adamawa	24,213	2421300000
Bauchi	4,626	462600000
Borno	13,345	1334500000
Gombe	2,508	250800000
Yobe	5,358	535800000
Jigawa	318,860	31886000000
Sokoto	15,508	4,800,000,000
Kebbi	5,803	760,000,000
Abia	17,168	1716800000
Anambra	15,364	1536400000
Ebonyi	5,254	525400000
Imo	105,811	10581100000
Akwa Ibom	12,765	1276500000
Bayelsa	46,143	4614300000
Cross River	99,083	1,000,000,000
Delta	4,103	410300000
Rivers	66,572	6657200000
Lagos	803	80300000
Enugu	54,350	5435000000
FCT	825	495,000,000
Total	863,648	₦81631500000

Fish pond

State	Estimated number lost	Estimated value lost (?)
Kwara	15,000	150,000,000
Enugu	1,000	150,000,000
Total	16,000	₦300,000,000

Thacthed house

State	Estimated number lost	Estimated value lost (₦)
Taraba	143	102,000,000
Total	143	₦102,000,000

Warehouse

State	Estimated number lost	Estimated value lost (₦)
Benue	11	220,000,000
Abia	2	20,000,000
Total	13	₦240,000,000

Farm building

State	Estimated number lost	Estimated value lost (₦)
Nasarawa	2,500	250,000,000
Abia	50	50,000,000
Cross River	800	50,000,000
Imo	32	48,000,000
Enugu	500	2,500,000
Total	3,882	₦400,500,000

Farm store

State	Estimated number lost	Estimated value lost (₦)
Nasarawa	600	60,000,000
Kwara	3,000	2,000,000
Akwa Ibom	403	76,570,000
Total	4,003	₦138,570,000

Factory

State	Estimated number lost	Estimated value lost (₦)
Benue	61	
Total	61	

Road and bridges

State	Estimated number lost	Estimated value lost (₦)
Bauchi	16	3,900,000,000
Gombe	9	9,000,000,000
Jigawa	22	22,000,000,000
Sokoto	22	2,600,000,000
Total	69	₦37,500,000,000

Pens

State	Estimated number lost	Estimated value lost (₦)
Ebonyi	2	2,000,000
Enugu	25	650,000
Total	27	₦2,650,000

Farm barn

State	Estimated number lost	Estimated value lost (₦)
FCT	2	103,000
Akwa Ibom	385	77,000,000
Kogi	150,000	60,000,000
Total	150,387	₦137,103,000

Huts

State	Estimated number lost	Estimated value lost (₦)
Kogi	205,000	70,250,000
Total	205,000	₦70,250,000

5.0 CROP PESTS AND DISEASES

All 36 states and the FCT reported pest and disease outbreaks. Four categories - cereals and legumes, roots and tubers, fruits and vegetables, and tree crops were affected. The cases varied in severity from light to heavy, with an estimated yield loss of 3 to 70percentage. An estimated hectarage from 1.5 to 200,000 was affected.

Pest and Disease Infestations on Cereals and Legumes

Table 5.1 shows documented cases of pests and diseases affecting maize, rice, sorghum, millet, soybean, peanuts, and cowpea in thirty-three (33) states. Fall armyworm, stem borer, leaf curl virus, grasshopper, snail, maize streak, bacterial blight, and leafy blight infested maize. The estimated yield loss and the number of hectares affected ranged from 3 to 70% with 0.4 to 30,000Ha affected. The severity of the pests and diseases infestation was ranked on the scale of light to heavy. Because pests and diseases infestation were recorded in twenty-one (21) states, it was feared, specifically, that fall armyworm attack on maize could be on the high by the end of the season. Even as at the time of the survey, the effect of fall armyworm was already heavy in FCT, Kwara, Plateau, Adamawa, Bauchi, Kaduna, Kano, Abia, Anambra, Enugu, Imo, Akwa Ibom, Rivers, Ekiti, Lagos, Ogun and Oyo states. Nevertheless, fall armyworm effect on maize was said to be moderate in Benue, Kogi, Niger, Taraba, Gombe, Katsina, Cross River, Delta, Ondo and Osun states. Application of agrochemicals, planting of pest resistant crops, early planting, biological control, hand picking, seed treatment, and fumigation before planting were some of the strategies applied by farmers in the affected states.

More so, fall armyworms, rice blasts, quelea birds, stem bore, and rodents impacted rice farming in 2022. In the FCT, Kwara, Adamawa, Bauchi, Borno, Kebbi, Sokoto and Ebonyi states, the impact was severe. In Gombe State, it was moderate and in Nasarawa, Taraba, Bayelsa, Cross River, and Rivers states, it was light. Heavy quelea bird attacks were reported in Borno, Kebbi, and Sokoto states; it is feared that that could lead to result a 40to 50percentage yield loss. Some of the control strategies used by farmers included aerial chemical spraying, use of ash and agrochemicals, and good agricultural practices (GAP).

Nasarawa, Adamawa, Bauchi, Borno, Gombe, Yobe, Kano and Zamfara reported pests and diseases infestation on sorghum; while Bauchi, Borno, Gombe, Yobe, Sokoto, and Zamfara reported pests and diseases infestation on millet. Smut, stem borers, fall army warm and downy mildew, and grasshoppers infected two crops (sorghum and millet). With a commensurate yield rate dropping from 10% and up to 40% in some communities, the severity of pests and diseases on both crops ranked from mild to heavy. In Bauchi, Yobe, and Kano states, sorghum was severely affected by stem borer, fall armyworm, and downy mildew. For instance, downy mildew impacted roughly 130,000 hectares of farmland in Yobe State. It was feared that the impact could reduce productivity by 40%. Similarly, millet was afflicted by stem borer on roughly 200,000 hectares; it was equally feared that the impact could lead to 50% output loss. In some cases, farmers uprooted affected plants while some of the used chemical spray to manage the situation.

Table 5.1a: Pest and Disease Infestations on Cereals and Legumes

Crops	Agricultural Zone	Pests/Disease	Severity	Estimated Yield loss (%)	Estimated hectares affected	Management
Maize	**North-Central**					
	Benue	Fall armyworm	Moderate	20	20	Use of chemical spray
	FCT	Fall armyworm	Heavy	50	1000	Pesticides application
	Kogi	Fall armyworm	Moderate	40	480	Application of insecticides
	Kwara	Fall armyworm	Heavy	40	3	Application of chemicals
	Nasarawa	Stem borer	Moderate	20		Application of chemicals
		Leaf curl	Moderate	20		Application of chemicals
	Niger	Fall armyworm	Moderate	10	142	Hand picking and use of pesticides
		Grasshopper	Moderate	10	10	Hand picking
	Plateau	Fall armyworm	Heavy	40	50	Application of chemicals
	Taraba	Fall armyworm	Moderate	10	200	
		Snails	Moderate	20	9	
	North-East					
	Adamawa	Fall armyworm	Heavy	30	185	Use of insecticides
	Bauchi	Fall armyworm	Heavy	40		Application of ash
		Stem borer	Light	5		
	Gombe	Fall armyworm	Moderate	20		Chemical application
	North-West					
	Kaduna	Fall armyworm	Heavy	40	500	Chemical, GAP and biological control
	Kano	Fall armyworm	Heavy	40		
	Katsina	Fall armyworm	Moderate	20	10	Spraying with chemicals
	South-East					
	Abia	Fall armyworm	Heavy	40	100	Early planting and use of pesticides
	Anambra	Fall armyworm	Heavy	60	20	Chemical control
	Ebonyi	Stem borer	Heavy	30	550	Use of resistant varieties and chemical application
	Enugu	Fall armyworm	Heavy	40		Cultural and use of pesticides
	Imo	Fall armyworm	Heavy	40	0.4	Use of insecticides

		Stem borer	Moderate	20	8	Use of pesticides
	South-South					
	Akwa Ibom	Fall armyworm	Heavy	30	11,700	Use of resistant variety, and spraying with agrochemicals
		Stem borer	Heavy	30	11,700	Use of resistant variety, and spraying with agrochemicals
		Maize streak	Heavy	30	11,700	Use of resistant variety, and spraying with agrochemicals
		Bacterial blight	Moderate	30	11,700	Use of resistant variety, and spraying with agrochemicals
	Bayelsa	Leafy blight	Light	5	5	Pesticides application
	Cross River	Fall armyworm	Moderate	20	55	Use of resistant variety, and spraying with agrochemicals
		Stem borer	Light	4	50	Use of resistant varieties and spraying with insecticides
	Delta	Fall armyworm	Moderate	30		
	Rivers	Fall armyworm	Heavy	70		Treat seeds before planting, and fumigate before flowering
		Stem borer	Light	4	50	Use of resistant variety, and spraying with agrochemicals
	South-West					
	Ekiti	Fall armyworm	Heavy	50	25	Spraying of agro-chemicals
		Stem borer	Light	3	0.3	Spraying of agro-chemicals
		Streak	Light	5	5	Spraying of agro-chemicals
	Lagos	Leaf rollback	Heavy	40	50	Use of resistant variety, and spraying with agrochemicals
		Fall armyworm	Heavy	50	55	Use of resistant variety, and spraying with agrochemicals
		Monkey	Moderate	10		
		Stem borer	Moderate	20	25	Use of resistant variety, and spraying with agrochemicals

	Ogun	Fall army worm	Heavy	70	10,000	Application of pesticides
	Ondo	Fall army worm	Moderate	10		Use of resistant variety, and spraying with agrochemicals
	Osun	Fall armyworm	Moderate	20		Use of agro-chemicals
	Oyo	Fall armyworm	Heavy	40	30000	Application of insecticides

Table 5.1b: Pest and Disease Infestations on Cereals and Legumes

Crops	Agricultural Zone	Pests/Disease	Severity	Estimated Yield loss (%)	Estimated hectares affected	Management
Rice	North-Central					
	FCT	Fall armyworm	Heavy	50		Application of agro-chemical
	Kwara	Rice blast	Heavy	30	3	Application of agro-chemical
	Nasarawa	Fall armyworm	Light	5		use of resistant variety
	Taraba	Rice blast	Light	5	30	
	North-East					
	Adamawa	Rice blast	Heavy	30	150	Application of fungicides
	Bauchi	Fall armyworm	Heavy	40		Application of ash and agro-chemicals
	Borno	Quela birds	Heavy	50	450	Ground control
	Gombe	Fall armyworm	Moderate	20		Application of agro-chemicals
	North-West					
	Kebbi	Quelea birds	Heavy	40		Aerial spraying
	Sokoto	Quelea birds	Heavy	40	11500	Aerial spraying
	South-East					
	Ebonyi	Stem borer	Heavy	50	500	Use of resistant variety, and spraying with agrochemicals
		Rodent	Heavy	40		
	South-South					
	Bayelsa	Rice blast	Light	5		Use of resistant variety, and spraying with agrochemicals
	Cross River	Stem borer	Light	5	50	Early planting and use of improved varieties

	Rivers	Stem borer	Light	5	50	Early planting and use of improved varieties
	South-West					
	Ondo	Quelea birds	Moderate	20		Aerial spraying
Sorghum	North-Central					
	Nasarawa	Fall army worm	Light	5		Use of insecticides
	North-East					
	Adamawa	Smut	Moderate	20	95	Fungicides application
	Bauchi	Stem borer	Heavy	40		Agro-chemical application
	Gombe	Fall army worm	Light	10		Application of chemicals
	Yobe	Downy mildew	Heavy	40	130000	Agro-chemical spraying
	North-West					
	Kano	Fall army worm	Heavy	40		
	Zamfara	Fall army worm	Moderate	10	15	Spraying with chemicals

Table 5.1c: Pest and Disease Infestations on Cereals and Legumes

Crops	Agricultural Zone	Pests/Disease	Severity	Estimated Yield loss (%)	Estimated hectares affected	Management
Millet	North-East					
	Bauchi	Fall army worm	Heavy	40		Application of chemicals
		Stem borer	Light	5		Chemical application
	Borno	Fall army worm	Heavy	40	4996	
	Gombe	Fall army worm	Moderate	15		Chemical application
		Grasshopper	Moderate	10		Chemical application
	Yobe	Stem borer	Heavy	50	200000	Uprooting
	North-West					
	Sokoto	Grasshopper	Moderate	30	15000	Chemical control
	Zamfara	Fall army worm	Moderate	10	15	Spraying with agrochemicals
Soybean	North-Central					
	FCT	Fall army worm	Heavy	50		Spraying with agrochemicals
	North-West					
	Zamfara	Defoliator	Moderate	10	25	Spraying with agrochemicals
	South-West					

	Ekiti	White flies	Moderate	10	5.7	Spraying of insecticides
		Pod borer	Moderate	15	5	Use of resistant varieties
Groundnut	North-Central					
	Plateau	Leaf curl	Heavy	70	1000	
	North-West					
	Sokoto	Grasshopper	Moderate	19	9000	Chemical spraying
	Zamfara	Defoliator	Moderate	12	22	Spraying with agrochemicals
Cowpea	North-Central					
	Kwara	Weevils	Heavy	50	3	chemical spraying
		Pod borer	Heavy	50	3	chemical spraying
	North-East					
	Yobe	Pod borer	Heavy	60	150000	Chemical spraying
	North-West					
	Katsina	Aphids	Light	8	7	Spraying with agrochemicals
	Sokoto	Aphids	Heavy	30	9000	Agrochemical spraying
	South-West					
	Ondo	Pod borer	Moderate	10		Agrochemical spraying

Only three (2) states, that is Zamfara and Ekiti as well the FCT recorded cases of autumn armyworm, defoliator, white flies, and pod borer on soybean. Defoliator, white flies, and pod borer severity on soybeans was moderate, with an estimated yield loss of less than 15%. Fall armyworm impact on soybeans was severe, and it was projected to result in a production drop of about 50%. The control tactics used were chemical spraying and the use of resistant cultivars. Again, in three (3) states (Plateau, Sokoto, and Zamfara), groundnut was reportedly afflicted by leaf curl virus, grasshoppers, and defoliators, while cowpea was impacted by weevils, pod borer, and aphids in five (5) states (Kwara, Yobe, Katsina, Sokoto and Ondo). Soybean and groundnut were affected by pests and diseases with varying degrees of severity, with an impact of 8% to 70% yield loss. In Plateau, Kwara, Yobe, and Sokoto States, leaf curl virus, pod borer, weevil and aphids affected crops severely. About 150,000 hectares of cowpeas in Yobe State were infested by pod borer causing a production decrease of 60percentage(estimation). Similar to this, leaf curl virus devastated 1000 hectares of groundnut farms, resulting in an estimated 70% yield loss. As mitigating measures, chemicals were applied by affected farmers.

Pest and Disease Infestations on Roots and Tubers

Records of disease and pest infestations on potato, yam, cocoyam, cassava, and other crops in fifteen (15) states in 2022 are presented on Table 5.2. The mosaic virus, dieback, white flies, brown leafy spot, leaf blight, and tuber rot all impacted on cassava production. The effect ranged from light to heavy, and it was expected to reduce yield by 1 to 50 percentage In Kwara, Ebonyi, Imo, and Lagos, the severity was severe and was expected to reduce yield by 50%. Nematode, yam beetle, and cricket borer affected yam farms. In Ekiti State, the severity was projected to lead to a 5% yield loss, while in Ebonyi, Delta, and Ondo states it was anticipated that crop yield could decrease by10 to 25 percentage. Among the control strategies used to lessen the effect were cultural management, planting improved cultivars, and the use of agrochemicals.

Leaf blight, fungal assault, root rot, and nematodes all had an impact on cocoyam. In Enugu State, the severity of the fungus infection was severe and feared could cause a yield loss of more than 70%. However, no data was supplied regarding the expected number of hectares affected. Leaf blight was very severe, whilst root rot and nematodes were mildly destructive. The use of agrochemical, planting of improved cultivars, cultural control techniques, and soil treatment were the methods used to lessen infestation impact on crop production. In three (3) states, (Plateau, Anambra and Ebonyi), instances of potato blight, tuber rot, and insect were documented.

It is estimated that the effect ty of the potato blight in Plateau State and potato tuber rot in Anambra would result in yield reductions of more than 60%. Both potato blight and tuber rot were feared to have impacted 400 and 10 hectares, respectively. As preventative measures, fungicides and insecticides were used by affected farmers.

Table 5.2: Pest and Disease Infestations on Roots and Tubers

Crops	Agricultural Zone	Pests/Disease	Severity	Estimated Yield loss (%)	Estimated hectares affected	Management
Cassava	North-Central					
	Kwara	Cassava mosaic	Heavy	30	3	Chemical control
	Nasarawa	Cassava mosaic				
	South-East					
	Abia	Die back	Moderate	25	200	Early planting and use of pesticides
	Ebonyi	Root rots	Heavy	50	25,000	Application of pesticides
		Cassava mosaic	Heavy	50	30,000	Application of pesticides
	Enugu	Cassava mosaic	Moderate	20		Cultural methods
	Imo	Root rots	Heavy	40	15	Application of pesticides
	South-South					
	Akwa Ibom	Cassava white flies	Moderate	10	43,000	Use of resistant varieties
	Bayelsa	Brown leafy spot	Moderate	25	5	
	Cross River	Cassava mosaic	Light	1	25	Planting improved varieties and use of agrochemicals
	South-West					
	Ekiti	Cassava mosaic	Light	5	2	Planting of improved varieties
		Leaf blight	Light	5	2	Use of chemicals
	Lagos	Tuber rot	Heavy	35	25	Early harvesting

	Ogun	Cassava mosaic	Light	5		Early planting
	Ondo	Cassava white flies	Moderate	15		Chemical and cultural control
Yam	South-East					
	Ebonyi	Nematode	Moderate	25	60000	Planting improved varieties and use of agrochemicals
	South-South					
	Delta	Yam beetle	Moderate	15		
	South-West					
	Ekiti	Yam beetle	Light	5	1.5	Use of chemicals
		Nematode	Light	5	1.5	Use of chemicals
	Ondo	Cricket borer	Moderate	10		Cultural control
Cocoyam	South-East					
	Ebonyi	Leaf blight	Moderate	10	40	Planting improved varieties and use of agrochemicals
	Enugu	Fungi attack	Heavy	73		Cultural and the use of pesticides
	South-West					
	Ekiti	Root rot	Light	3	2	Use of fungicid-es
		Nematode	Light	3	2	Soil treatment
Potato	North-Central					
	Plateau	Blight	Heavy	60	400	Fungicide application
	South-East					
	Anambra	Tuber rot	Heavy	60	10	Use of insecticides
	Ebonyi	Potato bug	Moderate	17	9	Use of agrochemicals

Pest and Disease Infestations on Fruits and Vegetables

From Table 5.3, plantain, onion, vegetable, melon, and tomato infestations are displayed based on data from nine (9) states.

In Akwa Ibom and Lagos States, plantain was impacted by black sigatoka and monkeys, but the impact was minimal. In Sokoto State, onions were moderately impacted by aphids, it was estimated that farmers may suffer 20% output loss from the 1000 hectares of land affected. On the other side, in Akwa Ibom State, Cochlicella sp. Attack was predicted to result in a 10% yield loss from the 1100 hectares of land affected. Improved plantain cultivars, pesticide spraying, and manual picking for onions and Cochlicella sp. Were the control measures used by farmers. In Taraba and Delta States, caterpillar and fall armyworm damaged melon. Caterpillar infestation was mildly severe, and autumn army worm attack was very severe. There was little information regarding the control system applied by farmers to lessen the impact the various infestations.

Accordingly, reports from three (3) states (Ekiti, Osun and Oyo), tomato was affected by tomato wilt, nematode, white fly, and fusarium wilt. The effect was moderate in each of the states affected; the yield loss

was estimated to be 15 to 25percentage The use of resistant cultivars, soil treatment, cultural management, crop rotation and agrochemicals were the few control strategies implemented by farmers.

Table 5.3: Pest and Disease Infestations on Fruits and Vegetables

Crops	Agricultural Zone	Pests/Disease	Severity	Estimated Yield loss (%)	Estimated hectares affected	Management
Plantain	South-South					
	Akwa Ibom	Black sigatoka	Light	5	1000	Use of improved cultivars
	South-West					
	Lagos	Monkey	Light	8		
Onions	North-West					
	Sokoto	Aphids	Moderate	20	10000	Agrochemical spraying
Vegetable	South-South					
	Akwa Ibom	Cochlicella	Moderate	10	1100	Hand picking
Melon	North-Central					
	Taraba	Caterpillar	Light	4	60	
	South-South					
	Delta	Fall army worm	Moderate	12		
Tomato	South-West					
	Ekiti	Tomato wilt	Moderate	15	3	Use of resistant varieties
		Nematode	Moderate	15	3	Soil treatment
		White fly	Moderate	15	3.5	Use of insecticides
	Osun	Fusarium wilt	Moderate	22		Use of agro-chemicals
		Nematodes	Moderate	22		Use of agro-chemicals
	Oyo	Tomato wilt	Moderate	25	100	Use of improved varieties, cultural control and crop rotation

Pest and Disease Infestations on Tree Crops

On Table 5.4, reports of pest and disease infestation on cashew, cocoa, citrus, and mango in seven (7) states are presented. In Kwara State, cashew plants were affected by leaf locusts, while in Oyo State, mangoes were impacted by dieback disease. The effect of the dieback attack was intermediate in intensity and was expected to produce a 20% yield loss, leaf locust was severe and was forecasted to have a 40% yield drop. There was poor knowledge of how to manage cashew infestation among farmers but for mango, the farmers used insecticides and planted pest resistant varieties. According to reports from three (3) States (Kwara, Akwa Ibom and Osun) showed that cocoa was impacted by mealy bugs, capsid bugs, black pods, cocoa swelling virus, and pod borer. The pod borer disease incidences were severe. The effects of all the attacks could lead to yield loss that could be more than 35%.

Some 1810 hectares of cocoa plantations in Kwara and Akwa Ibom states were severely infected by mealy bugs, capsid bugs, black pod, meanwhile, cocoa swollen shoots virus was moderate, with an estimated output drop of nearly 20%. Agrochemicals and fungicides were applied by farmers to manage the situation.
Citrus was reportedly affected by fruit flies and plant locusts in Kwara and Oyo states. The fruit flies attacks were expected to cause a 20% yield loss from 1000 hectares of citrus crop in Oyo State. Locust infestations were not really severe. Insecticide applications and integrated pest management were the control mechanisms used by farmers.

Table 5.4: Pest and Disease Infestations on Tree Crops

Crops	Agricultural Zone	Pests/Disease	-Severity	Estimated Yield loss (%)	Estimated hectares affected	Management
Cashew	North-Central					
	Kwara	Leaf locust	Heavy	40	1.5	
Cocoa	North-Central					
	Kwara	Mealy bugs	Moderate	15	10	Application of agrochemicals
	South-South					
	Akwa Ibom	Capsid bugs	Moderate	20	1800	Use of fungicides
		Mealy bugs	Moderate	20	1800	Use of fungicides
		Black pod	Moderate	20	1800	Use of fungicides
		Cocoa swollen shoots virus	Moderate	20	1800	Use of fungicides
	South-West					
	Osun	Pod borer	Heavy	36		Use of agro-chemicals
Citrus	North-Central					
	Kwara	Plant locust	Light	8	18	Integrated pest management practices
	South-West					
	Oyo	Fruit flies	Moderate	20	1000	Application of insecticides
Mango	South-West					
	Oyo	Die back	Moderate	20	1000	Application of insecticides and use of resistant varieties

6.0 USE OF IMPROVED FARM INPUTS

Farm inputs are essential for farm production. Agricultural inputs often include improved seeds, seedlings, cuttings, agrochemicals, fertilizer and farm implements. These inputs are critical to the success of crop production and inevitably, farm production and productivity.

Seeds and Seedlings Procured and Distributed - States and Zones

Table 6.1 shows the seeds and seedlings procured and distributed by states. Some States in the North-Central zone (Benue and Taraba) as well as the FCT procured and distributed seeds, cuttings and seedlings in 2022. Seeds distributed included rice, cowpea, soybean, groundnut and tomatoes, while the cuttings distributed were cassava, sugarcane and sweet potato. Similarly, the seedlings distributed were oil palm, mango, citrus, guava, coconut and African mango (ogbono soup seed tree). The seeds, cuttings and seedlings procured and distributed were adequate although the prices were quite on the high for many of the farmers in Benue and Taraba states as well as the FCT. The major source of seeds, cuttings and seedlings in Benue and FCT was the federal government. However, in Taraba, the state government was the major source of certified seeds and cuttings.

In the North-East zone, only certified seeds were procured and distributed. There was procurement and distribution of rice, cowpea and millet in Yobe State. The state government and non-governmental organizations were the main sources. The seeds provided were adequate and affordable.

Certified seeds were mainly procured and distributed in the North-West (Jigawa, Kebbi, Katsina, Kano and Sokoto states). There was no procurement of cuttings and seedlings. Jigawa State procured and distributed rice and millet while Kano State distributed rice, wheat and tomatoes seeds. Maize, groundnut, millet, sorghum and cowpea were distributed by the Katsina State Government. Similarly, Kebbi State Government distributed millet, maize and sorghum, whereas Sokoto State distributed rice, wheat and tomatoes. The seeds procured and distributed were adequate and affordable. State governments were the main sources of seeds procured and distributed.

Table 6.1 also shows the seeds, cuttings and seedlings procured and distributed in the South-East zone. Abia State procured and distributed rice seeds, cassava cuttings, coconut and citrus seedlings. Anambra State procured and distributed only seedlings (coconut, African mango, bitter kola, guava, soursop, breadfruit and sweet orange). Ebonyi procured and distributed rice seeds, cassava cuttings, and oil palm and citrus seedlings. Also, Imo state procured and distributed maize seeds, cassava cuttings, citrus and coconut seedlings. From the table, majority of the inputs procured in the South-East zone were provided by the state governments The quantity was adequate and the prices were affordable.

In the South-South zone, five (5) states (Akwa Ibom, Bayelsa, Cross River, Edo and Rivers) procured and distributed certified seeds, seedlings and cuttings. Most of the seeds and cuttings were sourced from the state and federal government and were adequate and affordable in most cases except in Akwa- Ibom State where the seeds, cuttings and seedlings were inadequate and expensive.

The seeds, seedlings and cuttings procured and distributed in the South-West zone included maize, rice, cassava, cashew and cocoa. Most of these inputs were provided by the state government except in Ekiti State which sourced the seeds from the federal government. The inputs were adequate and affordable in most of the states in the zone.

Table 6.1: Seeds and Seedlings Procured and Distributed by States and Zones

State	Seed Input Category	Crops	Quantity Procured (MT)	Quantity Distributed (MT)	Adequacy	Affordability	Source
North-Central							
Benue	Certified Seed	Rice	17,220	17,220	Yes	No	FG
		Maize	10,208	10,208	Yes	No	
		Cowpea	1,500	1,500	Yes	No	
		Soybeans	5,500	5,500	Yes	No	
		Groundnut	13.5	13.5	Yes	No	
		Tomatoes	0.2	0.2	Yes	No	
		Watermelon	0.2	0.2	Yes	No	
	Cuttings	Cassava	150	150	Yes	No	
		Sugarcane	-	-	Yes	No	
		Sweet potatoes	37.5	37.5	Yes	No	
	Seedlings	Oil palm	5,500	5,500	Yes	No	
		Mango	4500	4500	Yes	No	
		Citrus	6000	6000	Yes	No	
		Guava	0.5	0.5	Yes	No	
		Coconut	2,500	2,500	Yes	No	
		African Mango(Irvinja gabonensis)	2.0	2.0	Yes	No	
FCT	Certified Seed	Rice	0.2	0.2	Yes	No	Others
		Maize	3	3	Yes	No	
	Cuttings	Cassava	5	5	Yes	No	
Taraba	Certified Seed	PBR Cowpea			Yes	Yes	State Govt/ Others
		Rice			Yes	Yes	State Govt
	Cuttings	Cassava			Yes	Yes	State Govt
North-East							
Yobe	Certified Seed	Rice	7	7	Yes	Yes	State/NGO
		Cowpea	4	4	Yes	Yes	
		Millet	8	8	Yes	Yes	
North-West							
Jigawa	Certified Seed	Rice	12.0	6.15			State Govt
		Millet	12.3	8.0			State Govt
Kano	Certified Seed	Rice	430	430	Yes	Yes	State Govt
		Wheat	90	90	Yes	Yes	State Govt
		Tomato	2	2	Yes	Yes	State Govt
Katsina	Certified Seed	Maize	2000	2,000	Yes	Yes	State Govt
		Groundnut			Yes	Yes	"
		Millet			Yes	Yes	"
		Sorghum			Yes	Yes	"
		Cowpea					State Govt
Kebbi		Millet	3	3.0	Yes	Yes	State

	Certified Seed	Maize	0.3	0.3	Yes	Yes	
		Sorghum	0.1	0.1	Yes	Yes	
Sokoto	Certified Seed	Rice	16000	16,000	Yes	Yes	State Govt
		Wheat			Yes	Yes	"
		Tomato					"
South-East							
Abia	Certified Seeds	Rice	0.55	0.55	Yes	Yes	State Govt
	Cuttings	Cassava	27510	27,510 bundles	Yes	Yes	"
	Seedlings	Coconut	2000	2000	Yes	Yes	Others
		Citrus	1500	1500	Yes	Yes	Others
Anambra	Seedlings	Coconut	18,580	18,580			FG
		African Mango	977	977			
		Bitter kola	545	545			
		Guava	1,409	1,409			
		Soursop	1,510	1,510			
		Bread fruit	140	140			
		Sweet Orange	832	832			
Ebonyi	Certified seed	Rice	12.0	12.0	Yes		FG
	Cuttings	Cassava	276000 bundles	276000 bundles	Yes		State Govt
	Seedlings	Oil palm	500000	500000	Yes	Yes	State Govt
		Citrus	200000	200000	Yes	Yes	State Govt
Imo	Certified seed	Maize	2	2	Yes	Yes	State Govt/ Others
	Cuttings	Okro	0.004	0.004	Yes	Yes	State Govt
		Cassava	3,873		Yes	Yes	State Govt
	Seedlings	Citrus	200	200	Yes	Yes	State Govt
		Coconut	120	120	Yes	Yes	State Govt
South-South							
Akwa Ibom	Certified seeds	Maize	19	19	No	Yes	FG
		Rice	42.2	42.2	Yes	Yes	FG and State Govt
	Cuttings	Cassava	85000 bundles	85000 bundles	No	No	State Govt and NGOs
	Seeds	Yam	7500	1500	No	No	FG
		Okra	0.4 MT		No	No	State Govt
	Seedlings	Oil Palm	200000	200000	No	No	State Govt
Bayelsa	Certified Seed	Rice	2.80	2.80	Yes	Yes	State Govt
		Maize					FG/Others
		Vegetables					
	Cuttings	Cassava	7.27	7.27	Yes	Yes	State Govt

Cross River	Certified Seeds	Maize	0.10	0.1	Yes	Yes	
	Cuttings	Cassava	200 bundles	200 bundles	Yes	Yes	
	Seedlings	Oil palm	500	500	Yes		
Edo	Certified Seeds	Maize	1.260	1.081kg			
		Water melon	5 cans	5 cans			
		Cucumber	5 cans	5 cans			
		Celosia	0.002	0.0015kg			
		Okra	0.03	0.0025			
		Pepper	0.148	0.148			
		Tomatoes	0.016	0.0160			
	Cuttings	Cassava stem	720 bundles	40,000 bundle			
		Plantain/Banana	30,000	14,405			
	Seedlings	Budded sweet orange	50	22			
		Budded grape	40	13			
		Lemon	35	16			
		Guava	20	14			
		Grafted mangoes	15	10			
		Shaddock	30	15			
		Soursop	30	21			
		Budded tangelo	30	22			
		Avocado	20	20			
		Coconut	46	44			
Rivers	Cuttings	Cassava	74750	74,750 bundles			FG/State
South-West							
Ekiti	Certified Seed	Rice	0.05	0.05	Yes	Yes	FG
Ogun	Certified Seed	Maize	7.0	2.14	Yes	Yes	State Govt
	Seedlings	Cocoa	20,000		Yes	Yes	"
		Cashew	10,000		Yes	Yes	"
Osun	Cuttings	Cassava	25,0000	25,000 bundles	Yes	Yes	State Govt

Improved Seed Requirement -States and Zones

Table 6.2 shows the improved seed in total estimated requirement for states in the 6 agroecological zones. All the states in the North-Central zone planted improved seeds. The improved seeds reported for the 7 states in this zone were maize, millet, sugarcane, sorghum, soybean, rice and cassava. Farmers' awareness of the different seed varieties in this zone was ranked from 5 to10 percent..

In the North-East zone only two states (Adamawa and Borno) reported the cultivation of improved seeds. The improved seed required in these states were maize, millet, soybean, sorghum and rice. Farmers indicated their interest to plant different varieties of these seeds. The awareness level for improved seeds was ranked from 55 to90 percent.

Farmers in five states in the North-West zone (Jigawa, Kano, Katsina, Kebbi and Zamfara) indicated their interest to cultivate improved seeds in 2022. The improved seeds included (maize, millet, soyabean, sorghum, rice, wheat and tomatoes). The level of farmer's awareness of the different varieties of improved seeds was ranked from 5 to95 percent. The lowest level of awareness (5%) was reported by farmers in Zamfara State on two sorghum varieties (Sam sorgh 49 and Sam sorgh 45).

In the South-East zone, farmers in all the states indicated their interest to cultivate improved seeds in 2022. Major improved seeds required were (maize, cassava and rice). A high level of awareness was reported by farmers for the different seed varieties except for three (3) cassava varieties ('game changer', 'farmer pride' and 'poundable cassava' - local names). Farmers were aware of these improved varieties was ranked as 5, 5 and 10 percent respectively in Ebonyi State.

Five states in the South-South zone (Akwa-Ibom, Bayelsa, Cross-river, Edo and Rivers) indicated interest to cultivate improved seed requirement for the farming season. Avocado-pear, cassava, cocoyam, maize, plantain, rice and soybean were the major seeds required. The level of farmer's awareness for these seed varieties was ranked from 25 to 100 percent. Edo State farmers had the least awareness level at25% on a soybean variety (TGX 4142).

Farmers in three states in the South-West zone (Ekiti, Ogun and Ondo) indicated interest to cultivate improved seeds in 2022. The major seeds required for this year's planting season were maize, cassava, rice and soybean. Farmers in these states had a high level of awareness for most of the improved seed varieties except for Sammaz 66 variety whose level of awareness was 25% in Ondo State.

Table 6.2: Improved Seed Requirement (States and Zones)

State	Crops	Specify Variety name	Level of farmers' awareness in your state about the variety (%)	Total Estimated requirement for the state (MT)
North-Central				
Benue	Maize	DENT MAIZE	80	5.0
		OBA SUPER 1		
		OBA SUPER 2		
	Rice	FARO 44	>80	
	Cassava	TMS3057	>40	
		TME419		
		VIT A		
	Soybean	TGX1468-4E	>40	
	Millet	TRAD.VAR	100	
	Sorghum	TRAD.VAR	100	
FCT	Maize	HYBRID	90	8.5
	Rice	FARO 44	80	50
	Cassava	TMS 419	84	250
		TMS 305072	84	250
	Soybean	SAMSORG II	60	10
		TGX		
	Sorghum	KSV	40	30
Kwara	Maize	SWAM 1	40	0.03
	Rice	FARO 44	70	0.07
	Soybean	TGX 1448-2E	70	0.02
Nassarawa	Maize	SAMMAZ 17	80	5
		DK 15	50	2
	Rice	FARO 44	90	15
		FARO 60	70	16
		FARO 52	70	5
	Cassava	TMS-50572	80	1500000 bundles
		TMS 419	80	700000 bundles
		PRO-VIT A	50	1500000 bundles
	Sugarcane	TOS-1904	70	1MT
		14-48	70	1MT
Niger	Maize	SAMMAZ 52	70	52.5MT
	Rice	FARO 44	85	47.2MT
		FARO 52		54.6MT
		FARO 53	45	47.2MT
	Cassava	TME 419	60	47.25MT
	Soybean	TEX 1448.25	75	42.00MT
	Millet	X. BORNO	35	42MT
	Sorghum	SAM SORG 47	55	84MT
Plateau	Maize	SAMMAZ 51	70	35 MT
	Rice	SEEDCO 719	80	50 MT
		FARO 44	90	60 MT

		FARO 51	85	40 MT
	Cassava	TMS 419	70	30,000 bundles
		TMS 30572	83	50,000 MT
Taraba	Maize	SAMMAZ 15	50	
		SAMMAZ 50	50	
	Rice	FARO 44	82	
		FARO 52	82	
		CP	60	
	Cassava	TME 419	68	
		VIT A	20	
	Soybean	TGX 1448-2E	70	
		TGX 1445	70	
		TGX 148-1D	70	
		SOSCAT C88	19	
	Sorghum	SAM SORG 47	24	
		SAM SORG 48	24	
		SAM SORG 49	24	
North-East				
Adamawa	Maize	SAMMAZ 50	80	10,000kg
	Rice	FARO 44		6000kg
		FARO 52		
	Soybean	TGX-1448-2E	60	1000kg
		TGX-1835-10E	70	1000kg
	Sorghum	KSV-8	80	2000kg
		SK-4912	90	2000kg
Borno	Maize	EFARO-44VDT-STR-W	75	
		COMP-3DT		
		SAMMAZ-24		
	Rice	FARO-44	70	
		FARO-52		
		NERICA		
	Soybean	TGX-1448	55	
		TGX -1951		
		SOSAT	60	
	Millet	SUPER SOSAT		
		JIRANI		
	Sorghum	SAMSORG-40	65	
		SAMSORG-41		
		SAMSORG-45		
North-West				
Jigawa	Maize	EVDT	80	
	Rice	FARO 44	75	
		FARO 65	70	
	Soybean	TGS14482	10	
	Millet	SUPER SOSET	85	

	Sorghum	ZABO	60	
Kano	Rice	FARO 44		5,000
	Wheat	REYNA		500
	Tomato	CHIBLI		10
Katsina	Maize	SAMMAZ 15	70	500,000
		SAMMAZ 17	80	500,000
	Rice	FARO 44	65	150,000
		FARO 59	70	150,000
		FARO 60		200,000
	Millet	SUPER SOSAT	90	400,000
	Sorghum	SAMSORG	72	250,000
		ICSV 400	85	200,000
Kebbi	Maize	SAMMAZ 15	55	150
		SAMMAZ 40	50	90
		SAMMAZ 27	45	50
	Rice	FARO 44	95	400
		FARO 52	67	300
		FARO 61	50	240
	Millet	SUPER SOSAT 45	85	200
		SUPER SOSAT 47	85	180
	Sorghum	SAM SORG 45	50	250
		SAM SORG 47	40	150
Zamfara	Maize	PRO VIT A	20	
	Rice	FARO 46	30	
		FARO 44	50	
	Soybean	TGX 1448-2E	80	
	Millet	SUPER SOSAT	80	
	Sorghum	SAMSORG 49	5	
		SAMSORG 45	5	
South-East				
Abia	Maize	OBA SUPER 6	85	1.0
	Rice	FARO 44	60	1.0
	Cassava	TME 419	85	2.0
Anambra	Maize	OBA SUPER 6 PRO VITA	80	
		OBA SUPER 2	90	
	Rice	FARO 44	90	
		FARO 52		
	Cassava	TME 419	90	
		TMS 0581		
Ebonyi	Maize	OBA SUPER 2	100	50
		OBA SUPER 6	60	40
	Rice	FARO 44	100	100
		FARO 52	100	100

		FARO 57	100	80
	Cassava	POUNDABLE	10	100000 bundles
		GAME CHANGER	5	100000 bundles
		FARMER PRIDE	5	100000 bundles
Imo	Maize	SAMMAZ 52	60	8
		OBA SUPER 6	40	6
	Rice	FARO 44	80	10
		FARO 52	40	
	Cassava	TME 419	80	5
		TME 593	20	2.5
South-South				
Akwa Ibom	Maize	SWANI-Y-SR	80	14005
	Rice	FARO 44	85	65
		FARO 56	85	65
	Cassava	TME 419	70	11,854,800 bundles
		TME 693	95	30,145,200 bundles
	Cocoyam			100000
	Plantain			20000 suckers
	Avocado pear (dwarf)			5 MT
Bayelsa	Maize	OBA SUPER 6	70	10,000
		SEEDCO 615	90	
		SEDCO 719		105
	Rice	FARO 44		
	Cassava	TME 419	100	240,000
Cross River	Maize	OBA 98	55	0.5
		SAMMAZ 50	70	1.5
	Rice	FARO 75	75	2.5
		FARO 52	70	1.5
	Cassava	TME 419	85	1500 bundles
		VITAMIN A	85	1500 bundles
		TMS 01/1368	90	2000 bundles
Edo	Maize	LNTP AND	85%	70.5MT
		SAMMAZ 52		
	Rice	FARO – 44	92%	80MT
	Cassava	TME 419	92%	7,000,000 BUNDLES
	Soybean	TGX 4142	25%	27MT
Rivers	Maize	OBA 98	70	
	Rice	FARO 44852	65	
		TMS 419	85	224,250
	Cassava	PROVITAMIN A	70	
South-West				
Ekiti	Maize	DMR-WHITE	98	200

		DMR-YELLOW	98	200
	Rice	FARO 44	95	150
		FARO 58	95	250
		FARO 59	95	250
		FARO 60	95	150
	Cassava	TMS 419	100	1000
		TME 5018	100	1000
	Soybean	TGX536-02D	86	6
		M-98	86	6
Ogun	Maize	OBA SUPER 4	100	1
		OBA SUPER 6	100	1
		SWAN	100	4
Ondo	Maize	SUWAM I	70	50
		SAMMAZ 66	25	20
		DMR-ESR	60	40
	Rice	FARO 44	90	100
		FARO 52	35	60
	Cassava	WHITE LION	90	100 bundles
		TME	80	60,000

Agrochemicals Procured and Distributed -States and Zones

Table 6.3 revealed the agrochemicals procured and distributed by states and zones. In the North-Central zone, only Benue State procured and distributed pesticides (6,500 litres) and herbicides (11,500 litres). According to the farmers, the quantity distributed was adequate although not affordable.

Gombe State was the only state that procured and distributed agrochemicals in the North-East zone in 2022. It procured 3,600 litres of insecticides and 3,600 litres of herbicides, although the farmers could state categorically about the adequacy and the affordability of the agrochemical distributed by the state government. and affordability of these agro-chemicals.

In the North-West zone, three states (Jigawa, Kano and Katsina) procured and distributed agrochemicals. The agro-chemicals procured and distributed were reported by the farmers to be adequate and affordable. Most farmers got their agrochemicals from state government distribution.

In the South-East zone, only Ebonyi State procured and distributed agro-chemicals. The quantity of pesticides distributed was 300,000 litres while 150,000 litres of herbicides distributed. Farmers reported that the quantity distributed was adequate and affordable. Farmers in the state got their agrochemical supply mainly the state government.

Akwa Ibom was the only state that procured and distributed agrochemicals in the South-South. It procured 800 litres of pesticides and 5,050 litres of herbicides though it was reported by farmers that the quantity procured distributed was inadequate and unaffordable. Most farmers procured their agrochemicals in 2022 mainly from the state government supplies.

In the South-West zone, only two states (Ekiti and Ogun) procured and distributed herbicides, pesticides, insecticides, fungicides and growth enhancers. Most of the farmers in Ogun State procured these inputs mainly from the state government supplies, whereas in Ekiti State, the federal government was the primary supplier of the agro-chemicals and the supplies were reported by farmers to be adequate and affordable.

Table 6.3: Agrochemicals Procured and Distributed (States and Zones)

State	Agrochemical Class	Quantity Procured (Litres)	Quantity Distributed (Litres)	Adequacy	Affordability	Sources
North-Central						
Benue	Pesticide	6,500	6,500	Yes	No	Others
	Herbicide	11,500	11,500	Yes	No	Others
North-East						
Gombe	Insecticides	3,600	3,600			
	Herbicides	3,600	3,600			
North-West						
Jigawa	Herbicides	1,800	1,500	Yes	Yes	State Govt
	Pesticides	1,200	900	Yes	Yes	State Govt
Kano	Pre-emergence Herbicides	4,350	4,350	Yes	Yes	State Govt
	Post-emergence Herbicide	2,175	2,175	Yes	Yes	State Govt
Katsina	Insecticides	1,500	1,500	Yes	Yes	State Govt
South-East						
Ebonyi	Pesticides	300000	300000			
	Herbicides	150000	150000	Yes	Yes	State Govt
South-South						
Akwa Ibom	Pesticides	2800	2800	No	No	FG and State Govt
	Herbicides	5050	5050	No	No	FG and State Govt
South-West						
Ekiti	Herbicides	6533	6533	Yes	Yes	FG
	Pesticides	2613	2613			
	Growth Enhancer	5226	5226			
Ogun	Herbicides	924	128	Yes	Yes	State Govt
	Insecticides	535	48	Yes	Yes	"
	Fungicides	20	0.5	Yes	Yes	"

Fertilizer Situation

The data on Table 6.4 shows the overall quantity and types of fertilizer procured and distributed to farmers in the states and across all the agricultural zones of Nigeria for the year 2022. The report reveals that only 18 states were able to procure and distribute fertilizer to farmers. The North-West zone had the highest number of states (6) that procured and distributed fertilizer while the least was recorded 2 states each from the North Central, North-East, South East, and South West zones. Most States procured and distributed NPK and Urea fertilizers, few provided MOP and SSP varieties. Abia State procured and distributed the highest number of NPK at 135,200 and Urea at 67,850MT; Cross River distributed the least quantity of NPK 2MT and Urea 2MT in 2022. The state governments and some NGOs were the major sources from which farmers obtain fertilizer in 2022.

In the North-Central zone, Benue and Taraba were the only states that procured and distributed fertilizers in 2022. The types of fertilizer procured were NKP and Urea. Taraba State procured and distributed was 30MT for both NPK and Urea while Benue State bought and distributed 3,500 MT of NKP and 000 MT of Urea.

Borno and Gombe were the only states in the North-East zone that procured and distributed fertilizer to farmers. In these two states, NPK was the only fertilizer procured and distributed majorly by the state government.

The fertilizer situation in North-West zone showed that Jigawa, Kaduna, Kano, Katsina, Kebbi and Sokoto states (except Zamfara) procured and distributed fertilizer to farmers. The fertilizer distributed was majorly NPK, Urea and SSP. Kebbi State has the highest quality (NPK 490, Urea 3,000 and SSP 100MT) of fertilizer procured and distributed while Katsina recorded the least figure.

Table 6.4 also indicate that the quantity and type of fertilizer procured and distributed by the states in the South-East zone were NPK and Urea. Abia and Ebonyi were the only states that procured and distributed fertilizer to the farmers in 2022. Abia procured and distributed (NPK 135,200 and Urea 68,750MT) while of Ebonyi was 1470 MT of Urea.

Data from the South-South zone showed that Akwa Ibom, Bayelsa, Cross River, and Delta states procured and distributed fertilizer. The fertilizer procured were NPK, and Urea. Bayelsa State procured and distributed the highest number of (NPK 5800 and Urea 4000)fertilizer; Cross River had the least procurement.

In the South-West zone, Ekiti and Lagos states were the only states that procured and distributed fertilizer in the zone in 2022. The types of fertilizer procured were NKP and Urea. The quantity procured and distributed by Ekiti State was 30MT of NPK and 15MT of Urea while Lagos procured and distributed 1MT of Urea.

Table 6.4 Fertilizer Situation (States and Zones)

State	Fertilizer Type	Quantity Procured (MT)	Quantity Distributed	Source
North-Central				
Benue	NPK	3500	3,500	Others
	Urea	2000	2,000	
Taraba	NPK	30	30	State Govt
	Urea	30	30	
North-East				
Borno	NPK	200	200	State Govt/UNDP
Gombe	NPK	6,000	4,000	State Govt
North-West				
Jigawa	Urea	750	60	State Govt
Kaduna	NPK	433	433	
Kano	NPK	1290	1,290	State Govt
	Urea	645	645	State Govt
Katsina	NPK	95	95	FG
Kebbi	NPK	2,490	2490	State Govt
	Urea	3000	3000	
	SSP	2100	2100	
Sokoto	NPK	2000	2000	
	Urea	2000	2000	
South-East				
Abia	NPK	135200	135,200	FADAMA
	Urea	67850	67,850	FADAMA
Ebonyi	NPK	1470	1470	State Govt
South-South				
Akwa Ibom	NPK	25	25	Others
	Urea	5	5	Others
Bayelsa	NPK	5,800	5,800	FG
	Urea	4,000	4,000	
Cross Rivers	NPK	2	2	
	Urea	2	2	
Delta	NPK	225	225	
	Urea	180	180	
	MOP	10	10	
South-West				
Ekiti	NPK	30	30	Others
	Urea	15	15	Others
Lagos	NPK	1	1	FG

Farm Equipment Procured and Distributed - States and Zones

The overall quantity and types of farm equipment procured and distributed to farmers in Nigeria in 2022 are shown on Table 6.5. Farm equipment procurement and distribution was moderate in 13 states (Kwara, Plateau, Borno, Kaduna, Kano, Kebbi, Abia, Anambra, Enugu, Akwa Ibom, Bayelsa, Ekiti and Lagos). The North-West and South-East zones had the highest number of states (6) that procured and distributed farm equipment while Borno State was the only state in North-East Zone that bought and distributed farm equipment to farmers in 2022. Most of the States procured and distributed tractors, tractor equipment units, agro-processing equipment, combined harvesters and work bulls. Borno State procured and distributed the highest number of tractors (880) while the least (1) tractor was recorded in Akwa Ibom State.

Out of the 8 states in the North Central zone, Kwara and Plateau were the only states that procured and distributed farm equipment. Kwara State procured and distributed 54 tractors 1 (one) work bull and 164 different types of agro processing equipment. Plateau State on the other hand procured and distributed 348 tractors,3 combined harvesters and 164 work bulls.

Borno State procured and distributed 880 tractors made up of different types 1,200 of three different types of tractor implements and 600 agro processing equipment(millers).

In the North-West zone Kaduna, Kano and Kebbi states procured and distributed tractors, tractor implements, work bulls and agro processing equipment. Kebbi State was the only state in the zone that procured tractor (100 pieces), meanwhile, Kaduna State procured the highest number of different work bulls (60,500); there was no record for Katsina State. Also, Kebbi and Kaduna procured and distributed 150 and 7464 different types of tractor implements respectively.

Farm implement situation in South-East Zone showed that Abia, Anambra and Enugu states procured and distributed tractors, tractor implements and agro-processing equipment. Abia, Anambra and Enugu procured and distributed 39, 35 and 30 different types of agro-processing equipment respectively. However, Enugu was the only state in the zone that procured and distributed different types of tractors (36 pieces).

Akwa Ibom and Bayelsa states were the only states in the South-South zone that procured and distributed different types of farm equipment which includes tractors, tractor implements and agro-processing equipment. Akwa Ibom procured only one tractor while Bayelsa procured and distributed different types of tractors (10 pieces), tractor implements (9 different types) and 8 different types of agro-processing implements. which were given to beneficiaries.

Table 6.5 further revealed that only Ekiti and Lagos states in the South-West zone that procured and distributed farm equipment. Ekiti state procured and distributed different types of tractors (6 pieces), tractor implements (1,306) and 230 different types of agro-processing equipment. Lagos on the other hand procured and distributed 14 different types of tractors and 40 tractor implements.

Table 6.5: Farm Equipment Procured and distributed (States and Zones)

State	Equipment	Equipment Name	Quantity Procured	Quantity Distributed	Adequacy Yes/No	Number of Beneficiaries
North-Central						
Kwara	Tractor Implements	Sprayer	54	54	No	54
	Work Bulls	Storage Bins	1	1	Yes	30
	Agro processing equipment	Miller	15	15	Yes	200
		Presser	63	63	Yes	160
		Grinder	16	16	Yes	160
		Dryer	16	16	Yes	160
		Polisher	50	4	Yes	400
Plateau	Combine harvester		3	3	Yes	3 Zones
	Tractor	New Holland	3	3	Yes	
		Me 375	131	131	Yes	
		LOND Power	87	87	Yes	
		LOND Power	48	48	Yes	
		Global 7810	79	79	Yes	
	Work Bulls	Work bulls	1082	1082	Yes	
		Bull Plough	541	541	Yes	
		Bull Ridger	541	541	Yes	
North-East						
Borno	Tractor	Farmtrac-80	270	270	Yes	
		Farmtrac-70	270	270	Yes	
		Farmtrac-60	270	270	Yes	
		YTO-80	270	270	Yes	
	Tractor Implements	Plough	100	27	Yes	
		Harrow	100	27	Yes	
		Planter	1000	27	Yes	
	Agro Processing Unit	Miller	600	10		
North-West						
Kaduna	Tractor Implements	Plough	2488			
		Harrow	2488			
		Ridger	2488			
		Sprayer	3500			
	Work Bulls	Work bulls	20,500			
		Bull plough	20,500			
		Bull Harrow	20,500`			
Kano		Miller	8	8	Yes	640
		Mixer	20	20	Yes	1600

	Agro-processing equipment	Dryer	10	10	Yes	800
		De-stoner	10	10	Yes	800
		Parboiler	10	10	Yes	800
		Polisher	10	10	Yes	800
Kebbi	Tractor	John/Deer 5065E	100	100	Yes	
	Tractor Implements	Harrow	50	50	Yes	
		Ridger	100	100	Yes	
	Work Bulls	Bull Plough	1000	1000		
		Bull ridger	1000	1000		
South-East						
Abia	Tractor	SWARGJ	3	3	Yes	2000
	Agro-processing equipment	Scale	16	14	Yes	14
		Grinder	20	20		
		Dryer	1	1		1000
		Destoner	1	1		
		Parboiled	1	1		
Anambra	Tractor Implements	Plough	10	10		10
		Harrow	12	9	Yes	9
		Ridger	9	8	Yes	8
		Planter	8	8	No	7
		Sprayer	150	150	Yes	80
	Agro-Processing	Miller	20	18	Yes	
		Scale	15	13	No	
		Parboiler	2	2	Yes	
Enugu	Tractor	New Holland	2	2	Yes	
		Power tiller	34	34	Yes	
	Agro-processing equipment	Destoner	30	30		
South-South						
Akwa Ibom	Tractor	John Deere	1	1	Yes	186
Bayelsa	Tractor	SWARAZ 75HP	5	5		
		Bob Tractor SL1004	5	5		
	Tractor Implements	Plough	4	4		
		Harrow	4	4		
		Ridger	1	1		
	Agro-processing equipment	Miller	2	2		
		Scale	2	2		
		Parboiler	2	2		
		Polisher	2	2		
		Pumping machine	2	2		

South-West						
Ekiti	Tractor	Power Tillers	6	6	Yes	700
	Tractor Implements	Sprayer	1306	1306		
	Agro-processing equipment	Water Pump	230	230		
Lagos	Tractor	Origin 804	9	9	Yes	
		Origin 704	1	1	Yes	
		MF 275	3	3	Yes	
		MF268	1	1	Yes	
	Tractor implements	Plough	10	10	Yes	
		Harrow	8	8	Yes	
		Sprayer	22	22	Yes	22

7.0 AGRICULTURAL MECHANIZATION

Agricultural mechanization refers to the application of farm power to appropriate tools, implements and machines with the view to reduce drudgery, promote precision and timeliness and efficiency of utilization of the equipment in farming activities and reduce losses at different stages. Mechanization is an essential agricultural system with the potential to transform rural families' livelihoods by facilitating increased output of higher-value products. I Improved agricultural practices for smallholder farmers enable access to input supply chains and food production system integration. They help farmers to make more income, renew their business opportunities and value to all their activities. Moreover, agricultural mechanization in its broadest sense can accelerate the achievement of national food security and improve significantly post-harvest, processing and marketing activities and functions as well as inspire policies that will enable efficient, effective and environmental friendly agri-businesses.

7.1 Tractor Availability and Functionality

North-Central

Tractors were not considerably available in the North Central zone in 2022. The information from Table 7.1 shows that Benue State recorded 50 functional tractors owned by the government while in the private sector only FCT had 26 and Benue had 12 tractors in 2022. There was no significant increase in the number of tractors (government or private) in this in 2022 from what obtained in 2021. Plateau state recorded 245 government tractors for the year 2021 but no information was provided about the tractors for the year 2022.

Table 7.1: Government and Private Tractors in the North Central Zone

State	Government Tractors						Private Tractors					
	Functional			Non-Functional			Functional			Non-Functional		
	2021	2022	% change	2021	2022	% change	2021	2022	% change	2021	2022	% change
Benue	50	50	0					12			6	
FCT	1	1	0	1	1	0		26			5	
Kogi	2			2	4	100						
Plateau	245											
Total	53	51	-3.773	3	5	66.66		38			11	

North-East

The number of functional government tractors in the North East zone of the country was appreciable for both 2021 and 2022. Borno State recorded 88 government tractors in year 2022, showing a 60% increase from 2021 records as shown on Table 7.2 and by Figure 7.2. Yobe State recorded the least number of available government tractors. Data for Adamawa was not available as at the time of the survey, and up to when this report was put together.

The number of non-functional government tractors for the zone remained the same with inconsiderable increase from the numbers recorded in 2021. Information about private own tractors were not made available for most of the states in the zone as shown on Table 7.2, but Borno and Gombe states recorded 10 and 7 functional tractors respectively in 2022.

Table 7.2: Government and Private Tractors Available in North East Zone

State	Government Tractors						Private Tractors					
	Functional			Non-Functional			Functional			Non-Functional		
	2021	2022	% change	2021	2022	% change	2021	2022	% change	2021	2022	% change
Adamawa				25	25	0						
Bauchi	15	13	-13.33	13	23	9.524						
Borno	55	88	60					10				
Gombe	24	25	4.167	8	7	-14.28		7				
Yobe	16	5	-150	6	6	0						
Total	26	131	403.84	60	61	1.666		17				

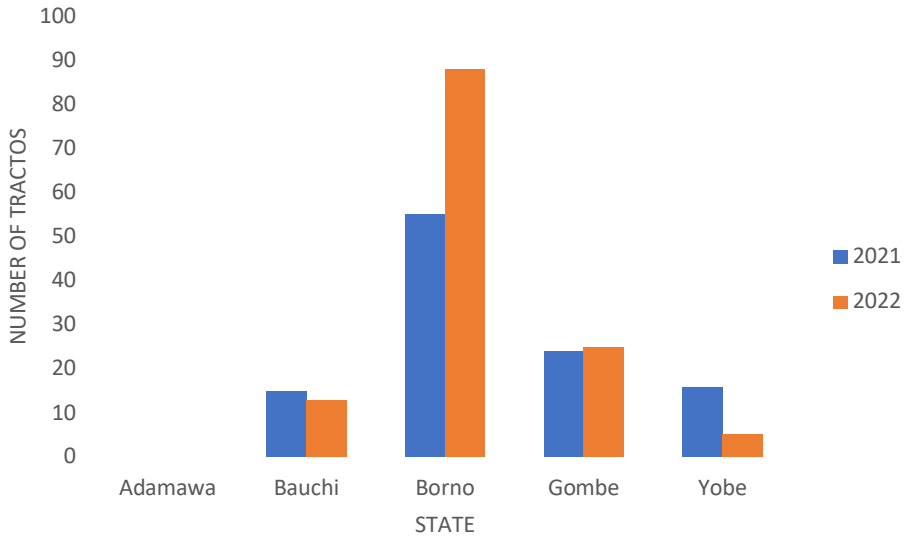


Fig. 7.2: Functional Govt. Tractors availability for North-East Zone

North-West

Jigawa State had 100 tractors and Kebbi State recorded 50 tractors as the two states in the zone with the highest number of functional tractors both in 2021 and 2022 as shown on Table 7.3 and by Figure 7.3. Zamfara State had 56 private owned tractors(the highest number of functional private tractors in the zone in 2022. Katsina recorded 60 non-functional for the year 2022. Information from the farmers in Zamfara, Sokoto and Katsina State indicated that the farmers use power tillers as substitute for tractors and draft animals because of insecurity and high cost of diesel for tractor.

Table 7.3: Government and Private Tractors Available in North West Zone

State	Government Tractors						Private Tractors					
	Functional			Non-Functional			Functional			Non-Functional		
	2021	2022	% change	2021	2022	% change	2021	2022	% change	2021	2022	% change
Jigawa	100											
Kano		3		8	5	-13.333						
Katsina	2	2	0					50			60	
Kebbi		50	0									
Sokoto	8	8	0	4	4	0		17			6	
Zamfara	1	1	0	40	40	0		56				
Total	61	64	4.918	52	49	-5.769		123			66	

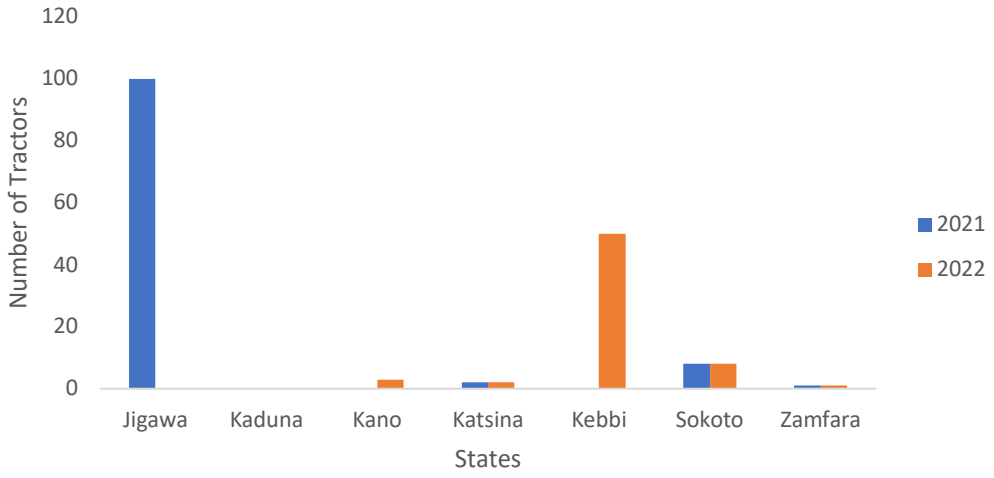


Fig. 7.3 Functional Govt. Tractor available in North West Zone

South-East

Table 7.4 and Figure 7.4 show remarkable changes concerning the availability of functional government tractors in the South-East Zone in 2022. Enugu and Ebonyi recorded the highest percentage change of the number of government tractors in 2022 (1700% and 70%) respectively; a remarkable improvement of government tractors available for farm operation in the states. Ebonyi State had 25 private functional tractors available for farm operations in 2022 in the zone. Whereas other states recorded few number, and information on private tractors were not available during and up to the time this report was compiled.

Table 7.4: Government and Private Tractors in the South East Zone

State	Government Tractors						Private Tractors					
	Functional			Non-Functional			Functional			Non-Functional		
	2021	2022	% change	2021	2022	% change	2021	2022	% change	2021	2022	% change
Abia				1	1	0						
Anambra	5	5	0	0	3							
Ebonyi	30	51	70	7	1	-85.71		25			1	
Enugu	2	36	1700		1							
Imo	2			4	6	50						
Total	39	92	135.89	12	12	0		25			1	

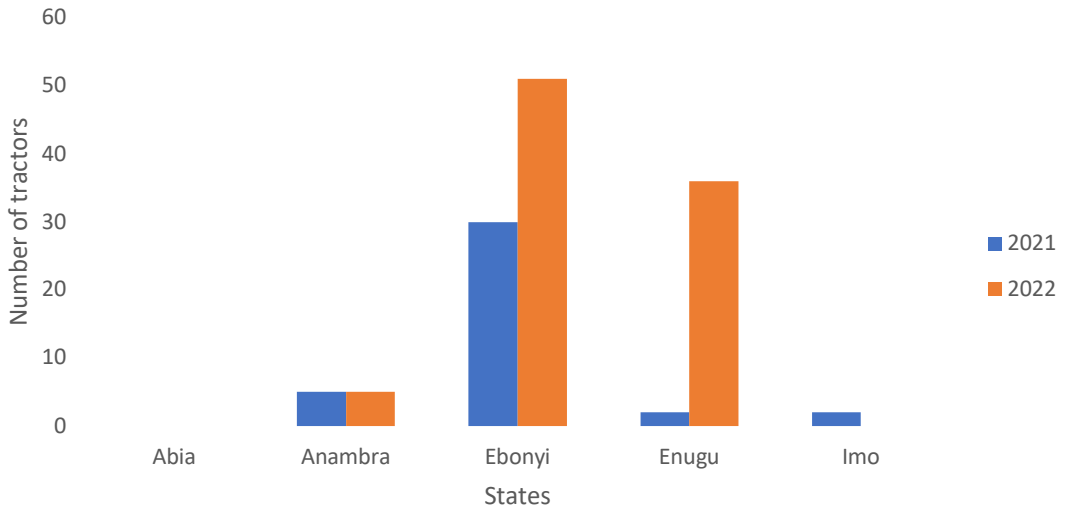


Fig. 7.4: Functional government tractors in the South-East Zone - 2022

South-South

The government tractors available for farm operations in the South-South zone had a little change for 2022 over the year 2021 as shown in Figure 7.5. Delta State recorded the highest number of 19 functional government tractors in 2022 in the zone, while only 20 tractors were recorded in 2021. Cross Rivers State recorded a total of 20 functional tractors in the private sector as shown on Table 7.5 with no information about the number of available tractors from other states in the zone.

Table 7.5: Government and Private Tractors in South South Zone

State	Government Tractors						Private Tractors					
	Functional			Non-Functional			Functional			Non-Functional		
	2021	2022	% change	2021	2022	% change	2021	2022	% change	2021	2022	% change
Akwa Ibom	14	13	-7.143	0	3							
Bayelsa	5	5	0									
Cross River	7	7	0				0	20				
Delta	20	19	-5		1							
Edo	6	6	0	0	0							
Rivers				1								
Total	52	50	-3.846	1	4			20				

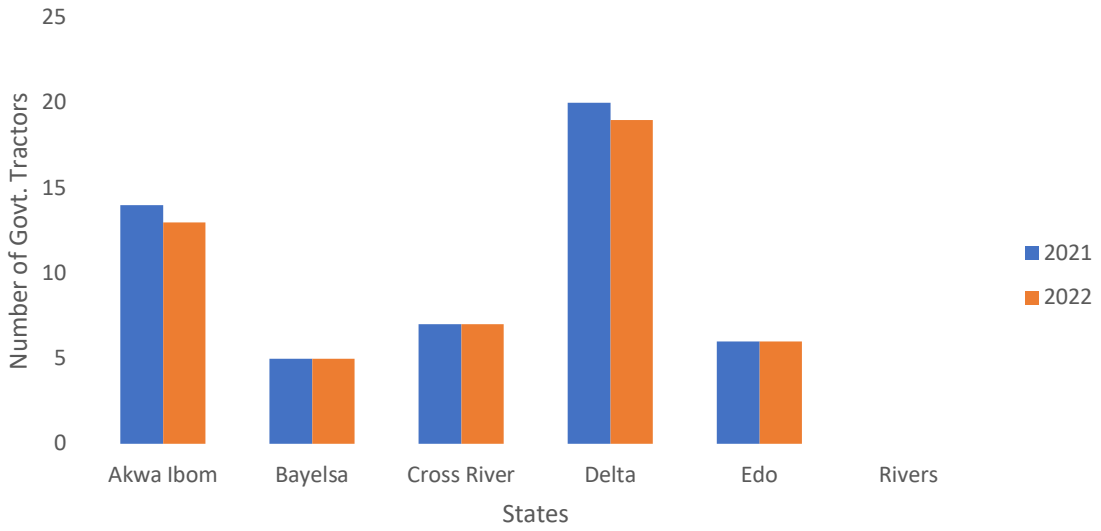


Fig. 7.5 Functional government tractors in South-South Zone

South-West

Lagos State recorded a total number of 14 functional government tractors available for 2022 farming operations, which is the highest figure in the South West zone while Ogun State had 25 non-functional tractors. Figure 7.6 shows the disparity between number of functional government tractors in 2021(4 tractors) and 2022(14 tractors) indicating that the government had procured additional tractors for farming in 2022. The number of non-functional government tractors have increased to 4, with only 3 tractors available for farm operation in the state.

Table 7.6: Government and Private Tractors in South-West Zone

State	Government Tractors						Private Tractors					
	Functional			Non-Functional			Functional			Non-Functional		
	2021	2022	% change	2021	2022	% change	2021	2022	% change	2021	2022	% change
Ekiti	1	1	0	10	10	0						
Lagos	4	14	1300	8	8	0	4					
Ogun	3	3	0	25	25	0		2				
Ondo	2	2	0	17			5					
Osun	7	3	-57.14		4							
Total	14	23	64.28	60	47	-21.66	9	2	-77.77			

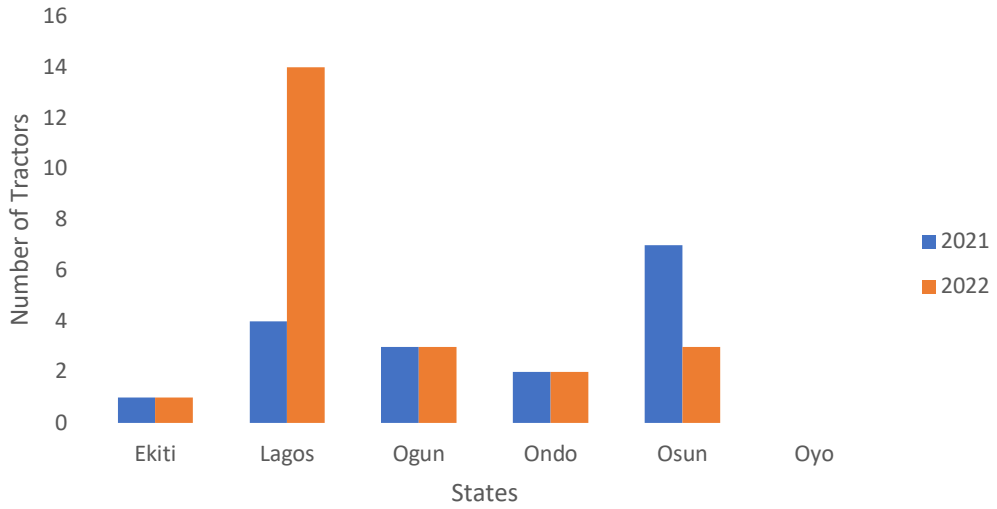


Fig. 7.6. Functional Govt. Tractors available in South West

7.2 Animal Traction

Animal traction is a system of using animals for farming operations in some part of the country and it depends on the availability and health condition of the animals. Animal traction is mostly used by peasant farmers in Northern part of Nigeria especially in the North-East and North West zones and some parts of North Central zone.

Table 7.7 shows that the number of draft animals in Kaduna State which is the highest in the country had increased from 30,838 in the year 2021 to 41,697 in 2022, showing a percentage change of 35.21%. Similarly, the number had also increased for Bauchi (142.18%), Taraba (20.63%), Borno (10%) and Kano (9.09%). Though, draft animals were also available in Sokoto, Jigawa, Kebbi, Yobe, and Zamfara, states, nevertheless, there was no information from either the ADPs or ministries of agriculture on the number of available draft animals available for farm operations. However, information gathered from the farmers, indicated that, because of insecurity and cattle rustling, farmers have opted for power tillers for land preparation and transportation of their farm produce.

Table 7.7: Animal traction situation in Nigeria

S/N	State	2021	2022	% Change
1	Borno	180	198	10
2	Taraba	572	690	20.629
3	Kaduna	30,838	41,697	35.213
4	Kano	1,320	1,440	9.090
5	Katsina		9,500	
6	Bauchi	12,800	31,000	142.18

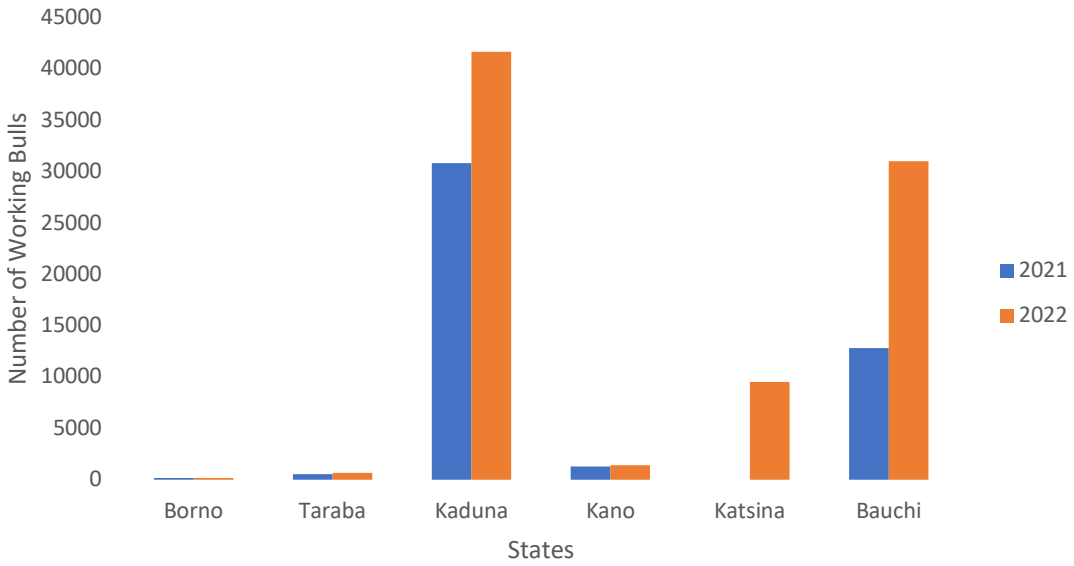


Fig 7.7 Animal traction situation in Nigeria

7.3 Cost of Tillage Operations

Tillage involves the turning over of the soil from its natural state. It is a process whereby the soil is disturbed in order to loosen the clods within the soil in readiness for planting. Common tillage operations practiced are land clearing, ploughing, harrowing and ridging. Irrespective of the types and classes of tillage carried out by farmers, tillage operations the use of certain implements and machineries. Tillage operations are mostly done with tractors that are attached with disc/mould board plough, harrower and ridger. In Nigeria, these operations are done with a combination of manual/manpower, implements and machineries. The 2022 Annual Agricultural Performance Survey (APS) recorded the cost of tillage operations per 1 hectare of land. The common tractor attached implements like ploughs, harrows and ridgers and the varying cost of land clearing methods were captured. The results are presented on Tables 7.8 – 7.13.

North-Central

Table 7.8 shows the cost of tillage operations in the North Central Zone. It was observed that Kogi, Kwara and Nasarawa states ₦62,000, ₦30,000 and ₦17,000 as the cost for land clearing with a corresponding percentage increase of 24, 20 and 13%, respectively when compared to 2021. Cost of ploughing, harrowing and ridging operations within the zone were relatively uniform in 2022 with prices ranging between ₦13,000 - ₦30,000; ₦11,000 - ₦28,000 and ₦18,900 - ₦30,000 per hectare respectively. Benue and Taraba states had the least cost of tillage operations in 2022. Percentage changes of 8.3 and 10.0% for ploughing and harrowing operations were reported in Benue State and 12.0% was reported in Taraba State for ploughing, harrowing

and ridging. The low cost of tillage operations in these two states not attributed to any special intervention. However, the type of crops produced (perennial crops), and the use of intermediate tillage operations such as power tillers were possible causes.

The zonal mean of the costs of tillage operations was 20.35, 19.72 and 18.25 for ploughing, harrowing and ridging respectively. Land clearing operation recorded a drop of 7.33 in the zonal mean. This drop could be attributed to the less use of tractors for land clearing or the more manual labourers to clear farmlands. The focus group discussions (FGD) revealed that old farmlands were mostly cultivated in 2022.Opening new farmlands usually require the use of farm tractors and that probably would have cost more.

Table 7.8: Cost of Tillage Operations in the North Central

States	Land Clearing (₦/Ha)			Ploughing (₦/Ha)			Harrowing (₦/Ha)			Ridging (₦/Ha)		
	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change
Benue	-	-	0.0	12000.0	13000.0	8.3	10000.0	11000.0	10.0	-	-	0.0
FCT	-	10000.0	0.0	22500.0	30000.0	33.3	20000.0	25000.0	25.0	25000.0	30000.0	20.0
Kogi	50000.0	62000.0	24.0	15000.0	18750.0	25.0	15000.0	18750.0	25.0	15000.0	18900.0	26.0
Kwara	25000.0	30000.0	20.0	-	-	0.0	-	-	0.0	35000.0	40000.0	14.3
Nasarawa	15000.0	17000.0	13.3	-	-	0.0	-	-	0.0	-	-	0.0
Niger	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0
Plateau	-	20000.0	0.0	25000.0	30000.0	20.0	20000.0	25000.0	25.0	20000.0	25000.0	25.0
Taraba	-	-	0.0	25000.0	28000.0	12.0	25000.0	28000.0	12.0	25000.0	28000.0	12.0
State Mean	30000.0	27800.0	-7.33	19900.0	23950.0	20.35	18000.0	21550.0	19.72	24000.0	28380.0	18.25

North-East

The cost of tillage operations in the North-East is presented on Table 7.9. Adamawa Borno and Yobe states provided data for cost of tillage operations. Ploughing operations was ₦13,000, ₦20,000 and ₦60,000 in 2021 but has increased to ₦15,000, ₦30,000 and ₦70,000 in 2022. The same pattern was observed for harrowing operations with percentage increase of 45.5, 60.0 and 32.9% in Adamawa, Borno and Yobe states respectively. Cost of ridging increased by 60% in Borno state. Borno state in the North-East zone was observed to record a percentage increase of 50 in ploughing and 60 in harrowing and ridging operations. This increase could be attributed to the resettlement of the displaced citizens into their communities and the intervention of the state governor by providing funds and inputs for farming activities. The zonal mean was 80, 23.7, 32.9 and 33.33 for land clearing, ploughing, harrowing and ridging respectively.

Table 7.9: Cost of Tillage Operations in the North East Zone

State	Land Clearing (₦/Ha)			Ploughing (₦/Ha)			Harrowing (₦/Ha)			Ridging (₦/Ha)		
	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change
Adamawa	-	-	0.0	13000.0	15000.0	15.4	11000.0	16000.0	45.5	10000.0	10000.0	0.0
Bauchi	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0
Borno	-	-	0.0	20000.0	30000.0	50.0	12500.0	20000.0	60.0	12500.0	20000.0	60.0
Gombe	-		0.0	-	-	0.0	-	-	0.0	-	-	0.0
Yobe	5000.0	9000.0	80.0	60000.0	70000.0	16.7	60000.0	75000.0	25.0	-	-	0.0
State Mean	5000.00	9000.00	80.00	31000.00	38333.33	23.66	27833.33	37000.00	32.93	11250.00	15000.00	33.33

North-West

Table 7.10 shows the cost of tillage operations in Kaduna, Katsina and Zamfara states. The three states experienced the highest cost of ploughing operations in 2022 which are ₦25,000, ₦25,000 and ₦30,000 respectively. The same was reported for harrowing and ridging which costs N25,000 in Kaduna and Katsina states. This increase could be attributed to the banditry and kidnapping activities in these states as reported by farmers during the FGD. Kano State reported a slight and consistent increase of ₦6,000, ₦12,000, ₦13,000 and ₦13,000 for land clearing, ploughing, harrowing and ridging respectively. Jigawa State was reported to have a 100% increase in ploughing and harrowing and 71.4% for ridging operations in 2022. The zonal mean increase for the cost of tillage operations between 19.0 – 27.0(farmers could afford to pay the increased price.

Table 7.10: Cost of Tillage Operations in the North West Zone

State	Land Clearing (₦/Ha)			Ploughing (₦/Ha)			Harrowing (₦/Ha)			Ridging (₦/Ha)		
	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change
Jigawa	5000.0	7000.0	40.0	10000.0	20000.0	100.0	10000.0	20000.0	100.0	7000.0	12000.0	71.4
Kaduna	20000.0	25000.0	25.0	20000.0	25000.0	25.0	20000.0	25000.0	25.0	20000.0	25000.0	25.0
Kano	5000.0	6000.0	20.0	10000.0	12000.0	20.0	10000.0	13000.0	30.0	10000.0	13000.0	30.0
Katsina	-	-	0.0	25000.0	25000.0	0.0	25000.0	25000.0	0.0	25000.0	25000.0	0.0
Kebbi	20000.0	21500.0	7.5	-	-	0.0	-	-	0.0	-	-	0.0
Sokoto	-	-	0.0	15000.0	15000.0	0.0	15000.0	17500.0	16.7	15000.0	17500.0	16.7
Zamfara	-	-	0.0	20000.0	30000.0	50.0	-	-	0.0	-	-	0.0
State Mean	12500.00	14875.00	19.00	16666.67	21166.67	27.00	16000.00	20100.00	25.63	15400.00	18500.00	20.13

South-East

The cost of tillage operations in the South-East zone is reported on Table 7.11. Ebonyi State was observed to have the highest cost of tillage operations in the zone. Ploughing operations was reported to increase from ₦35,000 to ₦50,000, harrowing operation increased from ₦30,000 to ₦50,000 and ridging operation from ₦35,000 to ₦45,000 between 2021 and 2022. This is closely followed by Abia State report of an increase of ₦26,000 from ₦15,000 in ploughing operation, ₦27,000 from N15,000 for harrowing operation and N20,000 from ₦15,000 for ridging operation. These states reported a percentage increase between 28.6 – 80.0% for tillage operations. Imo State reported a 20.0% increase in ploughing harrowing and ridging operations, while Enugu Sstate maintained the prices for 2021 except for land clearing which increased from ₦20,000 in 2021 - ₦22,000 in 2022. This increase in land clearing cost could be attributed to a likely increase in farmland for crop production. The highest zonal mean of 41.1 in harrowing operations was reported, which could mean that farmers do more harrowing operation than other tillage operations.

Table 7.11: Cost of Tillage Operations in the South-East Zone

State	Land Clearing (N/Ha)			Ploughing (N/Ha)			Harrowing (N/Ha)			Ridging (N/Ha)		
	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change
Abia	25000.0	25000.0	0.0	15000.0	26000.0	73.3	15000.0	27000.0	80.0	15000.0	20000.0	33.3
Anambra	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0
Ebonyi	-	-	0.0	35000.0	50000.0	42.9	30000.0	50000.0	66.7	35000.0	45000.0	28.6
Enugu	20000.0	22000.0	10.0	20000.0	20000.0	0.0	20000.0	20000.0	0.0	20000.0	20000.0	0.0
Imo	-	25000.0	0.0	25000.0	30000.0	20.0	25000.0	30000.0	20.0	25000.0	30000.0	20.0
Zonal Mean	22500.0	24000.0	6.7	23750.0	31500.0	32.6	22500.0	31750.0	41.1	23750.0	28750.0	21.1

South-South

Table 7.12 shows the cost of tillage operations in the South-South zone. The cost of land clearing in the South-South zone generally increased in 2022. Akwa Ibom State reported a 50% increase, followed by Cross River State with 40% increase, then Delta sand Edo states reported 25% and 10.5% increase respectively. The cost of ploughing operation in the zone from 2021 remined same in 2022 except in Bayelsa State with the report of ₦30,000 in 2021 and N45,000 in 2022. Rivers State had a uniform cost of N80,000 for all the tillage operations considered. This indicates that the cost of producing crop per hectare in Rivers State would be relatively stable.

Table 7.12: Cost of Tillage Operations in the South-South Zone

State	Land Clearing (₦/Ha)			Ploughing (₦/Ha)			Harrowing (₦/Ha)			Ridging (₦/Ha)		
	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change
Akwa Ibom	10000.0	15000.0	50.0	25000.0	25000.0	0.0	25000.0	25000.0	0.0	25000.0	25000.0	0.0
Bayelsa	20000.0	20000.0	0.0	30000.0	45000.0	50.0	-	-	0.0	-	-	0.0
Cross River	15000.0	21000.0	40.0	50000.0	52000.0	4.0	20000.0	55000.0	175.0	35000.0	86000.0	145.7
Delta	80000.0	100000.0	25.0	25000.0	25000.0	0.0	15000.0	20000.0	33.3	20000.0	20000.0	0.0
Edo	190000.0	210000.0	10.5	25000.0	25000.0	0.0	15000.0	15000.0	0.0	-	-	0.0
Rivers	80000.0	80000.0	0.0	80000.0	80000.0	0.0	80000.0	80000.0	0.0	80000.0	80000.0	0.0
State Mean	65833.3	74333.3	12.9	39166.7	42000.0	7.2	31000.0	39000.0	25.8	40000.0	52750.0	31.9

South-West

Table 7.13 shows the cost of tillage operations in the South West. No state in the South-West reported the cost of land clearing. This could be as a result of common manual clearing system or that more new farm lands were not cleared in 2022. Ekiti and Osun states reported a 25% and 66.7% increase in ploughing and harrowing operations. However, Oyo state reported a 100% increase in the cost of ploughing, harrowing and ridging operations in 2022.

Table 7.13: Cost of Tillage Operations in the South West Zone

State	Land Clearing (₦/Ha)			Ploughing (₦/Ha)			Harrowing (₦/Ha)			Ridging (₦/Ha)		
	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change
Ekiti			0.0	12000	15000.0	25.0	8000.0	10000.0	25.0	10000.0	10000.0	0.0
Lagos	-	-	0.0	20000	70000.0	250.0	20000.0	70000.0	250.0	-	-	0.0
Ogun	-	-	0.0	8000	15000.0	87.5	6000.0	11500.0	91.7	6000.0	11500.0	91.7
Ondo	-	-	0.0	12000	40000	233.3	10000.0	32000	220.0	10000.0	32000	220.0
Osun	-	-	0.0	15000.0	25000.0	66.7	15000.0	25000.0	66.7	15000.0	25000.0	66.7
Oyo	-	-	0.0	18750.0	37500.0	100.0	18750.0	37500.0	100.0	18750.0	37500.0	100.0
Zonal Mean	0.0	0.0	0.0	14291.7	33750.0	136.2	12958.3	31000.0	139.2	11950.0	23200.0	94.1
National Average	22,638.89	25,001.39	10.44	24,129.17	31,783.33	31.72	21,381.94	30,066.67	40.62	21,058.33	27,763.33	31.84

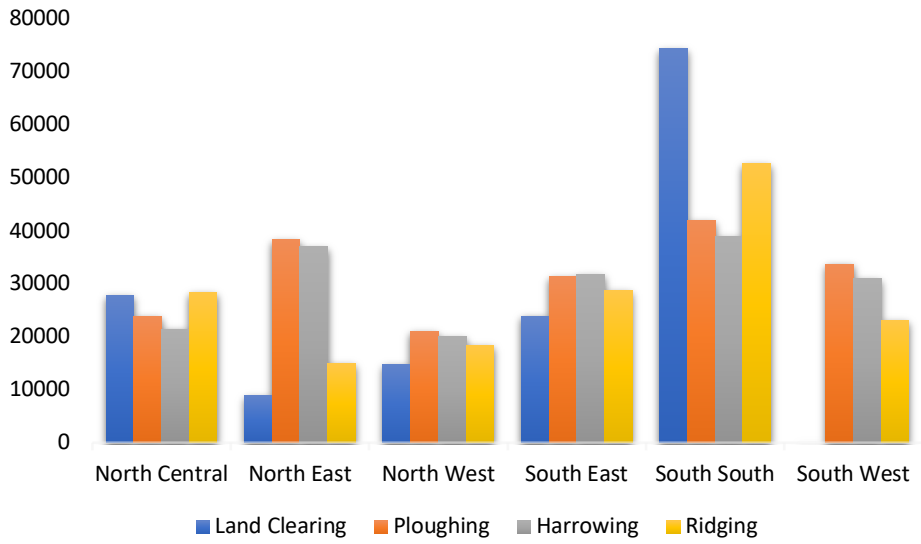


Figure 7.8: Mean Cost of Tillage Operation

Figure 7.8 shows the mean cost of tillage operations across all zones in Nigeria. South-South zone has the highest cost of tillage operations. This high cost could be attributed to the nature of soil and vegetation in the zone, which require heavy-duty tractors which are expensive to purchase and maintain. Conversely, North-West zone has the least cost of tillage operations in Nigeria. This is a result of the abundance of diffeerent tractors and animal-drawn implements in the zone.

The national cost for tillage operations increased in 2022. This increase could be greatly attributed to the cost of diesel required to operate tractor. To till a hectare of land in any part of the country, a farmer paid on the average ₦25,000, ₦31,000, ₦30,000 and ₦27,000 for land clearing, ploughing, harrowing and ridging operations respectively in 2022. The farmers complained that they could not hire these tractors due to high cost in most of the states.

7.4 Simple Farm Tools Usage

Farm tools are device or implement that are mostly held by hand to perform farm operations. Farm tools are generally manually operated which are engaged in order to ease farm operation, increase productivity and reduce drudgery. In Nigeria, agricultural production is still at the subsistence level, hence, use of farm tools is usually engaged in agricultural production. However, encouraging policies of the current political dispensation has made some farmers through the help of FGN and state governments evolve from use of farm tools to farm equipment. Farm equipment is a combination of tools that performs farm task faster than tools using less energy with better output. Common examples of farm equipment used in Nigeria are power tillers, sprayers, mills, parboiler and lots more. Agricultural Performance Survey (APS) of 2022 looked into some farm equipment across the country as available to farmers. The outlook is presented in Tables 7.14 through 7.19.

Table 7.14 presents the farm equipment used in the North-Central zone. Kwara, Plateau and Taraba states were the state within the zone that reported farm equipment usage. Kwara state purchased 54 sprayers out of 398,000 that was needed in that state. All the 54 sprayers purchased was distributed to 54 farmers through direct distribution (DD) that covers 54 farm families. Millers numbering 15 was also part of the equipment procured and distributed through direct distribution to 200 farm families. About 000 dryers and grinders were

also required in the state but 16 each was purchased and distributed to 160 farm families. Not less than 50 parboilers were as well purchased out of which 4 was distributed yet to 400 farm families. Most of the equipment procured and distributed were through direct distribution and was all reported to be available but not affordable by the farmers.

Plateau State purchased a mini combine harvester, tractors, power tillers, work bulls, bull ploughs and bull ridgers. It was reported that 9 mini combine harvesters were required within the state (3 at each senatorial zones), however, 3 numbers of 31H with 150 hp was purchased and directly distributed to the 3 senatorial zones of the state. 3 numbers of New Holland tractors and MF 375E were purchased and distributed to each of the senatorial zones. Though, 150 tractors were identified to be required in the state. Furthermore, 150 hp and 135 hp mini tractors were also reported to be purchased and directly distributed within the state. Work bulls of about 1082 was procured and distributed directly to farmers in the state after identifying that 3,000 of such equipment is needed. Some 541 bull ploughs and bull ridgers were procured and distributed to farmers. Both the bull plough and bull ridgers (1,500) were expected to be sufficient for farmers need in 2022.

Taraba State procured 8,000 PIC bags and distributed all to 800 farmers through a direct distribution method; the required 24,000 of such PIC bags.

Table 7.14: Farm Equipment Usage in the North Central Zone

Machine/Equipment (Give Specifications)			Quantity Procured (FG/State/Others)	Quantity Distributed	Mode of distribution (specify unit)	No. of Farm Families Benefited	Total Estimated requirement for the state
KWARA STATE							
Tractor Implements	Name	Rating (Hp)					
Sprayer			54	54	DD	54	398,000
Work Bulls							
Storage Bins			1	1	DD	30	1,000
Agro Processing Equipment							
Miller			15	15	DD	200	2,000
Scale							
Presser			63	63	DD	160	2,000
Grinder			16	16	DD	160	2,000
Crusher							
Mixer							
Dryer			16	16	DD	160	-
Destoner							
Parboiler			50	4	DD	400	-
Polisher							
Others (specify) 1							
PLATEAU STATE							
	Name	Rating (Hp)					
Combine harvester	3 I H Combine	150HP	3 Units	3 Units	Direct Distribution	3 Sen. Zone	9
Tractor							
	N. Holland	55 HP	3 Units	1 unit	Direct Distribution	3 Sen. Zones	17
	MF 375	75 HP	3 Units	3	"	"	150
	LOND Power	135 HP	-	87	"	"	100
	LOND Power	150 HP	-	48	"	"	60
	Global 7810	100 HP	-	79	"	"	100
Work Bulls							
Work Bulls			1082	1082	-	-	3000
Bull plough			541	541	-	-	1500
Bull Harrow							
Bull ridger			541	541	-	-	1500
TARABA STATE							
	Name	Ratings (Hp)					
Agro Processing Equipment							
PIC Bags			8,000	8,000	DD	800	24,000
Others (specify) 1							

Borno State was the only state in the North-East that reported farm equipment usage as presented on Table 7.15. Equipment ranging from tractors, tractor implements and agro-processing equipment were procured and distributed among the farmers within the state. Two types of tractors were procured 3 numbers of Famtrac with varying hp of 60, 70 and 80 hp and 1 YTO tractor of 80 hp. 270 units of each of these tractors were procured and distributed to all the Local Government Areas (LGAs) in the state. Tractor implements like ploughers, harrowers and planters were as well procured and distributed. About 100 units of ploughs and harrows was purchased, 27 units has so far been disbursed to farmers in some LGAs. The required number of ploughers and harrowers for the state was 1,200 and 400 respectively. Another 1,000 units of planters was procured and 27 units distributed to farmers in LGA. More so, 600 millers were procured, 10 was distributed. The state actually required 600 units.

Table 7.15: Farm Equipment Usage in the North-East Zone

Machine/Equipment (Give Specifications)			Quantity Procured (FG/State/Others)	Quantity Distributed	Mode of distribution (specify unit) *See code B Below	No. of Farm Families Benefited	Total Estimated requirement for the state
BORNO STATE							
	Name	Rating (Hp)					
Tractor							
	Farmtrac	80	270	270	LGA	-	300
	Farmtrac	70	270	270	LGA	-	200
	Farmtrac	60	270	270	LGA	-	200
	YTO	80	270	270	LGA	-	500
Tractor Implements							
Plough			100	27	LGA	-	1200
Harrow			100	27	LGA	-	400
Ridger			-	-	-	-	-
Planter			1000	27	LGA	-	300
Sprayer							
Agro Processing Equipment							
Miller			600	10	LGA	-	600

Table 7.16 displays farm equipment usage in North-West zone. Kaduna State procured 200 sprayers and was all distributed directly to 400 farm families. Kebbi State procured tractor implements such as ploughers, harrowers and ridgers. Some 100 unit of ploughers and ridgers was procured and distributed to 200 farm families and 50 units of harrows was also procured and distributed to 200 farm families. The number of ploughers, harrowers and ridgers required in the state was 1,000, 200 and 1,000 units respectively. Some agro-processing equipment such as threshers, reapers and power tillers were procured in Kebbi State. Some 250,000 units of these equipment were required in the state, however, 80 units of 10 hp threshers, 30 units of 5 hp reapers and 50 units of 10 hp power tillers were procured and distributed through farmers association to 3,200 farm families.

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Table 7.16: Farm Equipment Usage in the North-West Zone

Machine/Equipment (Give Specifications)			Quantity Procured (FG/State/Others)	Quantity Distributed	Mode of distribution (specify unit) *See code B Below	No. of Farm Families Benefited	Total Estimated requirement for the state
Kaduna State							
	Name	Rating (Hp)					
Sprayer			200	200	DD	400	10,000
Kebbi State							
	Name	Rating (Hp)					
Tractor							
	John Deer 5065	65	State	100		1M	1,000
Tractor Implements							
Plough			100	100		200	1,000
Harrow			50	50		200	200
Ridger			100	100		200	1,000
Agro Processing Equipment							
	Threshers	10	80	80	Farmers Assoc	3,200	250,000
	Reapers	5	30	30	Farmers Assoc	3,200	250,000
	Power tillers	10	50	50	Farmers Assoc	3,200	250,000

Farm equipment usage in south-south zone is shown on Table 7.17. Abia State purchased 2 units of 75 hp SWARAJ tractors which were distributed directly to serve 000 farm families. Agro-processing equipment purchased included a weighing scale, grinder, dryer, destoner and parboiler. Some 16 units of weighing scale were procured and 14 were distributed directly to 14 farm families, though 80 units were required. Some 20 units of grinder was procured and distributed directly to farmers. One (1) unit each of dryer, destoner and parboiler was procured and distributed to 10,000 farm families.

Enugu State procured 2 units of 75 hp New Holland tractors, 34 units of 5 hp hand tractors which were all distributed to farmers. Thirty (30) units of destoner were purchased and distributed to serve 8 farm families.

Table 7.17: Farm Equipment Usage in the South-East

Machine/Equipment (Give Specifications)			Quantity Procured (FG/State/Others)	Quantity Distributed	Mode of distribution (specify unit) *See code B Below	No. of Farm Families Benefited	Total Estimated requirement for the state
Abia State							
	Name	Rating (Hp)					
Tractor							
	SWARGJ	75 HP	2	2	DD	2000	100
Agro Processing Equipment							
Miller							
Scale			16	14	DD	14	80
Presser							
Grinder			20	20	DD	-	-
Crusher							
Mixer							
Dryer			1	1	DD	10000	17
Destoner			1	1	DD	-	-
Parboiler			1	1	DD	-	-
Polisher							
Others (specify) 1							
Enugu State							
	Name	Rating (Hp)					
Combine harvester							
Tractor							
	New Holland	75 hp	2	2		-	-
	Hand Tractor	75hp	34	34		-	-
Agro Processing Equipment							
Destoner			30	30	-	8	

Akwa Ibom (as seen on Table 7.18) procured 1 unit of 60 hp John Deere tractor through federal government and was distributed to farmers. use. Though, 186 units of tractors were required in the state. Bayelsa State also purchased tractors for its farmers. Five (5) units of 12 hp each of BOB tractor CL1004 and 2-wheel tractor were procured and were all directly distributed to farmers in the state. More so, 334 units of sprayers were directly distributed to 334 farm families. Some 1,166 units of pumps were distributed to 1,166 farm families. Total number of sprayers and pumps required in the state were 5,000 and 3,000 units respectively.

Table 7.18: Farm Equipment Usage in the South-South

Machine/Equipment (Give Specifications)			Quantity Procured (FG/State/Others)	Quantity Distributed	Mode of distribution (specify unit) *See code B Below	No. of Farm Families Benefited	Total Estimated requirement for the state
Akwa Ibom State							
	Name	Rating (Hp)					
Tractor							
	John Deere	60	1(FG)	1			186
Bayelsa State							
	Name	Ratings (Hp)					
Tractor							
	Two wheel tractor	74	5	5	DD		-
	BOB Tractor CL 1004	12	5	5	DD		-
Sprayer			2334	2334	DD	2334	5000
Agro Processing Equipment							
Pumps			1166	1166	DD	1166	3000
Others (specify) 1							

Table 7.19 reports farm equipment usage in South-West zone. Lagos State purchased farm equipment such as tractors, ploughers, harrowers, sprayers, millers, destoners, smoking kiln and safety gadgets; distributed to the agrarian local governments (Epe, Ikorodu and Badagry). Different brands of tractors were procured by the state government. Nine (9) units of 80 hp Origin 804 and 1 unit of 80 hp Origin 704 were procured and distributed. Another tractor brand procured was 3 units of 75 hp MF 275 and 1 unit of 63 hp MF 268.The variation in the tractor brands and unit purchased could be attributed to the type of soils in these LGAs. Some 10 units of ploughers, 8 units of harrowers a 1 unit of sprayer were purchased and distributed to farmers. Agro-processing equipment procured and distributed were 100 units of millers for 100 farm families, 30 units of destoners for 30 farm families, 50 units of smoking kiln for 50 farm families and 300 units of safety gadget for 300 farm families through direct distribution.

Table 7.19: Farm Equipment Usage in the South-West

Machine/Equipment (Give Specifications)			Quantity Procured (FG/State/Others)	Quantity Distributed	Mode of distribution (specify unit) *See code B Below	No. of Farm Families Benefited	Total Estimated requirement for the state
Lagos State							
	Name	Rating (Hp)					
Tractor							
	Origin 804	80Hp	ST (9)	9	Epe, Ikorodu & Badagry		-
	Origin 704	80Hp	ST (1)	1	Epe, Ikorodu & Badagry		-
	MF 275	72Hp	ST (3)	3	Epe, Ikorodu & Badagry		-
	MF 268	63Hp	ST (1)	1	Epe, Ikorodu & Badagry		-
Tractor Implements							
Plough			10	10	Epe, Ikorodu & Badagry		
Harrow			8	8	Epe, Ikorodu & Badagry		-
Ridger							
Planter							
Sprayer			1	1	Epe, Ikorodu & Badagry		-
Agro Processing Equipment							
Miller							
Scale			100	100	DD	100	500
Destoner			30	30	DD	30	100
Parboiler							
Polisher							
Smoking Kiln			50	50	DD	100	200
Safety Gadget			300	300	DD	150	500
Drums			150	150	DD	40	250
Others (specify) 1							

Only 9 states reported farm equipment usage in the country. Most of the equipment were procured by state governments. From focus group discussion , it was observed that were well acquainted with varying farm equipment and willing to adopt them. However, most of this farm equipment were generally available but mostly not affordable. It was also observed that farmers face the challenge of inadequate farm implements.

8.0 POSTHARVEST LOSSES

Post-harvest loss is the loss or damage that occurs from the stage of harvesting up to the stage of consumption. Post-harvest loss affects the quality as well as the quantity of agricultural produce. Post-harvest loss is incurred because of several factors which include method of harvesting, handling operation such as drying, processing and transportation, lack of appropriate storage facility. Post-harvest loss has significant nutritional, health and financial impact for both farmers and consumers. It is estimated that about one third of food produced globally is loss or wasted, representing a loss of 1.3 billion tons of food per year. Nigeria records 50% post-harvest loss annually. In order to attain food sustainability, maintain quality and quantity of agricultural produce there is the need to give urgent attention to this aspect. Agricultural post-harvest loss could be classified into crop, and livestock loss.

8.1 Crop Postharvest Loss

Table 8.1 presents the crop post-harvest loss in North-Central zone in 2022. Crop loss was reported for maize, cowpea, potatoes, tomatoes, melon, groundnut, vegetables, and sesame seed. The loss was caused by pest or diseases, poor drying, flood, insecurity and drought. The loss occurred at various stages which include growing, harvest, storage and transportation mostly on the farm, home and at the market. The estimated loss incurred was between 7 to 60%. Federal Capital Territory (FCT) recorded the highest estimated crop loss of 60% on cowpea, while Taraba State recorded the lowest estimated crop loss between 7 to 11% (on sesame and tomatoes). The loss could be reduced through proper harvest and storage practice, pest and disease control, flood management, provision of processing facilities and modern farming technique. There was no data for Benue, Kogi and Niger states.

Table 8.1: Crop post-harvest loss in North-Central Zone

State	Crop with significant losses this year	Commonest loss type	Commonest stage of loss	Commonest place of occurrence	Estimated crop loss in %	Suggestion/ Way Forward
FCT	Cowpea	Pest/Disease	Storage	Home	60	Hermetic storage
Kwara	Maize	Drying, flood, theft	Drying	At home	30	Crib for drying.
	Potato	Disease/erosion	Growth	At home	30	Pest/disease control and erosion management practice.
	Tomato	Pest/disease	Fruiting	Farm market	40	Making it to paste
Nasarawa	Melon	Drought	Pod	Farm	50	Use of drought tolerant variety
	Maize	Drought	Seed formation	Farm	20	Use of drought tolerant variety
	Groundnut	Drought	Growth	Farm	20	Use of drought tolerant variety.
Plateau	Vegetables	Rotting	After harvest	At home	30	Cold store and establishment of processing plants.
Taraba	Tomato	Pest/disease, mechanical, theft	Storage	Harvesting, drying, transport	7	Use of modern technique in harvesting, drying and storage.
	Sesame	Pest/disease, theft	Harvesting, drying,	Drying	11	Use of modern technique in harvesting and drying.

Table 8.2 shows the crop post-harvest loss in North-East zone. Crops loss was reported for maize, rice, cowpea, sesame and sorghum. The loss was caused by pest or diseases, mechanical damage, poor drying, and theft. The loss occurred at various stages which include harvesting, storage and processing usually on the farm and at the market. The estimated loss incurred was between 5 to 30%. Adamawa State was had the highest estimated crop loss between 20 to 30% on maize, rice and cowpea, while Gombe State recorded the lowest estimated crop loss between 5 to 23% on rice, sesame and sorghum. The loss could be curtailed by proper

harvest and storage practice, pest and disease control, provision of processing facilities and responsive security at the farm. There was no data for Borno and Yobe States on harvest loss in 2022.

Table 8.2: Crop post-harvest loss in North-East zone

State	Crop with significant losses this year	Commonest loss type	Commonest stage of loss	Commonest place of occurrence	Estimated crop loss in %	Suggestion/ Way Forward
Adamawa	Maize	Pest/disease, mechanical damage	Harvesting, storage	Harvesting, drying	25	Proper harvesting, drying and storage practices.
	Rice	Pest/disease, theft	Harvesting, processing, storage	Harvesting, drying	20	Proper harvesting, drying and storage practices.
	Cowpea	Pest/disease	storage	drying	30	Hermetic storage
Bauchi	Rice	Pest/disease	Harvesting, drying, processing, storage	Harvesting, drying	20	Use of storage chemical
	Maize	Pest/disease	Harvesting, drying, processing, storage	Harvesting, drying	10	Pest/disease control measures.
	Cowpea	Pest, poor drying	Harvesting, drying, processing, storage	Harvesting, drying	15	Use of systematic insecticides
Gombe	Rice	Mechanic damage	Processing	Farm	15	Big tampoling should be used
	Sesame	Theft	Harvesting	Farm	23	Security personnel should be employed
	Sorghum	Pest	Drying	Farm	5	Use of appropriate chemical

There was no available data for the seven states in the North-West zone in 2022 (as at the time the wet season agricultural performance survey was conducted. Table 8.3 indicates crop post-harvest loss in South-East zone. Crops loss was reported for cassava, maize, rice and yam. The loss was caused by pest or diseases, mechanical damage, poor drying, and lack of processing facility. The loss occurred at various stages which include harvest, storage and processing usually on the farm and at home. The estimated loss incurred was between 25 to 80%. Ebonyi State recorded the highest estimated crop loss between 70 to 80% on yam, maize and rice while Abia Sate recorded the lowest estimated crop loss between 20 to 25% on cassava, rice, and maize. These losses could be minimized by proper harvest and storage practice as well as provision of processing facilities such as threshing and milling machines. There was no data for Anambra, Enugu, and Imo states.

Table 8.3: Crop post-harvest loss in South-East Zone

State	Crop with significant losses this year	Commonest loss type	Commonest stage of loss	Commonest place of occurrence	Estimated crop loss in %	Suggestion/ Way Forward
Abia	Cassava	Processing	Harvesting	Storage	25	Good storage and processing facilities.
	Rice	Processing	Processing	Milling	20	Good processing machine.
	Maize	Drying	Harvesting/drying	Farm/storage	25	Good drying and storage facilities.
Ebonyi	Yam	Pests/diseases	Storage	Barn	70	Store in open shelves
	Rice	Mechanical damage	Processing	In the field	80	Use threshing machines
	Maize	Pests	Storage	In warehouses	80	Use of pesticides

Table 8.4 depict crop post-harvest losses in South-South zone. Crops loss was reported for plantain, yam, cassava, maize and rice. The loss was caused by pest or diseases, mechanical damage, theft and lack of processing facility. The loss occurred during harvesting, drying, storage, processing and transportation mostly on the farm, home and at the market. The estimated loss was between 5 to 70%. Rivers State recorded the highest estimated crop loss of 70% on maize due to feliro attack just one month after harvest, while Bayelsa Sate recorded the lowest estimated crop loss between 5 to 10% on plantain and yam. These losses could be reduced by effective use of chemical during cultivation, timely processing, proper handling, treatment of seed before planting and procurement of seed from accredited dealers. There was no data for Cross River, Delta and Edo States.

Table 8.4: Crop post-harvest loss in South-South Zone

State	Crop with significant losses this year	Commonest loss type	Commonest stage of loss	Commonest place of occurrence	Estimated crop loss in %	Suggestion/ way forward
Akwa Ibom	Maize	Pest	Drying	Home	15	Effective use of pesticides.
	Cassava	Processing	Processing	Home	10	Timely processing
	Rice	Threshing	Threshing	Home	20	Use of modern technology
Bayelsa	Plantain	Mechanical damage, theft, accident	Harvesting, transport	Home, farm, market	5	Proper handling
	Yam	Pest/diseases, theft, water absorption	Harvesting, transport	Home, farm, market	10	Proper handling
Rivers	Maize	Disease affecting the cob	One month after planting	Leaf (feliro)	70	Treat seed before planting. Procure seed from accredited dealers

Table 8.5 presents crop post-harvest loss in South-West zone. Crops loss was reported for maize, rice, cassava, vegetable and tomatoes. The loss was caused by pest or diseases, mechanical damage, theft, poor drying and glut. The loss occurred during growth, harvesting, drying, storage, processing and transportation mostly on the farm, home and at the market. The estimated loss was between 20 to 70%. Lagos State recorded the highest estimated crop loss between 50 to 70% on maize, cassava and vegetable, while Oyo Sate recorded the lowest estimated crop loss between 16 to 20% on maize, cassava and tomatoes. The loss could be reduced by

good agricultural practices, netting of rice plots, training on use of processing machine, good post-harvest handling operation and value addition. There was no data for Ogun and Ondo states.

Table 8.5: Crop post-harvest loss in South-West Zone

State	Crop with significant losses this year	Commonest loss type	Commonest stage of loss	Commonest place of occurrence	Estimated crop loss in %	Suggestion/ way forward
Ekiti	Maize	Pest and disease (fall army worm)	Early stages of growth and development.	Farm	40	Application of caterpillar force
	Rice	Pest (bird attack)	Fruiting stage	Farm	50	Netting of rice plots
Lagos	Maize	Pest/disease Theft	Flowering/harvesting	Farm, home	50	Good agricultural practices
	Cassava	Pest/disease Theft	Harvesting	Farm, home	55	Good agricultural practices
	Vegetable	Mechanical damage, poor drying	Harvesting	Farm	70	Training on use of machine
Osun	Cassava	Glut	Harvesting	Market	40	More processing industries
Oyo	Tomato	Glut	Transport	Home/market	40	Value addition
	Cassava	Glut, Poor drying, mechanical damage	Harvesting, transport, processing	Farm/market	20	Good post harvest, handling and value addition
	Maize	Pest/disease, Mechanical damage	Harvesting, drying, processing	Farm, home and market	16	Good post -harvest handling

Livestock post-harvest loss is the reduction in terms of quality and quantity of livestock and its products such as milk and egg. This loss could occur due to poor management, theft, diseases or mortality. Information on Table 8.6 shows the post-harvest loss for livestock in North-Central zone. The commodities affected were milk, eggs, sheep, goat, cow, broilers and layers due to problems of transportation, storage, disease outbreak, theft and accident. The estimated post-harvest loss was between 20 to 50%. Nasarawa State recorded the highest estimated loss of 50% for broilers due to lack of timely vaccination, while sheep and cow had the least estimated loss of 20%. However, suggestions to minimize post-harvest loss in livestock include prompt vaccinations against diseases and provision of security on the farms. There was no data for Benue, Kogi, Niger, Plateau, Taraba states and the Federal Capital Territory.

Table 8.6: Livestock post-harvest loss in North-Central Zone

State	Livestock with significant losses this year	Commonest loss type	Commonest stage of loss	Estimated crop loss in %	Suggestion/ Way Forward
Kwara	Milk	Transportation	Storage, processing	40	Storage facilities
	Eggs	Theft, Accident, glut	Transport	30	Storage facilities
	Sheep	Pest, disease, theft	Transport	-	-
Nasarawa	Milk	Disease	Transportation	30	Farmers should be trained
	Eggs	Disease	Transportation	40	Prompt Vaccination
	Sheep	Disease	Farm	20	Prompt Vaccination
	Goat	Disease	Theft	30	Provision of Security personnel
	Cow	Theft	Transportation	20	Provision of security personnel
	Broiler	Disease	Maturity	50	Prompt Vaccination
	Layer	Disease	At point of lay	40	Prompt Vaccination

Table 8.7 presents the livestock post-harvest loss in the North-East zone. The commodities affected were milk, eggs, sheep, goat, cow and broilers; this occurred due to disease, breakage, theft, spoilage, transportation problem, storage, during rearing. The estimated post-harvest loss was between 5 to 35%. Gombe State recorded the least estimated loss of 5% for eggs due to theft, while Adamawa State recorded the maximum estimated loss of 20% because of breakage due to transportation problem. Tholos could be reduced by provision of good transport system, good management and deployment of security personnel. There was no data for Bauchi and Yobe states.

There was no available data from the seven states in the North-West zone as at the time the wet season Agricultural performance survey was conducted. There is need to enlighten farmers on how to properly capture data in the section.

Table 8.7: Livestock post-harvest loss in North-East Zone

State	Livestock with significant losses this year	Commonest loss type	Commonest stage of loss	Estimated crop loss in %	Suggestion/ Way Forward
Adamawa	Milk	Spoilage	transportation	25	Transport Vans
	Eggs	Breakage	transportation	35	Transport Vans
	Sheep	Disease	transportation	15	Ease of transportation
	Cow	Disease	Grazing	30	Conflict management
	Broiler	Disease	Processing	25	Provision of Refrigerators and Generators
Bauchi	Milk	Disease, theft	Transportation, storage	10	Use of milking machine
	Eggs	Disease, theft	Transportation, storage	10	Use of proper transportation
	Sheep	Disease, theft	Rearing	15	Good management
	Goat	Disease, theft	Rearing	10	Good management
Gombe	Milk	Accident	Transportation	20	Milk should be in cans
	Eggs	Theft	Harvesting	5	The area should be secure
	Sheep	Theft	During grazing	30	Security should be provided
	Goat	Rain	Rain season	15	Goats should be kept in home

Table 8.8 indicate the livestock post-harvest loss in the South-East zone. This occurred due to disease, theft, transportation problem, communal conflict and accident. The commodities affected were milk, eggs, sheep, goat, cow, broilers and layers. The estimated post-harvest loss was between 10 to 80%. Abia State recorded the least estimated loss of 10% on cow and eggs due to disease, while Ebonyi State recorded the highest estimated loss of 80% on broiler due lack of vaccination and disease outbreak. Prompt vaccination and good management practice could help reduce the loss. There was no data for Anambra and Enugu states.

Table 8.8: Livestock post-harvest loss in South-East Zone

State	Livestock with significant losses this year	Commonest loss type	Commonest stage of loss	Estimated crop loss in %	Suggestion/ way forward
Abia	Eggs	Damage	Transportation	30	Ease of transportation
	Sheep	Transportation	Rearing	25	Good management
	Goat	Transportation	Grazing	20	Good management
	Cow	Disease	Growth stage	10	Disease management
	Broiler	Pest/disease	Harvesting	15	Vaccination
	layer	Pest/harvest	Harvesting	35	Vaccination
Ebonyi	Milk	Communal conflict	Farm	50	Security
	Eggs	Accident	Transportation	60	Careful handling
	Sheep	Theft& communal conflict	Farm & home	60	Security
	Goat	Theft & communal conflict	Farm & home	60	Security
	Cow	Theft & communal conflict	Farm & home	40	Security
	Broiler	Pests& diseases	Farm	80%	Use of drugs
	layer	Pests& diseases	Farm	70%	Timely vaccination
Imo	Eggs	Glut	Marketing problem due to poor road.	30	Provision of good road.
	Sheep	Diseases	Growth stage	12	Proper vaccination
	Goat	Disease	Growth stage	16	Good management
	Cow	Disease	Growth stage	14	Good hygiene
	Broiler	High cost of input	Brooding & adult stage	45	Proper medication, alternative source of input
	Layers	High cost of input	Brooding & adult stage	38	Alternative source of input(layers)

Results on table 8.9 illustrate the livestock post-harvest loss in the South-South zone. This occurred due to disease, theft, transportation problem, and accident. The commodities affected were eggs, broilers, layers, sheep, goat and cow. The estimated post-harvest loss was between 10 to 40%. Akwa Ibom State recorded the highest estimated loss of 40% on eggs, similarly, Bayelsa State recorded the lowest estimated loss of 10% on layers due lack of vaccination and disease outbreak. The loss could be minimized by good management, prompt vaccination, proper handling practice and good transportation network. There was no data from Cross Rivers, Delta, Edo and Rivers states.

Table 8.9: Livestock post-harvest loss in South-South Zone

State	Livestock with significant losses this year	Commonest loss type	Commonest stage of loss	Estimated crop loss in %	Suggestion/way forward
Akwa Ibom	Eggs	Theft, diseases	Storage, transportation	40	Appropriate storage and good transportation system
	Sheep	Diseases	Grazing, field	24	Good management practice
	Goat	Disease	Rearing, farm	20	Proper hygiene
	Cattle	Diseases	Growth	30	Drug administration
	Broiler	Thefts, diseases	Storage, transportation	35	Timely vaccination
	layer	Theft, diseases	Storage/transportation	30	Appropriate transportation strategies
Bayelsa	Eggs	Disease, theft, accident	Harvesting, transport, storage	15	Careful handling
	Broiler	Disease, theft	Harvesting, transport, storage	20	Disease control measure and careful handling
	layer	Disease, theft	Transport, storage	10	Disease control measure and careful handling

Table 8.10 presents livestock post-harvest loss in the South-West zone. The commodities affected were eggs, broilers, layers, sheep, goat and cow. However, the estimated post-harvest loss was between 10 to 70%. This occurred due to disease, glut in the market, mortality and community conflict. Ondo State was reported to have the highest estimated loss of 70% on broilers due to disease outbreak which included Newcastle, 'gumboro', bird flu and coccidiosis; resulting to to mortality. Similarly, Ekiti State recorded the lowest estimated loss of 10% on layers due lack of vaccination and disease outbreak. In order to curtail the loss, the following measure could be taken; government should buy from producers when there is glut in the market, prompt vaccination, conflict resolution, converting egg to powder. There was no data from Osun and Oyo states.

Table 8.10: Livestock post-harvest loss in South-West Zone

State	Livestock with significant losses this year	Commonest loss type	Commonest stage of loss	Estimated crop loss in %	Suggestion/ way forward
Ekiti	Broiler	Diseses due to Newcastle, gumboro, and bird flu, coccidiosis	Early growth stage	15	Vaccination
	layer	Diseases due to Newcastle, gumboro, and bird flu, coccidiosis	At maturity	10	Vaccination
Lagos	Eggs	Glut	Point of sell	45	Government to act as off-takers
	Broiler	Disease	Early growth stage	60	Good agricultural practices
	layer	Disease	Late maturity	35	Good management
Ogun	Eggs	Egg glut	Storage transportation	28	Egg powdering
	Sheep	Disease	Rearing stage	32	Bio-security campaign
	Goat	Disease	Rearing stage	28	Adequate management
	Cow	Disease and community conflict	Rearing stage	42	Adequate management, con flict resolution and pasture management
	Broiler	Disease	Early maturity	35	Vaccination, bio-security campaign
	layer	Disease	Late maturity	38	Vaccination bio-security, campaign.
Ondo	Eggs	glut	Market	40	Government should buy from producers.
	Sheep	Disease	Rearing	20	Good management practices
	Goat	Disease	Rearing	30	Disease control mesures
	Broiler	Disease, mortality	Early stage	70	Vaccination
	layer	Disease, mortality	At the point of lay (15 weeks)	50	Vaccination

9.0 GRAIN RESERVES

Agricultural produce, especially grains can be reserved if they are not for immediate use. Silos and warehouses of varying storage capacities have been constructed across the country to serve this purpose. It is necessary to reserve agricultural produce for future use in the event of emergency and food crises. Grain reserves are managed by states and the federal government in Nigeria.

9.1 State Grain Reserves

These are grain reserves usually managed by the state ADPs and the state ministries of agriculture. Grain reserves are commonly constructed in the forms of warehouses and silos, and are often located in different local government areas.

Table 9.1 shows the grain reserves in the North-central zone, their location, storage capacity, functionality status and the type of commodity that are stored. Niger State had the highest grain reserve capacity of 85,000 metric tons while Kwara State had the least grain reserve capacity of 1750 metric tons. This low storage capacity could be due to the use of warehouses which could only accommodate smaller volume when compared to silos that could accommodate about 20,000 metric ton.

Table 9.1: Grain Reserve in North-Central Zone

S/N	Location	Installed capacity (MT)	Ownership	Status	Commodities stored
Benue State					
1.	Zakibiam	1,000	State Government	Functional	Grain
2.	Vandakia	5,000	State Government	Functional	Grain
3.	Aliege	5,000	State Government	Functional	Grain
4.	Gboko silos complex	25,000	State Government	Functional	Grain
5.	Otukpo	25,000	State Government	Functional	Grain
6.	Katsina-Ala	1,000	State Government	Functional	Grain
Kogi State					
2	Ankpa	3,000	State Government	Functional	Grain
3	Kabba	3,000	State Government	Non functional	Grain
4	Okene	3,000	State Government	Functional	Grain
5	Lokoja	3,000	State Government	Functional	Grain
6	Idah	3,000	State Government	Functional	Grain
Kwara State					
1	Ilorin	350	State Government	Functional	Grain
2	Lafiagi	350	State Government	Functional	Grain
3	Share	350	State Government	Functional	Grain
4	Omu-Aran	350	State Government	Functional	Grain
5	Kosubosu	350	State Government	Functional	Grain
6	Erin Ile	350	State Government	Functional	Grain
Nasarawa State					
1	Lafiya	600	State Government	Functional	Grain
2	Shabu	600	State Government	Functional	Grain
3	Akwanga	600	State Government	Functional	Grain
4	Keffi	600	State Government	Functional	Grain
5	Nassarawa	600	State Government	Functional	Grain
6	Agyaragu, Lafia	600	State Government	Functional	Grain
Niger State					
1	Pandogari	20,000	State Government	Functional	Grain
2	Chanchaga	20,000	State Government	Functional	Grain

3	wushishi	15,000	State Government	Functional	Grain
4	Kuitigi	20,000	State Government	Functional	Grain
5	Western by pass	10,000	State Government	Functional	Grain
Plateau					
1	Bokkos Farm Project	2 warehouses: a. 1,400 b. 500	State Government	Functional	Grain
2	Dogon Dutse PADP Hqtrs, Jos North L.G.A.	1,000	State Government	Functional	Grain
3	Riyon	500	State Government	Functional	Grain
4	Bukuru	1,000	State Government	Functional	Grain
5	Mangu	500	State Government	Functional	Grain
6	Pankshin	500	State Government	Functional	Grain
7	Kanam	1,000	State Government	Functional	Grain
8	Wase	1,000	State Government	Functional	Grain
9	Langtan North	500	State Government	Functional	Grain
10	Quan'an-pan	500	State Government	Functional	Grain
11	Mikang	500	State Government	Functional	Grain
12	Kanke	500	State Government	Functional	Grain
Taraba State					
1	Jalingo	2,000	State Government	Functional	Grain
2	Bali	2,000	State Government	Functional	Grain
3	Kormo- Gassol	5,000	State Government	Functional	Grain
4	Wukari	2,000	State Government	Functional	Grain
5	Taku	2,000	State Government	Functional	Grain
6	Donga	2,000	State Government	Functional	Grain

Results on Table 9.2 show the grain reserves in North-East zone, their location, storage capacity, functionality status and the type of commodity stored. Bauchi State had the highest grain reserve capacity of 17,000 metric tons, while Adamawa State had the least grain reserve capacity of 8,000 metric tons. Almost all the grain reserves in the zone were functional. There was no data from Yobe State.

Table 9.2: Grain Reserve in North-East Zone

S/N	Location (LGA)	Installed capacity (MT)	Ownership	Status	Commodities stored
Adamawa State					
1	Gombi	1,000	State Government	Functional	Grain
2	Yola	5,000	State Government	Functional	Grain
3	Numan	1,000	State Government	Functional	Grain
4	Ganye	1,000	State Government	Functional	Grain
Bauchi State					
1	Bauchi	4,000	State Government	Functional	Grain
2	Azare	4,000	State Government	Functional	Grain
3	Boto	4,000	State Government	Functional	Grain
4	Wailo	5,000	State Government	Functional	Grain
Borno State					
1	Manguno	5,000	State Government	Functional	Grain
2	Biu	1,000	State Government	Functional	Grain
3	Maiduguri	5,000	State Government	Functional	Grain
4	Bama	1,000	State Government	Functional	Grain
Gombe State					
1	Balanga	8,100	State Government	Non functional	Grain

Table 9.3 presents the grain reserves in North-West zone. Jigawa State had a total reserve of 15,000 metric tons, Kaduna State had 29,000 metric tons, Kano State had 22,600 metric tons, Katsina State was reported to have 17,500 metric tons, Kebbi State had 108,000 metric tons, Sokoto State had 95,000 metric tons, while Zamfara State was reported to have the highest grain reserve capacity of 183150 metric tons in 2022. The high volume of reserves could be due to the use of silo complex (one silo can accommodate about 20,000 metric tons).

Table 9.3: Grain Reserve in North-West Zone

S/N	Location (LGA)	Installed capacity (MT)	Ownership	Status	Commodities stored
Jigawa State					
1.	Aujara	1,500	State Government	Functional	Grain
2.	Rigim	1,500	State Government	Functional	Grain
3.	Gumel	1,500	State Government	Functional	Grain
4.	Mallam	1,500	State Government	Functional	Grain
5.	Madori	1,500	State Government	Functional	Grain
6.	Sada	1,500	State Government	Functional	Grain
7.	Andaza	1,500	State Government	Functional	Grain
8.	Birnin Kudu	1,500	State Government	Functional	Grain
9.	Birniwa	1,500	State Government	Functional	Grain
10.	Hadejia	1,500	State Government	Functional	Grain
Kaduna State					
1	Saminaka	5,000	State Government	Non functional	Grain
2	Giwa	5,000	State Government	Non functional	Grain
3	Zaria	5,000	State Government	Functional	Grain
4	Kafanchan	5,000	State Government	Functional	Grain
5	Birnin Gwari	5,000	State Government	Non functional	Grain
6	Kachia	1,000	State Government	Functional	Grain
7	Ikara	1,000	State Government	Functional	Grain
8	Government garden Barnawa	1,000	State Government	Functional	Grain
9	Kakuri South LGA Kaduna	1,000	State Government	Functional	Grain
Kano State					
1.	Gezawa, Gezawa LGA	2,000	State Government	Functional	Grain
2.	Kwarkiya, Minjibir LGA	2,000	State Government	Functional	Grain
3.	Tukui, Danbatta LGA	2,000	State Government	Functional	Grain
4.	Danzabuwa, Bichi LGA	2,000	State Government	Functional	Grain
5.	Tofa, Tofa LGA	2,000	State Government	Functional	Grain
6.	Getso, Gwarzo LGA	2,000	State Government	Functional	Grain
7.	Balare, Gaya LGA	2,000	State Government	Functional	Grain
8.	Lamire, Wudil LGA	2,000	State Government	Functional	Grain
9.	Tsakuwa, Dawakin Kudu, LGA	2,000	State Government	Functional	Grain
10.	Maganda Nassarawa LGA	3 warehouses @1,000; 2 warehouses @ 700	State Government	Functional	Grain
11.	Kadawa, Garun, Malam L.G.A.	4 warehouses @500.	State Government	Functional	Grain
Katsina State					
1.	Katsina LGA	2 warehouses @1,500	State Government	Functional	Grain
2.	Daura	2,000	State Government	Functional	Grain
3.	Tambu-Daura	2,000	State Government	Functional	Grain
4.	Mani	1,000	State Government	Functional	Grain
5.	Malumfashi	2,000	State Government	Functional	Grain
6.	Kankiya	1,000	State Government	Functional	Grain
7.	Kafin Soli	2,000	State Government	Functional	Grain
8.	Dutsinma	1,500	State Government	Functional	Grain
9.	Funtua	2 warehouses @1,500	State Government	Functional	Grain
Kebbi State					
1.	Tudun Wada, Birnin Kebbi.	3 warehouses @1,000	State Government	Functional	Grain

2.	G/Sara, Birnin Kebbi	3 warehouses: a) 700; b) 650; c) 650	State Government	Functional	Grain
3.	Argungu	1,000	State Government	Functional	Grain
4.	Zuru	2 warehouses@1,000	State Government	Functional	Grain
5.	Yauri	1,000	State Government	Functional	Grain
6.	Birnin Kebbi (Silos Complex)	100,000	State Government	Functional	Grain
Sokoto State					
1	Kasarawa (Silo complex)	95,000	State Government	Functional	Grain
Zamfara State					
1.	2,650 MT each in 14 LGA	37,100	State Government	Functional	Assorted grains
2.	Commodity and Marketing Board warehouses @ Gada biyu, Gidan dawa. 5 Nos 3000MT each	15,000	State Government	Functional	Assorted grains
3.	ZASCO Ware houses a). Main Depot, Zamaru b). Unguwar Gwaza, Gusau c). Coca cola store, Samaru d). 3 Stores, Samaru e). Others	 a) 5,550 b) 800 c) 1,500 d) 1,950 e) 4,800	State Government	Functional	Assorted grains
4.	Food Security Store a. 10 Store @2,000MT b. Silos, Rawayya	 a) 20,000 b) 100,000	State Government	Functional	Assorted grains

Table 9.4 presents the grain reserves situation in the South-East region of Nigeria. A total reserve of 64,130 metric tons was reserved in the zone with Imo State having the highest reserve of 36,840 metric tons while Ebonyi States was having 1,500 metric tons. These reserves were mostly for fertilizers and other Agricultural inputs such as seeds.

Table 9.4: Grain Reserve in South-East Zone

S/N	Location (LGA)	Installed capacity (MT)	Ownership	Status	Commodities stored
Abia State					
1.	Umuahia: 4 warehouses	6,000	State Government	Functional	Fertilizers
2.	Const. Crescent road, Abia, 2 warehouses.	3,000	State Government	Functional	Fertilizers
3.	Isikwuato L.G.A.	1,500	State Government	Functional	Fertilizers
4.	Ilori Ikwuano Agro Service Centre	1,500	State Government	Functional	Fertilizers
5.	Bende Road, Okwoyi Ibeku	1,500	State Government	Functional	Fertilizers
6.	Isiala Ngwa Agro Service Centre	1,500	State Government	Functional	Fertilizers
Anambra State					
1.	Awka	1,200	State Government	Functional	Fertilizers
2.	Awkuzu, Oyi LGA	2,000	State Government	Functional	Fertilizers
3.	Uli, Ihiala, LGA	360	State Government	Functional	Fertilizers
4.	Ogidi, Idemili North LGA	300	State Government	Functional	Fertilizers
5.	Abagana, Njikaoka LGA	330	State Government	Functional	Fertilizers
6.	Amawbia., Awka-South LGA	300	State Government	Functional	Fertilizers
7.	Ekwulobia, Aguta LGA	300	State Government	Functional	Fertilizers
Ebonyi State					
1	Ezzillo farm	1,500	Private	Functional	Agricultural inputs
Enugu State					
1	Igboti Etiti L.G.A.	2,000	Igboti Etiti LGA	Not available	Agricultural inputs
2	Udi L.G.A.	2,000	Udi LGA	Not available	Agricultural inputs
3	Isu-Uzo L.G.A.	2,000	Isu-Uzo LGA	Not available	Agricultural inputs
4	Ogu L.G.A.	Not available	State Govt.	Not available	Agricultural inputs
5	Nusuka L.G.A.	Not available	State Govt.	Not available	Agricultural inputs
6	Mgbolo L.G.A.	Not available	State Govt.	Not available	Agricultural inputs
Imo State					
1.	Egbu Road, Oweri	5,940	State Government	Functional	Fertilizers
2.	Egbeada, Oweri	9,900	State Government	Functional	Organic Fertilizers
3.	ADP, Oweri Zonal office	3,000	State Government	Functional	Fertilizers & Chemicals
4.	Umuelemai Agro Services Centre	1,000	State Government	Functional	Fertilizers
5.	Ihite-Ubama	1,000	State Government	Functional	Fertilizers
6.	Okigwe Urban	3000	State Government	Functional	Fertilizers
7.	Okigwe Agro Service Centre, Umubolo:	2,000	State Government	Functional	Fertilizers

8.	Ihitte-Oweri, Orlu	1,000	State Government	Functional	Fertilizers
9.	Awomema, Orlu	1,000	State Government	Functional	Fertilizers
10.	Umuaka Agro Service centre:	2,000	State Government	Functional	Fertilizers
11.	Amaigbo Agro Service Centre	1,000	State Government	Functional	Fertilizers
12.	Uguta Agro Service Centre	1,000	State Government	Functional	Fertilizers
13.	Ihiagwa Agro Service Centre: 3 warehouses	2,000	State Government	Functional	Fertilizers
14.	Obokwe, Ngor Okpala Agro Service Centre	2,000	State Government	Functional	Fertilizers
15.	Afor Oru Mbaise Agro Service Centre	1,000	State Government	Functional	Fertilizers

Table 9.5 illustrates the grain reserve situation in South-South zone. A total reserve of 44,000 metric tons was recorded in the zone. Delta State had the highest reserve of 22,050 metric tons while Edo States had the least reserved of 3,000 metric tons. These reserves were mostly used to store fertilizers, seeds and manufactured goods. The reserves were mostly in good condition. There was no data from Akwa Ibom, Bayelsa and Cross Rivers state.

Table 9.5: Grain Reserve in South-South Zone

S\N	Location (LGA)	Installed capacity (MT)	Ownership	Status	Commodities stored
Delta State					
1.	Ibusa – ADP Premises Ibusa	6,000	State Government	Non functional	Fertilizer and Seeds
2.	Oleh – Oleh Town	6,000	State Government	Non functional	Fertilizer and Seeds
3.	Agbarho – Agbarho Town	6000	State Government	Non functional	Fertilizer and Seeds
4.	DAPA Warehouse – Effurun	3,000	State Government	Needs Maintenance	Fertilizer and Seeds
5.	DAPA Warehouse-Ministry of Agric Premises, Agbor	300	State Government	Needs renovation	Fertilizer and Seeds
6.	Abraka-Agro Service Centre	150	State Government	Good condition	Fertilizer and Seeds
7.	DAPA Store-Issele Uku	150	State Government	Good condition	Fertilizer and Seeds
8.	Owanta-Agro Service Centre	150	State Government	Non functional	Fertilizer and Seeds
9.	Koko-Agro Service Centre	150	State Government	Non functional	Fertilizer and Seeds
10.	DAPA Store-Ugheli South	150	State Government	Functional	Fertilizer and Seeds
Edo State					
1.	Benin - ADP Premises	1,500	State Government	Functional	Fertilizer
2.	Irrua – ADP Premises	750	State Government	Functional	Fertilizer
3.	Auchi – ADP Premises	750	State Government	Needs renovation	Fertilizer
Rivers State					
1.	PABOD Supplies Ltd – Trans Amadi, Port Harcourt	Capacities of warehouses (area of floors) A = 5,000 B= 8,000 C=2500 D=2,000 E=1,500	Under lease to Ministry of Commerce and Industry	Functional	Manufactured consumer goods.

Table 9.6 shows the grain reserve situation in the South-West zone. A total reserve of 144,750 metric tons was recorded in the zone. Lagos State had the highest reserve of 85,000 metric tons, while Ekiti States recorded the least reserved of 3,750 metric tons. These reserves were majorly for storing fertilizers and agricultural produce; most of them were in functional.

Table 9.6: Grain Reserve in South-West Zone

S/N	Location (LGA)	Installed capacity (MT)	Ownership	Status	Grains stored
Ekiti State					
1.	Odo Ado, Ado-Ekiti	1,500	State Government	Functional	Fertilizers & Grains
2.	Odo Ado, Ado-Ekiti	1,500	State Government	Functional	Fertilizers & Grains
3.	Near Govt. House, Ado-Ekiti	750	State Government	Functional	Agrochemicals
Lagos State					
1.	Araga, Epe LGA	20,000	State Government	Functional	Paddy rice
2.	Warehouse, Temu Epe	15,000	State Government	Functional	Empty
3.	Warehouse, Odogunyan, Ikorodu LGA	20,000	State Government	Farm Produce	Farm Produce
4.	Ajara Farm Settlement, Badagry LGA	20,000	State Government	Under construction	Farm Produce
5.	Lagos State Input Supply Authority, Ojo LGA	10,000	State Government	Agricultural inputs	Agricultural inputs
Ogun State					
1.	Ajegunle	2,000	State Government	Functional	Fertilizers
2.	Asero, Abeokuta	2,000	State Government	Functional	Fertilizers
3.	Ilaro	2,000	State Government	Functional	Fertilizers
4.	Ipokia	2,000	State Government	Functional	Fertilizers
5.	Ijebu-Ode	2,000	State Government	Functional	Fertilizers
6.	Ikenne	2,000	State Government	Functional	Fertilizers
7.	Abeokuta, OGADEP	5,000	State Government	Functional	Fertilizers
8.	Ibara-Orile	3,000	State Government	Cotton	Cotton
Ondo State					
	Akure South	10,000	State Government	Functional	Grain
Osun State					
1.	Osogbo, Ilobu Road	500	State Government	Functional	Agricultural produce
2.	Oyan, Odo-Otin Local Govt.	1,000	State Government	Under construction	Agricultural produce
3.	Esa-Oke	1,500	State Government	Yet to start operation	Agricultural produce
4.	Ilesa	1,500	State Government	Yet to start operation	Agricultural produce
5.	Ile-Ife	1,500	State Government	Yet to start operation	Agricultural produce
6.	Iwo	1,500	State Government	Yet to start operation	Agricultural produce
7.	Ede	1000	State Government	Yet to start operation	Agricultural produce
8.	Ago Owu	1000	State Government	Yet to start operation	Agricultural produce
9.	Mokore	1500	State Government	Yet to start operation	Agricultural produce
Oyo State					
1.	Ofa-meta, Oyo Town	5,000	State Govt.	Functional	Grain

2.	Saki	1,000	State Govt.	Functional	Grain
3.	Ayete, Ibarapa Central L.G.A.	1,000	State Govt.	Functional	Grain
4.	Kishi	1,000	State Govt.	Functional	Grain
5.	Iseyin	1,000	State Govt.	Functional	Grain
6.	Ojongbodu	2,000	State Govt.	Functional	Grain
7.	Otamokun	2,000	State Govt.	Functional	Grain
8.	Iresaapa	2,000	State Govt.	Functional	Grain

9.3 Federal Government Grain Reserves

The federal government grain reserves are located across states. Over the years, these grain reserves have been well managed by the federal government under the watchful eyes of the state ministries of agriculture. There are 1,336,000 metric tons of grain reserves in Nigeria. Most of them were functional as at the time of the 2022 survey. However, the difficulties in mopping excess grains after harvest and monitoring the distribution and storage of these grains to each state resulted in the concession of most of the silos to some private organizations.

Table 9.7 presents grain reserves and their capacities across states. Out of the 1, 336, 000 metric tons capacity available across the country, some 686, 000 metric tons facilities were recorded in Ekiti, Cross River, Ondo, Plateau, Sokoto, Kano, Bauchi, Ogun, Kebbi, Jigawa, Kaduna, Kwara, Benue, Gombe, Oyo, Ebonyi, Akwa Ibom, Anambra State and the Federal Capital Territory were under concession to private companies. Some of the companies engaged in the concession were Agro-Universal Consortium, Matrixville Consortium, Flour Mills, Ebonyi Agro-Industries Ltd, Neon Farms Africa Consortium and Coscharis Farms. The reserve capacity was between 11, 000 to 100, 000 metric tons.

Table 9.7: Federal Government Concession Grain Reserves

S/No.	Location	State	Capacity (MT)	Remarks
				Concession Company
1.	Ado-Ekiti	Ekiti	100,000	Agro Universal Consortium
2.	Ogoja	Cross River	25,000	Agro Universal Consortium
3.	Akure	Ondo	25,000	Agro Universal Consortium
4.	Jos	Plateau	25,000	Agro Universal Consortium
5.	Sokoto	Sokoto	25,000	Agro Universal Consortium
6.	Gaya	Kano	25,000	Agro Universal Consortium
7.	Bauchi	Bauchi	25,000	Agro Universal Consortium
8.	Ikenne	Ogun	25,000	Agro Universal Consortium
9.	Kwali	FCT	100,000	Matrixville Consortium
10.	Bulasa	Kebbi	100,000	Matrixville Consortium
11.	Jahun	Jigawa	25,000	Matrixville Consortium
12.	Kaduna	Kaduna	25,000	Matrixville Consortium
13.	Lafiagi	Kwara	11,000	Matrixville Consortium
14.	Makurdi	Benue	25,000	Flour Mills
15.	Gombe	Gombe	25,000	Flour Mills
16.	Ibadan	Oyo	25,000	Flour Mills
17.	Ezillo	Ebonyi	25,000	Ebonyi Agro-Industries Ltd
18.	Uyo	Akwa Ibom	25,000	Neon Farms AfricaConsortium
19.	Igbariam	Anambra	25,000	Coscharis Farms
	Total		686,000	

Table 9.8 shows the grain reserve not on concession to private companies but were still managed by the federal government. Some states reserves were still managed by the Federal Government; they were: Zamfara, Imo, Borno, Bayelsa, Katsina, Adamawa, Osun, Nasarawa, Taraba, Kogi, Yobe, Niger, Edo and Kwara with a total capacity of 650, 000 metric tons of which individual capacity ranged between 25, 000 to 100, 000 metric tons. Most of these reserves were functional but not stocked with grains as at the time of the survey.

Table 9.8: Federal Government Non-Concession Grain Reserves

S/No.	Location	State	Capacity (MT)
1.	Gusau	Zamfara	100,000
2.	Okigwe	Imo	100,000
3.	Maiduguri	Borno	100,000
4.	Yenagoa	Bayelsa	100,000
5.	Dustima	Katsina	25,000
6.	Yola	Adamawa	25,000
7.	Ilesha	Osun	25,000
8.	Lafia	Nassarawa	25,000
9.	Jalingo	Taraba	25,000
10.	Lokoja	Kogi	25,000
11.	Damaturu	Yobe	25,000
12.	Minna	Niger	25,000
13.	Irrua	Edo	25,000
14.	Ilorin	Kwara	25,000
		Total	**650,000**

8.4 Agro-Processing Plant in Nigeria

The process of converting raw harvested agricultural products into valuable finished products, with the help of machines is called processing. Primary processing of crops includes threshing, shelling, and winnowing while the conversion of crops from their original form to another form such as into cassava flour and maize flour are secondary processing. The 2022 agricultural performance survey captured data on two major commodity groups: Crop processing and Livestock processing, their respective locations, type of commodity being processed, operating capacity and functionality status.

Table 9.9 presents the agro-processing plants available in the North-Central zone, the commodities processed include catfish, cassava, rice, yam, broilers, ground and shea nut. Operating capacity of the processing plants were between 10 to 120 metric tons, this implies that some of the processing plants are small scale. The processing plant are mostly functional, information on operating capacity of processing plant in Kwara and Plateau states and some plants in FCT were not available. Similarly, there was no data from Benue State.

Table 9.9: Agro-processing plant in North-Central Zone

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
FCT						
1.	Better life domestic centre	Gwagwalada	Private	Cassava, melon, rice	20MT	Functional
2.	Ebenyi tech	Gwagwalada	Private	Catfish	_	Functional
3.	Dennis	Gwagwalada	Private	Catfish	_	Functional
4.	Albert	Gwagwalada	private	Catfish	_	Functional
5.	Uwazie	Gwagwalada	private	Catfish	_	Functional
6.	Nkanja	Gwagwalada	Private	Catfish	_	Functional
Kogi State						
1.	ADP cassava processing	Lokoja	Government	Cassava	10MT	Non functional
2.	Rice	Lokoja	Government	Rice	90MT	Functional
3.	Rice processing	Lokoja	Private	Rice	120MT	Functional
4.	Ageva	Okene	Private	Cassava	15MT	Functional
Kwara State						
1.	Osi cassava processing centre	Ekiti kwara	Government	Cassava	_	Functional
2.	Ayeddeen	Oke-Ero	Government	Cassava	_	Non functional
3.	Ilorin	Ilorin west	Government	Cassava	_	Functional
4.	Kaima Barutin	Kaima	Private	Yam	_	Functional
5.	Lafiaji	Edu	Government	Rice	_	Functional
6.	Gwanara	Barutin	Private	Yam	_	Functional
7.	Valentine	Edu	Private	Broiler	_	Functional
8.	Yamfy	Offa	Private	Broiler	_	Functional
9.	Jamsum	Asa	Private	Catfish	_	Functional
Nasarawa State						
1.	RIPMAPP	Lafia	Government	Rice	15 MT	_
2.	KUMAZY	Keffi	Private	Rice	15MT	_
3.	UNDP	Akwanga Kokona	Partnership	Cassava	10MT	Non Functional
4.	UNDP	Akwanga/ Kokona	Partnership	Rice	15 MT	Non Functional
5.	UNDP	Akwanga Kokona	Partnership	Groundnut	10MT	Non Functional
6.	OLAM	Rukubi	Partnership	Rice	60MT	Functional
Niger State						
1.	Ejiko processing	Bosso	Private	Rice	26MT	Functional
2.	Kodo shea processing	Kodo	Private	Shea nut	10MT	Functional
3.	Rahama women processing	Kontagora	Private	Cassava	10MT	Functional
4.	Kontogora rice processin gentre	Argungun road, kontagora	Private	Rice	15MT	Functional

5.	RIPMAPP incubation centre	Bida	Private	Rice	10MT	Functional
6.	Koica	RPC	Private	Rice	18MT	Functional
Plateau State						
1.	Tim Tali	Langtang North	Private	Rice	_	Functional
2.	SWOMEN	Shendam	Private	Rice	_	Functional
3.	ECWA	Bukuru	Private	_	_	Functional
4.	Feed Mill	Plateau	Private	Poultry	__	Functional
Taraba State						
1.	Al Ganzaki rice processing center	Ardo Kola	Private	Rice	25MT	Functional
2.	Al Umma rice processing center	Jalingo	Private	Rice	20MT	Functional
3.	Fik Four processing industry	Wukari	Private	Maize	10MT	Functional
4.	Uten cassava processing center	Wukari	Private	Cassava	15MT	Functional
5.	Tita Kuru cassava processing centr	Jalingo	Private	Cassava	23MT	Functional

Table 9.10 depicts the agro-processing plants in the North-East zone. The commodities processed included rice, grain for animal feed, groundnut, animals and cattle. Operating capacity of the processing plants were between 5 to 80 metric tons, this implies that some of the processing plants are small scale. Majority of the processing plants are functional, information on processing plants in Adamawa State was not available. Yobe State had the highest number of processing plants which processed mainly grains and pods while Gombe and Borno states had the least number of processing plants.

Table 9.10: Agro-processing plant in North-East Zone

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
Bauchi State						
1.	Zungur Rice mill	Bauchi	Private	Rice	30MT	Functional
2.	Mustapha Katagum rice mill	Katagum	Private	Rice	80MT	Functional
3.	Burga farm rice processing centre	Tafawa balewa	Private	Rice	10MT	Functional
4.	Bauchi meat company	Bauchi	Government	Cattle	25MT	Functional
5.	Kainuwa Rice mill	Azare	Private	Rice	50MT	Functional
6.	Gloria farm	Shira	Private	Animal feed	40MT	Functional
Borno State						
1.	Abatoir	MMC-Borno	Government	Animals	10MT	Functional
2.	Rice processing industry	Jere-Borno	Private	Rice	24MT	Functional
3.	Z rice plant	Jere-Borno	Private	Rice	32MT	Functional
Gombe State						
1.	Potuwana	Kaltung	Government	Grain	20 MT	Functional
2.	Cham	Balanga	Private	Grain	10 MT	Functional
3.	BCGA	Gombe	Private	Groundnut	20MT	Functional
Yobe State						
1.	Seed production	Nangere	Private	Grain	20MT	Functional
2.	Potiskum Flour mill	Potiskum	Government	Maize	10MT	Functional
3.	Yobe abattoir	Damaturu	Government	Cattle	15MT	Functional
4.	Gaji makeri	Damaturu	Government	Maize	8MT	Functional
5.	Gaji makeri rice mill	Damaturu	Government	Rice	10MT	Functional
6.	Dazigau	Nangere	Government	Millet	5MT	Functional
7.	Nguru oil mill	Nguru	Government	groundnut	12MT	Functional

Table 9.11 shows the agro-processing plants in the North-West zone. The commodities processed were milk, rice, broilers, seed, tomatoes, eggs, soya bean, groundnut and cattle. Operating capacity of the processing plants were between 5 to 75 metric tons, this implies that some of the processing plants are small scale. Most of the processing plants were functional, information on processing plants in Katsina State was not available. Jigawa State had the highest number of processing plants which processed mainly rice, while Sokoto States had the least number of rice processing plants.

Table 9.11: Agro-processing plant in North-West Zone

S/N	Name of Processing Centre	Location	Ownership	Crop/livestock processed	Operating Capacity	Functionality
Jigawa State						
1.	3 brother Rice mill	Hadeja	Private	Rice	8MT	Functional
2.	Jigawa rice processing mill	Taura	Government	Rice	10MT	Functional
3.	Majestic	Birnin Kudu	Private	Milk	5MT	Functional
4.	Malam Alu	Birnin Kudu	Private	Rice	20MT	Functional
5.	Danmodi food processing limited	Hadejia	Private	Rice	10MT	Yes to start
6.	Jigawa Rice Mill	Gujungu	Government	Rice	15MT	Functional
7.	Dangote rice processing plant	Kafin hausa	Private	Rice	75MT	Functional
8.	Jigawa seed processing center	Birnin Kudu	Government	Seed	10MT	Functional
9.	Sunkad agro-enterprise	Dutse	Private	Poultry	20MT	Functional
10.	Time and chance farm	Guri	Private	Fish	30MT	Functional
11.	Klaysaf	Hadejia	Private	Rice	25MT	Functional
12.	Iya Faranshi	Hadejia	Private	Rice	10MT	Functional
13.	Azman	Hadejia	Private	Rice	40MT	Under construction
Kaduna State						
1.	Tomato processing	Ikara	Private	Tomatoes	40MT	Functional
2.	OLAM	Chikun	Private	Hatchery Feed mill	1.6M chicks 360,000MT	Functional
3.	FALKE Oil	Igabi	Private	Soya bean oil	N/A	Functional
Kano State						
1.	Bunkure rice processing	Bunkure	Private	Rice	20 MT	Functional
2.	Kura rice processingkura	Kura	Private	Rice	32MT	Functional
3.	Ciromawa	G/Maku	Private	Rice	25MT	Functional
4.	Gezawa	Gezawa	Private	Rice	15MT	Functional
5.	Sharada groundnut millers cluster	Municipal	Private	Groundnut	23 MT	Functional
6.	Kura	Kura	Private	Rice	36MT	Functional
7.	Kwanar dawaki	Dawakin Kudu	Private	Rice	25MT	Functional
Kebbi State						
1.	Labana	Birnin Kebbi	Private	Rice	16MT	Functional
2.	Waccot	Argungu	Private	Rice	50MT	Functional
3.	Lolo Rice	Dandi	Private	Rice	8MT	Functional

4.	Sajo Mills	Birnin Kebbi	Private	Rice	5MT	Functional
Sokoto State						
1.	Kalanbaina rice mill	Sokoto	Private	Rice	20MT	Functional
2.	Ayarabshi rice mill	Sokoto	Private	Rice	15MT	Functional
Zamfara State						
1.	Gusau central abbatoir	GUSAU	Private	Cattle	8MT	Functional
2.	Taula Rice processing	Gusau	Private	Rice	10 MT	Functional
3.	Dangote Rice mill	Gusau	Private	Rice	50MT	Functional
4.	Yargeda Rice plant	Gusau	Private	Rice	12MT	Functional

Table 9.12 shows the agro-processing plants available in the South-East zone. The commodities processed were rice, cassava, catfish, and broilers. Operating capacity of the processing plants was between 2 to 50 metric tons, this implies that some of the processing plants were small scale. Almost all the processing plants were functional, Anambra State had the highest number of small-scale processing plants which processed mainly rice and cassava, while Imo State had the least number of processing plants which majorly processed cassava.

Table 9.12: Agro-processing plant in South-East Zone

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
Abia State						
1.	Nkwebi	Ohafia	Private	Cassava	5MT	Functional
2.	Ofeme mil	Umuahia North	Private	Rice	5 MT	Functional
3.	Able crystal	Umuahia North	Private	Catfish	15MT	Functional
4.	Izy garri p	Isiala Ngwa	Private	Cassava	8MT	Functional
Anambra State						
1.	Udoka Rice Mill	Omor Ayemelum	Private	Rice	9MT	Functional
2.	Nnedimma Rice Mill	Omor Ayemelum	Private	Rice	13MT	Functional
3.	Apex rice mill	Omor Ayemelum	Private	Rice	10MT	Functional
4.	Rice dealer mill	Achalla, Awka-North	Private	Rice	6MT	Functional
5.	Umuchuku rice mill	Otuocha Anambra East	Private	Rice	9MT	Functional
6.	Ezinwanne rice mill	Ubahuekwem, Ihialla	Private	Rice	9MT	Functional
7.	Njikoamaka Cassava mill	Mgbakwu, Awka-North	Private	Cassava	4MT	Functional
8.	Somkene cassava mill	Igbariam, Anambra Easr	Private	Cassava	2MT	Functional
9.	Ofuobi cassava Mill	Umeri, Anambra East	Private	Cassava	2MT	Functional
10.	Nneamaka cassava	Umueze-Anam Anambra West	Private	Cassava	2MT	Functional
11.	Covenant cassava	Ochuche, Ogbaru	Private	Cassava	4MT	Functional
12.	Otuoma cassava mill	Uli, Ihialla	Private	Cassava	4MT	Functional
13.	Maghakwe cassava mill	Isulo, Orumba-South	Private	Cassava	4MT	Functional
14.	Umunze cassava mill	Umunze Orumba south	Private	Cassava	2MT	Functional
15.	YMCF cassava Mill	Okija,Ihialla	Private	Cassava	2MT	Functional
16.	Multipurpose	Mgbakwu	Private	Rice	9MT	Functional
17.	Agro-Rice	Agu-Awka	Private	Rice	13MT	Functional

18.	Cisalaris	Igbariam	Private	Rice	10MT	Functional
19.	Lynden	Ayamelum	Private	Rice	6MT	Functional
20.	Wisdom	Agbu-Awka	Private	Rice	9MT	Functional
21.	Joetech	Omor	Private	Rice	9MT	Functional
Ebonyi State						
1.	Abakaliki rice mill	Abakaliki	Partnership	Rice	20MT	Functional
2.	Ikwo rice mill	Ikwo	Private	Rice	10MT	Functional
3.	Iboko rice mill	Izzi	Partnership	Rice	15MT	Functional
4.	Edda rice mill	Afikpo south	Private	Rice	30MT	Functional
5.	Uburu rice mill	Ohaozara	Partnership	Rice	8MT	Functional
6.	Akaeze rice mill	Ivo	Private	Rice	12MT	Functional
7.	Nbo rice mill	Ohaukwu	Private	Rice	20MT	Functional
8.	Ezulo rice mill	Ishielu	Private	Rice	25MT	Functional
9.	Iboko ultra-modern rice mill	Ikwo	Private	Rice	10MT	Functional
10.	Igboji utra modern rice mill	Ikwo	Private	Rice	23MT	Functional
11.	Oso Edda utra modern rice mill	Apikpo south	Private	Rice	10MT	Functional
Enugu State						
1.	Tara Agro	Uzo Uwani	Private	Rice	43MT	Functional
2.	Okunerere	Uzo Uwani	Private	Rice	40MT	Functional
3.	Omate	Uzo Uwani	Private	Rice	20MT	Functional
4.	Meat World	Enugu	Private	Poultry	10MT	Functional
5.	Ogbutpa Farm	Nkanu East	Private	Poultry	50MT	Functional
6.	Isaac Lucy	Enugu	Private	Poultry	26MT	Functional
7.	Farm Fresh	Enugu	Private	Poultry	20MT	Functional
Imo State						
1	Imo poly cassava processing	Ohai/egbema	Government	Cassava	5MT	Functional
2	Somchi foods	Ahiazu	Private	Cassava	10MT	Functional

Table 9.13 presents the agro-processing plants available in the South-South zone. The commodities processed were cocoa, rice, cassava, broilers, yam, maize, cashew and oil palm. Operating capacity of the processing plants was between 1 to 40 metric tons, this implies that some of the processing plants were small scale. Almost all the processing plants were functional, Edo State had the highest number of small-scale processing plants which processed mainly cassava and oil palm, while Rivers States had the least number of processing plants which majorly processed oil palm.

Table 9.13: Agro-processing plant in South-South

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
Akwa Ibom State						
1.	Afia cassava processing factory	Afia Nsit, Nsit Ibom	Government	Cassava	10MT	Functional
2.	Ikot cassava processing factory	Ikot Ekang, Abak	Government	Cassava	5MT	Functional
3.	Cassava processing factory	Ikot Ekpene Udo, Eket	Government	Cassava	5MT	Functional
4.	Nung cassava processing factory	Nung Udoe, Ibesikpo Asutan	Government	Cassava	15MT	Functional
5.	Odoro cassava processing factory	Odoro Ikpe, Ini	Government	Cassava	5 MT	Functional
6.	Rice processing mill	Mbiabet Ikpe, Ini	Government	Rice	20MT	Functional
Cross River State						
1.	Top Feeds	Cal muni	Private	Grain	24MT	Functional
2.	Cocoa	Ikom	Government	Cocoa	20MT	Functional
3.	Calachica	Cal muni	Government	Poultry	30MT	Functional
4.	Rice processing plant	Ogoja	Government	Rice	21MT	Functional
Delta State						
1.	ADP agro processing	Oshimili North	Government	Cassava	2MT	Functional
2.	Job creation processing	Oshimili South	Private	Cassava	3.5MT	Functional
3.	Ebu processing Centre	Oshimili North	Private	Yam and maize	1.5MT	Functional
4.	Obior rice processing Centre	Aniocha North	Private	Rice	12MT	Functional
Edo State						
1.	Agrotek	Ugboha	Private	Crop	40MT	Functional
2.	Pemo	Avielle	Private	Crop	30MT	Functional
3.	Inotech Food	Benin	Private	Crop	5MT	Functional
4.	Santa Maria Foods	Benin	Private	Crop	4MT	Functional
5.	Idaewor Farmers	Fugar	Private	Crop	3MT	Functional
6.	Amidai Farms	Iruekpe	Private	Crop	2MT	Functional
7.	Lentus Food	Ugo-orhionmwon	Private	Crop	1MT	Functional
8.	EmesomiGarri Proc.	Uzarie	Private	Crop	5MT	Functional
9.	Della Food	Benin	Private	Crop	4MT	Functional
10.	Madam Edna	Igueben	Private	Crop	3MT	Functional
11.	Imafidon	Owan ,Benin- Akure Rd	Private	Crop	2MT	Functional
12.	Paul Friday	Ibillo. Akoko Edo LGA	Private	Crop	1MT	Functional
13.	Madam Osagie	Igueka, Benin-Abuja Rd,	Private	Crop	4MT	Functional
14.	Farmforte	Ikpoba okha	Private	Cashew	3MT	Functional
15.	Dufil	Ovia N.E	Private	Cassava	5MT	Functional
16.	Greenhills	Ikpoba okha	Private	Cassava	2MT	Functional
17.	Presco	Ikpoba okha	Private	Oil palm	4MT	Functional
Rivers State						
1.	Sell to land	Obio/Akpor	Government	_	10MT	Functional
2.	CIAT	Ikwerre	Private	Oil palm	_	Functional

Table 9.14 presents the agro-processing plants available in the South-West zone. The commodities processed were rice, cassava, oil palm, vegetable, broilers, egg, and cocoa. Operating capacity of the processing plants was between 1 to 240 metric tons, this implies that some of the processing plants were small scale. Few of the processing plants were not functional while some were yet to be completed. Ogun State had the highest number of processing plants, majority of which were small scale processing mainly cassava, rice and fish. Osun States had the least number of processing plants which mainly processed cassava.

Table 9.14: Agro-processing plant in South-West

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
Ekiti State						
1.	_	Gbonyin	Private	Cassava	_	Functional
2.	_	Ado	Private	Cassava	_	Functional
3.	_	Oye	Private	Cassava	__	Functional
4.	_	Ikole	Private	Cassava	_	Functional
5.	_	Ekiti East	Private	Cassava	_	Functional
6.	_	Ijero	Private	Rice	_	Functional
7.	_	Ado	Private	Rice	_	Functional
8.	_	Irepodun/Ifelodun	Private	Rice	_	Functional
9.	_	Oye	Private	Rice	_	Functional
10.	_	Gbonyin	Private	Rice	_	Functional
11.	_	Oye	Private	Oil Palm	_	Functional
12.	_	Gbonyin	Private	Oil Palm	__	Functional
13.	_	Ikole	Private	Oil Palm	_	Functional
Lagos State						
1	Aregra	Epe	Government	Cassava	10MT	Non functional
2	Itedo Alafia	Badagry	Government	Cassava	20MT	Functional
3	Iragan	Badagry	Government	Cassava	12MT	Functional
4	Oko Ito	Badagry	Government	Cassava	15MT	Non Functional
5	Cassava processing center	Epe	Private	Cassava	24MT	Functional
6	Imota rice mill	Ikorodu	Private	Rice	21MT	Yet to be completed
7	Idena rice mill	Epe	Private	Rice	10MT	Yet to be completed
8	Erikorodu Poultry Estate	Ikorodu	Private	Poultry	25MT	Yet to be completed
9	Iyaafin Estate	Badagry	Private	Vegetable	12MT	Functional
10	Cassava cottage mill	Epe	Private	Cassava	15MT	Yet to be completed
Ogun State						
1.	Ijumo Rice	Ewekoro	Partnership	Rice	1MT	Functional
2.	Matsol Allied	Obafemi Owode	Private	Cassava	2MT	Functional
3.	Fish processing centre	Abeokuta South	Govt.	Fish	1MT	Functional
4.	Mab royal	Ijebu-Ode	Govt.	Cassava	2MT	Functional

5.	FUNAAB Industrial Park	Abeokuta	Private	Cassava	4MT	Functional
6.	Freezedah Fish Processing Plant	Ewekoro	Private	Fish	5MT	Functional
7.	Lamma Trusts Ltd	Ijebu-Ode	Private	Cassava	2MT	Functional
8.	Debanifaith Agro Allied	Abk South	Private	Grain	3MT	Functional
9.	Ogun state fish processing centre	Abk South	Govt	Grain	5MT	Functional
10.	MITROS Rice Mill	Abeokuta South	Private	Rice	10MT	Non Functional
11.	MITROS Rice Mill	Yewa North	Private	Rice	15MT	Non Functional
12.	Atan Rice Mill	Ado-odo ota	Private	Rice	10MT	Functional
13.	Cassava Processing Centre	Ijebu ode	Private	Cassava	2MT	Functional
14.	Blopamed ltd	Sagamu	Private	Cassava	2MT	Functional
15.	Harvest feed	Obafemi Owode	Private	Cassava	150 MT	Functional
16.	Premium Product Ltd	Ijebu ode.	Private	Cassava	240MT	Functional
17.	Balekan Poultry Project	Odeda	Private	Poultry	2MT	Functional
18.	Oke eri Poultry Project	Ijebu ode	Private	Poultry	5MT	Functional
Ondo State						
1.	MATNA Food	Ogbese	Private	Cassava	_	Functional
2.	NPFS	9 sites	Private	Cassava	_	Functional
3.	Araromi obu	Okitipupa	Private	Oil palm	_	Functional
4.	Stanmark	Ondo west	Private	Cocoa	_	Functional
5.	Ile oluji cocoa processing industry	Ile oluji/okeigbo	Government	Cocoa	_	Functional
6.	Oke- ayo	Ondo	Private	Cassava	_	Functional
7.	Iyansan	Irele lga	Private	Oil palm	_	Functional
8.	Idanre chocolate	Idanre	Government	Cocoa	_	Functional
9.	Cadbury Nig. PLC	Ondo East	Private	Cocoa	_	Functional
10.	Plantation Industry Ltd	Akure South	Private	Cocoa	_	Functional
11.	Ondo State Agribusiness	Multiple LGAs across the state	Government	Poultry	_	Functional
12.	Egberi fish industry	Akure south	Private	Dry fish	_	Functional
Osun State						
1.	Bismonco	Iwo	Private	Cassava	5MT	Functional

2.	CATO	Ayedire	Private	Cassava	10MT	Functional
Oyo State						
1.	Stop Hunger	Akinyele	Private	Cassava	1MT	Functional
2.	F.E. Processing	Akinyele	Private	Cassava	2MT	Functional
3.	Jibumoye	Oluloye	Private	Cassava	1MT	Functional
4.	Ifesowopo	oluloye	Private	Cassava	2MT	Functional
5.	Baba Oba	Lagelu	Private	Cassava	3MT	Functional
6.	Oore-Ofe Cassava processing	Ibarapa	Private	Cassava	1MT	Functional
7.	Saki West shea butter processing centre	Saki West	Private	Shea	2MT	Functional

10.0 COST OF PRODUCTION FOR MAJOR CROPS IN NIGERIA

The 2022 agricultural performance survey adequately captured the production cost of major crops per hectare in various states. For easy presentation, the very numerous crops were group into crop classes. The corresponding production cost data are shown hierarchically from state to region, and finally, to the national level. The regional data were pool of State data and the national data were pool of the regional data. In a situation of deficit data, the flow stopped at the stop of data and discussions were that limit. In 2021, production cost data were inclusive. A comparison was made between year 2021 and 2022 production cost data to evaluate the percentage of change in production cost. Where there was increase in cost for 2022, the change was positive; and where the cost reduced the change was interpreted as negative. In either case, a negative change was desired. For a zero-value change, the production is static for both years. The essence of the comparison was to determine agricultural production cost progression in Nigeria. The progress was expected to be determined by the corresponding rise or reduction in input costs. This lot information, coupled with the knowledge of financial strength of the farmers revealed how strong Nigeria's agriculture was in 2022. The costs of production of major crops in Nigeria are presented in the following sub-headings.

10.1 Cost of Production for Cereals and Legumes

The production cost of reported major cereals and legumes are presented in this section. The presentation captures the zonal data reflecting each corresponding states. The states are embedded in their respective zones. Production cost for a region is presented after the corresponding zones and those for national production cost after the region. At state level, the six zones, the region and national level, the production cost of major crops present follows.

10.1.1 Cost of production for cereals and legumes in North-Central zone and states

In the North-Central, 4 cereal crops (maize, millet, rice, sorghum) and 3 legume crops (cowpea groundnut, soybean) were reported (Table 10.1a &b). For all the crops, the production cost differed from each state for 2021 and 2022. There was a rise in production cost in year 2022 over those of year 2021 (in a positive percentage change). Among the cereal crops, the highest change (79%) was reported for millet in Nasarawa State. For the legumes, the highest change (33%) was recorded for cowpea in FCT. The zonal production cost was highest for soyabean among the legumes and maize among the cereals in2022. Rise in the price of farm inputs like fertilizer and agrochemicals was evident this year. The cost of production was increasing at a very alarm rate.

10.1.2 Cost of production for cereals and legumes in North-East zone and states

The cereals and legumes crops reported in the North-Central Zone are on Table 10.2a & b. The production cost differed in various state even for the same crop in 2021 and 2022. The differences could be attributed to differences to farm labour costs. the change in production cost in 2021 and 2022 were positive for all cases. For zonal production, the records cost in for 2022 that rice required more money than other cereals (₦292,333). And soybean (₦238,300) among the legumes. This report is similar to those in the North-Central zone. The results indicate similar agricultural practice in both regions.

Table 10.1a: Cost of production for cereals and legumes in North-Central zone and states

State	Maize			Millet			Rice			Sorghum		
	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year			Cost of Production (N) For Year		%Change
	2021	2022		2021	2022		2021	2022	%Change	2021	2022	
Benue	358,000	370,000	3	-	-	-	375,000	450,000	20	260,000	290,000	12
FCT	154,000	200,000	30	84,000	130,000	55	150,000	250,000	67	90,000	150,000	67
Kogi	250,000	380,800	52	-	-	-	450,000	480,000	7	-	-	.
Kwara	180,000	290,000	61	278,000	290,000	4	216,000	320,000	48	345,000	362,000	5
Nasarawa	160,000	250,100	56	84,000	150,100	79	260,000	280,400	8	130,000	195,500	50
Niger	200,000	230,000	15	-	-	-	230,000	250,000	9	-	-	.
Plateau	-	320,000	-	-	110,000	-	-	200,000	-	-	-	.
Taraba	251,000	270,000	8	-	-	-	360,000	250,000	31	220,000	250,000	14
Zonal Mean	221,857	288,863	32	148,667	170,025	46	291,571	310,050	27	209,000	249,500	29

Table 10.1b: Cost of production for cereals and legumes in North-Central zone and states Cont'd

State	Cowpea			Groundnut			Soyabean		
	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change
	2021	2022		2021	2022		2021	2022	
Benue	-	-	-	314,000	350,000	11	330,000	380,000	15
FCT	110,000	150,000	36	120,000	150,000	25	-	-	-
Kwara	192,000	240,000	25	-	-	-	575,000	585,000	2
Nasarawa	-	-	-	105,200	125,700	19	-	-	-
Niger	185,000	220,000	19	-	-	-	-	-	-
Plateau	-	104,000	-	-	-	-	-	110,000	-
Taraba	230,000	290,000	26	240,000	320,000	33	200,000	250,000	25
Zonal Mean	179,250	200,800	27	194,800	236,425	22	368,333	331,250	14

Table 10.2a: Cost of production for cereals and legumes in North-East zone and states

State	Cowpea			Groundnut			Maize			Millet		
	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change
	2021	2022		2021	2022		2021	2022		2021	2022	
Adamawa	149,000	165,000	11	202,000	236,000	17	198,000	235,000	19	-	-	-
Bauchi	120,000	194,250	62	-	-	-	250,000	280,000	12	150,000	281,600	88
Bornu	65,000	85,000	31	70,000	215,000	207	92,000	279,500	204	75,000	125,800	68
Gombe	-	-	-	-	-	-	270,000	300,000	11	137,513	170,000	24
Yobe	-	-	-	-	-	-	-	-	-	-	-	-
Zonal Mean	111,333	148,083	34	136,000	225,500	112	202,500	273,625	61	120,838	192,467	60

Table 10.2b: Cost of production for cereals and legumes in North-East zone and states cont'd

State	Rice		%Change	Sorghum		%Change	Soyabean		%Change
	Cost of Production (N) For Year			Cost of Production (N) For Year			Cost of Production (N) For Year		
	2021	2022		2021	2022		2021	2022	
Adamawa	238,000	260,000	9	146,000	172,000	18	326,910	340,000	4
Bauchi	300,000	357,000	19	150,000	220,000	47	120,000	254,900	112
Bornu	-	-	-	80,000	155,000	94	-	-	-
Gombe	246,820	260,000	5	138,653	150,000	8	95,000	120,000	26
Yobe	-	-	-	-	-	-	-	-	-
Zonal Mean	261,607	292,333	11	128,663	174,250	42	180,637	238,300	48

10.1.3 Cost of production for cereals and legumes in North-West zone and states

The major cereals and legumes produced in this zone were also produced in the two previous zones (Table 10.3a &b). It is safe to admit this set of cereals and legumes are major crop production in Northern Nigeria. There was no reduction in production cost for these crops in 2022. When compared with the 2012 production cost, the percentage change was positive. Only in Jigawa State, and for rice, the cost was static (2021 and 2022).

Soybean is the most cost demanding legume to cultivate in the North-West and rice is the most cost demanding cereal in the North-West. Price of these commodities is expected to rise next year.

The zonal mean production cost was the highest for maize (₦320,000) and soybean (₦196,667) for cereals and legumes respectively. This is a little deviation from the zonal production cost from the preceding zones where rice and soybean were highest. The prices of inputs, especially fertilizers were presently higher and that could account for the increase in production cost. Production duration for soybean was longer compared to other legume; that could raise the production cost over other legumes.

10.1.4 Zonal production cost comparison for cereals and legumes (northern zones)

The production cost distribution of cereals and legumes in northern zone is further shown in Figure 10.1. Millet had relatively low production cost across the northern states. Maize, rice and soybean had higher production cost in the region. Comparing the production cost changes of the crops across the two years in the northern zone, Figure 10.2 showed that changes were highest for groundnut, followed by that for soybean and millet. Evidently, there was an increase in cost of production in 2022. This could be interpreted as high cost of production for 2022. Meanwhile, it is predicted that farmers may enjoy high selling price of these crops in 2022.

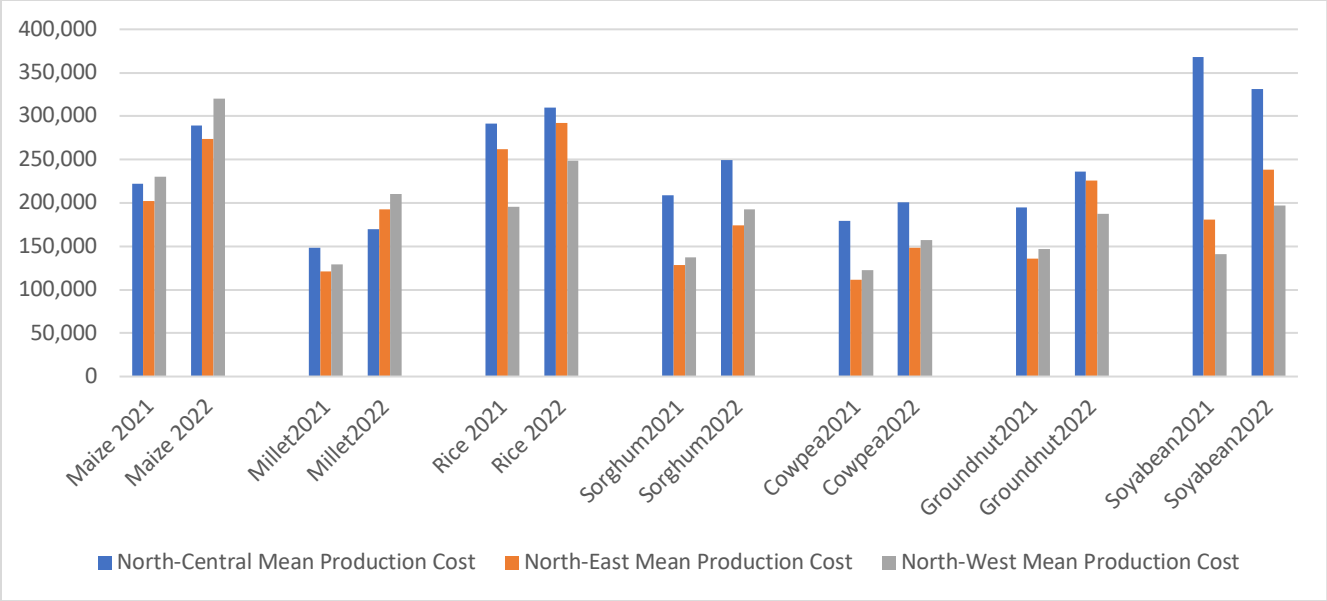

Figure 10.1: Zonal production cost comparison for cereals and legumes for year 2021 and 2022 (northern zones)

Table 10.3a: Cost of production for cereals and legumes in North-West zone and states

State	Cowpea			Groundnut			Maize			Millet		
	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change
	2021	2022		2021	2022		2021	2022		2021	2022	
Jigawa	-	-	-	140,000	250,000	79	-	-	-	160,000	240,000	50
Kaduna	100,000	220,000	120	160,000	200,000	25	285,000	320,000	12	-	-	-
Kano	90,000	120,000	33	90,000	120,000	33	-	-	-	78,000	240,000	208
Kebbi	180,000	-	-	180,000	-	-	175,000	-	-	160,000	Harvest	-
Zamfara	120,500	132,000	10	164,200	180,400	10	-	-	-	120,000	150,000	25
Mean	122,625	157,333	54	146,840	187,600	37	230,000	320,000	12	129,500	210,000	94

Table 10.3b: Cost of production for cereals and legumes in North-West zone and states cont'd

State	Rice			Sorghum			Soyabean		
	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change
	2021	2022		2021	2022		2021	2022	
Jigawa	280,000	280,000	0	170,000	210,000	24	-	-	-
Kaduna	145,000	250,000	72	85,000	220,000	159	228,600	250,000	9
Kano	190,000	286,000	51	80,000	140,000	75	45,000	180,000	300
Kebbi	210,000	Not yet	-	175,000	-	-	-	-	-
Zamfara	153,000	180,000	18	176,000	200,000	14	150,000	160,000	7
Zonal Mean	195,600	249,000	35	137,200	192,500	68	141,200	196,667	105

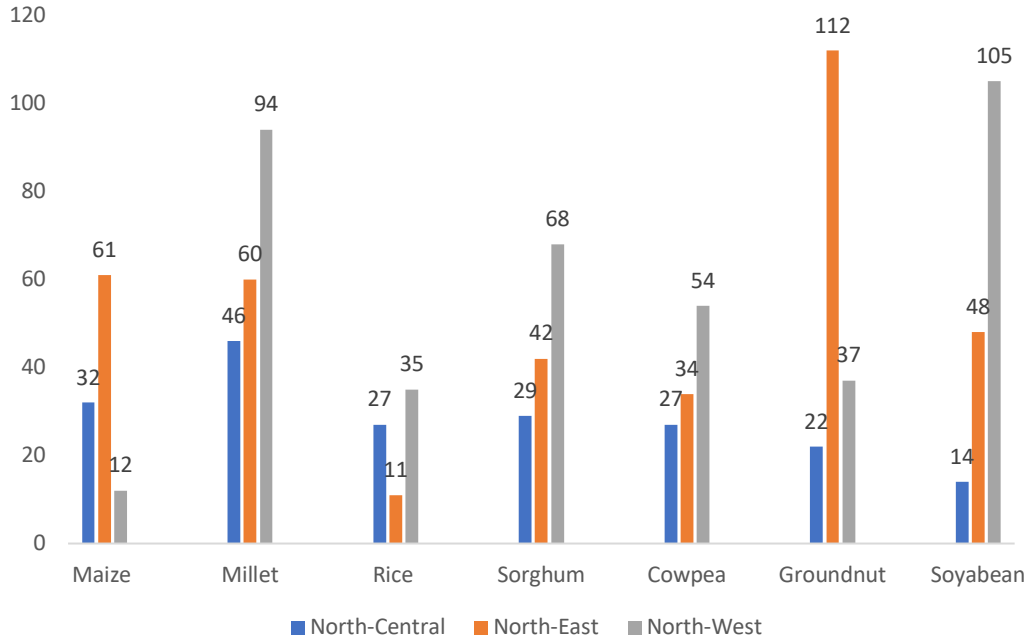

Figure 10.2: Zonal percent change comparison in production cost of cereals and legumes between 2021 and 2022 (northern zones)

10.1.5 Regional production cost for cereals and legumes (northern region)

In this region, the production cost for maize is highest among the cereals crops while production cost for soybean is highest among the legumes (Figure 10.3). Production cost of all these crops increased in 2022. (Figure 10.4). The cost change over 2 years in consideration was highest for millet and groundnut among the cereals and legumes respectively (Figure 10.5). Increase production cost does not benefit the economy. The increase is transferred to consumer and populace. Production costs for crops, across the two years in northern Nigeria are shown on Table 10.4.

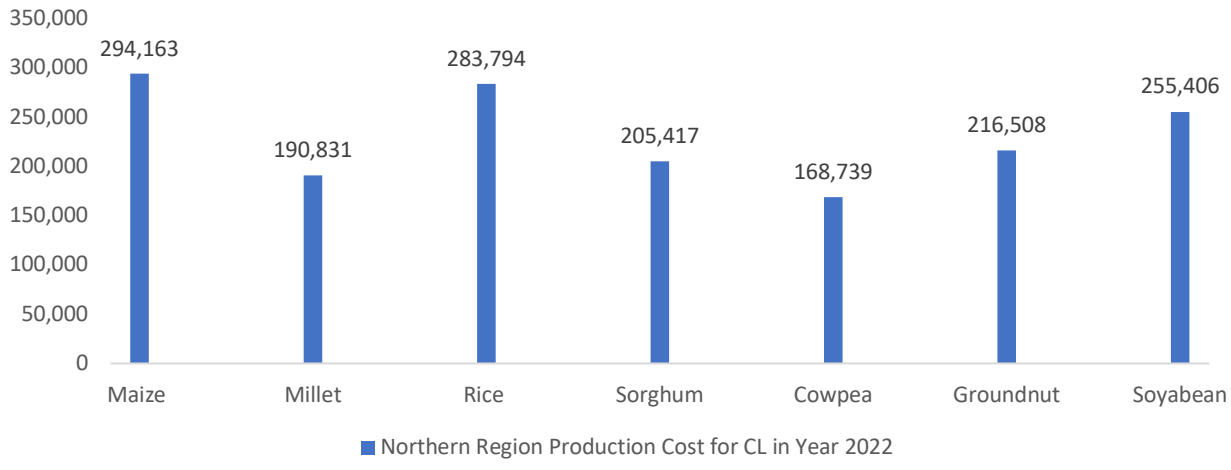

Figure 10.3: Regional production cost for cereals and legumes (northern region) for Year 2022

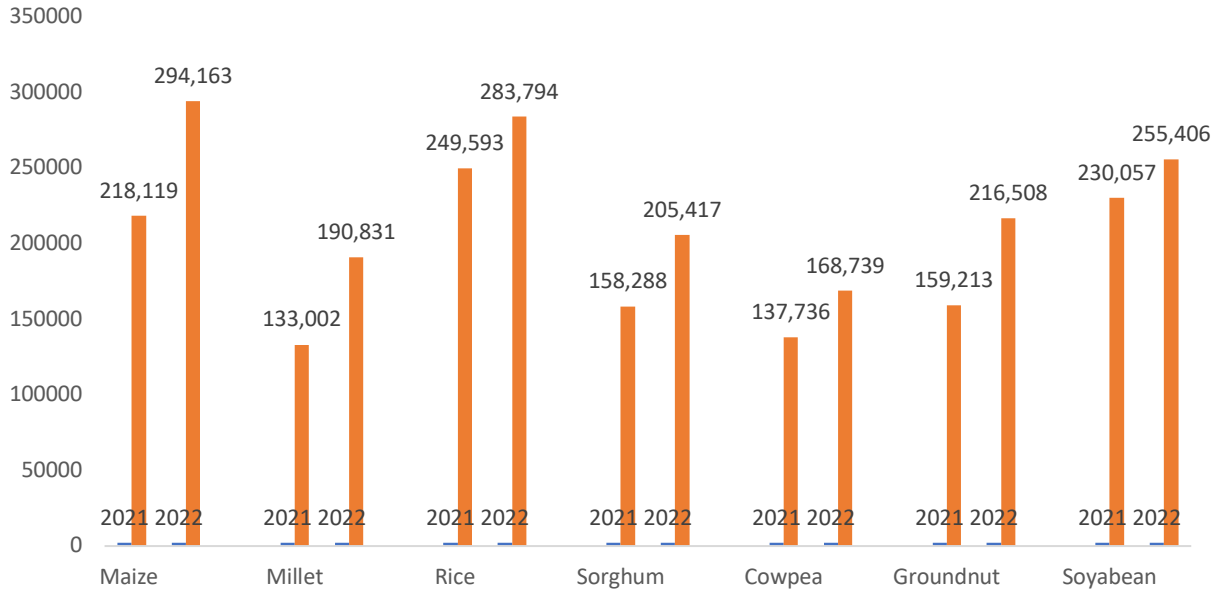

Figure 10.4: Regional production cost for cereals and legumes for year 2021 and 2022 (northern region)

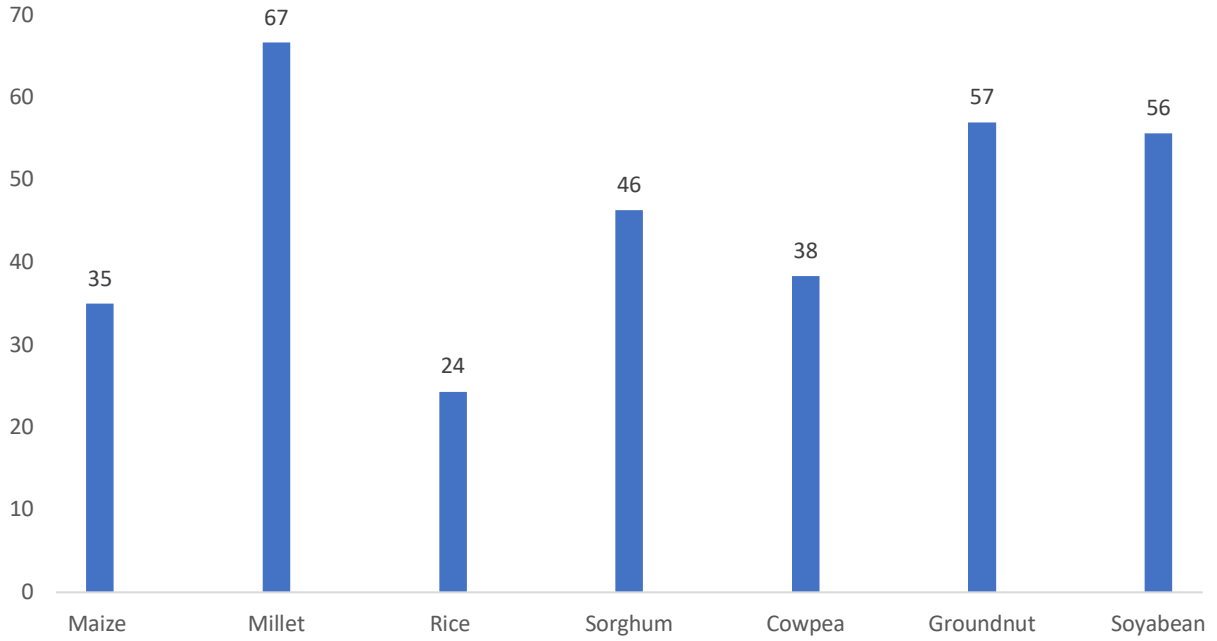

Figure 10.5: Regional percentage change in Production cost for cereals and legumes between year 2021 and 2022

Table 10.4: Regional production cost for cereals and legumes (northern region)

Crop			Mean Cost of Production (₦)			
			North-Central zone	North-East zone	North-West zone	Northern Region Mean Production Cost (₦)
Maize	Cost of Production (N) For Year	2021	221,857	202,500	230,000	218,119
		2022	288,863	273,625	320,000	294,163
		% Change	32	61	12	35
Millet	Cost of Production (N) For Year	2021	148,667	120,838	129,500	133,002
		2022	170,025	192,467	210,000	190,831
		% Change	46	60	94	67

Table 10.4: Regional production cost for cereals and legumes (northern region) Cont'd

			Mean Cost of Production (N)			
Crop			North-Central zone	North-East zone	North-West zone	Northern Region Mean Production Cost (N)
Rice	Cost of Production (N) For Year	2021	291,571	261,607	195,600	249,593
		2022	310,050	292,333	249,000	283,794
		%Change	27	11	35	24
Sorghum	Cost of Production (N) For Year	2021	209,000	128,663	137,200	158,288
		2022	249,500	174,250	192,500	205,417
		%Change	29	42	68	46
Cowpea	Cost of Production (N) For Year	2021	179,250	111,333	122,625	137,736
		2022	200,800	148,083	157,333	168,739
		%Change	27	34	54	38
Groundnut	Cost of Production (N) For Year	2021	194,800	136,000	146,840	159,213
		2022	236,425	225,500	187,600	216,508
		%Change	22	112	37	57
Soybean	Cost of Production (N) For Year	2021	368,333	180,637	141,200	230,057
		2022	331,250	238,300	196,667	255,406
		%Change	14	48	105	56

10.1.6 Cost of production for cereals and legumes in south-east zone and states

In south-east, there is heavy production of cereals and scanty production of legumes (Table 10.5). Maize and rice were produced in all the states. Abia State produced cowpea but did not produce groundnut. Ebonyi produced groundnut but did not produce cowpea. The remaining state produce neither of the crops. The zone experiences increase in cost of production in 2022. There was no state with negative percentage change in crop production. The zonal mean production cost was highest for groundnut (₦200,000) and rice (₦338,000).

Selling price of Agric produce will no doubt rise in the south-east.

10.1.7 Cost of production for cereals and legumes in south-south zone and states

The cereals and legumes reported for this zone are maize, rice and cowpea, soybean. While many states produce cowpea, less produce soybean (Table 10.6). All the states produced maize and rice except Delta State. All the states experienced increased production cost except for Bayelsa that produced maize at a lesser cost in 2022. For the zonal production cost for rice and soybean were ₦459,090 and ₦320,149, respectively.

Maize and rice are major cereals in southeast and south- south states.

10.1.8 Cost of production for cereals and legumes in south-west zone and states

The cereals and the legumes crop reported for south-south zone are also reported for this zone (Table 10.7). The cost of production increased in all the states, and for all the crops in 2022. The zonal mean production cost was the highest for rice (₦331,060) and soybean (₦317,667) among the cereals and legumes.

The predominant cereals in south is rice and maize and the predominant legume is cowpea and soybean .

Table 10.5: Cost of production for cereals and legumes in South-East zone and states

State	Cowpea			Groundnut			Maize			Rice		
	Cost of Production (₦) For Year		%Change	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change
	2021	2022		2021	2022		2021	2022		2021	2022	
Abia	110,000	145,000	32	-	-	-	110,000	160,000	45	140,000	220,000	57
Anambra	-	-	-	-	-	-	-	150,000	-	-	220,000	-
Ebonyi	-	-	-	180,000	200,000	11	150,000	250,000	67	650,000	700,000	8
Enugu	-	-	-	-	-	-	235,000	278,000	18	206,000	220,000	7
Imo	-	-	-	-	-	-	260,000	285,000	10	300,000	330,000	10
Zonal Mean	110,000	145,000	32	180,000	200,000	11	188,750	224,600	35	324,000	338,000	20

Table 10.6: Cost of production for cereals and legumes in South-South zone and states

State	Cowpea			Maize			Rice			Soybean		
	Cost of Production (₦) For Year		%Change	Cost of Production (₦) For Year		%Change	Cost of Production (₦) For Year		%Change	Cost of Production (N) For Year		%Change
	2021	2022		2021	2022		2021	2022		2021	2022	
Akwa Ibom	-	-	-	246,000	296,000	20	265,000	315,000	19	-	-	-
Bayelsa	387,000	390,000	1	605,000	380,000	-37	450,000	600,000	33	-	-	-
Cross river	-	-	-	443,200	460,000	4		650,450	-	-	-	-
Delta	101,450	150,000	48	94,780	220,000	132	-	-	-	-	-	-
Edo	363,779	370,000	2	329,785	373,450	13	363,763	380,000	4	240,448	320,149	33
Rivers	-	-	-	309,900	350,000	13	270,800	350,000	29	-	-	-
Zonal Mean	284,076	303,333	17	338,111	346,575	24	337,391	459,090	21	240,448	320,149	33

Table 10.7: Cost of production for cereals and legumes in South-West zone and States

State	Cowpea			Maize			Rice			Soybean		
	Cost of Production (N) For Year		%Change	Cost of Production (₦) For Year		%Change	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change
	2,021	2,022		2,021	2,022		2,021	2,022		2,021	2,022	
Ekiti	240,000	275,000	15	280,000	350,000	25	270,000	340,000	26	300,000	380,000	27
Lagos	-	-	-	400,000	420,000	5	400,000	550,000	38	-	-	-
Ogun	250,000	280,000	12	243,000	303,000	25	412,800	472,800	15	-	-	-
Ondo	200,000		-	160,000	270,000	69	300,000	270,000	-10	200,000	250,000	25
Osun	-	-	-	150,000	220,000	47	-	-	-	-	-	-
Oyo	178,000	253,000	42	180,000	372,000	107	272,500	425,000	56	195,000	323,000	66
Zonal Mean	217,000	269,333	23	235,500	322,500	46	331,060	411,560	25	231,667	317,667	39

10.1.9 Zonal production cost comparison for cereals and legumes (zones in southern Nigeria)

The cost of production for cereals and legumes in the entire southern zone is shown in Figure 10.6. Rice has the highest production cost among the cereals and soybean among the legumes. The percentage change factor is highest for maize and soybean (Figure 10.7).

10.1.10 Total Production cost for cereals and legumes (all zones in southern Nigeria)

In all the zones in southern Nigeria, rice has the highest cost of production among cereal crops and soybean among the legumes (Figure 10.8). The change in production cost were highest and almost equal for maize and soybean (Figure 10.9). For the reported crops, production cost was generally high in 2022 (Figure 10.10).

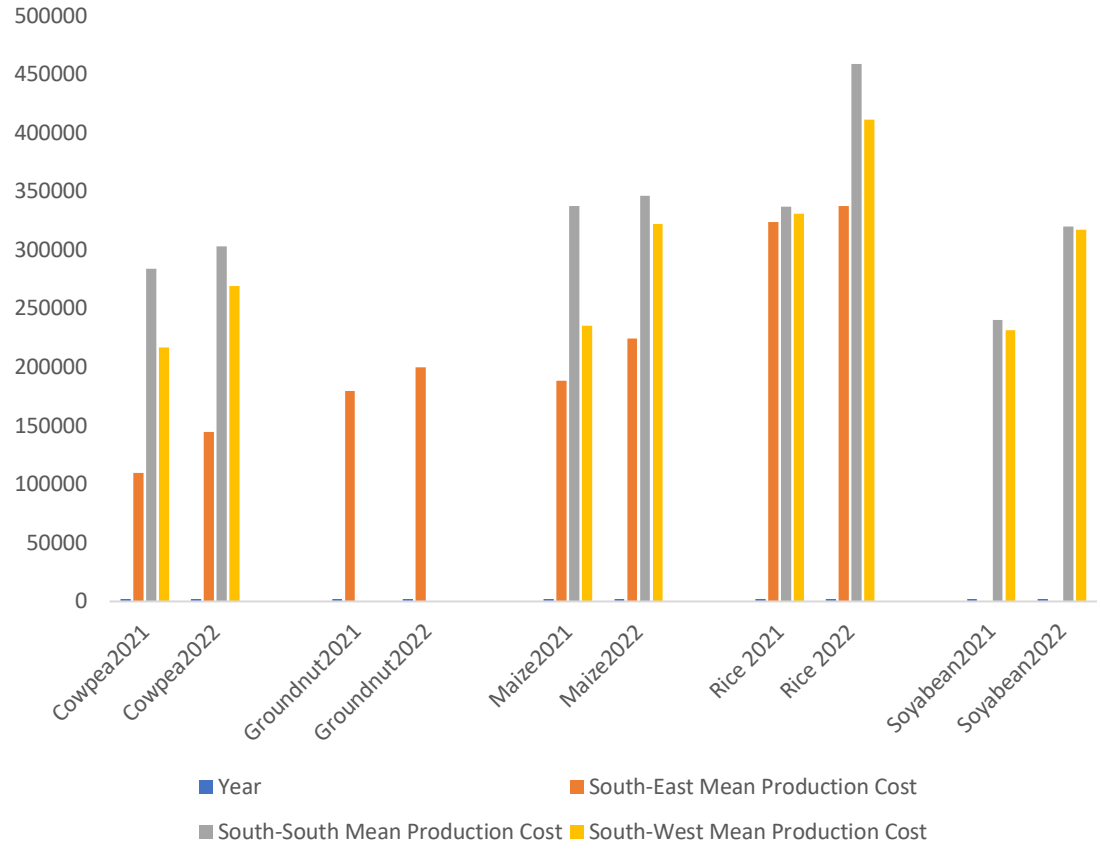

Figure 10.6: Production cost comparison for cereals and legumes for 2021 and 2022(all the zones in southern Nigeria)

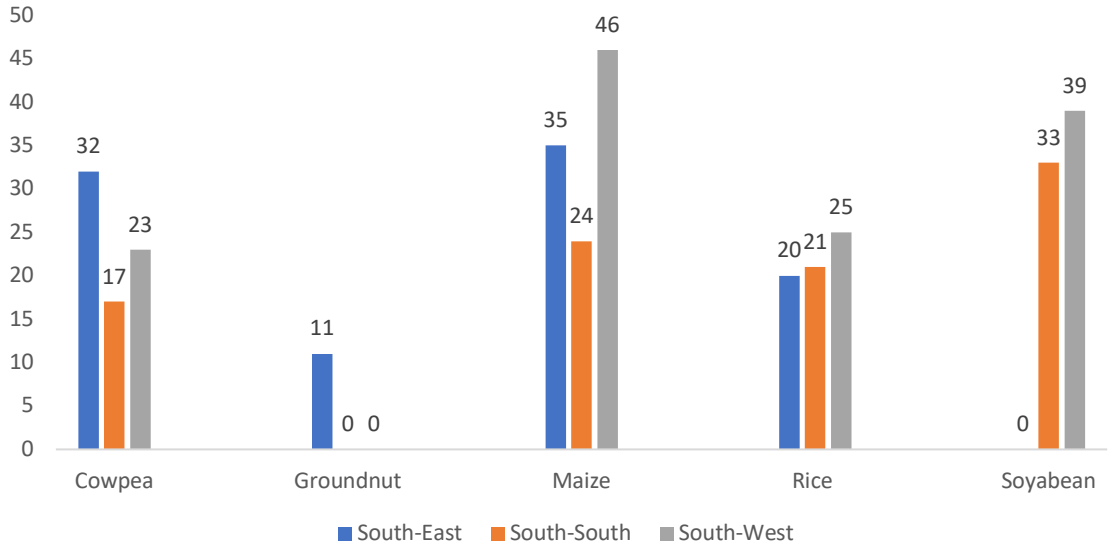

Figure 10.7: Percent change comparison in zonal percent change comparison for the production cost of cereals and legumes between 2021 and 2022 (zones in southern Nigeria)

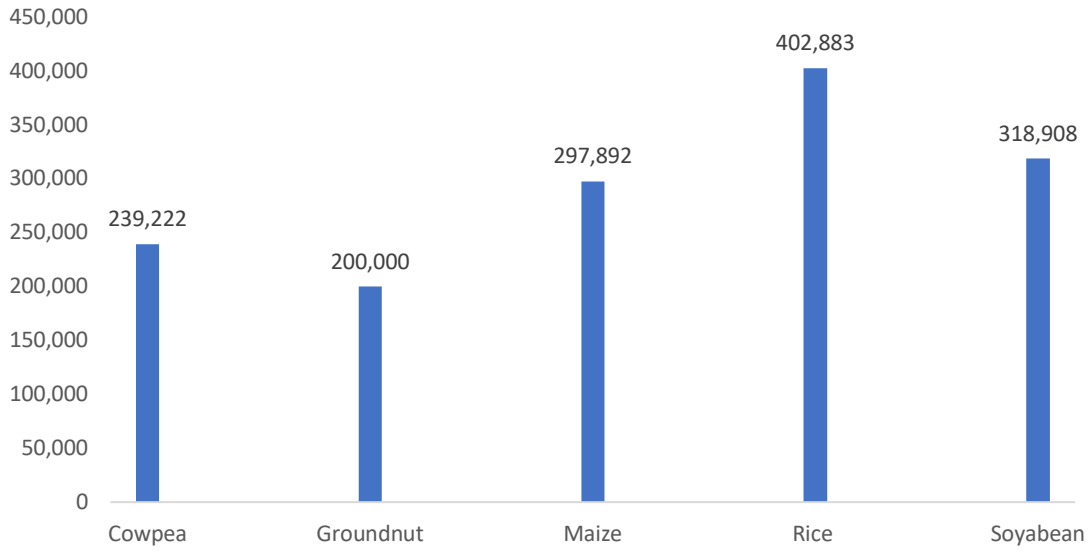

Figure 10.8: Total production cost for cereals and legumes (all zones in southern Nigeria) for Year 2022

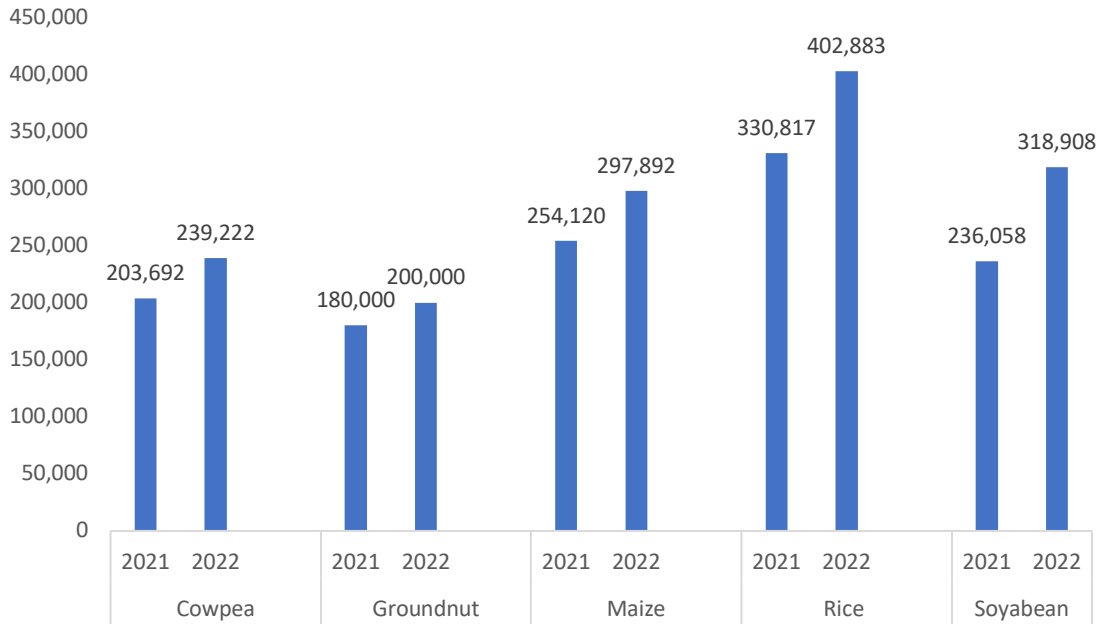

Figure 10.9: Production cost for cereals and legumes for year 2021 and 2022 (all zones in southern Nigeria)

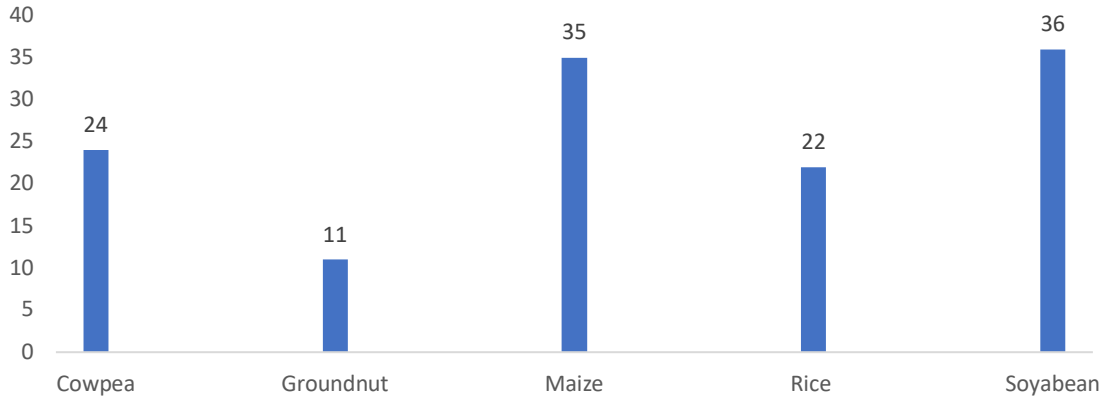

Figure 10.10: Percentage change in production cost for cereals and legumes between year 2021 and 2022 (all zones in southern Nigeria)

10.1.11 Production cost comparison for cereals and legumes (southern and northern Nigeria)

The results are shown in Figure 10.11. for most of the crops, production cost was higher in the southern than the northern part for both years. The only explicit exceptional case occurred for groundnut production. The reason could be the reduction in the cost of labour, favourable operation scale, or proximity of inputs to farmers in the southern part. The percentage change in production costs is shown on Table 10.8. The production cost for soybean was the highest at (36%). (36%).

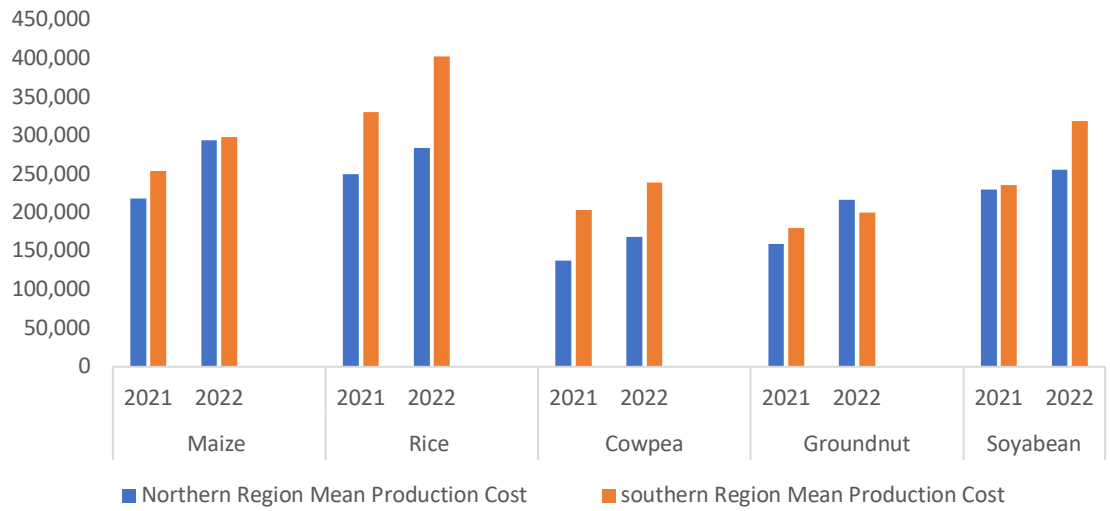

Figure 10.11: Production cost comparison for cereals and legume crops in northern and southern parts of Nigeria.

Table 10.8: Regional production cost for cereals and legumes (Southern region)

Crops			Mean Cost of Production (₦)			
			South-East zone	south-south zone	South-West zone	southern Region Mean Production Cost (₦)
Cowpea	Cost of Production (N) For Year	2021	110,000	284,076	217,000	203,692
		2022	145,000	303,333	269,333	239,222
		%Change	32	17	23	24
Groundnut	Cost of Production (N) For Year	2021	180,000	-	-	180,000
		2022	200,000	-	-	200,000
		%Change	11	-	-	11
Maize	Cost of Production (N) For Year	2021	188,750	338,111	235,500	254,120
		2022	224,600	346,575	322,500	297,892
		%Change	35	24	46	35
Rice	Cost of Production (N) For Year	2021	324,000	337,391	331,060	330,817
		2022	338,000	459,090	411,560	402,883
		%Change	20	21	25	22
Soybean	Cost of Production (N) For Year	2021	-	240,448	231,667	236,058
		2022	-	320,149	317,667	318,908
		%Change	-	33	39	36

10.1.12 National production cost for cereals and legumes

The production cost data at the national level is shown on Table 10.9. Those crops with complete entry, having both the southern and northern details were emphasized. Otherwise, such crops are retained in appropriate part of the country. The national production cost details for cereals and legumes are presented on Table 10.9. The representative national production cost is shown in Figure 10.12. These results indicate that rice and maize were produce in every region and zones in the country in 2022. They also mean that rice has the highest cost of production among the cereals. The legume produced in all part of Nigeria were cowpea, groundnut, and soybean in 2022. Among these, soybean has the highest cost of production. This result clearly indicates that irrespective of the part of Nigeria where rice was farmed in 2022 the production was the highest for cereals and soybean for legumes production.

The national production cost for cereals and legumes for 2021 and 2022 is compared in figure 10.12. The cost of production in 2022 was higher for all the crops. The cost of inputs could have influenced the high cost. The margin of this change in cost over the two years is expressed in percentage change and shown in Figure 10.13. Soybean had the highest increase in cost as indicated in the highest percentage change of about 45%, it was followed by maize and groundnut. Invariably, the selling price of agricultural produce may increase in 2022.

Table 10.9: National mean production cost for ccereals and legumes

Crop			Mean Cost of Production (₦)		
			Northern Region	southern Region	National Mean Production Cost (₦)
Maize	Cost of Production (N) For Year	2021	218,119	254,120	236,120
		2022	294,163	297,892	296,027
		%Change	35	35	35
Millet	Cost of Production (N) For Year	2021	133,002	-	-
		2022	190,831	-	-
		%Change	67	-	-
Rice	Cost of Production (N) For Year	2021	249,593	330,817	290,205
		2022	283,794	402,883	343,339
		%Change	24	22	23

Table 10.9: National mean production cost for ccereals and legumes Cont'd

Crop			Mean Cost of Production (₦)		
			Northern Region	southern Region	National Mean Production Cost (₦)
Sorghum	Cost of Production (N) For Year	2021	158,288	-	-
		2022	205,417	-	-
		%Change	46	-	-
Cowpea	Cost of Production (N) For Year	2021	137,736	203,692	170,714
		2022	168,739	239,222	203,980
		%Change	38	24	31
Groundnut	Cost of Production (N) For Year	2021	159,213	180,000	169,607
		2022	216,508	200,000	208,254
		%Change	57	11	34
Soybean	Cost of Production (N) For Year	2021	230,057	236,058	233,057
		2022	255,406	318,908	287,157
		%Change	56	36	46

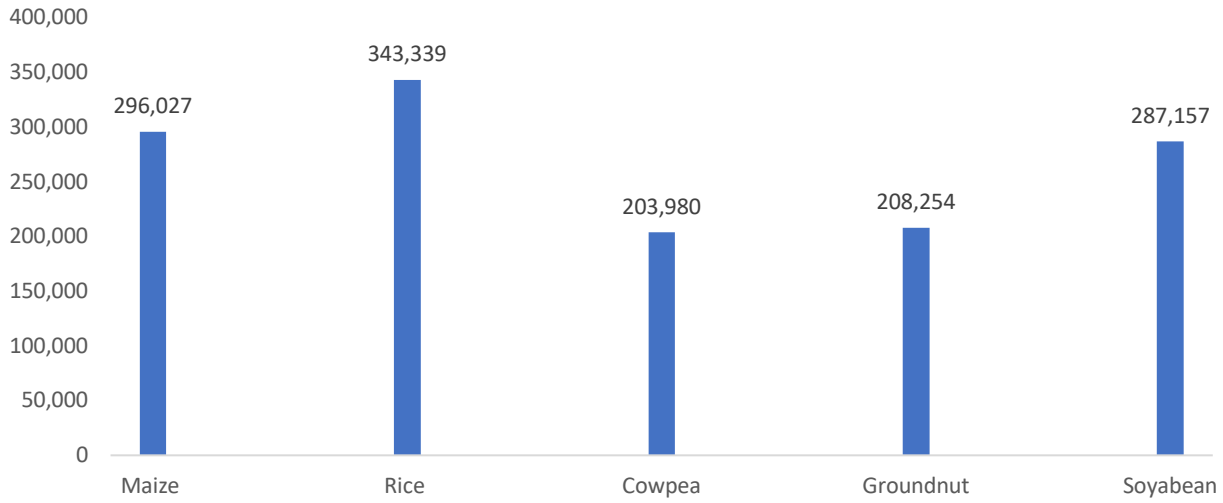

Figure 10.12: National production cost for cereals and legumes in 2022

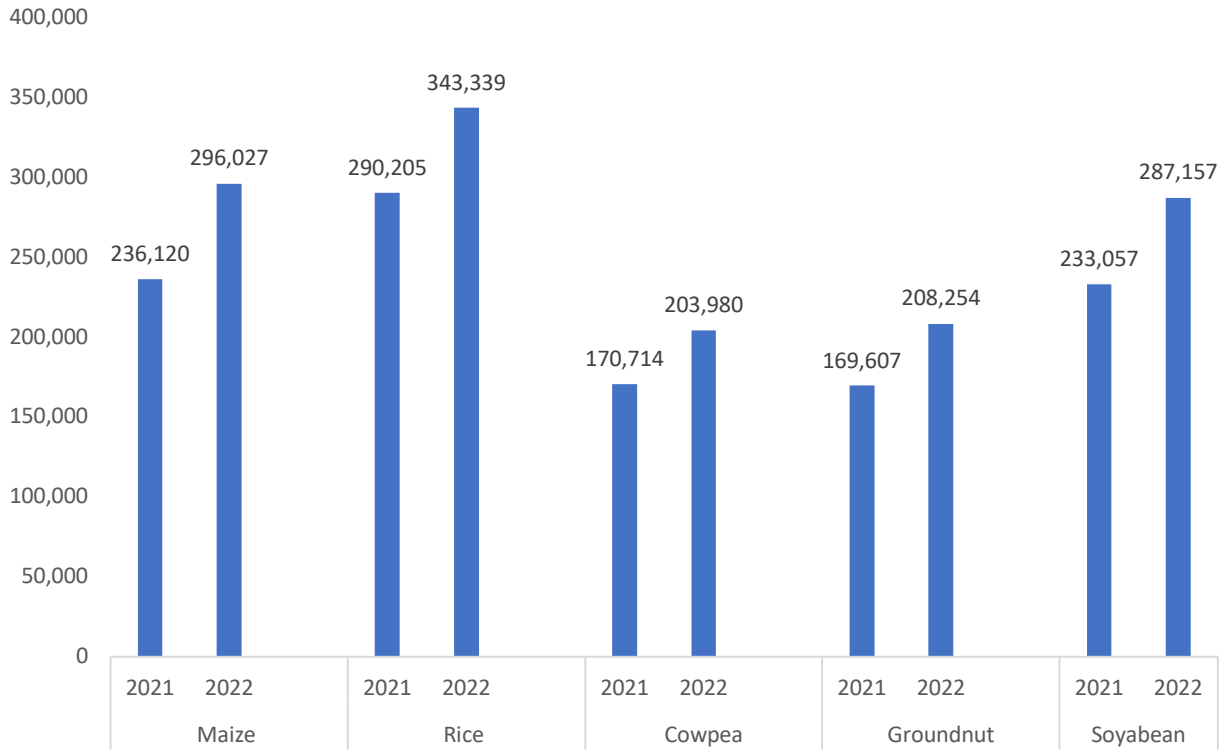

Figure 10.13: National production cost for cereals and legumes for 2021 and 2022

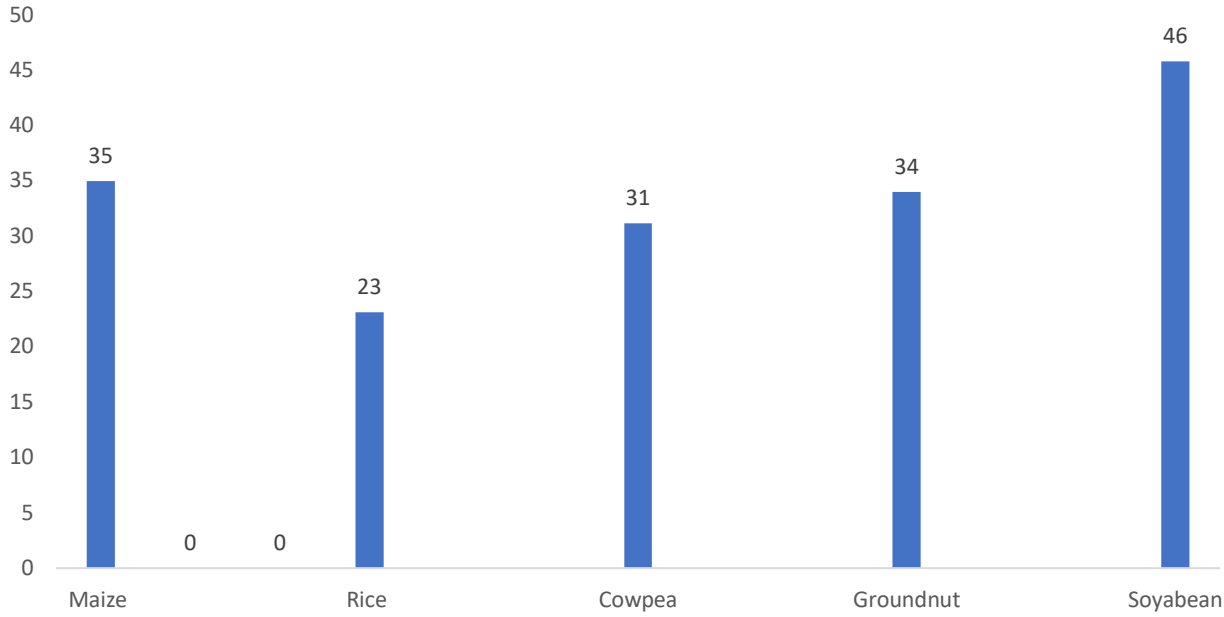

Figure 10.14: National percentage change in production cost for cereals and legumes between 2021 and 2022

10.2 Cost of Production for Tuber Crops

Root and tuber crops are principal components of the nation agricultural production. There are numerous and various types produced in different parts of Nigeria. The production cost for major tuber crops per hectare in 2022 are presented in this section. There are no reported production data for the north-east and north-west zones in 2022. There was no considerable data to compute information for zonal production costs.

10.2.1 Cost of production for tuber crops in north-central zone and states

There were 4 major tuber crops cultivated in North-Central states in 2022: they are cassava, Irish potato, sweet potato and yam (Table10.10). Irish potato was cultivated only in Plateau State and this was due to its typical climatic requirement which was available in the state. The production cost for tuber crops increased in 2022 in this zone. In the zone, the highest cost of production was recorded for yam. Comparatively, yam requires more production activities, that might account for the high cost of production.

Table 10.10: Cost of production for tuber crop in north-central zone and states

State	Cassava			Irish Potato			Sweet potato			Yam	
	Cost of Production (₦) For Year		% Change	Cost of Production (₦) For Year		% Change	Cost of Production (₦) For Year		% Change	Cost of Production (₦) F	
	2021	2022		2021	2022		2021	2022		2021	2022
Benue	300,000	400,000	33	-	-	-	-	-	-	470,000	720,0
FCT	120,000	320,000	167	-	-	-	-	-	-	300,000	720,0
Kogi	300,000	320,000	7	-	-	-	-	-	-	-	-
Kwara	192,000	250,000	30	-	-	-	395,000	260,000	34	-	-
Nasarawa	180,000	210,000	17	-	-	-	129,000	150,500	17	900,000	1,300,
Niger	-	-	-	-	-	-	-	-	-	255,000	630,0
Plateau	-	320,000	-	-	1,030,100	-	-	-	-	-	815,0
Taraba	224,000	250,000	12	-	-	-	-	-	-	486,000	670,0
Mean	219,333	295,714	44	-		-	262,000	205,250	25	482,200	809,1

Table 10.11: Cost of production for tuber in south-east zone and states

State	Cassava			Cocoyam			Sweet potato			Yam	
	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change	Cost of Production (N) Fo	
	2021	2022		2021	2022		2021	2022		2021	2022
Abia	130,000	350,000	169	-	-	-	80,000	100,000	25	150,000	950,00
Anambra	-	268,000	-	-	-	-	-	-	-	-	-
Ebonyi	300,000	350,000	17	200,000	340,000	70	200,000	250,000	25	800,000	850,00
Enugu	170,000	300,000	76	166,000	320,000	93	-	-	-	225,000	830,00
Imo	450,000	540,000	20	-	-	-	-	-	-	570,600	870,00
Mean	262,500	361,600	71	183,000	330,000	81	140,000	175,000	25	436,400	875,00

10.2.2 Cost of production for tuber in South-East zone and states

Four types of tuber cops were cultivated in this zone in 2022. The crops were cassava, cocoyam, sweet potato and yam. Cocoyam and sweet potato were not produced as much as the other two tuber crops (Table 10.11) in 2022. The cost of production generally increased in 2022. For all the crops and across the states; the mean production value for 2022 for yam was the (₦875,000) the highest cost of tuber production in this zone in 2022.

10.2.3 Cost of production for tuber crops in South-South zone and states

Three tuber crops were cultivated in this zone in 2022. Among them, cassava and yam were cultivated in all the states while cocoyam was cultivated in only one state, (Akwa Ibom) (Table 10.12). The cost of production increased for all crops in 2022. The mean zonal production cost was higher for yam than the other two tubers in this zone in 2022.

10.2.4 Cost of production for tuber crops in south-west zone and states

Four tuber crops were the major cultivation in this region but two (cassava and yam) were prevalent(Table 10.13). Cocoyam and sweet potato were not produced by all the states. Production cost increased for all the crops across the states in 2022, except for sweet potato in Ogun state. In this zone, the mean production cost for yam was the highest.

Cassava and yam are the preferred tuber crops in southern Nigeria.

10.2.5 Zonal production cost comparison for tuber crops (southern zones)

Overview of production cost for tuber crops is shown in Figure 10.15. Yam has the highest production cost across the zone in 2012 and 2022. The production cost increased in 2022 for all tuber corps across the zones. The percentage change in production cost for yam was the highest across the 3 zones (Figure 10.16) in 2022.

Table 10.12: Cost of production for tuber in south-south zone and states

State	Cassava			Cocoyam			Yam		
	Cost of Production (₦) For Year		%Change	Cost of Production (₦) For Year		%Change	Cost of Production (₦) For Year		%Change
	2021	2022		2021	2022		2021	2022	
Akwa Ibom	275,000	325,000	18	380,000	385,000	1	450,000	950,000	111
Bayelsa	450,300	480,000	7	-	-	-	752,000	900,000	20
Cross river	610,000	680,400	12	-	-	-	570,000	721,300	27
Delta	97,150	280,000	188	-	-	-	100,384	710,000	607
Edo	302,383	366,459	21	-	-	-	1,538,320	1,637,567	6
Rivers	442,100	520,000	18	-	-	-	1,520,000	1,150,000	24
Mean	362,822	441,977	44	380,000	385,000	-	821,784	1,011,478	133

Table 10.13: Cost of production for tuber crops in south-west zone and states

State	Cassava			Cocoyam			Sweet potato			Yam		
	Cost of Production (₦) For Year			Cost of Production (₦) For Year			Cost of Production (₦) For Year			Cost of Production (₦) For Year		
	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change
Ekiti	260,000	320,000	23	400,000	420,000	5	-	-	-	300,000	1,100,000	267
Lagos	325,000	400,000	23	-	-	-	-	-	-	250,000	880,000	252
Ogun	292,400	352,400	21	467,000	467,000	-	250,000	250,000	-	970,000	1,050,000	8
Ondo	250,000	285,000	14	-	-	-	-	-	-	350,000	720,000	106
Osun	180,000	200,000	11	-	-	-	-	-	-	350,000	780,000	123
Oyo	225,000	313,000	39	-	-	-	-	-	-	350,000	720,000	106
Zonal Mean	255,400	311,733	22	433,500	443,500	3	250,000	250,000	-	428,333	875,000	144

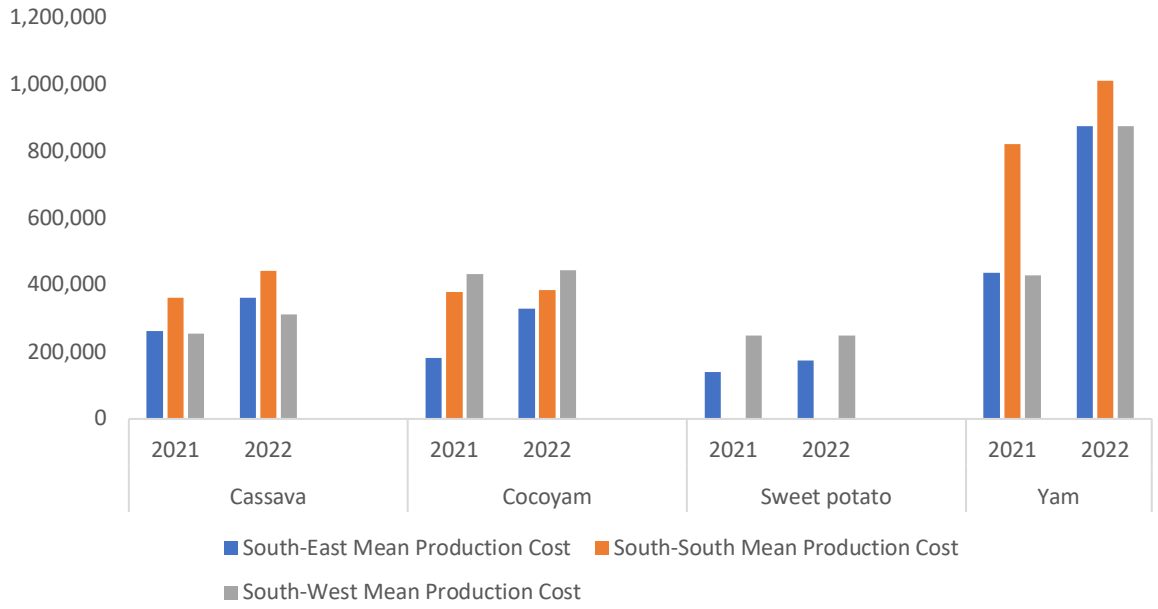

Figure 10.15: Zonal production cost comparison for tuber crops in 2021 and 2022 (Southern zones)

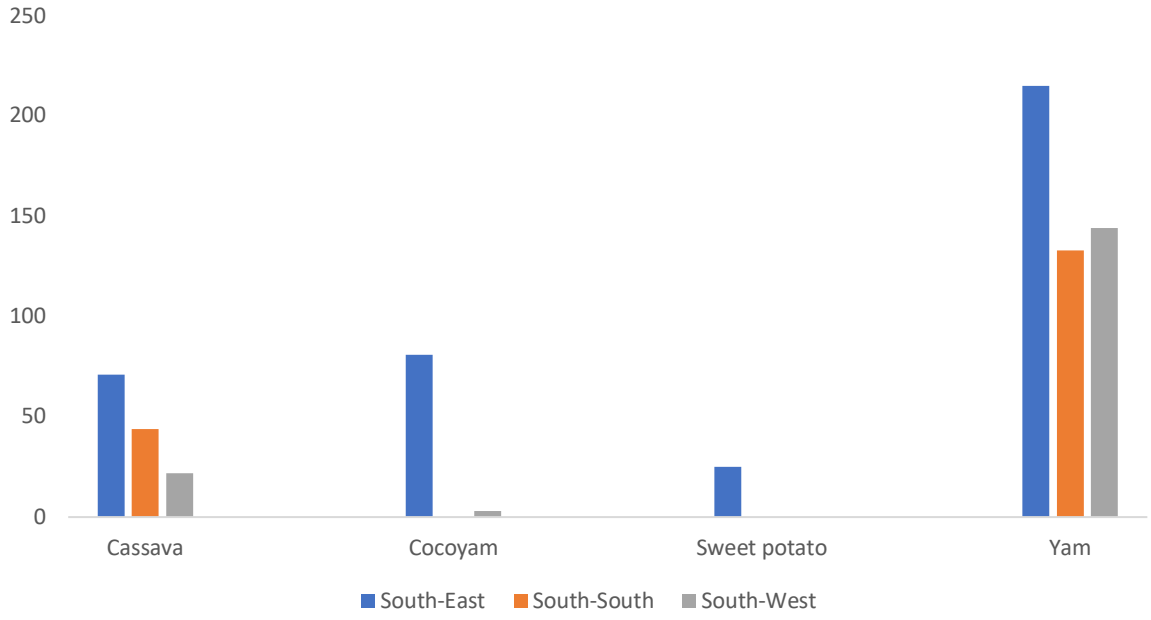

Figure 10.16: Zonal percentage change comparison in production cost of tuber crops between 2021 and 2022 (southern zones)

Yam has the highest production cost, followed by cassava, cocoyam and sweet potato (Figure 10.17). For the two years in consideration, cost of production is remarkably high for all the crops except sweet potato (Figure 1018). The corresponding level of cost change was also the highest

for yam (Figure 10.19). The production cost and the percentage changes are shown on Table 10.14.

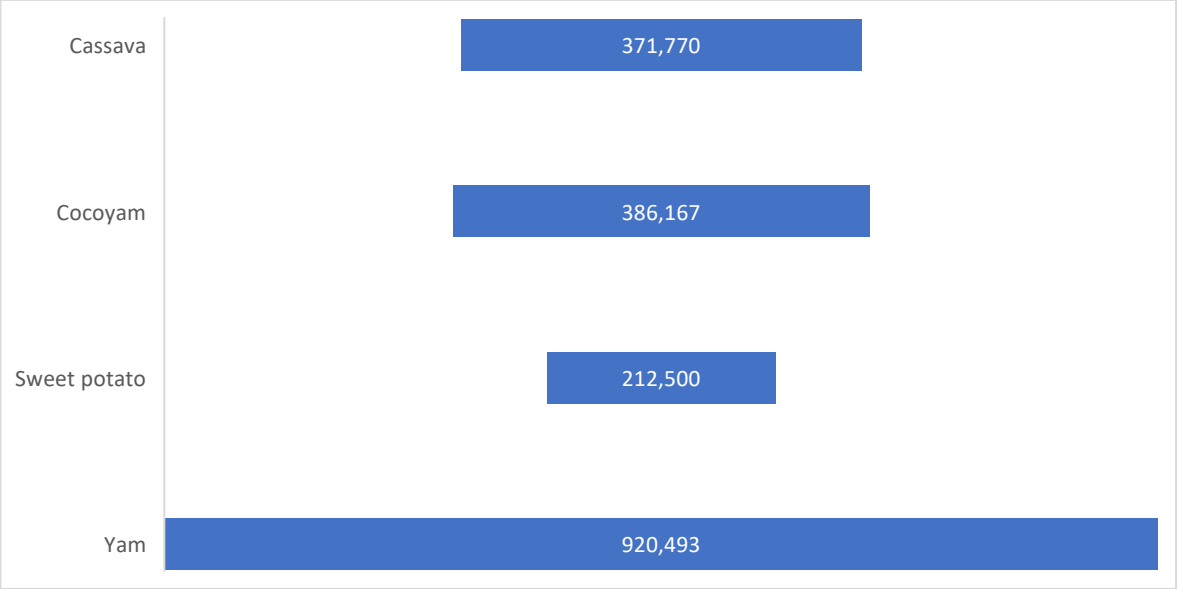

Figure 10.17: Production cost for tuber crops (southern zones) for 2022

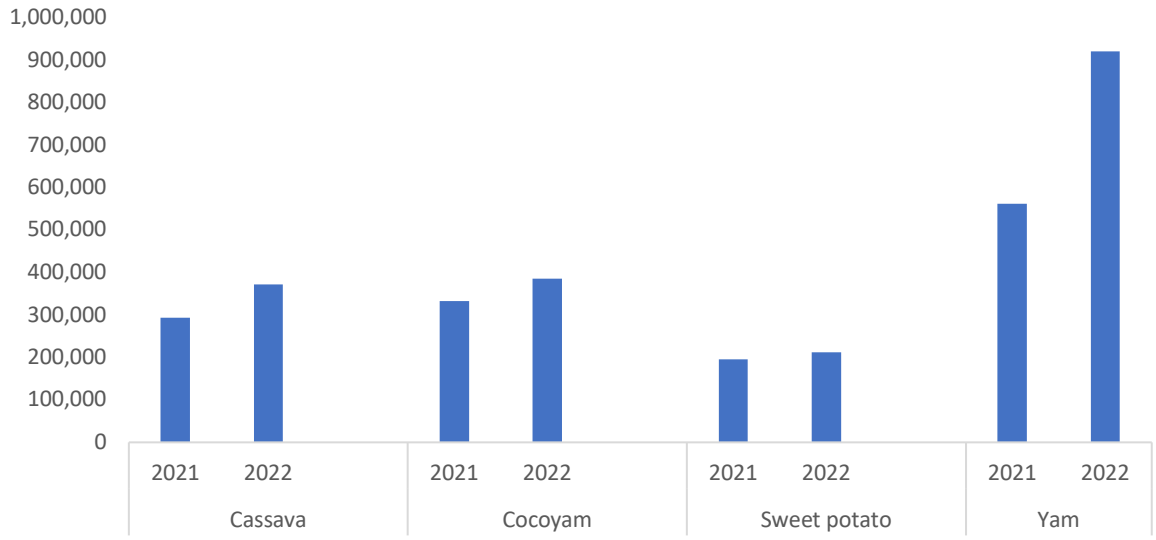

Figure 10.18: Production cost for tuber crops in 2021 and 2022 (southern zones)

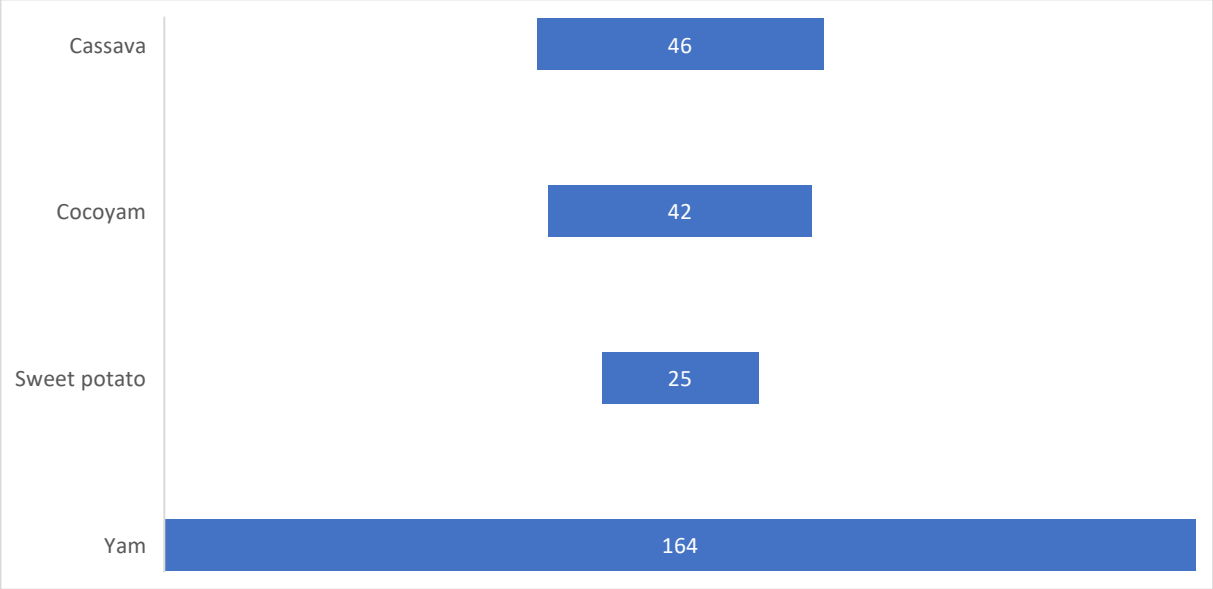

Figure 10.19: Percentage change in production cost for tuber crops between year 2021 and 2022 (southern zones)

Table 10.14a: Regional production cost for root and tuber (southern region)

Crops			Mean Production Cost (₦)			Southern Region Mean Production Cost (₦)
			South-East zone	south-south zone	South-West zone	
Cassava	Cost of Production (N) For Year	2021	262,500	362,822	255,400	293,574
		2022	361,600	441,977	311,733	371,770
		%Change	71	44	22	46
Cocoyam	Cost of Production (N) For Year	2021	183,000	380,000	433,500	332,167
		2022	330,000	385,000	443,500	386,167
		%Change	81	-	3	42
		2022	875,000	1,011,478	875,000	920,493
		%Change	215	133	144	164

Table 10.14b: Regional production cost for root and tuber (southern region) Cont'd

Crops			Mean Production Cost (₦)			Southern Region Mean Production Cost (₦)
			South-East zone	south-south zone	South-West zone	
Sweet potato	Cost of Production (₦) For Year	2021	140,000		250,000	195,000
		2022	175,000		250,000	212,500
		%Change	25		-	25
Yam	Cost of Production (₦) For Year	2021	436,400	821,784	428,333	562,172
		2022	875,000	1,011,478	875,000	920,493
		%Change	215	133	144	164

10.3 Cost of Production for Fruit and Vegetable Crops

Large scale production of fruits and vegetables take place in some states in Nigeria. Their cost of production presented. There was no reported data for north-central, north-east, North-West and south-east zones in 2022.

10.3.1 Cost of production for fruit and vegetables in south-south zone and states.

Four fruit and vegetable crops were cultivated in south-south states. They were banana/plantain, okra, pepper, and tomato. Banana/plantain was produced in almost all the states in this zone, while the other 3 were produced in few states. The cost of producing these crops in2021 and 2022 are on Table 10.15. The cost of production for all the crops increased in 2022 leading to a positive percentage change. Increased in the price of inputs in 2022 might be responsible for this observation. The change in cost of production for banana and plantain was (78%) in Bayelsa State. The zonal mean production cost in 2022 was highest for banana/plantain (₦598,875). Banana and plantain are long-term crop with higher establishment; this peculiarity may justify the relatively high cost of production.

Banana and plantain are choice crops in south-south states. The cost of production increased in 2022. We expect increase selling price.

Table 10.15: Cost of production for fruit and vegetables in South-South zone and states

State	Banana/Plantain			Okra			Pepper			Tomato		
	Cost of Production (N) For Year			Cost of Production (N) For Year			Cost of Production (N) For Year			Cost of Production (N) For Year		
	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change	2021	2022	% Change
Akwa Ibom	446,000	500,500	12	-	-	-	-	-	-	-	-	-
Bayelsa	360,000	640,000	78	-	-	-	-	-	-	-	-	-
Delta	-	-	-	101,070	125,000	24	97,600	110,000	13	143,000	160,000	12
Edo	526,110	550,000	5	289,101	310,000	7	-	-	-	-	-	-
Rivers	630,600	705,000	12	-	-	-	-	-	-	-	-	-
Zonal Mean	490,678	598,875	27	195,086	217,500	15	97,600	110,000	13	143,000	160,000	12

10.3.2 Cost of production for fruit and vegetables in south-west zone and states

Six fruit and vegetable crops were produced in this zone (Table 10.16a&b) in 2022. The six crops were not produced in large quantity. The crops were banana, plantain, cucumber, leafy vegetable, okra, pepper, and watermelon. Banana and plantain production was not statewide as in the south-south zone. In terms of yearly production cost, the SW zone experienced higher production cost in 2022 for all the crops, except in Ogun State. The mean production cost was the highest for banana and plantain (₦600,580) in 2022.

Table 10.16a: Cost of production for fruit and vegetables in south-west zone and states. Cont'd

	Pepper			Watermelon		
	Cost of Production (N) For Year			Cost of Production (N) For Year		
State	2021	2022	%Change	2021	2022	%Change
Ondo	150,000	150,000	0	120,000	150,000	25
Zonal Mean	150,000	150,000	-	120,000	150,000	25

Table 10.16b: Cost of production for fruit and vegetables in south-west zone and states

State	Banana/Plantain			Cucumber			Leafy vegetables			Okra		
	Cost of Production (N) For Year			Cost of Production (N) For Year			Cost of Production (N) For Year			Cost of Production (N) For Year		
	2021	2022	%Change	2021	2022	%Change	2021	2022	%Change	2021	2022	%Change
Ekiti	362,000	440,000	22	-	-	-	-	-	-	210,000	250,000	19
Lagos	-	-	-	-	-	-	203,000	270,000	33	-	-	-
Ogun	761,700	761,700	0	-	-	-	-	-	-	-	-	-
Ondo	-	-	-	90,000	100,000	11	-	-	-	-	-	-
Zonal Mean	561,850	600,850	11	90,000	100,000	11	203,000	270,000	33	210,000	250,000	19

10.3.4 Zonal production cost comparison for fruit and vegetable crops (southern zones)

Results for the zone are shown in Figure 10.20. Production cost of banana/plantain is higher in both zones for both years. In both zones the cost of production differed in 2021 and 2022 as shown in figure 10.21. The highest cost increment occurred in banana and plantain production in south-south zone in 2022. The cost increment for okra production in south-west zone was also alarming.

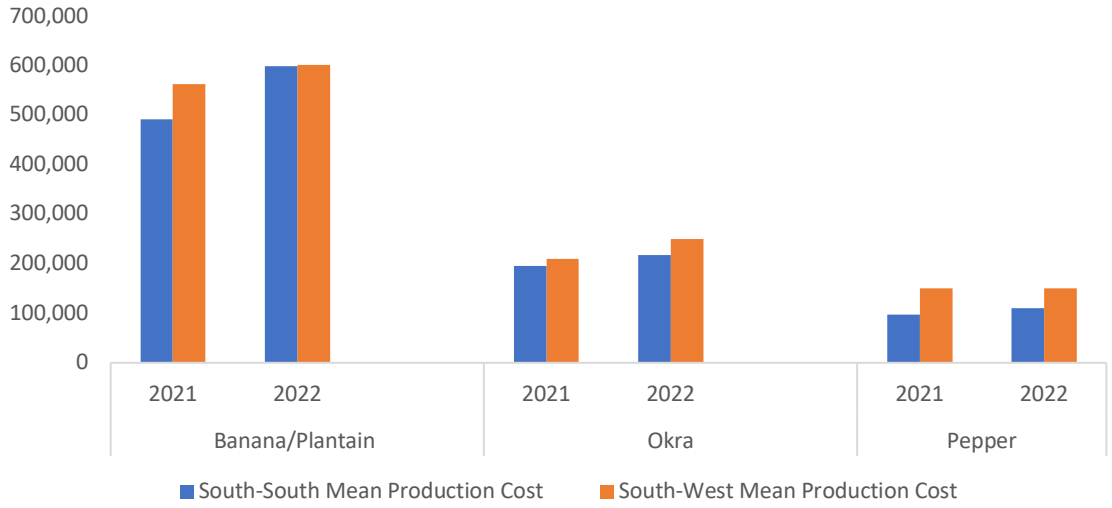

Figure 10.20: Zonal production cost comparison for fruits and vegetables in year 2021 and 2022(southern zones)

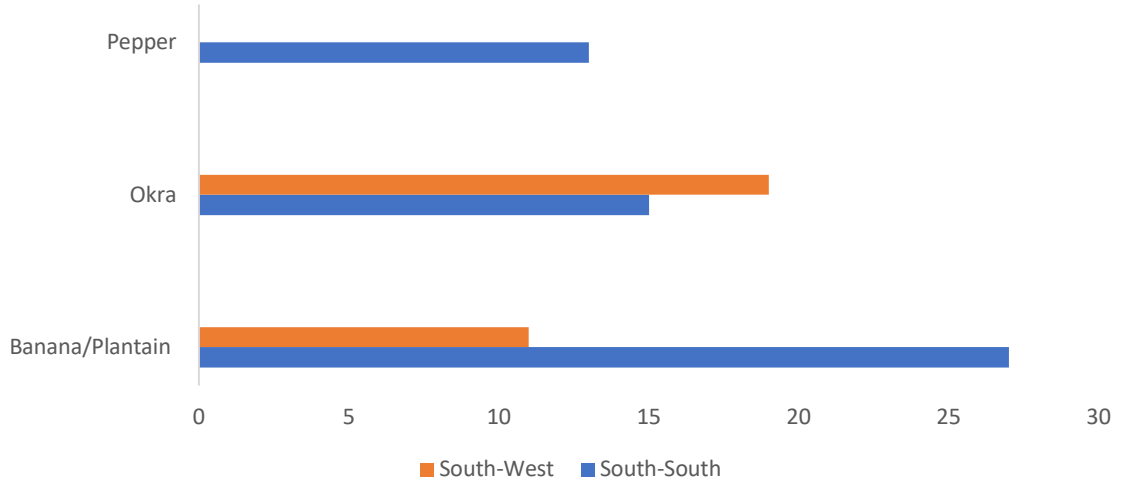

Figure 10.21: Zonal percent change comparison in production cost of fruits and vegetables between 2021 and 2022 (southern zones)

10.2.5 Production cost for fruit and vegetable crops (southern region)

Production cost for fruit and vegetable crops is shown in Figure 10.22. Banana was the most expensive to produce among the reported fruits and vegetables crops in this zone in 2022. Okra had a higher production cost than pepper. For these crops, the zonal production cost for 2021 and 2022 were different, and the percentages of cost change are shown in Figure 10.23. The yearly production cost and the changes are shown together on Table 10.17.

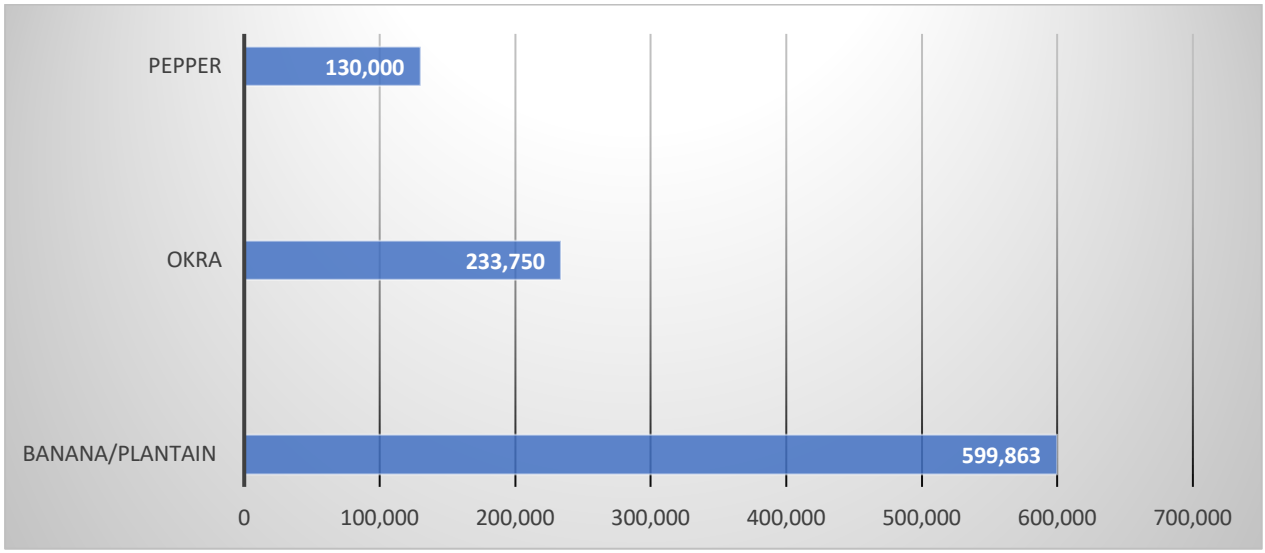

Figure 10.22: Production cost for fruits and vegetables (southern zones)for Year 2022

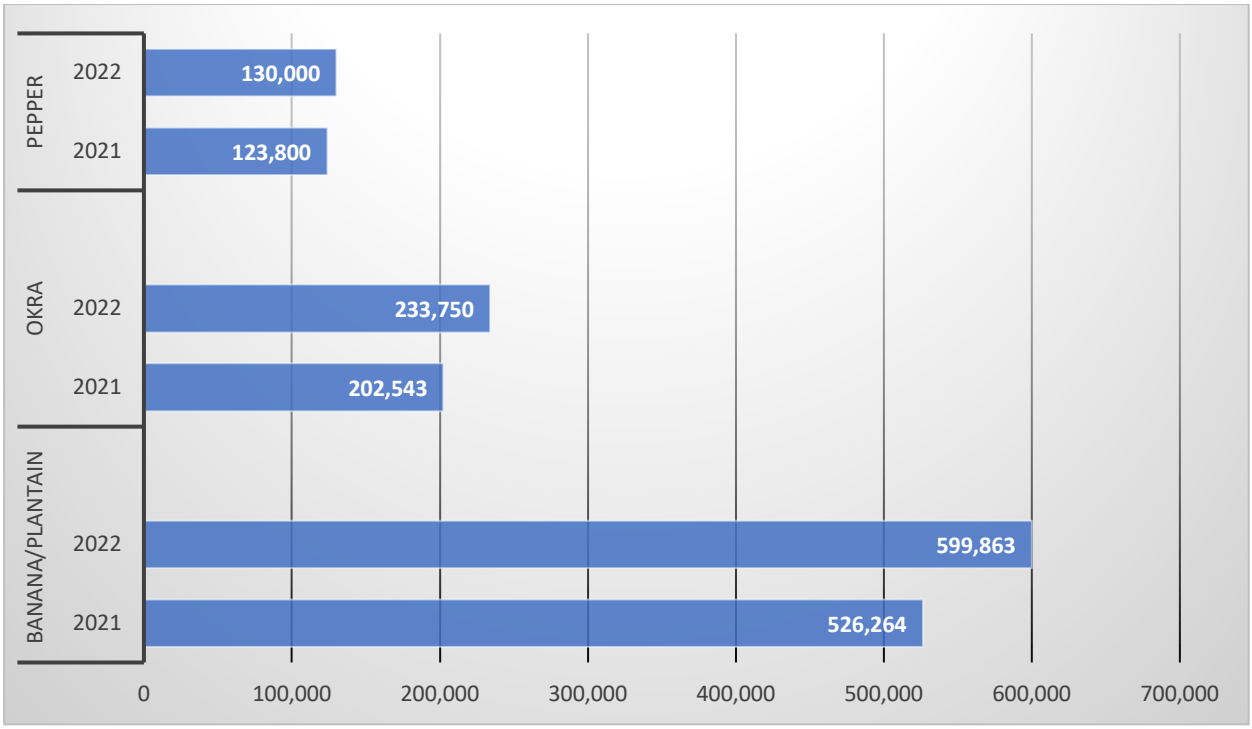

Figure 10.23: Production cost for fruit and vegetable crops in 2021 and 2022 (southern zones)

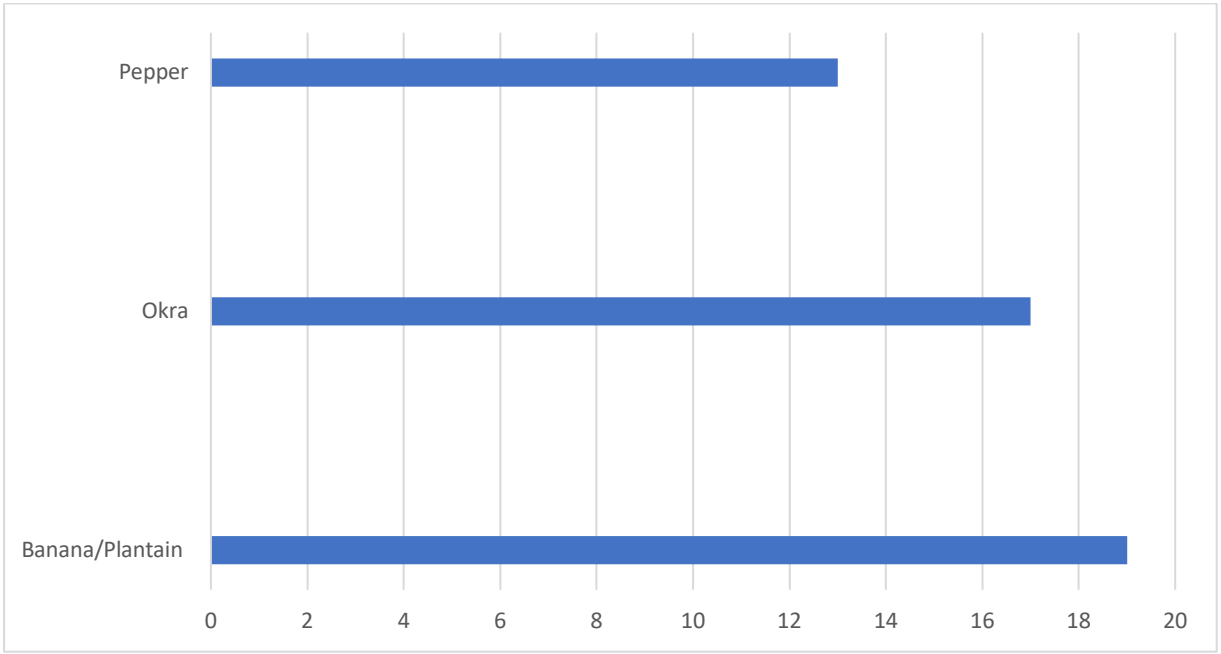

Figure 10.24: Percentage change in production cost for fruits and vegetables between 2021 and 2022 (southern zones)

Table 10.17: Regional production cost for fruit and vegetable crops (southern region)

			Mean Production Cost (N)		
			south-south zone	South-West zone	Southern Region Mean Production Cost (N)
Banana/Plantain	Cost of Production(N) for Year	2021	490,678	561,850	526,264
		2022	598,875	600,850	599,863
		%Change	27	11	19
Okra	Cost of Production(N) for Year	2021	195,086	210,000	202,543
		2022	217,500	250,000	233,750
		%Change	15	19	17
Pepper	Cost of Production(N) for Year	2021	97,600	150,000	123,800
		2022	110,000	150,000	130,000
		%Change	13	-	13
Tomato	Cost of Production(N) for Year	2021	143,000	-	143,000
		2022	160,000	-	160,000
		%Change	12	-	12
Cucumber	Cost of Production(N) for Year	2021	-	90,000	90,000
		2022	-	100,000	100,000
		%Change	-	11	11
Leafy vegetables	Cost of Production(N) for Year	2021	-	203,000	203,000
		2022	-	270,000	270,000
		%Change	-	33	33
Watermelon	Cost of Production(N) for Year	2021	-	120,000	120,000
		2022	-	150,000	150,000
		%Change	-	25	25

10.4 Cost of Production for Tree Crops

Output of tree crops are of immense contribution to total agricultural production in Nigeria. Tree crop spread across states and are actively cultivated in some zones. There are no data in north-central , north-east ,north-west and south-east zones. The costs of production are reported and

relative changes in cost between year 2021 and 2022 were observed. No report for zonal production cost for tree crops in 2022.

10.4.1 Cost of production for tree crops in south-south, south-west zone and states.

In the South-South zone, only Akwa-Ibom State reported the cultivation of oil palm. The cost of production increased in 2022 with 10% (Table 10.18). We may attribute the increase in cost to the general increased cost of farm inputs witnessed in year 2022. Apparently, the submission of Akwa-Ibom may not totally represent tree crop production in this zone.

In the south-west zone, Ekiti State reported cocoa production. Ogun state reported citrus and cocoa production. No report from remaining states. Cocoa and citrus are representative tree crops in this zone. Comparing production cost of year 2021 and 2022, there were no reduction. Cost of production was static in Ogun State but increased in Ekiti State. The price increase in agricultural inputs might have caused the increased cost of production. The static observation on the cost of citrus production in Ogun State is a deviation. The zonal mean production costs of both crops were near equal.

Cocoa, citrus and oil palm are important tree crop in the country in southern Nigeria in year 2022 and the production cost almost equal

Table 10.18: Cost of production for tree crops in south-south and south-west zone cum states.

South-south				South-West						
State	Oil palm			State	Cocoa			Citrus		
	Cost of Production (N) For Year		%Change		Cost of Production (N) For Year			Cost of Production (N) For Year		%Change
	2021	2022			2021	2022	%Change	2021	2022	
Akwa Ibom	500,000	550,000	10	Ekiti	265,000	330,000	25	400,000	420,000	5
Cross River	-	-	-	Ogun	-	-	-	317,500	317,500	0
Zonal Mean	500,000	550,000	10	Mean	265,000	330,000	25	358,750	368,750	3

10.5 Cost of Production of Oil, Sugar, and Fibre Crops

It I important to state that not much information was available on some of the crops placed together in this subheading. Oil crops are important crop in while sugar crop remains one of the prime crops in Nigeria. Aromatic crop like ginger has been a good export commodity for the country. Corresponding records of the cost of production for 2021 and 2022 are presented below. The zonal production cost was not computed due lack of data.

10.5.1 Cost of production of oil, sugar, and fibre crops in North-Central and North-East zones

Melon and Benniseed (oil crops) were cultivated in few north-central states (Table 10.19). The production cost of these crops increased in 2022. The zonal mean production cost for benniseed was higher. Sugarcane was cultivated only in FCT and the production cost increased in 2022. Benniseed was the only oil crop reported in the north-east zone and with a very alarmingly production cost in 2022; a percentage change of over 100% was recorded

Table 10.19: Cost of production of oil, sugar, and fibre crops in north-central and north-east zone cum states

North-Central										North-East			
	Melon			Benniseed (Sesame)			Sugarcane				Benniseed (Sesame)		
	Cost of Production (N) For Year			Cost of Production (N) For Year			Cost of Production (N) For Year				Cost of Production (N) For Year		
State	2021	2022	%Change	2021	2022	%Change	2021	2022	%Change	State	2021	2022	%Change
Benue	305,000	350,000	15	-	-	-	-	-	-	Adamawa	-	-	-
FCT	-	-	-	-	-	-	300,000	400,000	33	Bauchi	120,000	260,500	117
Kwara	-	-	-	398,000	400,000	1	-	-	-	Gombe	-	-	-
Nasarawa	130,000	160,000	23	149,500	185,800	24	-	-	-	Yobe	-	-	-
Niger	-	-	-	-	-	-	-	-	-	Mean	120000	260500	117.0833
Zonal Mean	217,500	255,000	19	273,750	292,900	12	300,000	400,000	33	-	-	-	-

10.5.2 Cost of production of oil, sugar and fibre crops in North-west zone and states

Benniseed was cultivated in this zone in 2022. Cotton and ginger (fibre and aroma) crops were cultivated in this zone. The production cost of ginger did not increase in 2022; but that of benniseed and cotton increased.

Benniseed is the predominant oil seed cultivated in all northern zones in 2022.

Table 10.20: Cost of production of oil, sugar and fibre crops in north-west zone and states

State	Benniseed (Sesame)	Cotton	Ginger

	Cost of Production (N) For Year			Cost of Production (N) For Year			Cost of Production (N) For Year		
	2021	2022	%Change	2021	2022	%Change	2021	2022	%Change
Jigawa	170,000	240,000	41	-	-	-	-	-	-
Kaduna	-	-	-	-	-	-	650,000	650,000	0
Zamfara	143,100	160,000	12	125,000	150,000	20	-	-	-
Zonal Mean	156,550	200,000	26	125,000	150,000	20	650,000	650,000	-

10.5.3 Production cost for oil, sugar and fibre crops (northern zones)

Production cost at northern regional level is shown on Table 10.21. There were no current data for most crops in order to be able to compute their zonal production cost, except benniseed. The production cost for benniseed in the zone in 2022 stood at ₦251,133 and ₦183,433 in 2021 and 2022 respectively; resulting in a 52% percentage change.

10.5.4 Cost of production of oil, sugar and fibre crops in South-east and South-south zones

Benniseed was the only oil crop cultivated by only one state in South-east zone in 2022. The production cost increased in 2022Table 10.22). Melon and ginger were produced in are reported south-south zone. both are cultivated in Edo State. The production cost of both crops increased in 2022. There were no records for the production of ginger and melon in south-west states in 2022

Table 10.21: Zonal and regional production cost for oil crops (northern region)

		State	Mean Production Cost (N)			Northern Region Mean Production Cost (N)
			North-Central zone	North-East zone	North-West zone	
Melon	Cost of Production (N) For Year	2021	217,500	-	-	-
		2022	255,000	-	-	-
		%Change	19	-	-	-
Benniseed (Sesame)	Cost of Production (N) For Year	2021	273,750	120000	156,550	183,433
		2022	292,900	260500	200,000	251,133
		%Change	12	117.0833	26	52
Sugarcane	Cost of Production (N) For Year	2021	300,000	-	-	-
		2022	400,000	-	-	-
		%Change	33	-	-	-
Cotton	Cost of Production (N) For Year	2021	-	-	125,000	-
		2022	-	-	150,000	-
		%Change	-	-	20	-
Ginger	Cost of Production (N) For Year	2021	-	-	650,000	-
		2022	-	-	650,000	-
		%Change	-	-	-	-

Table:10.22 Cost of production of oil, sugar and fibre crops in south-east and south-south zone

South-East				South-south						
	Benniseed (Sesame)				Melon			Ginger		
	Cost of Production (N) For Year				Cost of Production (N) For Year			Cost of Production (N) For Year		
State	2021	2022	%Change	State	2021	2022	%Change	2021	2022	%Change
Cassava	-	-	-	Akwa Ibom	-	-	-	-	-	-
Abia	-	-	-	Bayelsa	-	-	-	-	-	-
Anambra	-	-	-	Cross river	-	-	-	-	-	-
Ebonyi	50,000	180,000	260	Delta	-	-	-	-	-	-
Enugu	-	-	-	Edo	366,379	380,000	4	1,092,329	1,120,000	3
Imo	-	-	-	Rivers	-	-	-	-	-	-
Zonal Mean	50,000	180,000	260	Mean	366,379	380,000	4	1,092,329	1,120,000	3

11.0 FARMERS ASSESSMENT OF CROPPING PERFORMANCE

Agriculture contributes to a significant part of the country's GDP. It is a key activity for Nigeria's economy after oil. Agricultural activities provide livelihoods for many Nigerians (Statista Research Department, 2022). Results of the farmers' assessment showed that most of the surveyed farmers were male (72%) and female (28%). The mean age of the respondents was 48 years. A typical household in Nigeria had an average of seven members; and average number of plots was 2 while the average farm size was 2 hectares according to the 2022 reports collated from 36 states and the FCT.

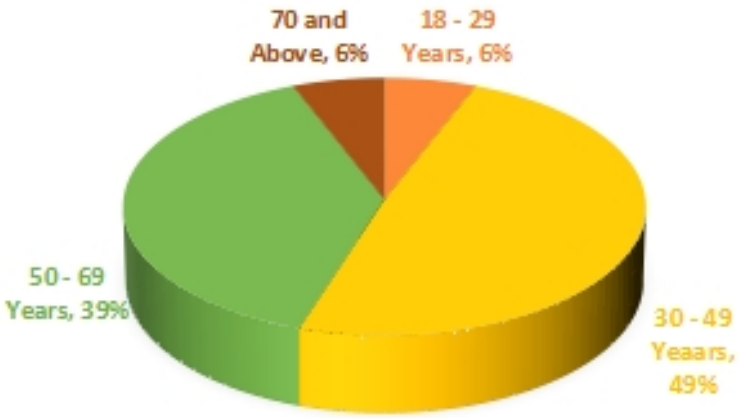

Figure 11.1: Age group of farmers

Gender and Age of Farmers

There were more farmers between the ages of 30 to 69 years surveyed in 2022. This age group accounted for 88% of the total farmers interviewed. The proportion of farmers declined as the age category increased from 70years and above. Respondents between the ages of 30 and 49 years old made up the largest proportion (49%) of the farmers interviewed. Of the 1211 farmers surveyed, at least 6% were between the ages of 18 – 29 years in 2022 as against 4% in 2021; indicating a marginal increase in youth participation in agriculture in 2022.

Figure 11.2: Type of production engaged in by farmers

The results showed that majority of surveyed households produced food crops and relied on livestock production for their livelihoods. At least 84% of the households were engaged in crop and livestock farming. In general, 92% of the farmers produced crops, while 29% kept livestock. The main annual food crops grown were maize, rice, sorghum, millet, cassava, and yam. The perennial crops grown were sugarcane and plantain. Generally, maize, rice, sorghum, and cowpea were cited as the four most important crops in the northern parts of Nigeria. Yam and cassava were majorly cultivated in the southern part though few states in the North-central also produced them.

Land Area Cultivated

The land available for each farmer was either personally owned or rented. Figure 11.3 showed that 15% of farmers had less than one hectare of land, and 72% of households had access to between 1 and 3 hectares of land. Only 13% of farmers had more than 3 hectares. Recently, farmers had challenges accessing land for farming. Limited land access is due to high population growth and insecurity in some states, resulting in very small parcels of land per farmer. In some areas, land has been severely degraded, due to gully formation most especially in the South-East and South-South. In some areas, the situation was caused by lack of proper land management practices by these farmers.

Majority of the farmers interviewed cultivated land areas that ranged between 0.5 – 3 hectares in 2022. Moreover, most of the farmers had between 1 to 3 independent plots of farmland. The median hectarage for maize, rice, and yam cultivated was 3.5 hectares. Inter-cropping (by planting different crops on the same piece of lands such as cassava and maize) was a common practice among farmers in Nigeria. Some farmers reported that their farm size in 2022 decreased due to limited access to farmland. That was attributed to insecurity and conflict in some states. The insecurity situation might truncate the effort of farmers to improve food security at the household level considering the continuous hike in food prices in 2022. Farmers have been adapting and making changes in their farming practices over the last ten years. The majority of farmers had made changes to at least three of their crops.

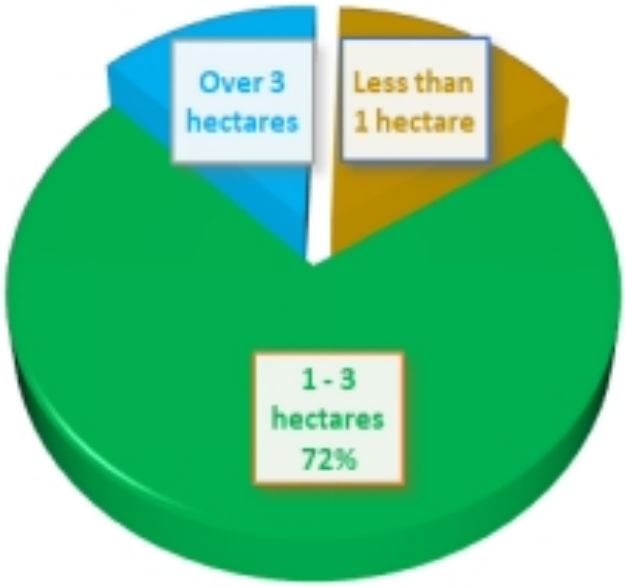

Figure 11.3: Land areas cultivated by farmers

Crop Production

Majority of the farmers made changes to the crop produced in 2022. Some mentioned market-related reasons behind those changes, while others made such changes because of pests and diseases. Some farmers also cited climate-related reasons for making changes to their crop production practices. Some of these farmers shifted from the production of cereals to legumes and oil seeds to avoid the purchase of chemical fertilizer. Majority of the respondents (92%) were smallholder farmers that cultivated less than three hectares of land at the subsistence level. On the average, households cultivated 2 or 3 staple crops across the states. In each of the states, the staple cereal, legumes, and tubers cultivated by majority of the farmers were maize, rice, sorghum, millet, cowpea and groundnut, yam, cassava, and sweet potatoes. The proportion of farmers producing legumes (cowpeas groundnuts and soybean) was generally not as high as those producing cereals, but the production of legumes with the most producing farmers varied from state to state.

Livestock Production

Livestock production is very important in the northern states, with some of the households raising small livestock (sheep, goats, chickens), and large livestock, most especially, oxen which they use for animal traction. Animal production in Nigeria has remained underexploited. Livestock mostly reared by households are small ruminants like goats, sheep, and cattle. The ecology in the northern part of the country makes it famous for livestock keeping. Fewer proportion of the respondents kept livestock at 29% to augment their cash income. Figure 11.4 shows that goat was the most common small ruminant kept by 19% of these farmers. Sheep was owned by 11% of farmers, predominantly in the Northern zones. Similarly, cattle were kept by 7% of the farmers surveyed. Livestock is mostly kept at a low cost. Poor management skills resulted to low livestock production in many states. Fewer farmers made livestock-related management changes.

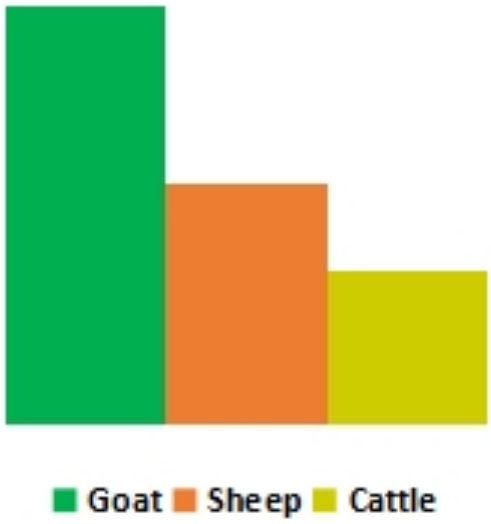

Figure 11.4: Livestock type

Poultry Farming

Eighteen percent (18%) of farmers are into poultry. Poultry farming is the leading form of meat production in Nigeria. While there were some semi-industrial poultry operations in many states, rural family farms were still predominant, and women played important role.

Fish Farming
Fishing is a vital livelihood for poor households in the riverine areas in Nigeria. Only 5% of the farmers engaged in fishing in 2022. Most of the farmers that engaged in fish farming was recorded from the southern part of Nigeria. This figure was mainly reported in Lagos, Ogun, and Rivers States. The fish species mostly cultivated were catfish and tilapia. About 3% of these farmers produced catfish and the main source of fingerlings was specialized private fish farms.

Crop and Livestock Pests and Diseases
Farmers (58%) reported infestation of pests and diseases on crops while 14% reported infestation on livestock. This is a slight increase compared to 2021. However, crop pests and disease impacts were light to moderate on maize in the current year with Fall Army Worm (FAW) in all 36 States and FCT recorded as the principal problem. Rice blight and birds infested rice farms in all the states; the level of severity was light. A significant proportion of farmers reported nematode attack/rotting on yam and cassava mosaic disease on cassava with the light level of severity. Bio-pesticides were used by farmers to control the fall army worm infestation on maize.
There were reported cases of coccidiosis and New Castle Disease (NCD) of poultry and PestePetits Ruminants (PPR), on Goats/Sheep by farmers in 2022. The farmers vaccinated the animals to control the spread of livestock diseases.

Sources of Input, Access, and Usage
Farmers experienced constraints, especially in acquiring seeds, chemical fertilizer, and organic manure.

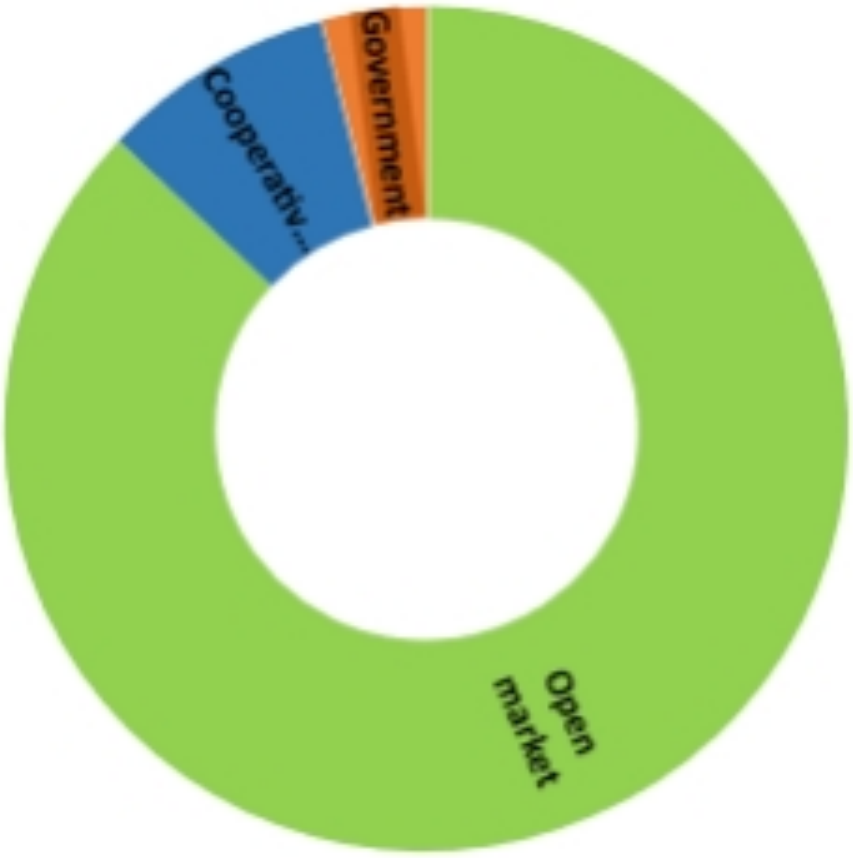

Figure 11.5: Sources of inputs

Majority of the farmers asserted that farm inputs were mainly purchased from the open markets within and outside the communities. Only a small fraction, that is,6% of the farmers received

government input in 2021 and 5% in 2022. Moreover, 2% of the farmers received input from government in both years. Hence, 87% of the farmers surveyed could not access government inputs in 2022. This is an indication that limited quantity of farm inputs was procured and distributed; and grossly inadequate considering the population of farmers in the country.

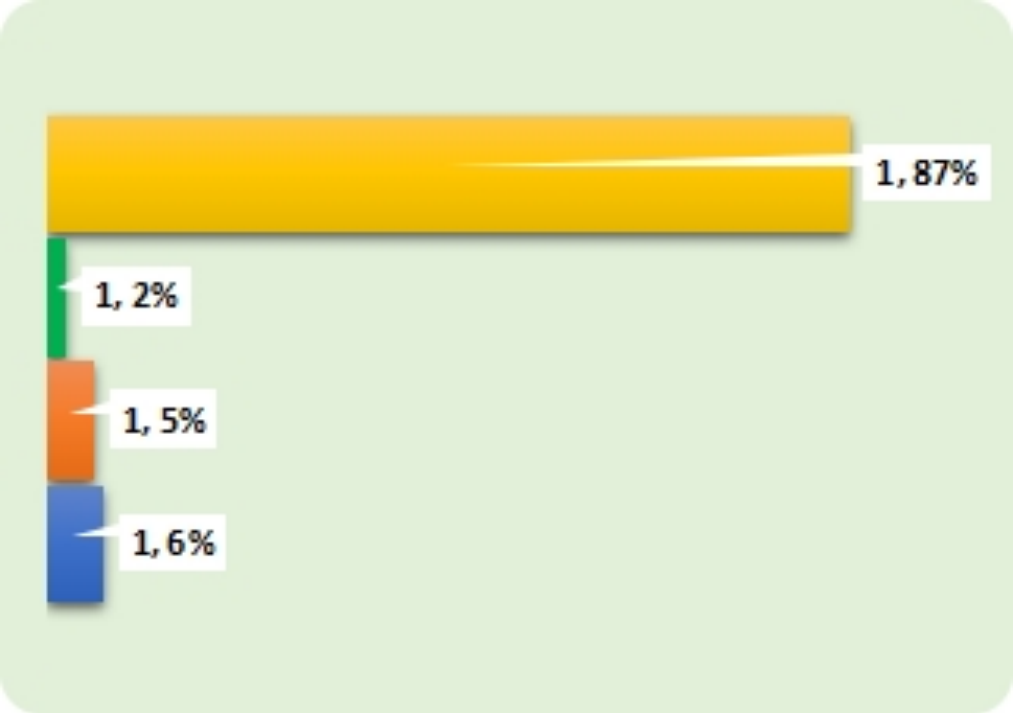

Figure 11.6: Proportion of farmers that received inputs from government

Farm input such as inorganic fertilizer was used by some farmers. Farmers affirmed that fertilizer in the open market was accessible but not expensive. Majority of farmers surveyed did not receive fertilizer from the government in 2022. About 30% of the farmers purchased fertilizer at exorbitant prices, while 70% of the farmers did not purchase fertilizer because they could not afford it. Also, farm equipment such as power tiller, power harrow, or combine harvester was procured or made available to farmers by the government. Farmers continued to make use of simple tools at their disposal.

Farmers advised that government should endeavour to procure adequate farm inputs for smallholder farmers at a subsidized rate. Paucity of fund was cited as the problems associated with the procurement and distribution of agricultural inputs.

Insufficient fertilizer application on the already nutrient-depleted soil not only reduced productivity but also posed a risk and contributed to food insecurity. For farmers that use fertilizer in 2022, the quantity of fertilizer used per hectare was far lower than the recommended quantity by the FAO; thereby resulting in poor crop yield.

Improved Seeds

Majority of farmers, that is,75% were aware of certified seeds but only 53% said they bought certified seeds in 2022. Twenty-eight percent indicated that they bought seed from open container while 72% bought seed in a sealed pack. Farmers bought their certified seeds from the market, government and agro-dealers. The use of improved seeds was generally low, probably because most farmers rely on seeds saved from the previous harvest. Fifty-six percent said they want a replacement for the seed varieties they currently cultivated for higher productivity.

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Figure 11:7: Source of certified seeds

Farmers accessed their seeds from formal and informal channels that provided them with a range of varieties and quality. The quantities of seeds purchased varied between 2kg and 25kg. The average cost of purchased seeds was about ₦4000. Seeds were mainly obtained from the open markets (50%), previous harvest (15%) agro-dealers (15%), seed companies (13%) research institutes (5%), and government offices (2%). The low use of certified seeds suggests a need for awareness creation among farmers to increase crop yield.

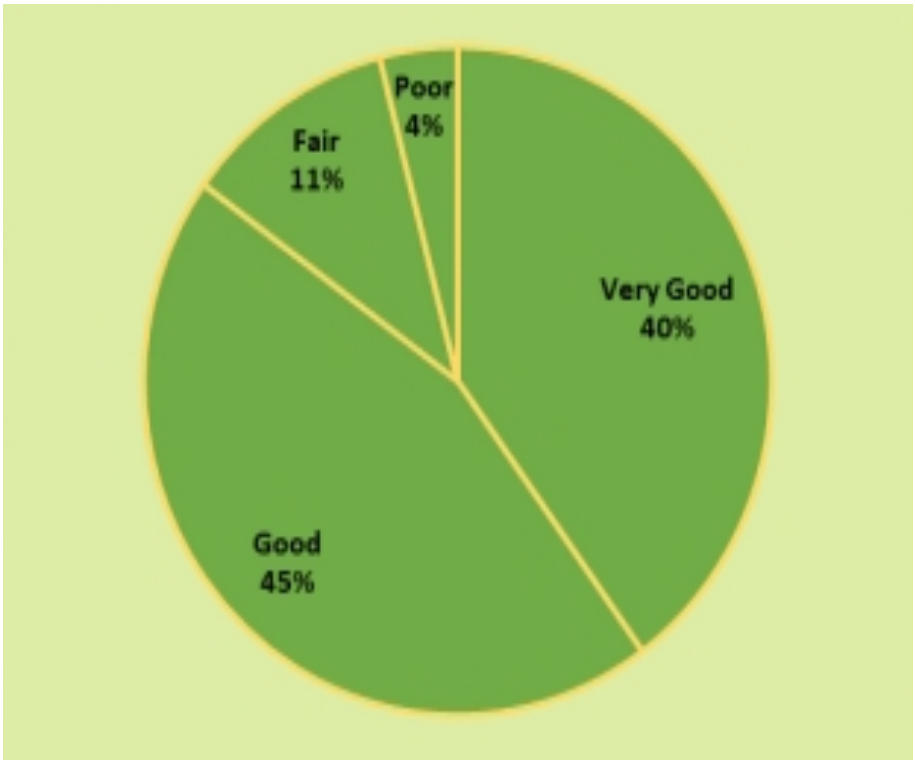

Figure 11.8: Quality of fertilizer purchased in the open market

Fertilizer Use

Fertilizer was sparsely used in the 2022due to high market cost. The use of inorganic fertilizers in Nigeria was relatively low and varied between states. The quantity of fertilizer both organic and inorganic applied to crops by farmers was insufficient. Although 30% of the farmers sampled used inorganic fertilizer, the application per hectare continued to decline over the years. The situation could be attributed to the paucity of funds and the high price of the commodity. More than half, that is,56% of the farmers reported that they used NPK, while some (36%) used Urea. The remaining 8% used SSP. About 46% of the farmers used organic fertilizers (animal manure). The application of organic fertilizers was also minimal as only small amounts of organic fertilizer were used by individual farmers. The organic fertilizers used among farmers were mostly cow and small ruminant dung (48%) and poultry manure (42%). Only 10% of the farmers used municipal waste.

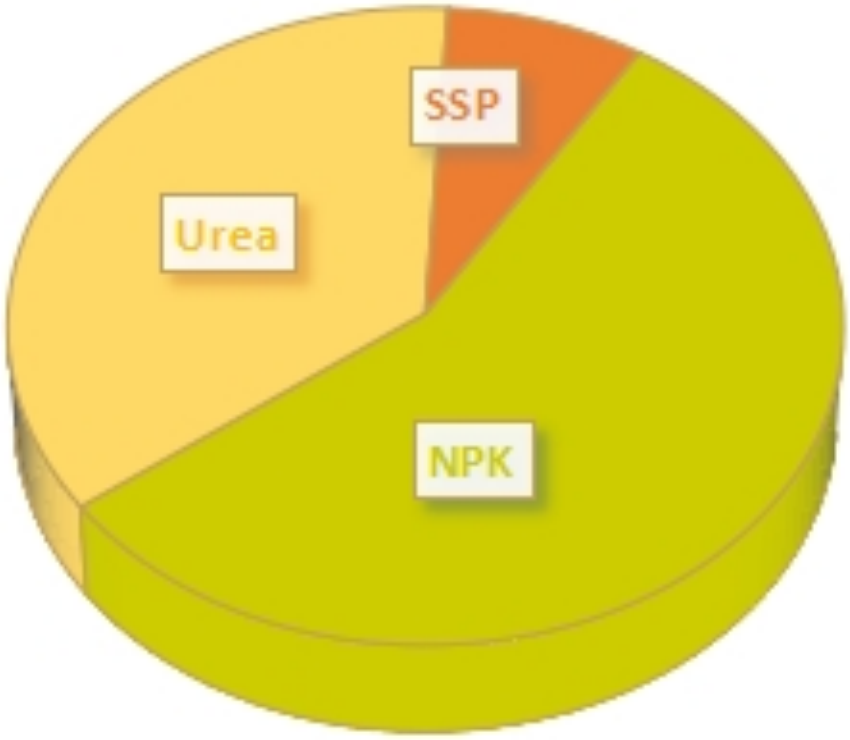

Figure 11.9: Types of inorganic fertilizer used by farmers

Figure 11:9 shows the types of fertilizer farmers used. As shown above, only one-third of farmers surveyed applied one or two types of chemical fertilizers. For those that apply, the most common fertilizer applied was NPK and urea. Very few farmers used SSP.

Further analysis showed that of the farmers that applied fertilizer, 85% applied it to maize, 67% applied it to rice and 58% applied it to sorghum. At the farmer level, 85% who used fertilizer, applied it to their most important crop, 67% applied it to their second most important crop, and 58% to their third most important crop.

Fertilizer Prices

Farmers purchased fertilizers at an average cost of ₦22,500 per 50kg bag from the open markets. The NPK and urea fertilizers remained the common inorganic fertilizers used by farmers in 2022. The average cost of NPK and urea in the season ranged from ₦ 18,000 to ₦ 26,500 per bag depending on the brand. The prices of NPK and Urea continued to increase and could probably continue to do so across the country as blending plants are running out of stocks (raw materials

for blending). The ongoing crisis between Russia and Ukraine is one of the reasons behind the price increments, as it has affected the importation of MOP from Russia, resulting in a scarcity of blenders. Fluctuating exchange rates and increase in the price of fuel are other contributing factors to farm produce price increase. Transportation fees had equally increased. The uncertainty on future prices of NPK products led to the hoarding of products by some agro-dealers.

Pesticides: Herbicides and Insecticides

The proportion of farmers that apply pesticides varies based on cropping patterns and crop type. To control the infestation of pests, and diseases and also control weeds, farmers relied heavily on the use of pesticides. The majority (92%) of farmers applied herbicides and insecticides to their farms. More of the farmers (78%) used herbicides while 55% are reported to have used insecticides. Herbicides were used by cereal farmers to control weeds. Some farmers complained that they did not apply sufficient quality of pesticides as required on their crops. One litre of herbicides and insecticides costs between ₦3,800 and ₦4,500 in the open markets. Generally, insecticides application was low in all the six agroecological zones in 2022. The application of fungicides was not reported.

Use of Inputs in Livestock Production

The use of inputs in livestock production was low on average. The most commonly used inputs were feeds (58%), vaccines (27%), and vitamins (11%). Less than 5% of farmers used concentrates to feed livestock.

Crop Production Prospect

The effect of insecurity and flood in some parts of the country is expected to negatively impact crop production in 2022. However, when compared to the previous year, a shortfall in cereal output is expected in 2022. About 16% of farmers were optimistic and expected higher output than in 2021; a sharp decrease in the proportion of farmers in 2021 (67%). 6% of the farmers expect their production to be below that of 2021; while about 6% expected their output to be the same.

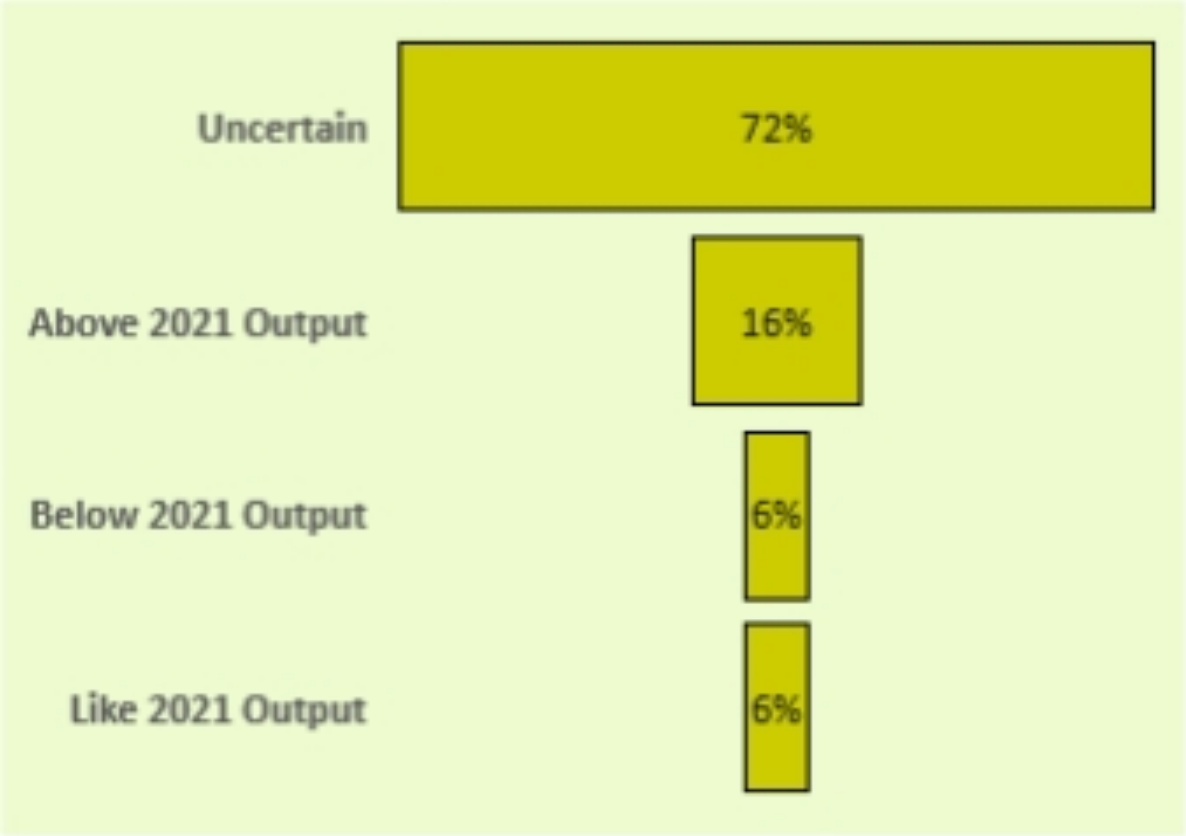

Figure 11.10: Prospects of crop production

Data from the Agricultural Performance Survey (APS) revealed that Nigeria's crop production has been on a steady decline in the past 2 years. Food inflation has continued to rise as crop production falls. Nigeria's food inflation rate has risen as crop production declined in the last two years. Reasons for declining crop production are insecurity and conflict, kidnapping for ransom, natural disaster, farmer-herder clashes, and ethnic clashes.

Beyond insecurity, the inability of Nigerian farmers to adopt advanced technology and methods has also impacted the level of crop output in Nigeria. Farmers used outdated methods of farming like cutlasses and hoes and local preservation of farm produce. This outdated system resulted in low and slow yield and also wastage of farm produce before getting to the consumer.

Government, at all levels, should facilitate the availability of farm inputs at affordable rates to farmers to boost agricultural productivity, improve food security, and enhanced livelihoods.

Hired Labour and Machinery

The results showed that 86% of farmers hired farm labour for land clearing, plowing, harrowing, planting, and other on-farm activities.

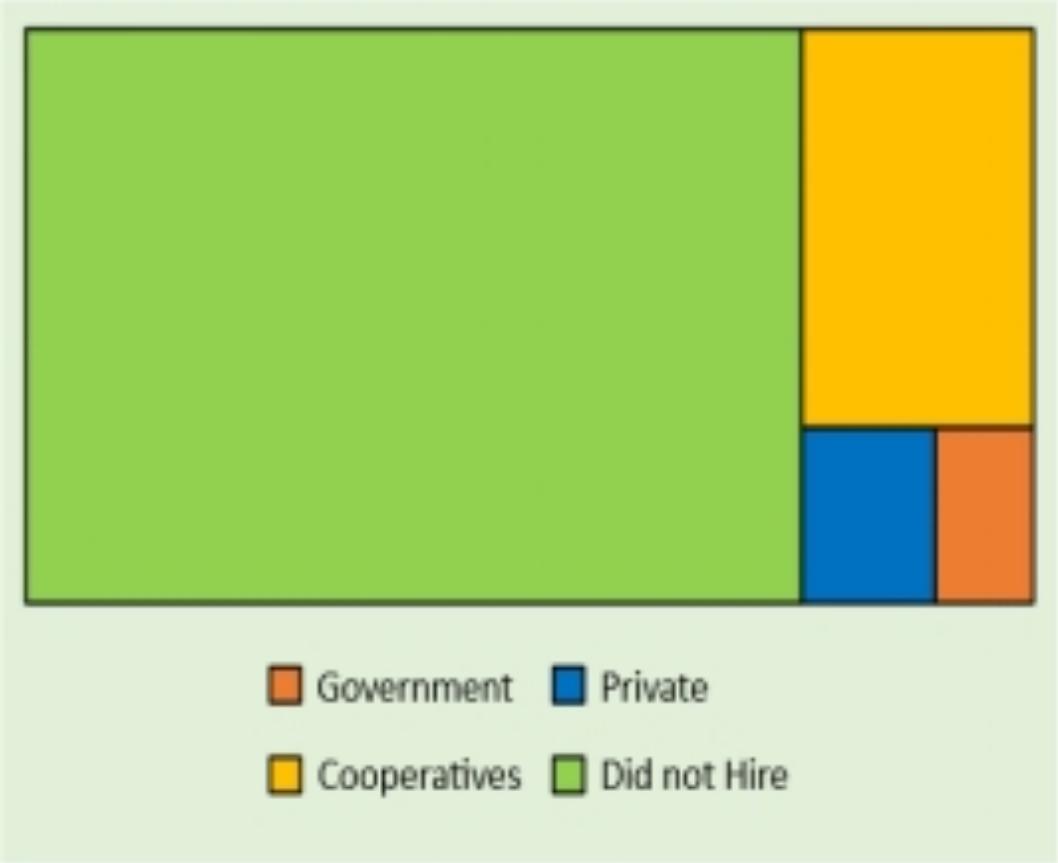

Figure 11.11: Sources of hired tractors

Fewer farmers indicated they used some farm machinery/equipment in their agricultural activities. About 23% of the farmers used tractors for cultivation in 2022. Similarly, an insignificant proportion (3%) hired tractors from the government, an increase from 2021, while only 4% hired tractors from private owners. 16% were hired from cooperative associations. There is a need for the three tiers of government to support the provision of basic socioeconomic services to the poor and vulnerable farmers to uplift their productive capacity to a level where they can engage in commercial production.

Effect of Insecurity on Farming Activities

The resource-driven conflict between farmers and herdsmen has impacted on farmers ability to access to land for crop production at (20%), internal displacement (10%), destruction of farmlands (30%), theft of agricultural produce (38%), loss of casual labour (13%), and loss of livestock (11%). The glaring insecurity issues in Nigeria have led to sharp rise in food prices owing to the substantial reduction in food production. The low level of agricultural production, due to attacks from insurgents or herdsmen, is likely to lead to a food crisis if the security situation does not improve in 2023.

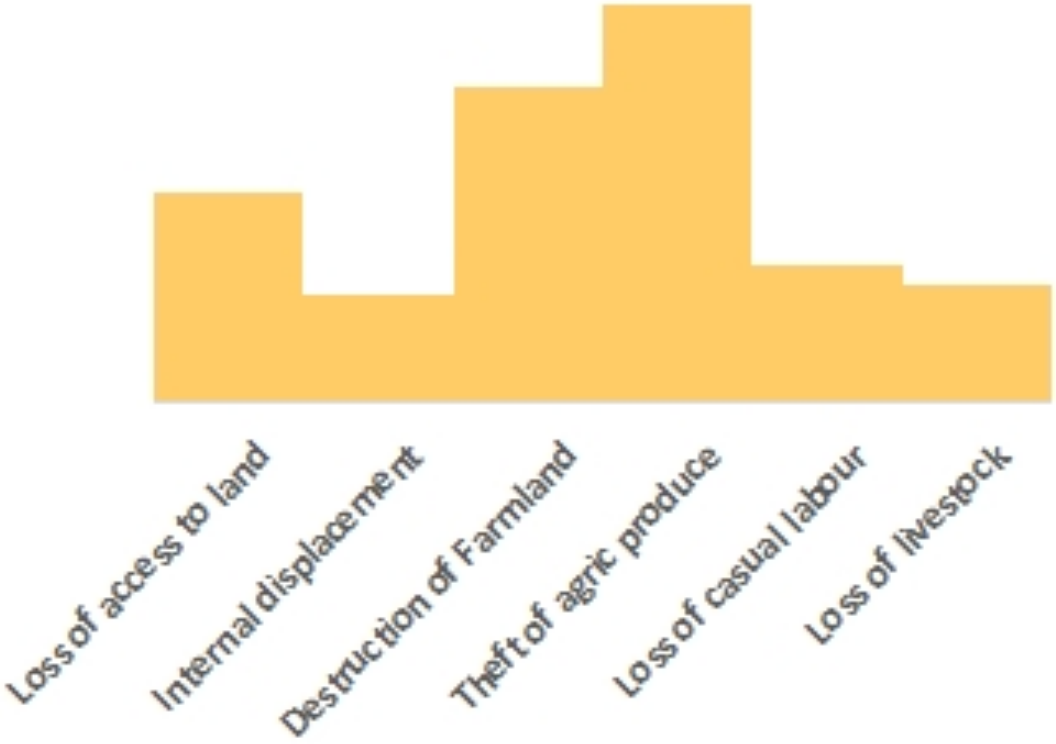

Figure 11.12: Effect of insecurity on farmers

Climate Resilience Adaptation Practice

All the farmers surveyed engaged in different climatic resilience adaptation strategies ranging from the use of improved varieties (52%), intercropping (68%), mulching (35%), planting (46%), planting of cover crops (48%), use of organic manure (60%), early planting (84%) to late planting (31%). The importance of these climate change adaptation and mitigation strategies is to efficiently increase food production.

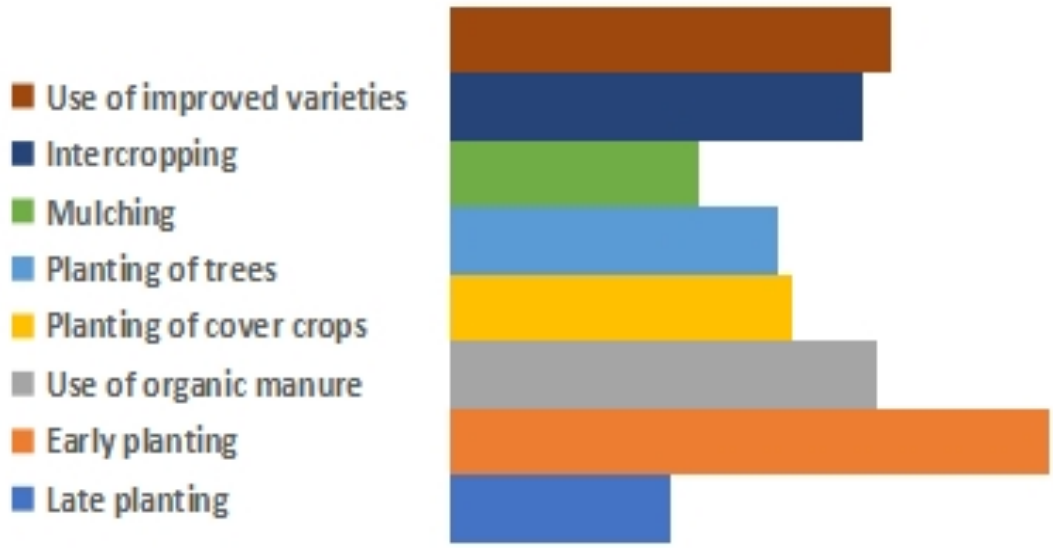

Figure 11.13: Proportion of farmers that practice climate change adoption strategies

Sources and Types of Extension Services

The proportion of farmers who receive extension information is still low in Nigeria. In the survey across 36 States and FCT, 92% of sampled farmers accessed extension services in 2022. There was a total of 1109 farmers receiving extension advisory services representing 92% of the total number of respondents. The following are the proportions of farmers receiving extension advice from the three most important sources: extension agents (64%), radio (40%), and friends/family (36%). Television (7%), market (7%), internet (6%) and extension publication (3%) are other sources. (Figure 11.14). A major constraint to effective extension service delivery is the disproportionate ratio of extension agents to farmers.

Most of the farmers that had access to Extension Agents were farmers that are domiciled in locations or zones where the Agricultural Development Programme (ADPs) are still very active in extension service delivery. Thousands of farmers in Nigeria are still not being powered by the ADPs. Hence, the radio is the second most common source of information reported, with 40% of farmers receiving information through this channel. Other common sources for this type of information include extension agents, friends, and family.

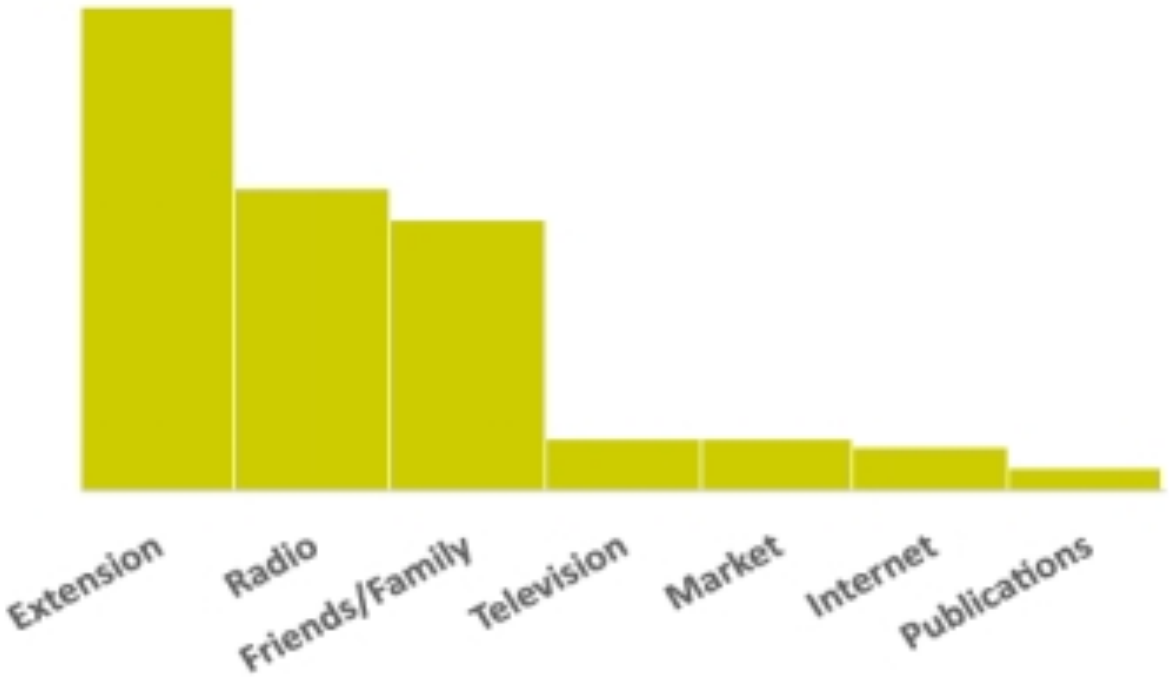

Figure 11.14: Source of extension services

12.0 PRODUCTION ESTIMATES FOR MAJOR CROPS

12.1 Rice

The production forecast for rice in 2022 showed Niger State as the highest producer with 664,520 MT. The total production estimate of rice in 2022 was 8,501,650 MT, a 1.9% increase over 2021. Kogi State has the largest land area of 293,680 ha devoted to rice production in 2022.

12.2 Maize

Kaduna State was the leading maize producer in 2022 with a record of 987,140 MT. The total production estimate of maize in 2022 was 12,634,520 MT; a 0.1% decrease over maize in 2021 figures. The largest land area committed to maize production 450,210 ha (Borno State).

Table 12.1: Estimates of Land Area Cultivated and Production Forecast for Rice

State	LandArea			Production			Yield	
	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	272.29	276.37	1.50	517.65	528.70	2.13	1.90	1.91
FCT	206.50	211.53	2.44	415.00	424.76	2.35	2.01	2.01
Kogi	291.98	293.68	0.58	534.65	477.55	-10.68	1.83	1.63
Kwara	208.37	222.31	6.69	431.94	440.13	1.90	2.07	1.98
Nasarawa	189.91	197.90	4.21	417.39	420.71	0.80	2.20	2.13
Niger	255.91	283.49	10.78	629.80	664.52	5.51	2.46	2.34
Plateau	135.48	140.51	3.71	250.45	252.09	0.65	1.85	1.79
North-Central	1560.44	1625.80	4.19	3196.88	3208.46	0.36	2.05	1.97
Adamawa	172.2	187.0	8.58	275.8	284.9	3.31	1.60	1.52
Bauchi	153.4	167.8	9.40	250.1	260.2	4.05	1.63	1.55
Borno	120.2	127.4	5.97	189.5	190.1	0.31	1.58	1.49
Gombe	157.0	183.3	16.74	215.1	220.0	2.29	1.37	1.20
Taraba	201.45	215.82	7.13	388.16	402.89	3.80	1.93	1.87
Yobe	98.1	94.3	-3.81	160.5	170.7	6.39	1.64	1.81
North-East	902.4	975.6	8.12	1479.1	1528.9	3.36	1.64	1.57
Jigawa	122.18	134.41	10.01	215.31	205.45	-4.58	1.76	1.53
Kaduna	163.92	168.00	2.49	360.37	410.60	13.94	2.20	2.44
Kano	131.74	137.28	4.21	438.72	480.11	9.43	3.33	3.50
Katsina	137.28	136.82	-0.34	220.26	216.02	-1.92	1.60	1.58
Kebbi	224.42	238.55	6.30	348.69	370.78	6.34	1.55	1.55
Sokoto	84.02	85.88	2.21	163.09	167.22	2.53	1.94	1.95
Zamfara	112.89	106.26	-5.88	220.62	202.74	-8.10	1.95	1.91
North-West	976.45	1007.20	3.15	1967.06	2052.92	4.36	2.01	2.04
Abia	49.69	62.47	25.71	58.29	60.40	3.61	1.17	0.97
Anambra	42.03	47.58	13.22	99.31	99.63	0.32	2.36	2.09
Ebonyi	65.59	66.18	0.89	145.73	148.99	2.24	2.22	2.25
Enugu	51.61	59.12	14.55	94.25	95.01	0.81	1.83	1.61
Imo	44.07	51.08	15.90	85.49	85.86	0.43	1.94	1.68
South-East	252.99	286.42	13.22	483.07	489.89	1.41	1.91	1.71
Akwa Ibom	11.37	12.99	14.23	24.02	24.91	3.70	2.11	1.92
Bayelsa	48.47	49.73	2.60	94.72	95.63	0.96	1.95	1.92
Cross Rivers	72.80	80.72	10.88	163.53	166.87	2.04	2.25	2.07
Delta	29.69	33.64	13.31	50.52	50.38	-0.27	1.70	1.50
Edo	61.84	62.61	1.24	137.89	139.14	0.91	2.23	2.22
Rivers	42.11	44.59	5.89	80.68	81.19	0.64	1.92	1.82
South-South	266.28	284.28	6.76	551.36	558.13	1.23	2.07	1.96
Ekiti	81.95	88.47	7.95	140.47	140.52	0.04	1.71	1.59
Ogun	58.45	67.78	15.95	93.58	93.64	0.06	1.60	1.38
Ondo	47.67	54.57	14.46	120.18	117.91	-1.89	2.52	2.16
Osun	60.75	76.37	25.71	115.83	115.92	0.07	1.91	1.52
Oyo	63.37	69.92	10.34	108.60	109.47	0.80	1.71	1.57

Lagos	49.42	57.77	16.89	85.85	85.93	0.09	1.74	1.49
South-West	361.61	414.87	14.73	664.51	663.39	-0.17	1.84	1.60
National	4320.13	4594.20	6.34	8341.97	8501.65	1.91	1.93	1.85

Table 12.2: Estimates of Land area Cultivated and Production Forecast for Maize

States	LandArea			Production			Yield	
	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	163.59	169.22	3.44	386.33	388.83	0.65	2.36	2.30
FCT	198.89	201.17	1.15	454.42	462.88	1.86	2.28	2.30
Kogi	174.58	177.36	1.59	430.87	439.44	1.99	2.47	2.48
Kwara	171.59	175.70	2.40	335.49	340.80	1.58	1.96	1.94
Nassarawa	115.79	124.48	7.51	311.95	319.97	2.57	2.69	2.57
Niger	258.93	226.02	-12.71	700.61	720.17	2.79	2.71	3.19
Plateau	265.04	317.44	19.77	656.48	660.19	0.57	2.48	2.08
North-Central	1348.41	1391.39	3.19	3276.15	3332.28	1.71	2.43	2.39
Adamawa	203.17	214.36	5.51	442.39	450.45	1.82	2.18	2.10
Bauchi	307.07	335.30	9.19	581.01	582.57	0.27	1.89	1.74
Borno	387.24	450.21	16.26	626.65	508.27	-18.89	1.62	1.13
Gombe	375.61	402.28	7.10	648.79	628.50	-3.13	1.73	1.56
Yobe	150.60	153.46	1.90	302.70	305.09	0.79	2.01	1.99
Taraba	296.50	403.22	35.99	605.80	628.72	3.78	2.04	1.56
North-East	1720.19	1958.83	13.87	3207.34	3103.60	-3.23	1.86	1.58
Jigawa	182.03	190.02	4.39	332.44	340.81	2.52	1.83	1.79
Kaduna	380.04	397.55	4.61	977.03	987.14	1.03	2.57	2.48
Kano	132.97	136.63	2.76	357.06	370.85	3.86	2.69	2.71
Katsina	187.21	173.87	-7.13	362.36	356.98	-1.48	1.94	2.05
Kebbi	170.79	177.24	3.78	335.68	346.84	3.32	1.97	1.96
Sokoto	102.58	123.26	20.16	260.99	263.61	1.00	2.54	2.14
Zamfara	175.79	182.25	3.68	252.07	254.23	0.86	1.43	1.39
North-West	1331.41	1380.82	3.71	2877.63	2920.47	1.49	2.16	2.12
Abia	78.25	79.97	2.20	96.62	100.14	3.65	1.23	1.25
Anambra	55.08	56.86	3.24	109.50	99.96	-8.71	1.99	1.76
Ebonyi	91.49	102.33	11.84	167.28	160.15	-4.26	1.83	1.57
Enugu	97.25	99.89	2.72	182.79	190.78	4.37	1.88	1.91
Imo	55.69	61.46	10.36	134.97	114.50	-15.16	2.42	1.86
South-East	299.51	320.54	7.02	594.54	565.40	-4.90	1.99	1.76
Akwa Ibom	83.69	84.15	0.55	92.04	94.74	2.94	1.10	1.13
Bayelsa	57.22	60.87	6.39	87.21	89.60	2.74	1.52	1.47
C/Rivers	60.74	61.90	1.91	112.77	114.05	1.14	1.86	1.84
Delta	81.49	80.45	-1.27	163.29	158.34	-3.03	2.00	1.97
Edo	108.06	111.20	2.90	159.70	162.41	1.70	1.48	1.46
Rivers	64.21	64.32	0.17	135.86	134.64	-0.90	2.12	2.09
South-South	455.41	462.89	1.64	750.87	753.78	0.39	1.65	1.63

Ekiti	163.01	166.19	1.95	299.46	302.07	0.87	1.84	1.82
Ogun	139.09	137.52	-1.13	286.24	288.49	0.79	2.06	2.10
Ondo	159.76	162.03	1.42	396.34	398.50	0.55	2.48	2.46
Osun	175.89	180.53	2.64	381.93	392.23	2.70	2.17	2.17
Oyo	170.86	173.91	1.79	315.82	326.85	3.49	1.85	1.88
Lagos	163.49	166.21	1.66	261.51	250.84	-4.08	1.60	1.51
South-West	972.10	986.39	1.47	1941.30	1958.99	0.91	2.00	1.99
National	6127.03	6500.86	6.1	12647.83	12634.52	-0.1	2.06	1.94

12.3 Sorghum

Table 12.3: Estimates of Land Area Cultivated and Production Forecast for Sorghum

States	Land Area			Production			Yield	
	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	196.10	199.57	1.77	204.80	209.03	2.06	1.04	1.05
FCT	110.20	112.96	2.50	132.90	136.53	2.73	1.21	1.21
Kogi	102.30	104.37	2.02	129.90	132.13	1.72	1.27	1.27
Kwara	106.50	114.33	7.35	151.70	159.48	5.13	1.42	1.39
Niger	417.40	452.70	8.46	549.70	526.81	-4.16	1.32	1.16
Nassarawa	92.50	92.88	0.41	165.10	168.44	2.02	1.78	1.81
Plateau	201.90	204.87	1.47	311.70	321.23	3.06	1.54	1.57
North-Central	1226.90	1281.68	4.46	1645.80	1653.65	0.48	1.34	1.29
Adamawa	271.60	278.89	2.68	292.00	294.78	0.95	1.08	1.06
Borno	351.80	363.38	3.29	347.50	356.70	2.65	0.99	0.98
Bauchi	427.20	442.15	3.50	447.20	462.03	3.32	1.05	1.04
Gombe	336.50	334.38	-0.63	331.30	342.91	3.50	0.98	1.03
Taraba	324.30	334.75	3.22	340.70	344.60	1.14	1.05	1.03
Yobe	251.90	251.90	0.00	271.00	274.76	1.39	1.08	1.09
North-East	1963.30	2005.45	2.15	2029.70	2075.78	2.27	1.03	1.04
Jigawa	293.70	312.36	6.35	351.60	349.76	-0.52	1.20	1.12
Kaduna	426.00	438.53	2.94	446.20	462.89	3.74	1.05	1.06
Kano	593.20	606.58	2.26	618.60	625.97	1.19	1.04	1.03
Katsina	339.80	309.68	-8.86	357.60	309.07	-13.57	1.05	1.00
Kebbi	336.00	357.06	6.27	406.50	411.77	1.30	1.21	1.15
Sokoto	275.80	277.18	0.50	376.80	384.54	2.05	1.37	1.39
Zamfara	411.10	392.12	-4.62	413.60	383.49	-7.28	1.01	0.98
North-West	2675.60	2693.51	0.67	2970.90	2927.49	-1.46	1.11	1.09
Enugu	13.40	15.44	15.22	14.20	14.54	2.39	1.06	0.94
South-East	13.40	15.44	15.22	14.20	14.54	2.39	1.06	0.94
Oyo	51.70	56.19	8.68	64.90	70.10	8.01	1.26	1.25
South-West	51.70	56.19	8.68	64.90	70.10	8.01	1.26	1.25
National	5930.90	6052.27	2.0	6725.50	6741.55	0.2	1.13	1.11

12.4 Millet

Table 12.4: Estimates of Land Area Cultivated and Production Forecast for Millet

States	LandArea			Production			Yield	
	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	112.31	133.48	18.85	86.94	86.97	0.04	0.77	0.65
FCT	49.48	45.35	-8.34	57.16	50.27	-12.05	1.16	1.11
Kogi	39.96	40.44	1.19	38.76	34.07	-12.09	0.97	0.84
Kwara	32.56	36.22	11.23	30.92	30.23	-2.24	0.95	0.83
Nassarawa	24.38	26.28	7.80	31.73	31.95	0.70	1.30	1.22
Niger	103.49	99.36	-3.99	113.61	113.80	0.17	1.10	1.15
Plateau	83.10	85.24	2.58	74.81	74.09	-0.97	0.90	0.87
North-Central	445.28	466.36	4.73	433.93	421.39	-2.89	0.97	0.90
Adamawa	137.88	140.43	1.85	166.80	168.42	0.97	1.21	1.20
Borno	98.63	102.32	3.74	78.13	109.86	40.62	0.79	1.07
Bauchi	88.25	95.86	8.63	76.61	91.01	18.79	0.87	0.95
Gombe	123.03	129.90	5.59	118.73	119.19	0.39	0.97	0.92
Taraba	110.60	119.49	8.04	93.78	90.01	-4.03	0.85	0.75
Yobe	210.94	214.53	1.70	245.26	247.16	0.78	1.16	1.15
North East	769.33	802.53	4.32	779.31	825.66	5.95	1.01	1.03
Jigawa	94.19	97.65	3.67	71.08	99.43	39.88	0.75	1.02
Kaduna	63.49	70.34	10.80	51.60	51.49	-0.21	0.81	0.73
Kano	54.27	54.96	1.26	88.42	109.89	24.28	1.63	2.00
Katsina	137.85	125.46	-8.98	153.07	152.99	-0.05	1.11	1.22
Kebbi	81.50	93.13	14.28	75.57	92.10	21.88	0.93	0.99
Sokoto	81.40	81.47	0.09	188.53	190.66	1.13	2.32	2.34
Zamfara	40.08	44.66	11.43	85.44	87.54	2.45	2.13	1.96
North-West	552.78	567.68	2.70	713.71	784.10	9.86	1.29	1.38
National	1767.39	1836.58	3.9	1926.95	2031.14	5.4	1.09	1.11

12.5 Cowpea

The production forecast for cowpea in 2022 showed Gombe State as the highest producer with 391,670 cowpea MT. The total production estimate for cowpea in 2022 was 4,271,580 MT which is an indication of a 1.4% cowpea increase from the value estimated for 2021. The largest land area committed to cowpea production in Nigeria was 383,920 ha from Kogi State.

Table 12.5: Estimates of Land Area Cultivated and Production Forecast for Cowpea

States	LandArea			Production			Yield	
	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	126.45	118.33	-6.42	138.51	139.51	0.72	1.10	1.18
FCT	144.92	147.85	2.02	127.81	121.87	-4.65	0.88	0.82
Kogi	371.59	383.92	3.32	170.19	172.25	1.21	0.46	0.45
Kwara	233.48	247.86	6.16	204.91	189.59	-7.48	0.88	0.76
Nassarawa	64.93	75.84	16.80	90.77	90.88	0.12	1.40	1.20
Niger	97.62	87.93	-9.93	123.79	131.14	5.94	1.27	1.49
Plateau	181.40	180.46	-0.52	101.35	107.83	6.40	0.56	0.60
North-Central	1220.39	1242.18	1.79	957.33	953.08	-0.44	0.78	0.77
Adamawa	201.63	205.57	1.95	217.89	223.25	2.46	1.08	1.09
Borno	179.39	214.30	19.46	159.28	161.49	1.39	0.89	0.75
Bauchi	198.39	231.08	16.48	177.19	192.43	8.60	0.89	0.83
Gombe	323.93	351.07	8.38	300.26	319.67	6.46	0.93	0.91
Taraba	266.39	275.66	3.48	257.71	263.95	2.42	0.97	0.96
Yobe	109.90	118.50	7.83	228.90	245.59	7.29	2.08	2.07
North-East	1279.63	1396.18	9.11	1341.23	1406.38	4.86	1.05	1.01
Jigawa	117.99	119.36	1.16	185.37	195.36	5.39	1.57	1.64
Kaduna	180.79	182.65	1.03	153.68	154.36	0.44	0.85	0.85
Kano	200.74	202.06	0.66	169.94	171.56	0.96	0.85	0.85
Katsina	124.41	117.37	-5.66	111.85	108.58	-2.92	0.90	0.93
Kebbi	108.35	108.30	-0.05	88.35	88.80	0.51	0.82	0.82
Sokoto	138.20	140.38	1.57	111.72	108.81	-2.61	0.81	0.78
Zamfara	127.62	120.53	-5.56	71.90	70.10	-2.50	0.56	0.58
North-West	998.10	990.65	-0.75	892.81	897.58	0.53	0.89	0.91
Abia	44.83	43.63	-2.67	47.33	42.70	-9.79	1.06	0.98
Anambra	120.25	141.02	17.27	64.13	58.63	-8.57	0.53	0.42
Ebonyi	71.56	69.64	-2.69	43.59	40.69	-6.66	0.61	0.58
Enugu	104.77	122.69	17.10	86.36	86.78	0.48	0.82	0.71
Imo	97.56	105.50	8.14	68.37	62.03	-9.28	0.70	0.59
South-East	438.97	482.47	9.91	309.78	290.82	-6.12	0.71	0.60
Akwa Ibom	30.30	30.71	1.35	42.50	43.11	1.44	1.40	1.40
Bayelsa	31.35	32.45	3.50	28.42	28.62	0.70	0.91	0.88
C/Rivers	25.52	25.03	-1.91	23.92	23.22	-2.94	0.94	0.93
Delta	50.84	56.17	10.48	45.30	43.99	-2.89	0.89	0.78
Edo	5.49	5.75	4.73	5.21	5.70	9.45	0.95	0.99
Rivers	96.33	98.27	2.02	47.60	46.35	-2.63	0.49	0.47
South-South	239.83	248.38	3.57	192.95	190.99	-1.02	0.80	0.77

Ekiti	171.52	178.41	4.01	96.86	100.74	4.01	0.56	0.56
Ogun	85.98	89.85	4.50	54.10	54.32	0.41	0.63	0.60
Ondo	148.66	147.57	-0.73	115.81	116.81	0.87	0.78	0.79
Osun	211.99	213.22	0.58	87.45	89.94	2.85	0.41	0.42
Oyo	127.31	127.85	0.42	101.87	108.14	6.15	0.80	0.85
Lagos	119.61	122.65	2.54	62.91	62.78	-0.21	0.53	0.51
South-West	865.07	879.54	1.67	519.00	532.73	2.65	0.60	0.61
National	5041.99	5239.40	3.9	4213.10	4271.58	1.4	0.84	0.82

12.6 Groundnut

The production forecast for groundnut in 2022 showed Bauchi State as the highest producer with 535,370 MT. The total production estimate of groundnut in 2022 was 4,284,080 MT which is an indication of a 1.34% increase from the value estimated for 2021. The largest land area committed to groundnut production in Nigeria was 415,940 ha from Bauchi State.

Table 12.6: Estimates of Land Area Cultivated and Production Forecast for Groundnut

State	Land Area ('000) Ha			Production ('000) MT			Yield (Ton/Ha)	
	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	270.73	273.54	1.04	277.6	270.86	-2.43	1.03	0.99
FCT	186.3	181.06	-2.81	140.63	137.22	-2.42	1.41	1.43
Kogi	137.19	135.15	-1.49	173.78	170.26	-2.03	1.27	1.26
Kwara	194.43	194.15	-0.14	260.28	252.44	-3.01	1.34	1.30
Nasarawa	93.32	94.30	1.05	208.75	209.86	0.53	2.24	2.23
Niger	228.87	215.57	-5.81	284.99	273.78	-3.93	1.25	1.27
Plateau	146.87	147.21	0.23	209.55	208.00	-0.74	1.43	1.41
North-Central	1257.71	1240.98	-7.93	1555.58	1522.42	-14.03	9.97	9.89
Adamawa	58.67	59.74	1.83	131.17	131.28	0.08	2.24	2.20
Bauchi	412.24	415.94	0.90	533.97	535.37	0.26	1.30	1.29
Borno	161.41	161.49	0.05	197.47	190.81	-3.37	1.22	1.18
Gombe	124.7	120.50	-3.37	138.83	135.30	-2.54	1.11	1.12
Taraba	224.37	220.15	-1.88	241.85	238.46	-1.40	1.08	1.08
Yobe	45.98	46.26	0.62	61.24	60.01	-2.01	1.33	1.30
North-East	1027.37	1024.08	-1.85	1304.53	1291.23	-8.98	8.28	8.17
Jigawa	152.84	152.52	-0.21	242.43	240.42	-0.83	1.59	1.58
Kaduna	209.91	206.96	-1.40	288.95	281.68	-2.52	1.38	1.36
Kano	220.19	218.07	-0.96	153.33	149.19	-2.70	0.70	0.68
Katsina	141.29	138.78	-1.78	137.63	131.02	-4.80	0.97	0.94
Kebbi	146.37	148.51	1.46	182.39	186.74	2.39	1.25	1.26
Sokoto	197.84	196.71	-0.57	100.36	100.16	-0.20	0.51	0.51
Zamfara	169.39	160.34	-5.34	168.83	160.27	-5.07	1.00	1.00
North-West	1237.83	1221.89	-8.8	1273.92	1249.48	-13.73	7.4	7.33
Ebonyi	5.28	5.28	0.09	5.55	5.34	-3.71	1.05	1.01
Enugu	5.46	5.00	-8.42	7.11	6.66	-6.34	1.30	1.33

Imo	9.31	8.99	-3.44	7.98	7.83	-1.84	0.86	0.87
South-East	20.05	19.27	-11.77	20.64	19.83	-11.89	3.21	3.21
Bayelsa	25.17	25.59	1.69	25.17	25.17	0.00	1.00	0.98
Edo	10.51	9.95	-5.33	7.12	6.50	-8.70	0.68	0.65
C/Rivers	14.48	13.78	-4.83	19.77	18.24	-7.74	1.37	1.32
South-South	50.16	49.32	-8.47	52.06	49.91	-16.44	3.05	2.95
Ogun	19.41	19.01	-2.07	41.82	38.84	-7.14	2.15	2.04
Osun	40.51	40.10	-1.01	57.84	53.49	-7.53	1.43	1.33
Oyo	49.17	48.88	-0.59	61.52	58.89	-4.28	1.25	1.20
South-West	109.09	107.99	-3.67	161.18	151.22	-18.95	4.83	4.57
National	3702.21	3663.56	-1.04	4227.52	4284.08	1.34	1.14	1.20

12.7 Soybean

Table 12.7: Estimates of Land Area Cultivated and Production Forecast for Soybean

State	Land Area ('000) Ha			Production ('000) MT			Yield (Ton/Ha)	
	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	100.35	103.48	3.12	247.87	250.77	1.17	2.47	2.42
FCT	66.34	65.29	-1.58	37.58	36.74	-2.25	0.57	0.56
Kogi	59.48	60.92	2.43	48.96	49.64	1.38	0.82	0.81
Kwara	67.77	73.35	8.23	62.04	65.36	5.36	0.92	0.89
Nasarawa	37.16	38.64	3.99	29.67	30.35	2.30	0.80	0.79
Niger	143.96	136.82	-4.96	74.76	70.97	-5.07	0.52	0.52
Plateau	50.04	49.33	-1.42	32.61	31.85	-2.32	0.65	0.65
North-Central	525.1	527.83	9.81	533.49	535.68	0.57	6.75	6.64
Adamawa	62.92	66.77	6.13	57.14	56.04	-1.93	0.91	0.84
Bauchi	41.81	43.27	3.49	28.95	28.52	-1.48	0.69	0.66
Borno	27.84	29.00	4.16	19.07	20.18	5.81	0.68	0.70
Gombe	71.88	75.90	5.59	59.70	62.35	4.45	0.83	0.82
Taraba	57.17	55.75	-2.48	73.59	73.89	0.41	1.29	1.33
North-East	261.62	270.69	16.89	238.45	240.98	7.26	4.4	4.35
Jigawa	44.18	46.10	4.34	35.39	36.79	3.96	0.80	0.80
Kaduna	105.55	109.34	3.59	105.06	110.32	5.00	1.00	1.01
Kano	68.29	70.47	3.19	76.20	79.38	4.18	1.12	1.13
Katsina	64.39	61.36	-4.71	43.24	42.92	-0.73	0.67	0.70
Kebbi	46.83	48.36	3.27	42.85	43.36	1.18	0.92	0.90
Sokoto	43.11	45.00	4.38	37.22	38.55	3.58	0.86	0.86
North-West	372.35	380.63	14.06	339.96	351.32	17.17	5.37	5.4
Ekiti	26.41	27.46	3.97	9.05	9.04	-0.10	0.34	0.33
Oyo	49.13	46.46	-5.43	33.34	31.52	-5.46	0.68	0.68
South-West	75.54	73.92	-1.46	42.39	40.56	-5.56	1.02	1.01
National	1262.28	1278.80	1.31	1166.05	1179.30	1.14	0.92	0.92

12.8 Beniseed

The production forecast for benniseed in 2022 showed Benue State as the highest producer with 101,480 MT. The total production estimate of benniseed in 2022 was 584,700 MT which is an indication of a 2.1% increase from the value estimated for 2021. The largest land area committed to benniseed production in Nigeria was 121,960 ha from Benue State.

Table 12.8: Estimates of Land Area Cultivated and Production Forecast for Benniseed

State	Land Area ('000) Ha			Production ('000) MT			Yield (Ton/Ha)	
	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	119.38	121.96	2.16	96.58	101.48	5.07	0.81	0.83
FCT	89.19	88.09	-1.24	58.94	59.37	0.74	0.66	0.67
Kogi	96.47	92.02	-4.62	73.57	70.50	-4.17	0.76	0.77
Kwara	36.27	38.69	6.68	16.14	17.05	5.63	0.45	0.44
Nasarawa	62.26	64.16	3.05	62.38	65.97	5.76	1.00	1.03
Niger	80.08	76.36	-4.65	28.90	27.87	-3.55	0.36	0.36
Plateau	65.08	66.96	2.88	39.25	38.52	-1.87	0.60	0.58
North-Central	548.73	548.24	4.26	375.76	380.76	7.61	4.64	4.68
Adamawa	17.08	16.89	-1.12	18.05	19.23	6.51	1.06	1.14
Bauchi	21.81	22.56	3.46	10.48	10.82	3.20	0.48	0.48
Borno	18.02	18.26	1.34	8.62	8.85	2.64	0.48	0.48
Gombe	38.01	39.25	3.26	10.75	11.46	6.62	0.28	0.29
Taraba	60.93	62.79	3.05	51.10	52.40	2.54	0.84	0.83
Yobe	16.79	17.05	1.56	3.50	3.37	-3.77	0.21	0.20
North-East	172.64	176.8	11.55	102.5	106.13	17.74	3.35	3.42
Jigawa	18.88	20.10	6.48	22.76	24.46	7.47	1.21	1.22
Kano	22.42	23.74	5.90	22.59	23.41	3.63	1.01	0.99
Katsina	52.76	53.69	1.77	17.57	18.21	3.63	0.33	0.34
Kebbi	10.69	11.40	6.63	7.54	7.87	4.35	0.71	0.69
Sokoto	29.96	31.11	3.85	15.94	16.25	1.94	0.53	0.52
Zamfara	4.46	4.20	-5.83	8.05	7.65	-4.91	1.80	1.82
North-West	139.17	144.24	18.8	94.45	97.85	16.11	5.59	5.58
National	860.53	869.28	1.02	572.71	584.74	2.10	0.68	0.67

12.9 Yam

The production forecast for yam in 2022 showed Niger State as the highest producer with 5,915,210 MT. The total production estimate of yam in 2022 was 62,562,230 MT which is an indication of a 4.47% increase from the value estimated for 2021. The largest land area committed to yam production in Nigeria was 751,130 ha from the FCT.

Table 12.9: Estimates of Land Area Cultivated and Production Forecast for Yam

State	Land Area ('000) Ha			Production ('000) MT			Yield (Ton/Ha)	
	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	210.61	215.63	2.38	3158.30	3249.14	2.88	15.00	15.07
FCT	755.11	751.13	-0.53	3113.44	3003.49	-3.53	4.12	4.00
Nasarawa	222.70	237.55	6.67	4307.47	4468.02	3.73	19.34	18.81
Niger	385.83	367.26	-4.81	6261.85	5915.21	-5.54	16.23	16.11
Plateau	136.96	137.57	0.44	1755.01	1746.27	-0.50	12.81	12.69
North Central	1711.21	1709.14	4.15	18596.07	18382.13	-2.96	67.5	66.68
Taraba	334.59	348.29	4.09	3430.64	3543.25	3.28	10.25	10.17
North-East	334.59	348.29	4.09	3430.64	3543.25	3.28	10.25	10.17
Kaduna	202.86	201.15	-0.84	2783.28	2726.21	-2.05	13.72	13.55
Kebbi	162.15	156.08	-3.74	997.00	972.73	-2.43	6.15	6.23
Kogi	203.29	195.55	-3.81	1815.45	1767.39	-2.65	8.93	9.04
Kwara	263.19	257.39	-2.20	2278.71	2218.46	-2.64	8.66	8.62
North West	1500.67	1506.75	-2.41	14735.72	14771.29	-3.21	57.96	57.78
Abia	357.17	384.86	7.75	2416.37	2467.48	2.12	6.77	6.41
Anambra	164.76	165.80	0.63	899.73	890.16	-1.06	5.46	5.37
Ebonyi	329.99	353.83	7.22	3110.49	3197.71	2.80	9.43	9.04
Enugu	270.96	278.29	2.71	3432.87	3550.71	3.43	12.67	12.76
Imo	96.19	100.46	4.44	329.92	342.73	3.88	3.43	3.41
South-East	1219.07	1283.24	22.75	10189.38	10448.79	11.17	37.76	36.99
Akwa Ibom	302.76	305.54	0.92	2540.00	2607.88	2.67	8.39	8.54
Bayelsa	330.03	342.07	3.65	1295.09	1270.78	-1.88	3.92	3.71
C/Rivers	356.49	340.13	-4.59	3074.31	3049.93	-0.79	8.62	8.97
Delta	168.88	163.89	-2.96	1428.66	1414.65	-0.98	8.46	8.63
Edo	454.64	465.77	2.45	3372.48	3475.81	3.06	7.42	7.46
Rivers	585.44	621.34	6.13	1396.36	1379.73	-1.19	2.39	2.22
South-South	2198.24	2238.74	5.6	13106.9	13198.78	0.89	39.2	39.53
Ekiti	228.48	233.93	2.39	1724.36	1759.95	2.06	7.55	7.52
Ogun	165.61	169.27	2.21	1012.72	1042.88	2.98	6.11	6.16
Ondo	237.50	249.12	4.89	2276.06	2298.88	1.00	9.58	9.23
Osun	217.57	220.80	1.48	2537.49	2546.43	0.35	11.66	11.53
Oyo	354.37	376.37	6.21	1673.45	1656.34	-1.02	4.72	4.40
South-West	1203.53	1249.49	17.18	9224.08	9304.48	5.37	39.62	38.84
National	7498.12	7639.08	1.88	59884.05	62562.23	4.47	8.32	7.99

12.10: Cassava

Cassava is an important crop which serves as a food crop and a major source of income for smallholder farmers. Majority of farmers in the North Central, South East, South South, and South West zones grow cassava. The major producing states and zones in 2022 were Benue, Kogi, Nassarawa and Taraba (North Central), Imo, Enugu, and Anambra (South East), Cross River, Delta, Rivers and Akwa Ibom (South South) and Ogun, Osun, Oyo and Ondo (South West). The

National production of cassava has decreased in 2022 from 58,237.50 to 57,278.27MT when compared with figures from 2021. The estimated land area cultivated under cassava also decreased by 3.95% in 2022, despite the increase in the market price and high demand for cassava by-products and derivatives by companies. This could be attributed to the increase in security challenges in most of the high producing areas, and or the increase in the cost of inputs and flooding in some areas.

Table 12.10: Estimates of Land Area Cultivated and Production Forecast for Cassava

States	Land Area			Production			Yield	
	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	407.01	431.00	5.90	3731.87	3732.88	0.03	9.17	8.66
FCT	465.38	367.34	-21.07	1827.34	1818.23	-0.50	3.93	4.95
Kogi	410.16	380.23	-7.30	4007.04	3528.94	-11.93	9.77	9.28
Kwara	470.35	402.61	-14.40	1535.96	1481.94	-3.52	3.27	3.68
Nasarawa	305.00	302.77	-0.73	1804.42	1788.06	-0.91	5.92	5.91
Niger	437.33	361.26	-17.39	1704.14	1678.78	-1.49	3.90	4.65
Plateau	385.56	320.22	-16.95	1071.32	1071.27	0.00	2.78	3.35
Taraba	198.11	199.04	0.47	1455.81	1448.20	-0.52	7.35	7.28
North-Central	3078.90	2764.48	-10.21	17137.90	16548.29	-3.44	5.76	5.97
Bauchi	134.88	137.55	1.98	495.32	495.55	0.05	3.67	3.60
Gombe	125.97	125.57	-0.32	751.53	757.15	0.75	5.97	6.03
Yobe	184.57	184.94	0.20	494.19	494.23	0.01	2.68	2.67
North-East	445.42	448.06	0.59	1741.04	1746.93	0.34	4.11	4.10
Jigawa	132.42	123.05	-7.08	1347.18	1046.07	-22.35	10.17	8.50
Kaduna	198.18	198.79	0.31	2271.33	1969.49	-13.29	11.46	9.91
Katsina	181.77	163.22	-10.21	420.82	387.43	-7.93	2.32	2.37
Kebbi	143.98	135.30	-6.03	653.35	623.78	-4.53	4.54	4.61
Sokoto	93.44	86.53	-7.40	342.74	323.09	-5.73	3.67	3.73
Zamfara	124.20	114.57	-7.75	233.44	223.12	-4.42	1.88	1.95
North-West	873.99	821.45	-6.01	5268.86	4572.99	-13.21	5.67	5.18
Abia	263.21	265.94	1.04	1589.70	1866.57	17.42	6.04	7.02
Anambra	259.86	266.82	2.68	2012.99	2197.31	9.16	7.75	8.24
Ebonyi	838.59	849.31	1.28	24.86	26.63	7.14	0.03	0.03
Enugu	242.78	244.47	0.69	2202.06	2185.39	-0.76	9.07	8.94
Imo	329.52	329.85	0.10	3435.08	3425.63	-0.28	10.42	10.39
South-East	1933.96	1956.39	1.16	9264.69	9701.54	4.72	6.66	6.92
Akwa Ibom	306.77	304.62	-0.70	1840.34	1993.20	8.31	6.00	6.54
Bayelsa	372.22	377.35	1.38	1285.08	1462.53	13.81	3.45	3.88
Cross River	438.48	433.81	-1.07	2299.19	2545.07	10.69	5.24	5.87
Delta	242.23	242.58	0.15	1839.16	1829.59	-0.52	7.59	7.54
Edo	322.99	310.48	-3.87	1349.46	1490.13	10.42	4.18	4.80
Rivers	625.88	637.63	1.88	3312.55	3258.86	-1.62	5.29	5.11
South-South	2308.57	2306.47	-0.09	11925.78	12579.37	5.48	5.29	5.62
Ekiti	248.14	246.88	-0.51	1872.80	1843.98	-1.54	7.55	7.47
Lagos	274.50	258.40	-5.86	1643.28	1436.75	-12.57	5.99	5.56
Ogun	188.92	170.51	-9.74	1923.62	1749.18	-9.07	10.18	10.26
Ondo	237.62	226.16	-4.82	3728.83	3393.39	-9.00	15.69	15.00

Osun	194.56	190.65	-2.01	1907.23	1888.09	-1.00	9.80	9.90
Oyo	194.75	195.49	0.38	1823.47	1817.77	-0.31	9.36	9.30
South-West	1338.49	1288.10	-3.76	12899.23	12129.15	-5.97	9.76	9.58
National	9979.33	9584.95	-3.95	58237.50	57278.27	-1.65	6.21	6.23

12.11: Cocoyam

Cocoyam is another important staple root crop commonly grown among smallholder farmers in Nigeria. Despite its potential high yield, it is not highly cultivated when compared with other root and tuber crops such as cassava and yam because it is not regarded as a major source of income. However, it serves as a food security crop for most rural poor farming households. The land area cultivated for cocoyam in 2022 was 1451.69 thousand hectares which indicated a 5.63% increase compared to 2021 figures of 1374.32. The production output for cocoyam decreased by 0.93% in 2022 which caused the national average yield to decrease from 5.68 tons per hectare in 2021 to 5.25 tons per hectare in 2022.

Table 12.11: Estimates of Land Area Cultivated and Production Forecast for Cocoyam

States	Land Area			Production			Yield	
	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	30.04	30.38	1.14	127.76	127.20	-0.44	4.25	4.19
FCT		15.42			74.95			4.86
Kogi	21.60	21.69	0.42	215.47	214.10	-0.64	9.98	9.87
Kwara	53.75	59.66	10.99	158.41	156.82	-1.00	2.95	2.63
Nasarawa	30.50	30.21	-0.95	211.59	207.33	-2.01	6.94	6.86
Niger	26.88	27.29	1.54	270.49	268.81	-0.62	10.06	9.85
Plateau	18.17	19.37	6.62	92.49	94.22	1.87	5.09	4.86
Taraba	133.38	127.09	-4.71	217.77	202.06	-7.21	1.63	1.59
North-Central	314.32	331.12	5.07	1293.98	1345.49	3.83	5.84	5.59
Borno	5.30	5.45	2.83	20.04	18.23	-9.03	0.26	0.23
North-East	5.30	5.45	2.83	20.04	18.23	-9.03	0.26	0.23
Abia	49.60	55.00	10.89	376.86	407.41	8.11	7.60	7.41
Anambra	113.01	133.94	18.52	646.15	665.38	2.98	5.72	4.97
Ebonyi	146.95	131.85	-10.28	310.94	339.23	9.10	2.12	2.57
Enugu	74.14	81.45	9.86	582.50	525.41	-9.80	7.86	6.45
Imo	109.86	117.35	6.82	571.99	611.08	6.83	5.21	5.21
South-East	493.56	519.60	5.01	2488.44	2548.51	2.36	5.70	5.32
Akwa Ibom	48.40	50.04	3.39	476.86	385.15	-19.23	9.85	7.70
Bayelsa	98.84	108.49	9.76	670.50	685.73	2.27	6.78	6.32
Cross River	35.91	35.75	-0.46	435.62	433.87	-0.40	12.13	12.14
Delta	40.99	41.48	1.20	205.80	206.84	0.51	5.02	4.99
Edo	53.47	62.50	16.89	312.77	324.83	3.86	5.85	5.20
Rivers	35.49	37.26	5.00	274.31	274.95	0.23	7.73	7.38
South-South	313.10	335.53	7.16	2375.86	2311.37	-2.71	7.89	7.29
Ekiti	45.25	45.10	-0.34	512.41	480.71	-6.19	11.32	10.66
Lagos	42.67	46.64	9.31	146.49	148.18	1.15	3.43	3.18
Ogun	31.19	32.20	3.24	340.08	301.85	-11.24	10.90	9.37

Ondo	36.26	36.35	0.26	566.29	503.08	-11.16	15.62	13.84
Osun	41.11	47.81	16.29	342.67	352.25	2.80	8.34	7.37
Oyo	51.56	51.89	0.65	131.13	131.28	0.11	2.54	2.53
South-West	248.04	259.99	4.82	2039.07	1917.34	-5.97	8.69	7.82
National Total	1374.32	1451.69	5.63	8217.39	8140.94	-0.93	5.68	5.25

12.12: Cotton

Cotton is a fibre cash crop mainly cultivated in the Savannah Belts of Nigeria which is the North West, North East, some parts of the North Central and the South West zones for its lint and seeds. The major producing states are Bauchi, Kaduna, Kano, Katsina, Kebbi, Oyo, Sokoto and Zamfara. An estimated land area of 510.89 thousand hectares was cultivated in 2021, representing a decrease of 1.36% over the 503.93 thousand hectares cultivated in 2022. This has led to a marginal decrease of 1.69% in 2022 production (238.64) over the production output of 2021 (242.74). The combined effect of the decrease in land area and production, coupled with the decision of most farmers in the major producing states to shift resources to crops that yield more and are in high demand and with security concerns has negatively affected yield. The national yield for cotton was 10.03 thousand tons in 2021 compared with 10.18 thousand tons in 2022, showing a marginal increase.

Table 12.12: Estimates of Land Area Cultivated and Production Forecast for Cotton

	Land Area			Production			Yield	
States	2021	2022	% Change	2021	2022	% Change	2021	2022
Plateau	9.70	9.71	0.10	6.52	6.61	1.41	0.67	0.68
Taraba	22.73	22.47	-1.15	4.58	4.88	6.44	0.20	0.22
North-Central	32.43	32.18	-0.78	11.10	11.49	3.49	0.44	0.45
Adamawa	24.57	25.13	2.27	11.82	12.29	3.98	0.48	0.49
Bauchi	97.32	97.37	0.05	29.57	29.75	0.61	0.30	0.31
Borno	45.98	46.11	0.28	13.96	13.98	0.16	0.30	0.30
Gombe	33.07	33.15	0.24	11.59	11.62	0.29	0.35	0.35
Yobe	32.98	33.06	0.24	13.20	13.48	2.14	0.40	0.41
North-East	233.92	234.81	0.38	80.14	81.13	1.24	0.37	0.37
Jigawa	36.00	36.05	0.14	7.96	8.07	1.41	0.22	0.22
Kaduna	8.32	9.25	11.13	26.61	22.09	-16.99	3.20	2.39
Kano	48.85	49.95	2.26	35.73	29.21	-18.24	0.73	0.58
Katsina	63.36	55.31	-12.71	30.91	34.83	12.69	0.49	0.63
Kebbi	39.13	39.13	-0.01	15.13	17.34	14.61	0.39	0.44
Sokoto	38.08	38.07	-0.02	27.21	27.27	0.24	0.71	0.72
Zamfara	7.92	6.67	-15.78	5.26	4.71	-10.44	0.66	0.71
North-West	241.66	234.42	-2.99	148.81	143.53	-3.55	0.91	0.81
Oyo	2.88	2.52	-12.67	2.69	2.49	-7.62	0.93	0.87
South-West	2.88	2.52	-12.67	2.69	2.49	-7.62	0.93	0.87
National	510.89	503.93	-1.36	242.74	238.64	-1.69	0.66	0.63

12.13: Ginger

Ginger is mainly produced in Kaduna, Nassarawa, Bauchi, Benue and some parts of Niger State. Production figures in 2022 showed that both Nassarawa and Benue States from the North Central zone recorded a decrease in land area for ginger production by 2.11% and 3.49% respectively when compared with 2021. Kaduna State, from the North West zone, the highest producer in Nigeria, recorded a decrease of 11.94% in land area for ginger production which led to a marginal decrease in production by 3.84% in the state. The National production for ginger has decreased from 707.10 thousand MT in 2021 to 683.12 thousand MT in 2022. Major producing states in 2022 are Kaduna (519.21 MT), Nasarawa (66.81 MT), Benue (63.65MT);Bauchi State recorded the lowest production output of 33.45 MT.

Table 12.13: Estimates of Land Area Cultivated and Production Forecast for Ginger

	Land Area			Production			Yield	
States	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	10.47	9.56	-8.69	65.95	63.65	-3.49	6.30	6.66
Nasarawa	29.65	32.98	11.24	68.25	66.81	-2.11	2.30	2.03
North-Central	40.12	42.54	6.04	134.20	130.46	-2.79	4.30	4.34
Bauchi	10.46	11.68	11.65	32.94	33.45	1.56	3.15	2.86
North-East	10.46	11.68	11.65	32.94	33.45	1.56	3.15	2.86
Kaduna	51.74	45.56	-11.94	539.96	519.21	-3.84	10.44	11.40
North-West	51.74	45.56	-11.94	539.96	519.21	-3.84	10.44	11.40
National	102.32	99.78	-2.48	707.10	683.12	-3.39	5.96	6.20

12.14: Tomato

Table 12.14: Estimates of Land Area Cultivated and Production Forecast for Tomato

	Land Area			Production			Yield	
States	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	21.18	25.16	18.77	75.95	77.11	1.52	3.59	3.07
FCT	69.49	43.50	-37.40	69.77	66.47	-4.73	1.00	1.53
Kogi	51.49	41.29	-19.81	79.41	71.95	-9.39	1.54	1.74
Kwara	61.75	42.00	-31.98	63.36	57.47	-9.29	1.03	1.37
Nasarawa	88.87	65.21	-26.62	133.65	115.25	-13.77	1.50	1.77
Niger	29.38	29.50	0.39	134.54	115.10	-14.45	4.58	3.90
Plateau	48.42	48.65	0.48	60.04	64.17	6.87	1.24	1.32
Taraba	48.55	40.10	-17.41	141.85	120.45	-15.09	2.92	3.00
North-Central	419.14	335.41	-19.98	758.57	687.96	-9.31	1.81	2.05
Adamawa	77.10	30.50	-60.44	166.40	93.16	-44.02	2.16	3.05
Bauchi	39.09	39.50	1.04	194.54	190.20	-2.23	4.98	4.82
Borno	25.73	20.93	-18.66	280.18	198.50	-29.15	10.89	9.48
Gombe	25.29	24.23	-4.21	281.60	255.40	-9.30	11.13	10.54
Yobe	19.31	22.35	15.73	163.73	178.20	8.84	8.48	7.97
North-East	186.52	137.50	-66.54	1086.45	915.46	-15.74	5.82	6.66
Jigawa	39.14	40.30	2.97	78.33	89.01	13.64	2.00	2.21
Kaduna	46.18	46.75	1.23	204.71	198.36	-3.10	4.43	4.24

Kano	64.05	70.53	10.11	228.39	236.49	3.55	3.57	3.35
Katsina	65.68	55.88	-14.92	189.55	165.64	-12.61	2.89	2.96
Kebbi	64.83	58.63	-9.56	47.74	45.78	-4.10	0.74	0.78
Sokoto	18.17	23.13	27.28	95.5	92.71	-2.92	5.26	4.01
Zamfara	44.81	36.95	-17.55	223.39	161.23	-27.83	4.99	4.36
North-West	342.85	332.16	-0.43	1067.61	989.22	-7.34	3.11	2.98
Abia	80.52	31.13	-61.34	17.46	18.64	6.73	0.22	0.60
Anambra	22.73	21.23	-6.59	25.57	22.56	-11.77	1.12	1.06
Ebonyi	58.12	48.39	-16.73	57.46	50.60	-11.93	0.99	1.05
Enugu	74.46	37.24	-49.98	17.99	18.52	2.95	0.24	0.50
Imo	8.31	11.38	36.91	14.44	14.62	1.24	1.74	1.28
South-East	244.13	149.37	-97.73	132.92	124.94	-12.78	0.54	0.84
Cross River	28.61	19.68	-31.19	98.67	85.32	-13.53	3.45	4.33
Delta	70.38	21.47	-69.49	40.5	30.94	-23.62	0.58	1.44
Edo	59.49	51.20	-13.94	33.89	32.80	-3.22	0.57	0.64
South-South	158.48	92.35	-114.63	173.06	149.05	-40.37	1.09	1.61
Ekiti	54.959975	34.04	-38.06	22.29	20.65	-7.34	0.41	0.61
Lagos	70.972209	28.05	-60.48	45.89	32.89	-28.32	0.65	1.17
Ogun	15.160689	13.15	-13.24	93.87	55.71	-40.66	6.19	4.24
Ondo	24.0975	21.30	-11.59	38.9	31.21	-19.77	1.61	1.47
Osun	43.94962	30.73	-30.07	19.19	15.81	-17.60	0.44	0.51
Oyo	54.49	35.88	-34.16	37.21	32.62	-12.33	0.68	0.91
South-West	263.63	267.15	1.34	257.35	259.90	0.99	0.98	0.97
National Total	1614.74	1313.94	-18.63	3475.96	3126.54	-10.05	2.15	2.38

12.15: Onion

Table 12.15: Estimates of Land area Cultivated and Production Forecast for Onion

States	Land Area			Production			Yield	
	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	27.67	28.30	2.26	51.22	48.12	-6.05	1.85	1.70
Plateau	41.39	42.90	3.64	53.87	55.54	3.10	1.30	1.29
Taraba	26.59	31.58	18.76	104.49	91.62	-12.32	3.93	2.90
North-Central	95.65	102.77	7.44	209.58	195.28	-6.82	2.19	1.90
Adamawa	58.75	31.65	-46.13	140.02	95.21	-32.00	2.38	3.01
Bauchi	47.70	49.02	2.76	90.60	93.14	2.80	1.90	1.90
Borno	19.04	19.49	2.38	70.40	70.44	0.06	3.70	3.61
Gombe	52.82	48.48	-8.21	92.28	93.68	1.52	1.75	1.93
Yobe	54.32	54.82	0.91	98.83	99.97	1.16	1.82	1.82
North-East	232.63	203.46	-12.54	492.13	452.45	-8.06	2.12	2.22
Jigawa	31.98	33.23	3.90	83.09	82.72	-0.44	2.60	2.49
Kaduna	33.06	33.87	2.43	109.25	110.83	1.44	3.30	3.27
Kano	51.80	52.10	0.58	124.44	127.86	2.75	2.40	2.45

Katsina	38.82	38.87	0.12	111.55	118.22	5.98	2.87	3.04
Kebbi	45.75	46.96	2.65	125.14	125.85	0.57	2.74	2.68
Sokoto	31.35	32.35	3.18	135.02	128.36	-4.94	4.31	3.97
Zamfara	27.51	24.00	-12.76	125.66	109.32	-13.01	4.57	4.56
North-West	260.28	261.37	0.42	814.15	803.16	-1.35	3.13	3.07
Lagos	7.3	8.60	17.86	18.57	15.64	-15.78	2.54	1.82
South-West	7.3	8.604	17.86	18.57	15.64	-15.78	2.54	1.82
National	595.86	576.21	-3.30	1534.43	1466.52	-4.43	2.58	2.55

12.16: Okra

Table 12.16: Estimates of Land area Cultivated and Production Forecast for Okra

States	Land Area			Production			Yield	
	2021	2022	% Change	2021	2022	% Change	2021	2022
Benue	37.35	37.57	0.59	56.11	56.55	0.79	1.50	1.51
FCT	76.42	85.01	11.23	58.15	64.61	11.09	0.76	0.76
Kogi	49.50	48.90	-1.20	96.61	98.22	1.66	2.01	2.01
Kwara	10.47	11.55	10.31	90.15	94.93	5.30	8.22	8.22
Nasarawa	26.21	26.53	1.24	31.79	31.49	-0.92	1.19	1.19
Niger	7.01	5.85	-16.64	20.80	18.20	-12.52	3.11	3.11
Plateau	32.12	32.65	1.64	52.30	52.30	0.00	1.60	1.60
Taraba	24.00	25.21	5.05	50.15	50.36	0.43	2.00	2.00
North-Central	263.08	273.27	3.87	456.06	466.66	2.32	1.71	1.71
Adamawa	33.26	34.04	2.35	19.71	20.67	4.85	0.59	0.61
Bauchi	26.71	30.00	12.31	25.05	26.08	4.14	0.94	0.87
Borno	34.42	34.91	1.41	29.11	29.39	0.97	0.85	0.84
Gombe	34.60	35.05	1.30	26.64	26.86	0.81	0.77	0.77
Yobe	21.65	22.11	2.15	45.19	48.75	7.88	2.09	2.20
North-East	150.64	156.11	3.63	145.69	151.75	4.15	0.97	0.97
Jigawa	20.45	21.26	4.00	27.01	29.38	8.74	1.32	1.38
Kaduna	20.51	22.93	11.81	51.54	53.77	4.33	2.51	2.34
Kano	48.92	49.09	0.34	26.50	29.22	10.26	0.54	0.60
Katsina	16.74	17.75	6.03	17.90	18.22	1.77	1.07	1.03
Kebbi	36.37	35.11	-3.47	35.26	34.12	-3.24	0.97	0.97
Sokoto	15.39	14.75	-4.14	22.10	20.59	-6.83	1.44	1.40
Zamfara	21.65	19.11	-11.71	45.19	38.67	-14.42	2.09	2.02
North-West	180.03	180.01	-0.01	225.50	223.97	-0.68	1.25	1.24
Abia	22.63	23.44	3.59	24.84	25.05	0.85	1.10	1.07
Anambra	26.18	26.85	2.55	20.16	20.58	2.09	0.77	0.77
Ebonyi	18.23	17.39	-4.60	19.45	18.86	-3.05	1.07	1.08
Enugu	27.20	28.23	3.77	23.53	23.50	-0.14	0.86	0.83
Imo	80.94	85.38	5.49	31.45	32.56	3.54	0.39	0.38
South-East	175.17	181.28	3.49	119.43	120.55	0.94	0.68	0.66

Akwa Ibom	137.30	129.66	-5.57	120.52	110.23	-8.54	0.88	0.85
Bayelsa	121.32	102.91	-15.17	103.55	82.57	-20.26	0.85	0.80
Cross River	144.43	149.63	3.60	142.66	143.63	0.68	0.99	0.96
Delta	44.49	36.18	-18.68	109.11	85.45	-21.68	2.45	2.36
Edo	37.33	44.79	19.99	94.43	95.56	1.20	2.53	2.13
Rivers	151.28	130.95	-13.44	127.06	98.26	-22.67	0.84	0.75
South-South	636.16	594.11	-6.61	697.34	615.70	-11.71	1.10	1.04
Ekiti	23.67	23.00	-2.81	13.60	13.09	-3.78	0.57	0.57
Lagos	8.90	8.17	-8.16	60.34	60.48	0.23	6.78	7.40
Ogun	14.23	14.28	0.32	36.74	39.08	6.38	2.58	2.74
Ondo	42.59	42.83	0.55	13.17	13.87	5.34	0.31	0.32
Osun	55.84	51.76	-7.30	18.85	17.33	-8.04	0.34	0.33
Oyo	7.33	7.62	3.92	37.10	37.10	0.00	5.06	4.87
South-West	152.57	147.66	-3.21	179.79	180.95	0.64	1.18	1.23
National	1557.65	1532.45	-1.62	1823.82	1759.57	-3.52	1.17	1.15

12.17: Plantain/Banana

Table 12.17: Estimates of Land area Cultivated and Production Forecast for Plantain/Banana

	Land Area			Production			Yield	
States	2021	2022	% Change	2021	2022	% Change	2021	2022
Kwara	142.52	145.13	1.83	398.23	405.54	1.83	2.79	2.79
North-Central	142.52	145.13	1.83	398.23	405.54	1.83	2.79	2.79
Abia	18.8	20.20	7.45	139	139.47	0.34	7.39	6.90
Ebonyi	65.65	54.22	-17.41	2104.2	2369.63	12.61	32.05	43.70
Imo	42.17	49.75	17.96	412.38	481.34	16.72	9.78	9.68
South-East	126.622	124.1693	-1.94	2655.58	2990.433	12.61	20.97	24.08
Akwa Ibom	54.62	56.19	2.87	2025.05	1968.40	-2.80	37.07	35.03
Bayelsa	80.54	87.43	8.54	496.70	545.94	9.91	6.17	6.24
Edo	120.87	112.16	-7.21	1813.05	1682.40	-7.21	15.00	15.00
South-South	256.03	255.77	-0.10	4334.80	4196.74	-3.18	16.93	16.41
Lagos	7.3	8.62	18.08	18.57	21.66	16.66	2.54	2.51
South-West	7.30	8.62	18.08	18.57	21.66	16.66	2.54	2.51
National	532.48	533.70	0.23	7407.18	7614.37	2.80	13.91	14.27

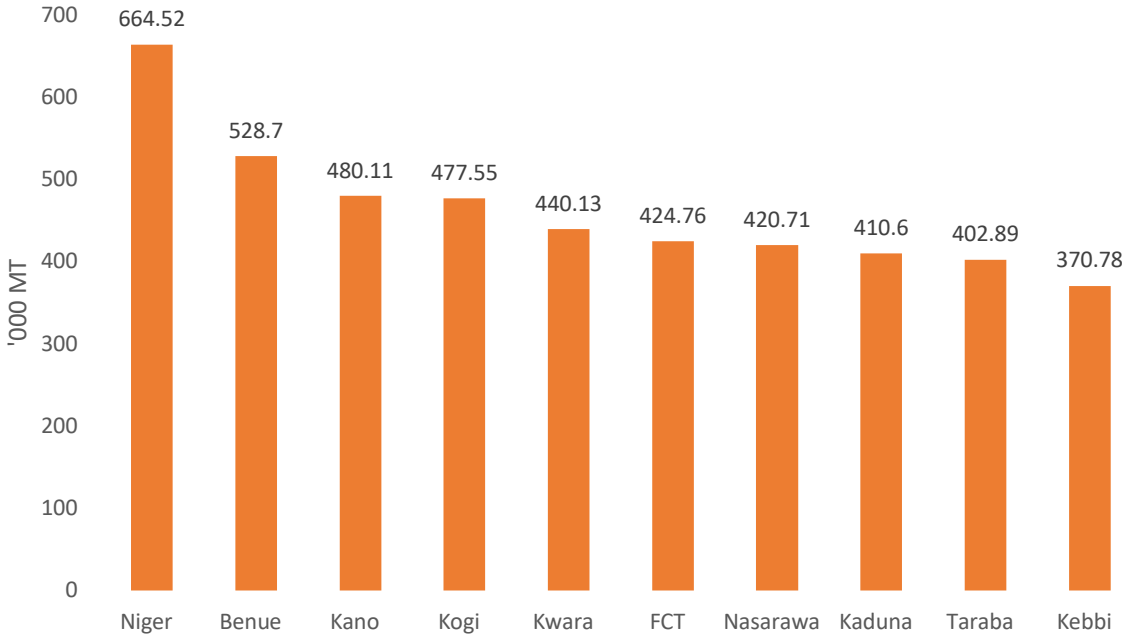

Figure 12.1: Production Estimate of Top 10 Rice Producing States in 2022

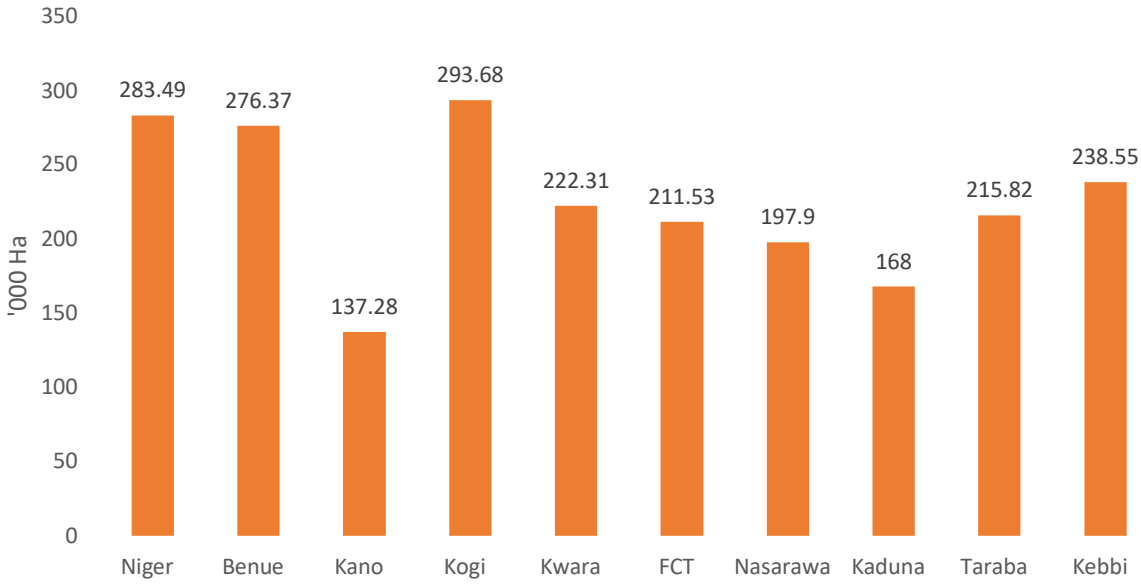

Figure 12.2: Land area of the Top 10 Rice producing States in 2022

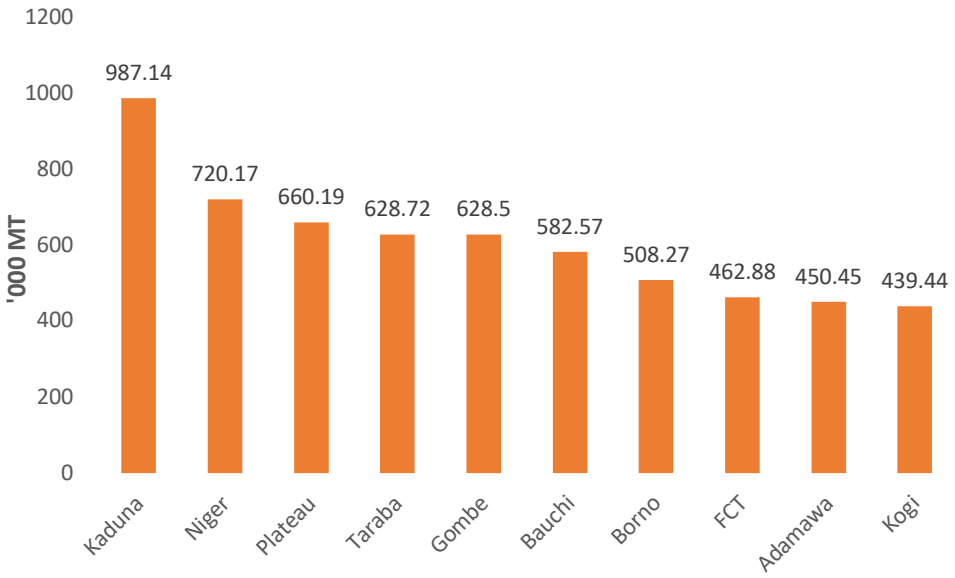

Figure 12.3: Production Estimate of Top 10 Maize producing States in 2022

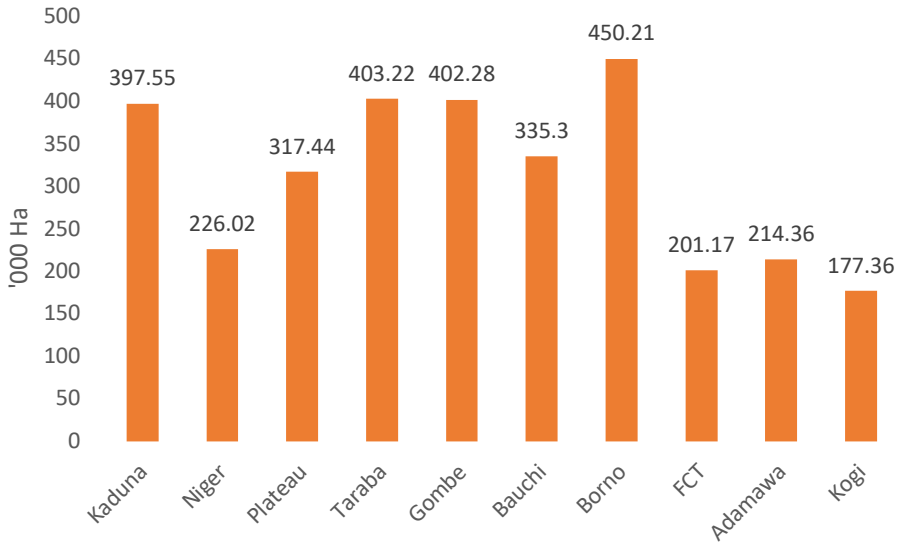

Figure 12.4: Land area of the Top 10 Maize producing States in 2022

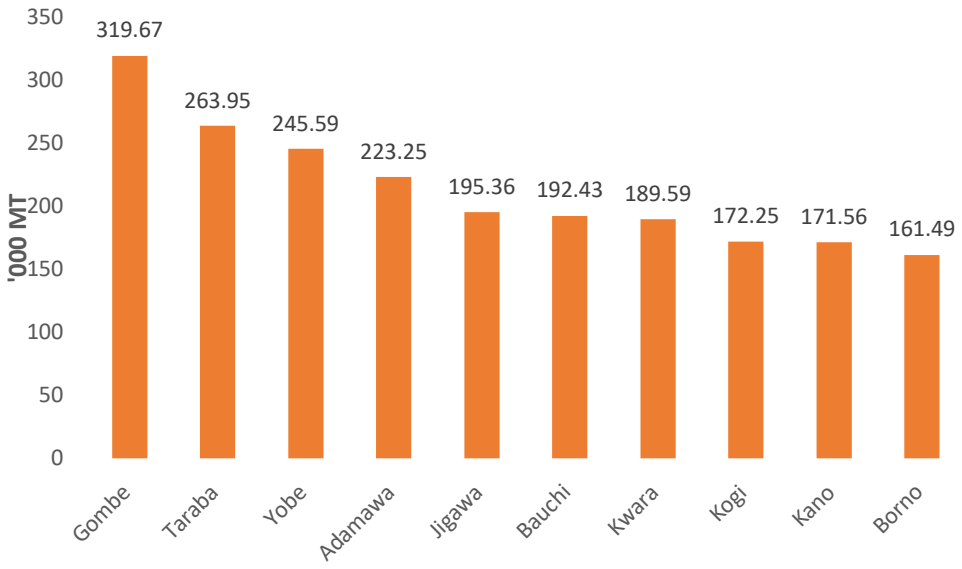

Figure 12.5: Production Estimate of Top 10 Cowpea producing States in 2022

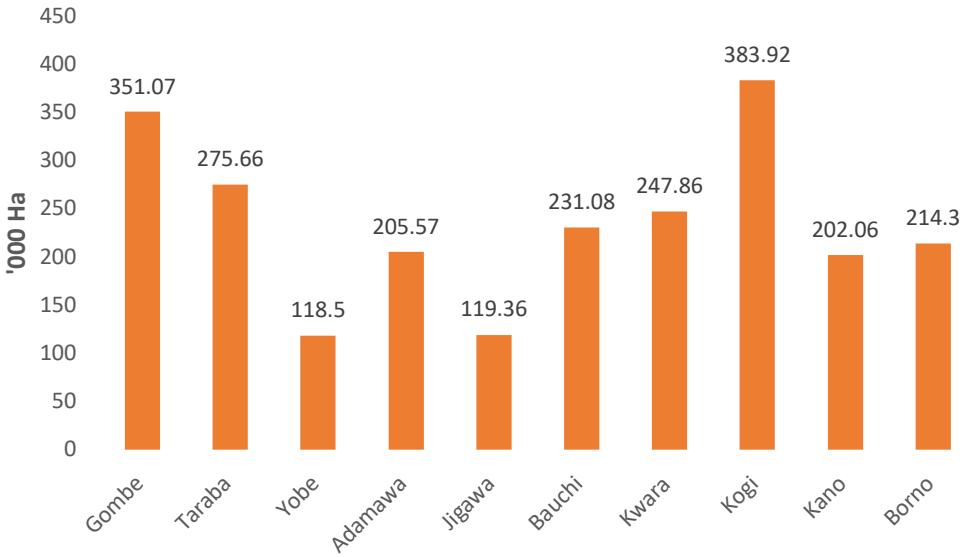

Figure 12.6: Land area of the Top 10 Cowpea Producing States in 2022

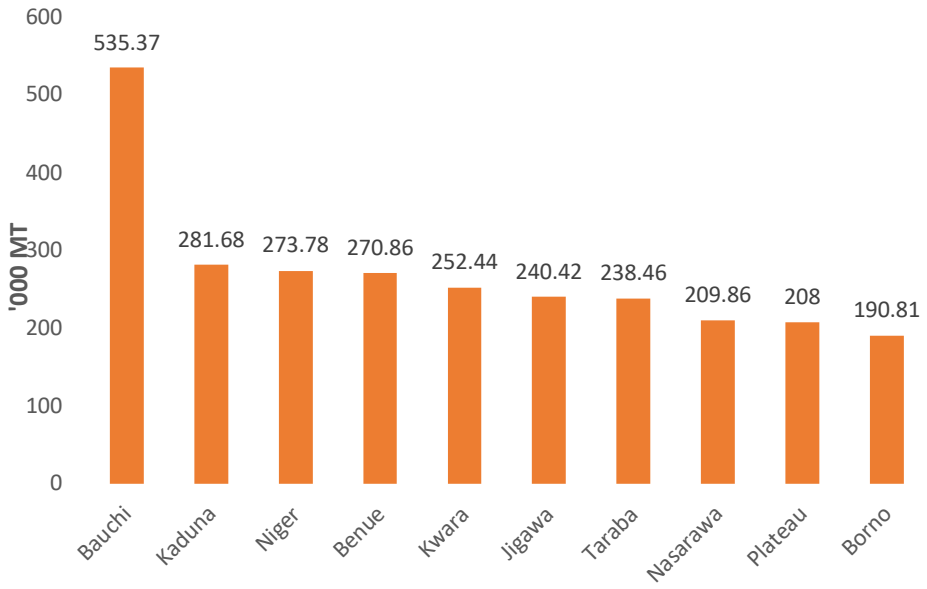

Figure 12.7: Production Estimate of Top 10 Groundnut Producing States in 2022

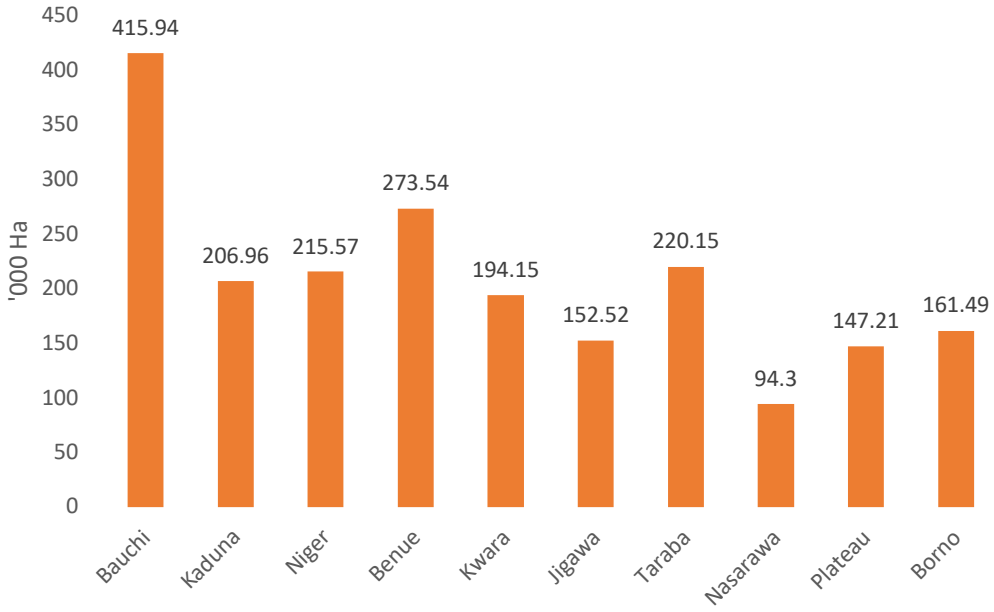

Figure 12.8: Land area of the Top 10 Groundnut Producing States in 2022

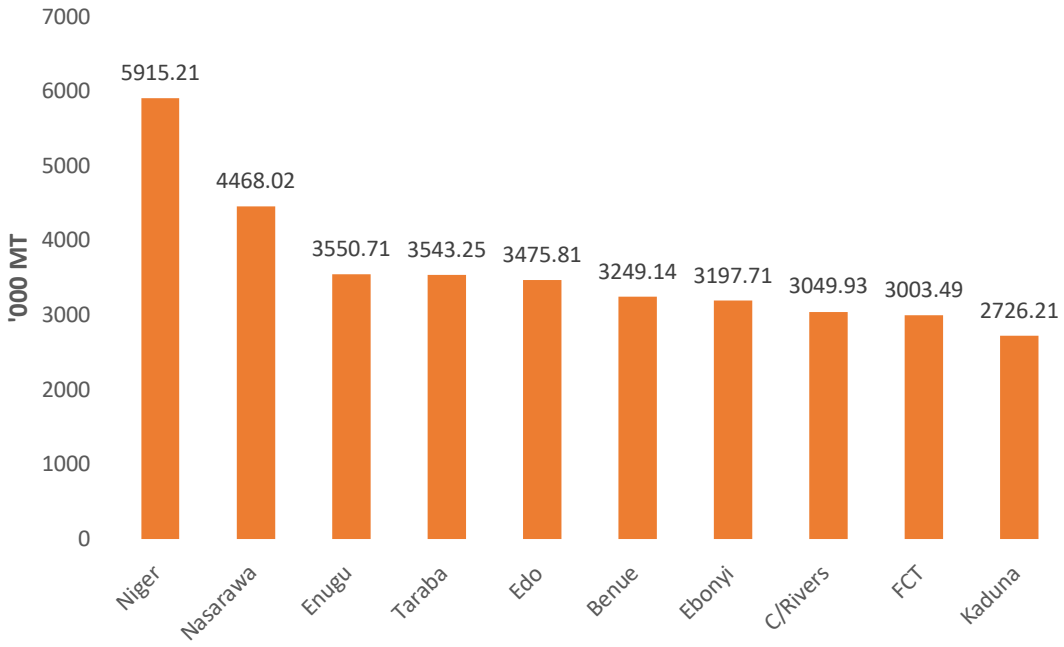

Figure 12.9: Production Estimate of Top 10 Yam Producing States in 2022

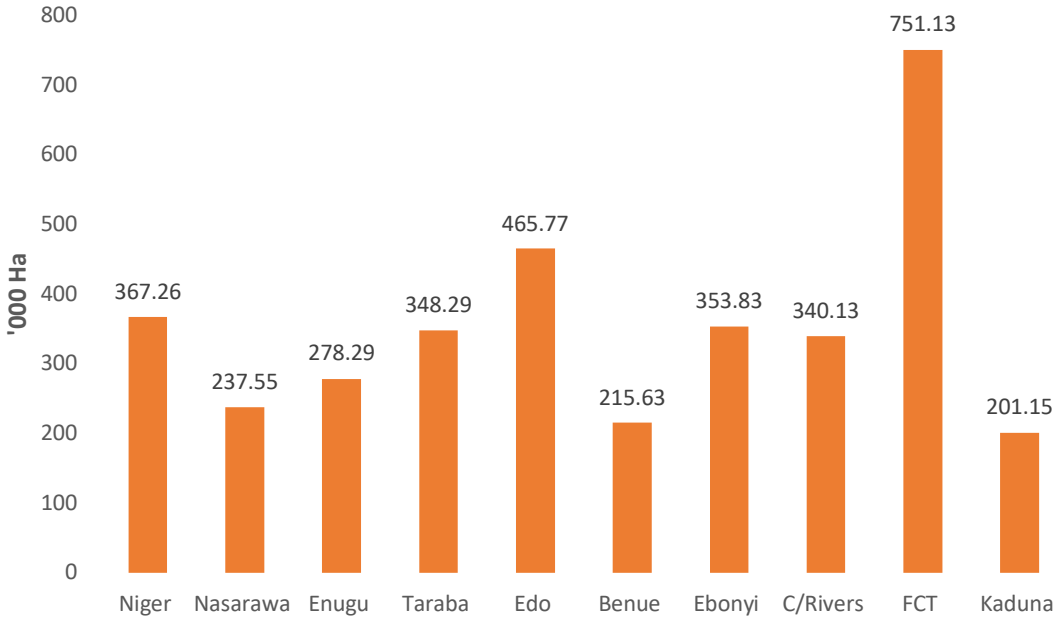

Figure 12.10: Land area of the Top 10 Yam Producing States in 2022

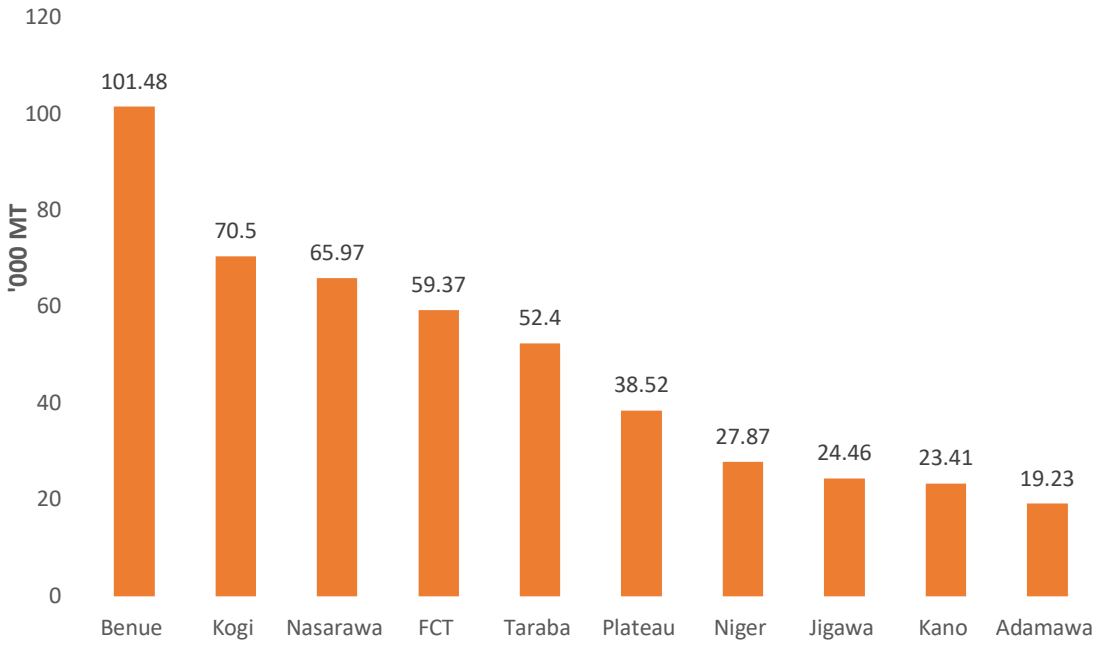

Figure 12.11: Production Estimate of Top 10 Benniseed Producing States in 2022

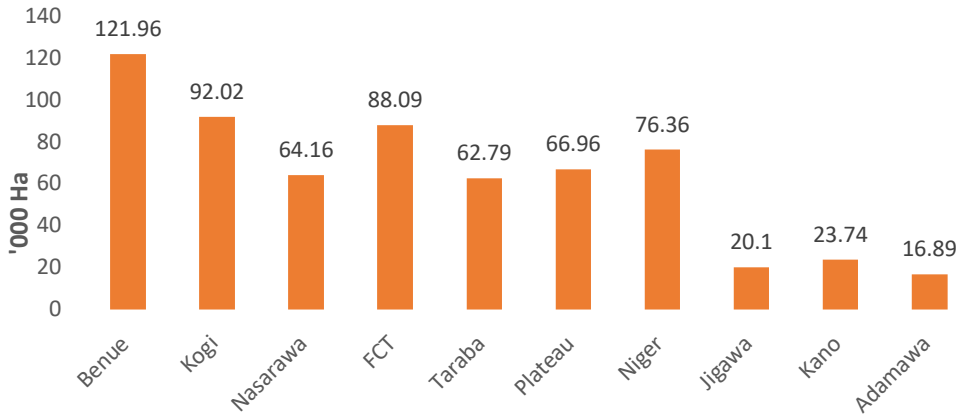

Figure 12.12: Land area of the Top 10 Benniseed Producing States in 2022

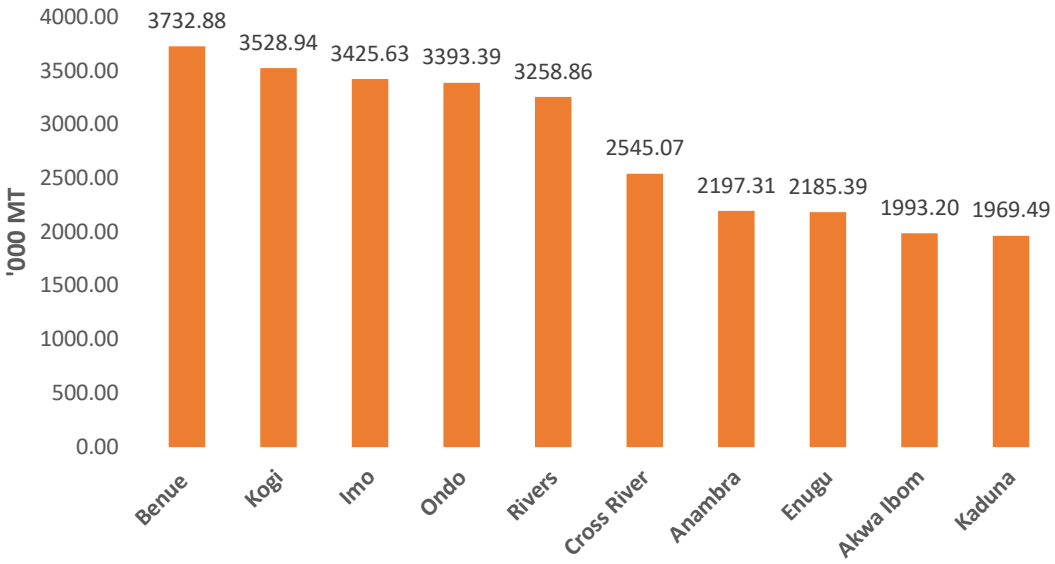

Figure 12.13: Production Estimate of Top 10 Cassava Producing States in 2022

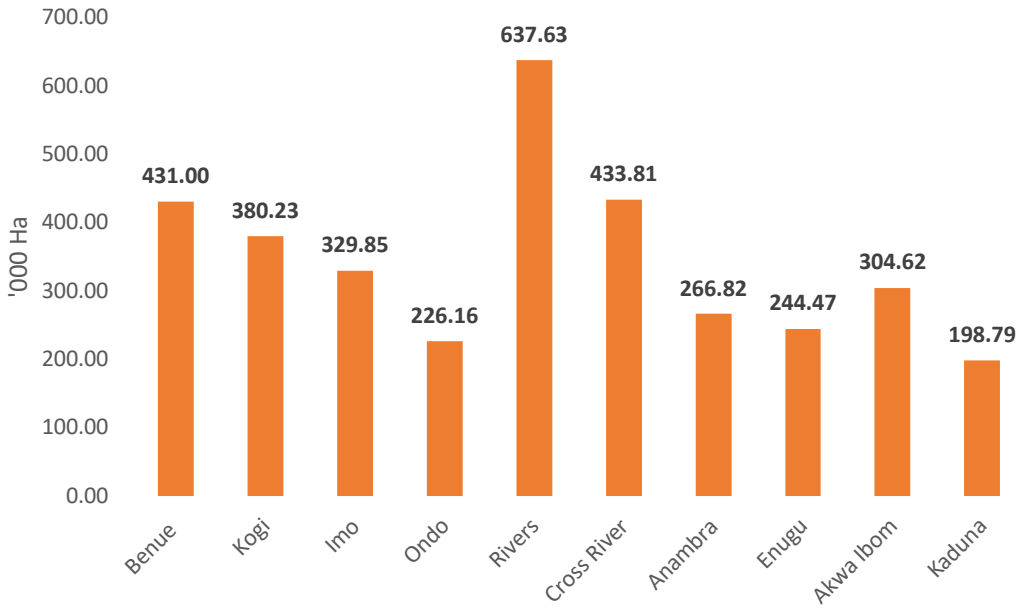

Figure 12.14: Land area of the Top 10 Cassava Producing States in 2022

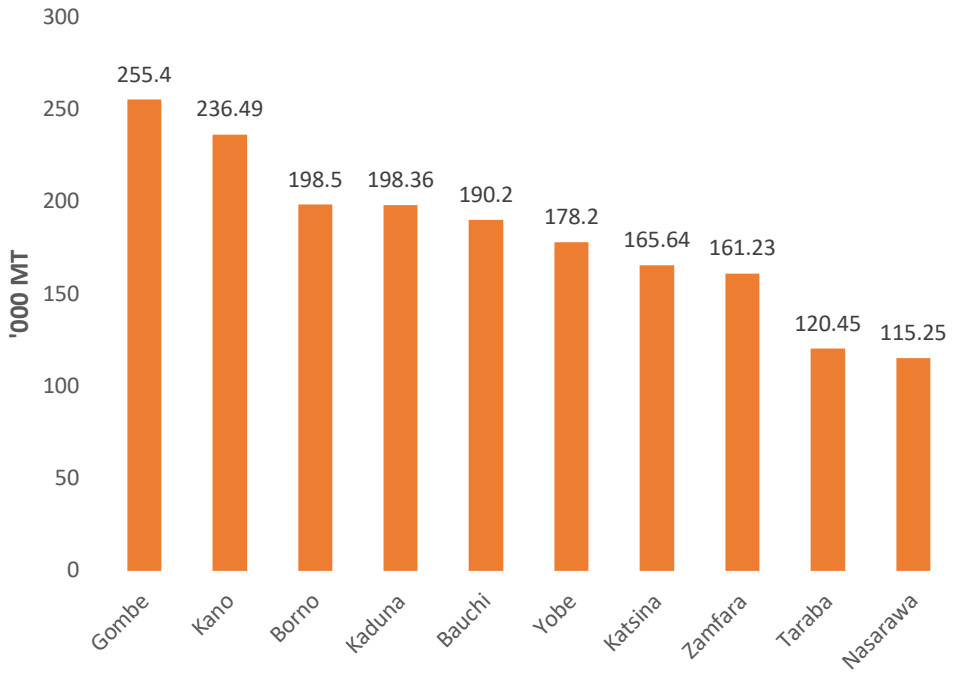

Figure 12.15: Production Estimate of Top 10 Tomatoes Producing States in 2022

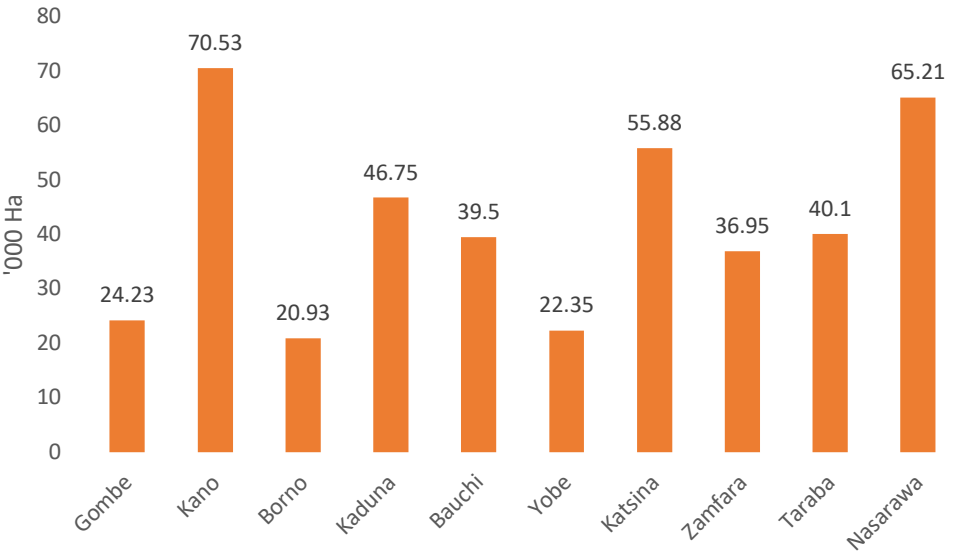

Figure 12.16: Land area of the Top 10 Tomatoes Producing States in 2022

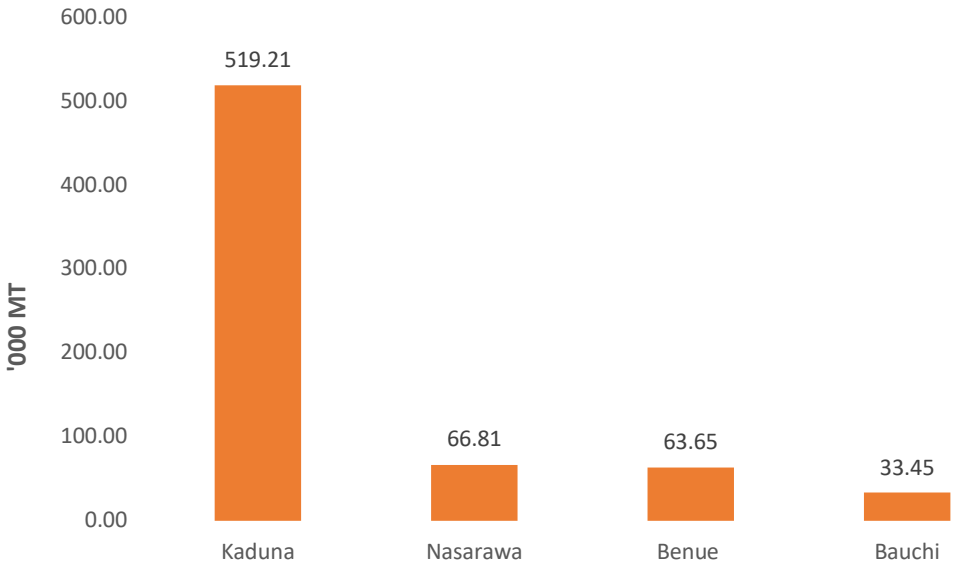

Figure 12.17: Production Estimate of Top 10 Ginger Producing States in 2022

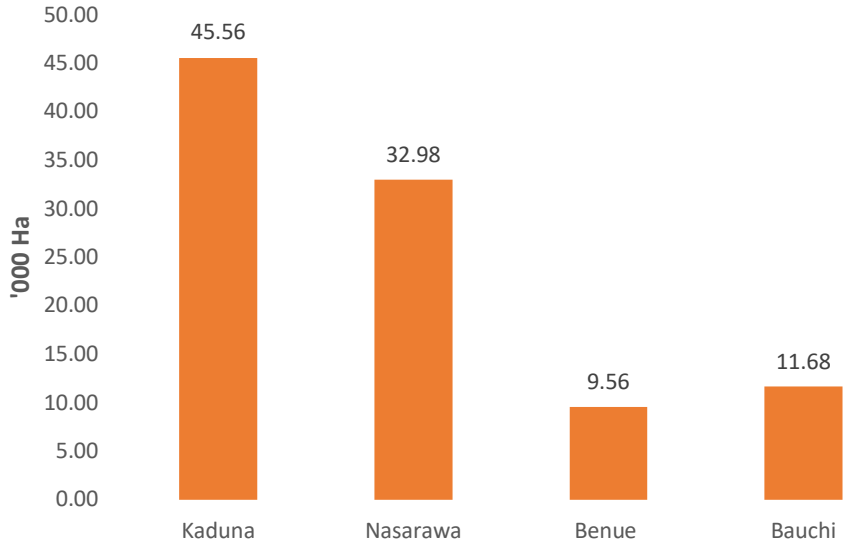

Figure 12.18: Land area of the Top 10 Ginger Producing States in 2022

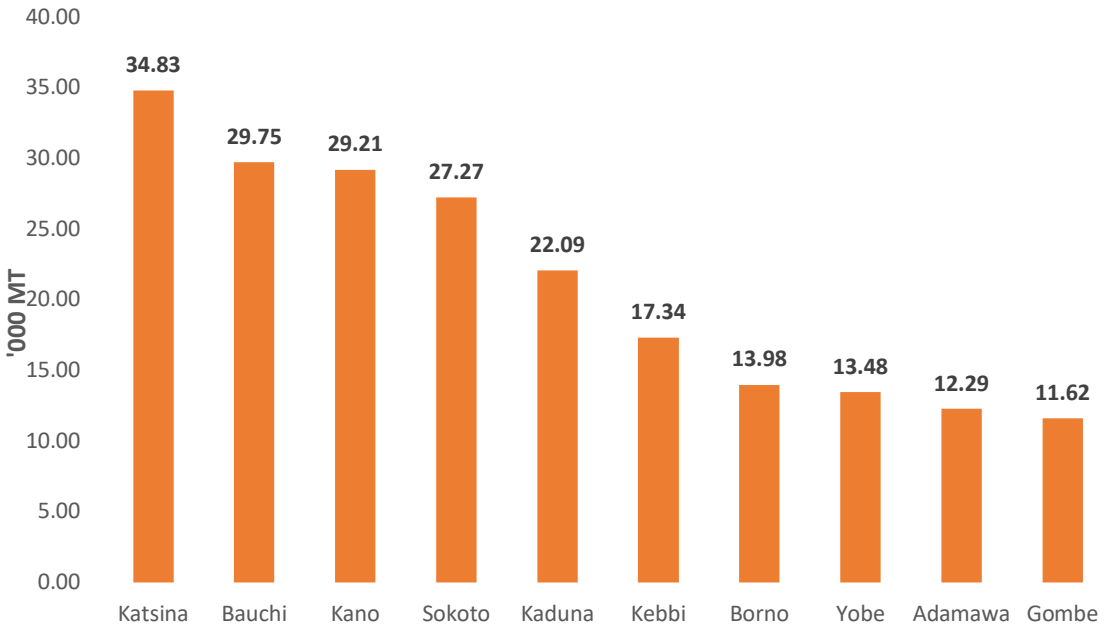

Figure 12.19: Production Estimate of Top 10 Cotton Producing States in 2022

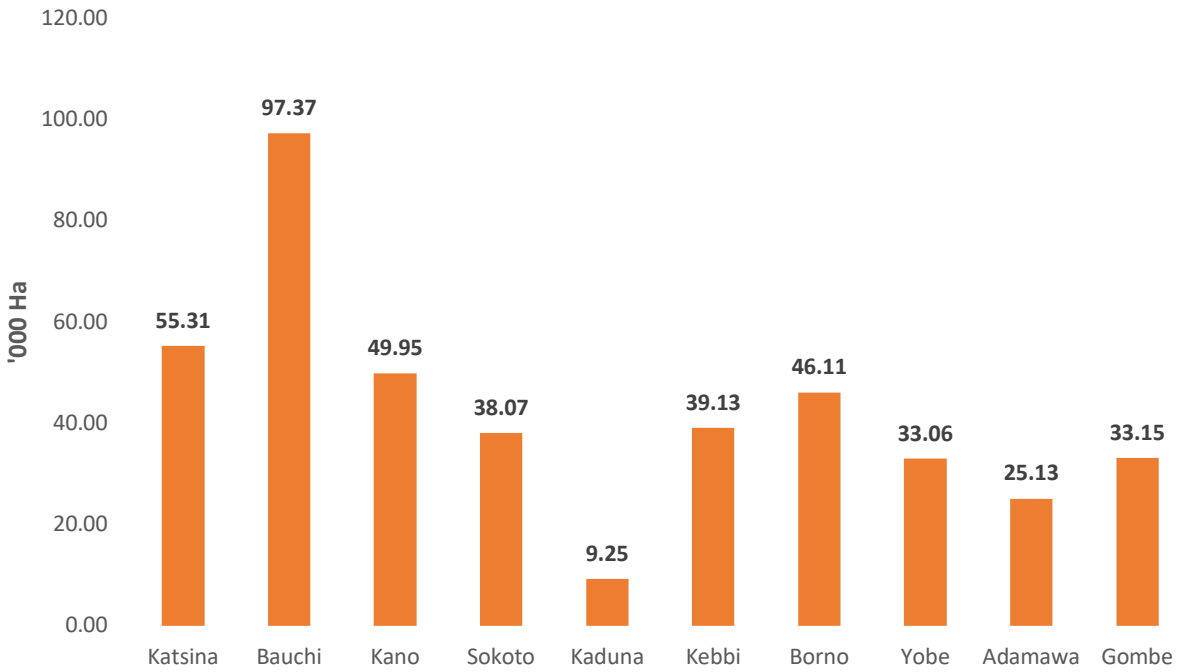

Figure 12.20: Land area of the Top 10 Cotton Producing States in 2022

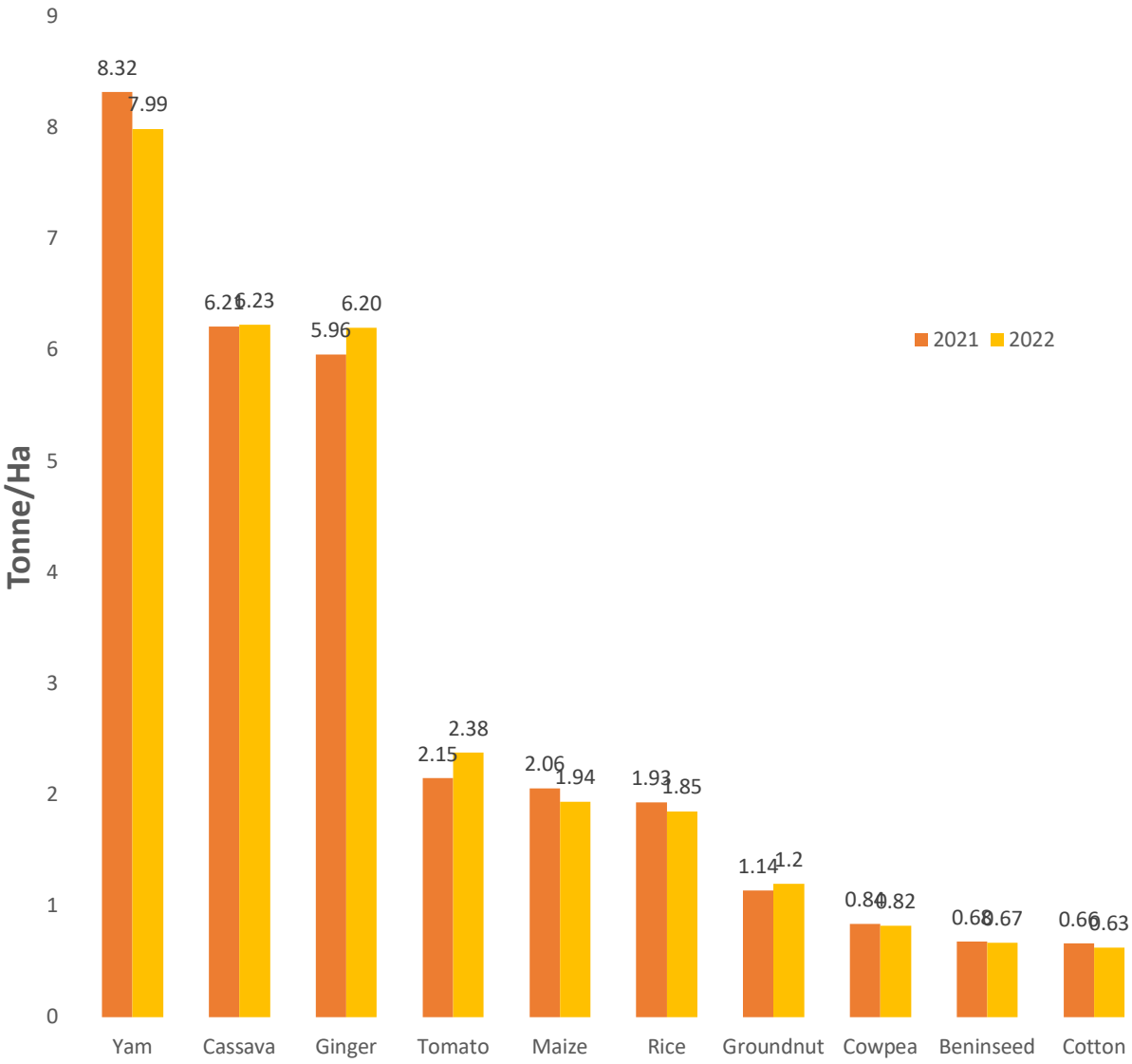

Figure 12.21: Cultivated crops for 2022

13.0 LIVESTOCK PRODUCTION SITUATION

Nigeria is the topmost livestock producer in Central and West Africa. The country's livestock sector has a huge economic potential worth over N33 trillion. At the national level, livestock production contributes about 5% of GDP, whereas agriculture contributes 23% of GDP in the first and second quarters of 2022. However, the livestock subsector of the economy had been faced with some challenges among which are insufficient animal husbandry inputs and technical support for animal health inadequate. Available pastureland is receding quite significantly as cities and farming expand. Cattle are raised essentially in the Sudan-Sahel region of the northern states, where agro-pastoral activities generally involve seasonal and cross-border migration to take advantage of Sahel pastures in the rainy season. The issue of insecurity is also an enormous limiting factor to livestock production.

Despite all the limiting factors against the livestock industry in Nigeria, the country is a major hub of animal product consumption in West Africa. It is also one of the largest livestock-raising countries in the region. Meeting the ever-increasing domestic demand and access to these flourishing markets are major economic stakes for Nigeria and the neighbouring countries raising livestock.

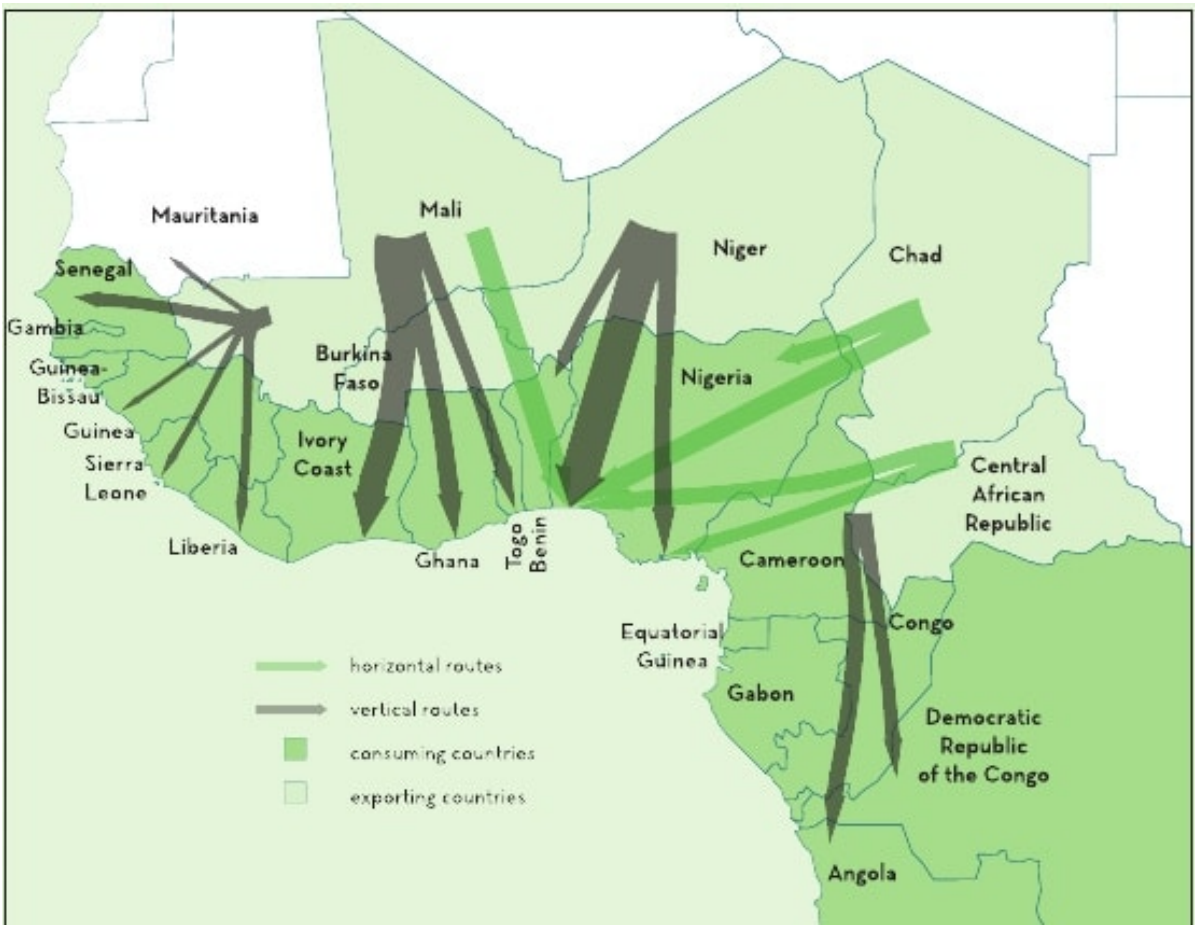

Figure 13.1: Principal livestock trade routes in Central and West Africa

These routes run in a north-to-south direction from the Sahel to coastal markets (Bernard *et al.*, 2011). Many converge massively towards Nigeria, at the heart of this continental sub-region (source: IRAM, 2009)

13.1 Livestock Population

13.1.1 Cattle

The population of major livestock in Nigeria is shown in Table 13.1a and 13.1b. The total population of cattle in 2022 was 20,944,893 as against 20,764,244. The increased number of cattle in the space of one year was 180,649 heads. The largest population of cattle per State was recorded by Zamfara State with a total number of 3,522, 855 heads of cattle (Figure 13.2). Apart from Zamfara State, eight other states recorded cattle populations that were above a million heads. These States are Jigawa (2,437,153), Kano (2,229,732), Borno (1,882,856), Nasarawa (1,456,254), Adamawa (1,245,038), Yobe (1,100,099), Kwara (1,072,399) and Kebbi (1,019,609).

13.1.2 Sheep

The sheep population in 2022 was 49,124,553, similar to the population of the species in 2021. The largest population of the stock was recorded in Zamfara State with 7,684,296 sheep. There are 14 other States in Nigeria with more than a million sheep (Figure 13.3). They are Katsina (5,766,780), Jigawa (5,729,653), Kano (4,237,407), Borno (2,790,462), Plateau (2,427,930), Kebbi (2,276,620), Kaduna (1,803,059), Adamawa (1,731,021), Yobe (1,519,116), Sokoto (1,381,992), Kogi (1,249,307), Nasarawa (1,103,391) and Akwa Ibom (1,019,640).

13.1.3 Goats

Among the ruminant livestock in Nigeria, the population of goats was the largest, with 88,293,636 in 2022 (Table 13.1a). This was an increase of 153,503 from the population of the species in 2021 which was 86,140,132. The largest population of goats among the States was recorded by Katsina State (6,790,410). It is of note that 31 states and FCT had a population of more than a million goats. Jigawa and Zamfara States had 6,611,749 and 6,023,512 goats, respectively. Benue, Kano, Plateau and Osun states had 4,899,178; 4,632,405; 4,590,642 and 4,487,183 goats, respectively. Oyo and Kebbi states also had 3,627,444 and 3,314,154 goats, respectively (Figure 13.4).

13.1.4 Chickens

The total population of chickens in 2022 was 258,518,091 as against 240,481,945 birds in 2021. States like Kano, Oyo, Zamfara, Niger, Imo, Kogi, Yobe, Katsina, Plateau, and Kaduna had more than 10 million birds in 2022 (Figure 13.5). In all, 33 states and FCT Abuja had more than a million chicken populations in 2022 (Figure 13.5).

13.1.5 Guinea fowls

As shown in Table 13.1b, the total population of guinea fowls in Nigeria was 30,488,080 with the largest population found in Zamfara State (5,990,397) among other States. Yobe and Kebbi had 3,481,278 and 3,101,142 guinea fowls, respectively. Other states with prominent large populations of the birds are Kano (2,771,026), Niger (2,372,763), Katsina (2,169,348), Katsina (2,169,348), Sokoto (2,042,860), Jigawa (1,489,327), Gombe (1,215,850), Kogi (1,052,269) and Bauchi (1,032,445). The population of guinea fowls in 20 states (30,188,941) make up 99.02% of the stock in the country (Figure 13.6).

13.1.6 Other livestock species

The populations of other poultry species in Nigeria are shown in Figure 13.7 while those of other livestock (pseudo-ruminant) were shown in Figure 13.8 as well as Table 13.1b.

Table13.1a: Livestock Population in Nigeria for 2021 and 2022

States	Cattle		Sheep		Goat		Pig		Chicken		Guinea fowl	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Benue	132,513	133,666	879,946	879,946	4,779,686	4,899,178	1,243,916	1,243,916	3,796,510	4,081,248	67,416	70,787
FCT Abuja	33,008	33,295	211,070	211,070	1,084,110	1,111,213	33,888	33,888	2,930,271	3,150,042	21,906	23,001
Kogi	146,919	148,197	1,249,307	1,249,307	2,823,418	2,894,003	70,099	70,099	11,205,872	12,046,312	1,002,161	1,052,269
Kwara	1,063,150	1,072,399	430,021	430,021	2,113,025	2,165,851			3,185,111	3,423,994	371,665	390,249
Nasarawa	1,443,694	1,456,254	1,103,391	1,103,391	1,906,269	1,953,926	351,577	351,577	4,604,775	4,950,134	652,407	685,028
Niger	243,614	245,734	818,915	818,915	1,751,115	1,794,893	41,574	41,574	12,057,603	12,961,923	2,259,774	2,372,763
Plateau	786,460	793,302	2,427,930	2,427,930	4,478,675	4,590,642	1,941,022	1,941,022	10,368,950	11,146,621	343,747	360,935
Taraba	326,842	329,685	1,199,091	1,199,091	1,187,898	1,217,595	364,820	364,820	8,429,413	9,061,619	709,955	745,453
North-Central	4,176,200	4212532	8319671	8319671	20124196	20627301	4046896	4046896	56578505	60821893	5429031	5700485
Adamawa	1,234,300	1,245,038	1,731,021	1,731,021	1,949,943	1,998,692	803,669	803,669	491,936	528,831	169,165	177,623
Bauchi	585,246	590,338	260,878	260,878	450,909	462,182			6,456,734	6,940,989	983,281	1,032,445
Borno	1,866,617	1,882,856	2,790,462	2,790,462	2,844,305	2,915,412			2,116,669	2,275,419	43,773	45,961
Gombe	594,202	599,372	745,022	745,022	1,431,312	1,467,095	124,154	124,154	5,267,553	5,662,619	1,157,953	1,215,850
Yobe	1,090,611	1,100,099	1,519,116	1,519,116	2,292,332	2,349,640	73,695	73,695	10,840,950	11,654,021	3,315,503	3,481,278
North-East	5,370,976	5,417,703	7,046,499	7,046,499	8,968,801	9,193,021	1,001,518	1,001,518	25,173,842	27,061,879	5,669,675	5,953,157
Jigawa	2,416,133	2,437,153	5,729,653	5,729,653	6,450,487	6,611,749			8,521,748	9,160,879	1,418,407	1,489,327
Kaduna	720,903	727,175	1,803,059	1,803,059	2,170,017	2,224,267	781,137	781,137	9,531,917	10,246,811	342,265	359,378
Kano	2,210,500	2,229,732	4,237,407	4,237,407	4,519,420	4,632,405			15,642,379	16,815,557	2,639,072	2,771,026
Katsina	600,919	606,147	5,766,780	5,766,780	6,624,790	6,790,410			10,650,315	11,449,088	2,066,045	2,169,348
Kebbi	1,010,815	1,019,609	2,276,620	2,276,620	3,233,321	3,314,154	110,437	110,437	8,523,942	9,163,237	2,953,469	3,101,142
Sokoto	432,149	435,908	1,381,992	1,381,992	1,231,560	1,262,349			6,593,251	7,087,745	1,945,581	2,042,860
Zamfara	3,492,471	3,522,855	7,684,296	7,684,296	5,876,597	6,023,512			13,056,045	14,035,248	5,705,140	5,990,397
North-West	10,883,890	10,978,579	28,879,807	28,879,807	30,106,192	30,858,846	891,574	891,574	72,519,597	77,958,565	17,069,979	17,923,478

Table13.1a Cont'd: Livestock Population in Nigeria for 2021 and 2022

States	Cattle		Sheep		Goat		Pig		Chicken		Guinea fowl	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Abia			229,250	229,250	515,947	528,845	460,560	460,560	1,639,821	1,762,807	172,515	181,141
Anambra			165,673	165,673	536,691	550,108			5,054,801	5,433,911		
Ebonyi	14,581	14,708	229,271	229,271	1,173,045	1,202,371			7,814,098	8,400,156		
Enugu	2,552	2,574	168,237	168,237	1,645,065	1,686,192	92,209	92,209	6,900,942	7,418,512	36,726	38,562
Imo			92,804	92,804	1,763,824	1,807,919	297,835	297,835	11,844,083	12,732,389	42,269	44,383
South-East	17,133	17,282	397,508	397,508	2,818,110	2,888,563	92,209	92,209	14,715,040	15,818,668	36,726	38,562
Akwa-Ibom			1,019,640	1,019,640	2,396,894	2,456,816	548,298	548,298	3,837,583	4,125,402	344,170	361,378
Cross River			139,535	139,535	262,057	268,608	46,898	46,898	3,260,822	3,505,384		
Delta	30,548	30,814	241,566	241,566	2,197,332	2,252,265	44,436	44,436	2,694,276	2,896,346		
Edo	134,617	135,788	654,845	654,845	1,413,767	1,449,111	23,895	23,895	5,498,313	5,910,686	5,890	6,185
Rivers			34,070	34,070	2,086,269	2,138,426			2,025,011	2,176,887		
South-South	165,165	166,602	896,411	896,411	3,611,099	3,701,376	68,331	68,331	8,192,589	8,807,032	5,890	6,185
Ekiti	35,600	35,909	75,841	75,841	1,134,990	1,163,365	149,526	149,526	144,624	155,471	664	697
Lagos					13,305	13,637	17,069	17,069	6,899,610	7,417,081		
Ogun	15,206	15,338	209,908	209,908	1,167,480	1,196,667	96,969	96,969	8,885,762	9,552,194	66,250	69,562
Ondo	37,055	37,377	170,899	170,899	2,717,572	2,785,511	1,074,899	1,074,899	1,660,479	1,785,015		
Osun			701,796	701,796	4,377,739	4,487,183	219,375	219,375	3,531,647	3,796,521		
Oyo	63,020	63,568	745,240	745,240	3,538,969	3,627,444	287,604	287,604	14,518,130	15,606,990	199,097	209,052
South-West	150,881	152,192	1,903,684	1,903,684	12,950,055	13,273,807	1,845,442	1,845,442	35,640,252	38,313,272	266,011	279,311
National	20,764,244	20,944,893	49,124,553	49,124,553	86,140,132	88,293,635	9,299,565	9,299,565	240,481,945	258,518,091	29,036,267	30,488,080

Table13.1b: Livestock Population in Nigeria for 2021 and 2022

States	Duck		Turkey		Pigeon		Donkey		Rabbit		Camel		Horse	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Benue	244,062	256,265	13,985	14,685	111,365	116,934			75,886	78,921				
FCT Abuja	105,011	110,262	32,151	33,759	546	573								
Kogi	1,483,234	1,557,395	288,196	302,605	124,213	130,424								
Nasarawa	831,926	873,522	316,349	332,167	67,030	70,381	2,382	2,384	33,970	35,328				
Niger	592,636	622,268			297,036	311,888			330,074	343,277	3,277	3,280		
Plateau	236,318	248,133	178,082	186,986					61,561	64,024				
Taraba	811,459	852,031	331,818	348,409	105,489	110,763								
North-Central	4,304,646	4,519,876	1,160,581	1,218,611	705,679	740,963	2,382	2,384	501,491	521,550	3,277	3,280		
Adamawa	78,662	82,595	16,664	17,497	443	465			49,478	51,457				
Bauchi	1,036,252	1,088,064					1,452	1,453			9,494	9,503		
Borno	46,619	48,950			24,764	26,002	143,994	144,138					16,166	16,182
Gombe	1,090,769	1,145,307			569,028	597,480	14,269	14,283						
Yobe	1,750,440	1,837,962	44,128	46,335	228,619	240,050	1,106	1,107			502	503		
North-East	4,002,742	4,202,878	60,792	63,832	822,854	863,997	160,821	160,981	49,478	51,457	9,996	10,006	16,166	16,182
Jigawa	571,542	600,120	82,083	86,187	487,972	512,370	25,185	25,211			12,877	12,890	12,900	12,913
Kaduna	947,013	994,364			59,525	62,501								
Kano	1,561,353	1,639,421	619,567	650,545	750,870	788,413	136,234	136,370			128,361	128,489	62,427	62,489
Katsina	88,112	92,517			205,136	215,393	87,412	87,499			9,600	9,610		
Kebbi	881,950	926,048			7,158	7,516	83,036	83,119			50,584	50,635	4,206	4,210
Sokoto	208,959	219,407	20,155	21,162	420,937	441,984	153,964	154,118			60,467	60,528		
Zamfara	1,732,729	1,819,366			505,676	530,959	332,305	332,637	69,306	72,078	5,636	5,641	6,933	6,940
North-West	5,991,658	6,291,243	721,805	757,894	2,437,274	2,559,136	818,136	818,954	69,306	72,078	267,525	267,793	86,466	86,552

Table13.1b Cont'd: Livestock Population in Nigeria for 2021 and 2022

States	Duck		Turkey		Pigeon		Donkey		Rabbit		Camel		Horse	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Abia	51,158	53,716	13,932	14,629					41,205	42,853				
Anambra			305,005	320,255										
Ebonyi									5,987	6,226				
Enugu			226,688	238,023										
Imo	51,962	54,560	101,926	107,022					39,778	41,369				
South-East	103,120	108,276	647,551	679,929					86,970	90,448				
Akwa-Ibom	276,550	290,377	61,163	64,222					120,858	125,692				
Cross River	172,168	180,776												
Delta			15,491	16,265					4,516,674	4,697,340				
Edo	222,067	233,170	156,951	164,799					87,176	90,663				
Rivers									21,046	21,888				
South-South	670,785	704,323	233,605	245,286					4,724,708	4,913,695				
Ekiti	1,515	1,591	135	142	1,630	1,711			79,827	83,020				
Lagos	143,003	150,153												
Ogun	409,401	429,871	65,643	68,925					60,735	63,164				
Ondo	49,513	51,988	19,103	20,058					86,884	90,359				
Osun			9,935	10,432										
Oyo	664,050	697,252												
South-West	1,267,482	1,330,855	94,816	99,557	1,630	1,711	0	0	227,446	236,543				
National	16,340,432	17,157,453	2,919,151	3,065,108	3,967,437	4,165,808	981,340	982,322	5,680,445	5,907,663				

Source: Federal Department of Animal Production and Husbandry Services, FMARD, Abuja

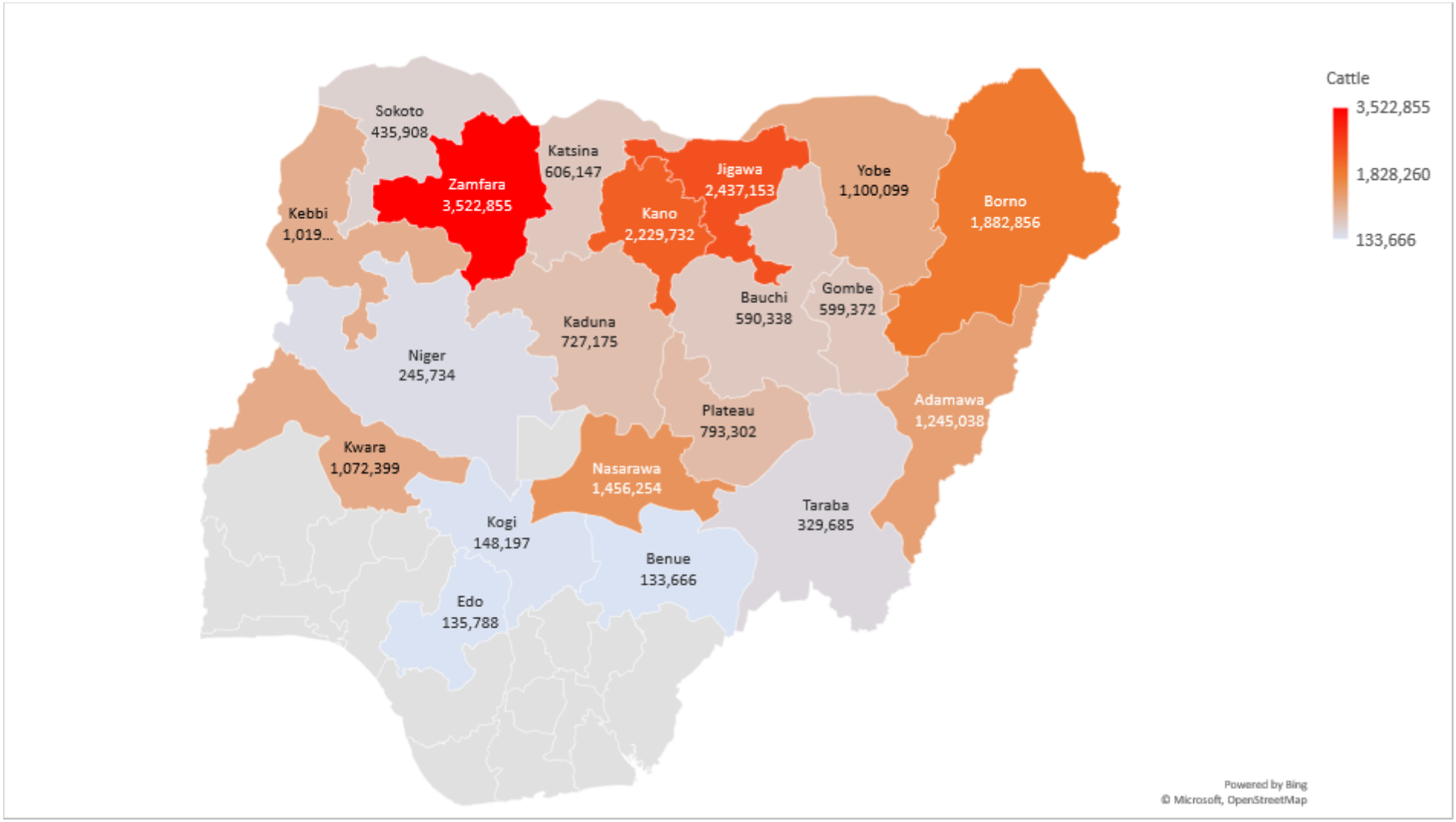

Figure 13.2: Twenty States in Nigeria with the most of population of sheep in 2022 account for 98.88% of the stocks
Source: Federal Department of Animal Production and Husbandry Services, FMARD, Abuja

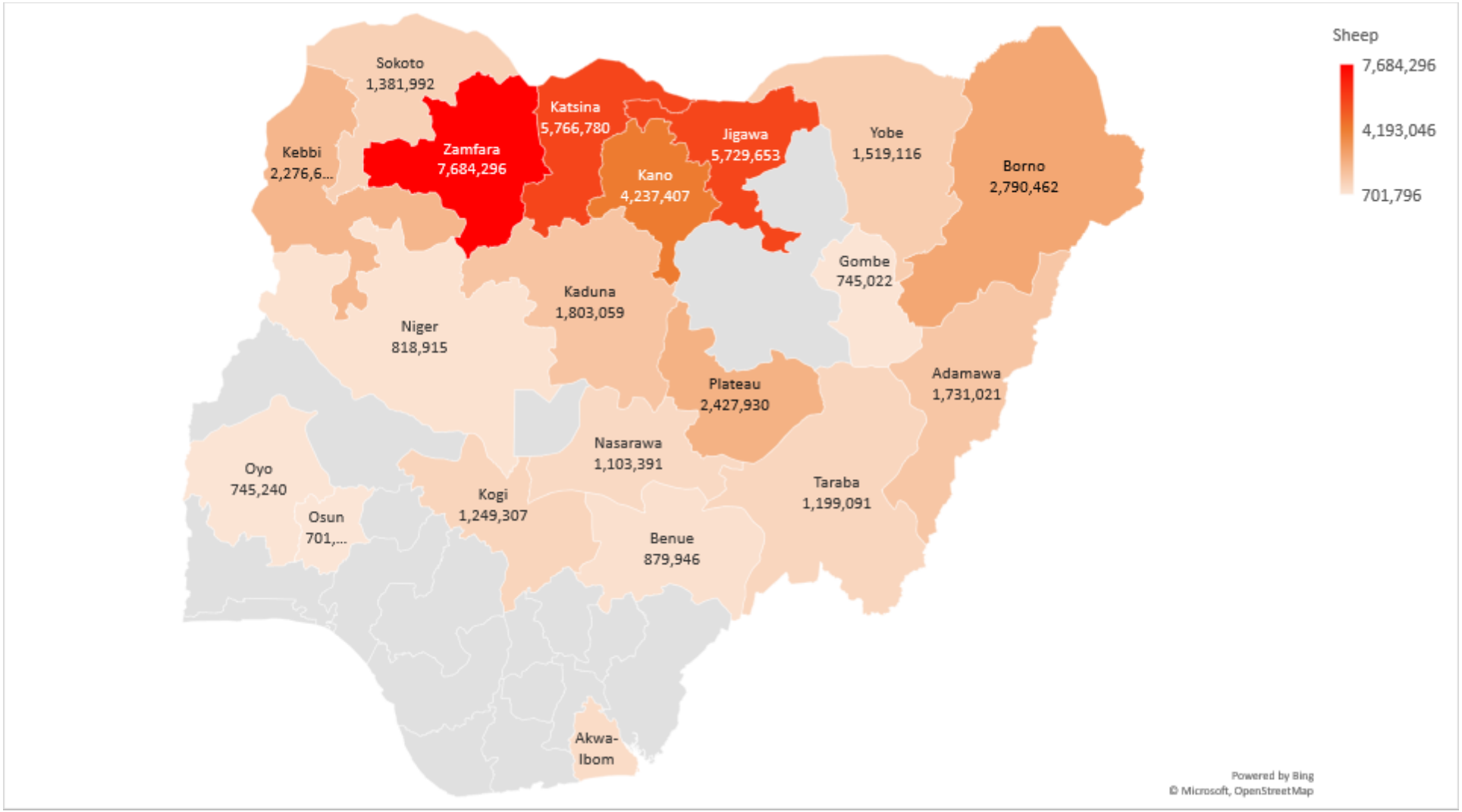

Figure 13.3: Twenty States in Nigeria with the most of population of sheep in 2022 account for 93.25% of the stocks
Source: Federal Department of Animal Production and Husbandry Services, FMARD, Abuja

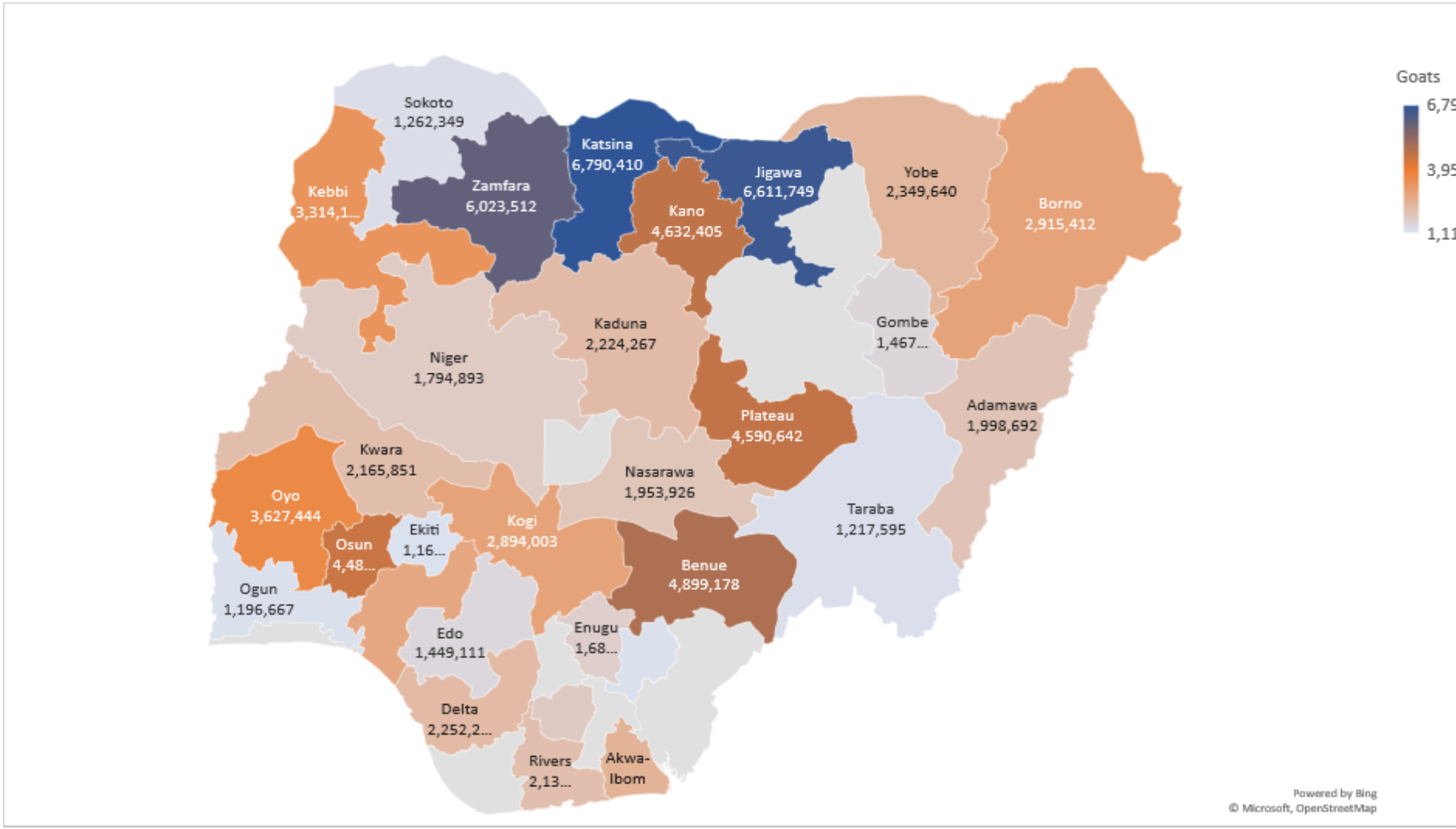

Figure 13.4: Thirty-One States in Nigeria that have above one million goats population in 2022 account for 97.93% of the stocks
Source: Federal Department of Animal Production and Husbandry Services, FMARD, Abuja

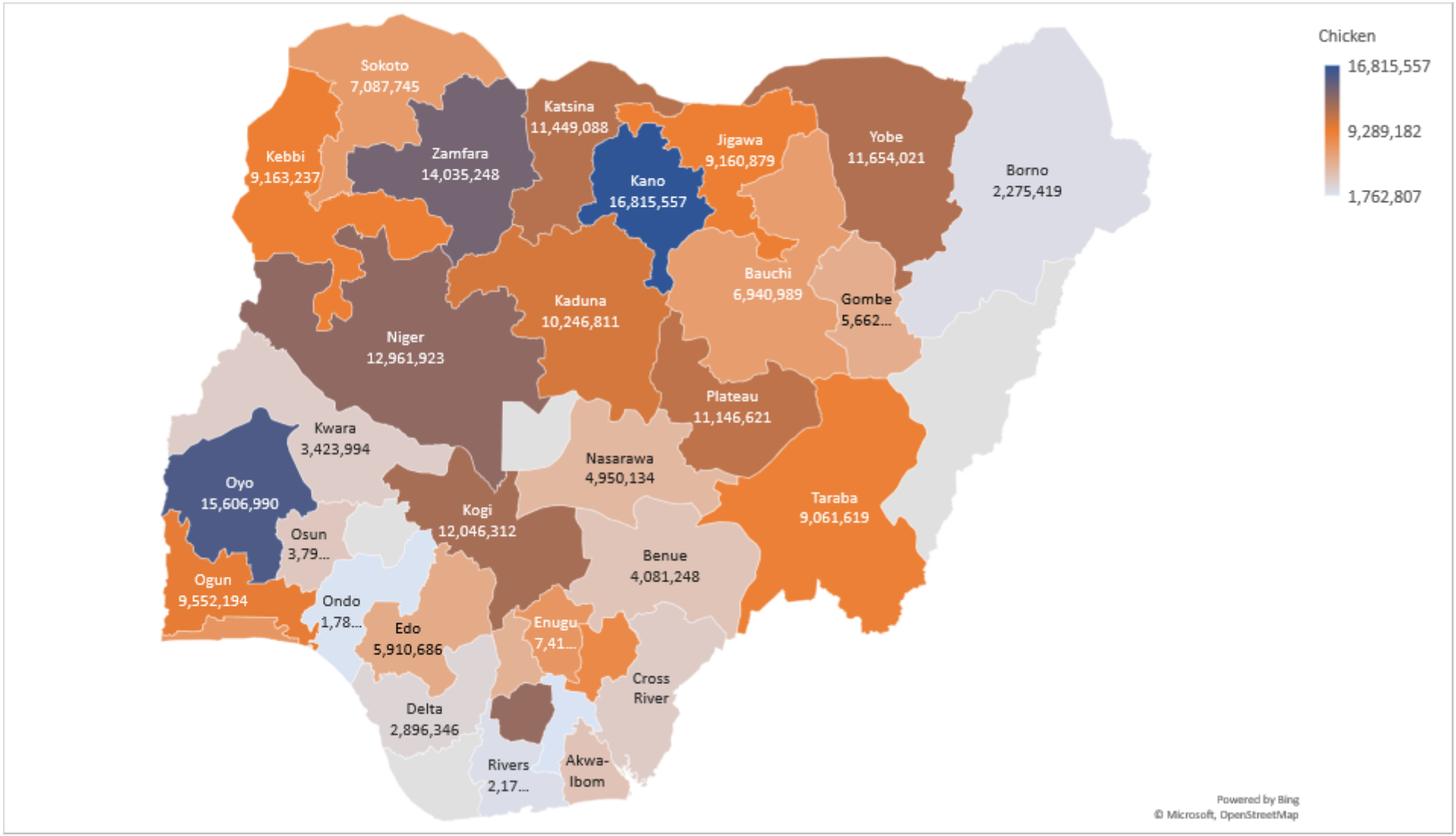

Figure 13.5: Thirty-three States and FCT Abuja have above one million chicken population in 2022
Source: Federal Department of Animal Production and Husbandry Services, FMARD, Abuja

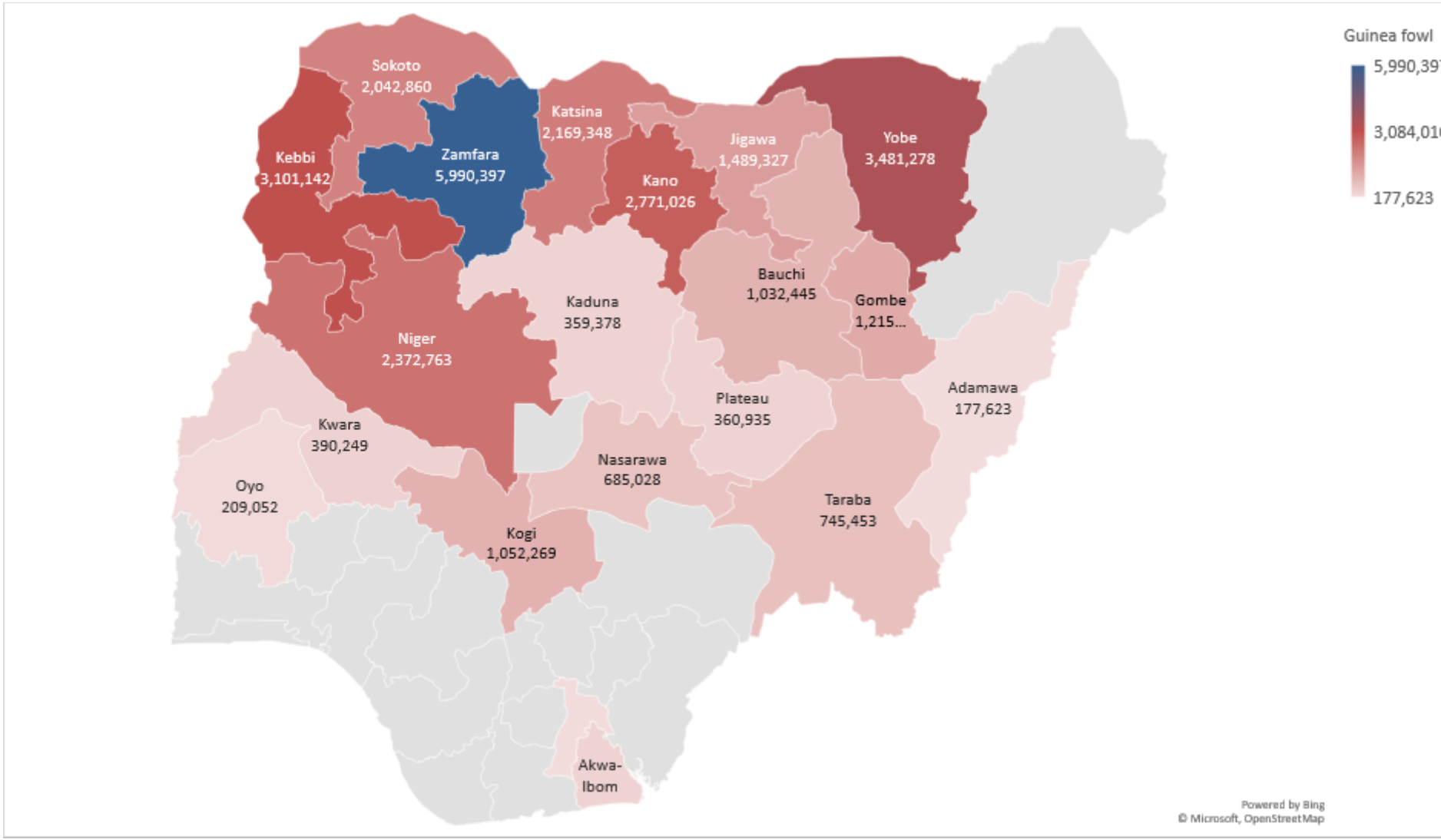

Figure 13.6: States with prominent populations of guinea fowls in Nigeria. The population of guinea fowls in 20 States make up 99.02% of the stock in the country. *Source: Federal Department of Animal Production and Husbandry Services, FMARD, Abuja*

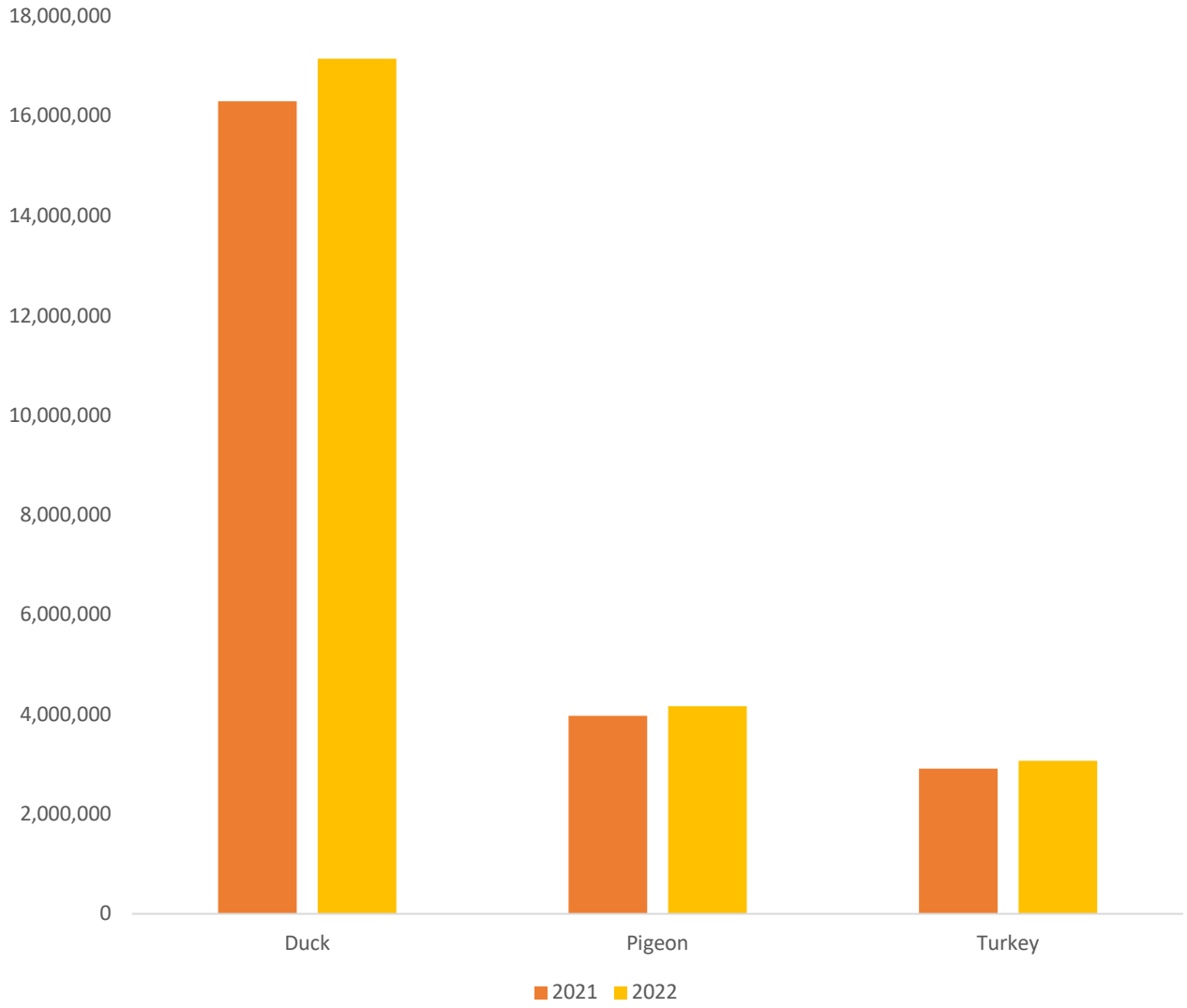

Figure 13.7: Population of other poultry birds in Nigeria
Source: Federal Department of Animal Production and Husbandry Services, FMARD, Abuja

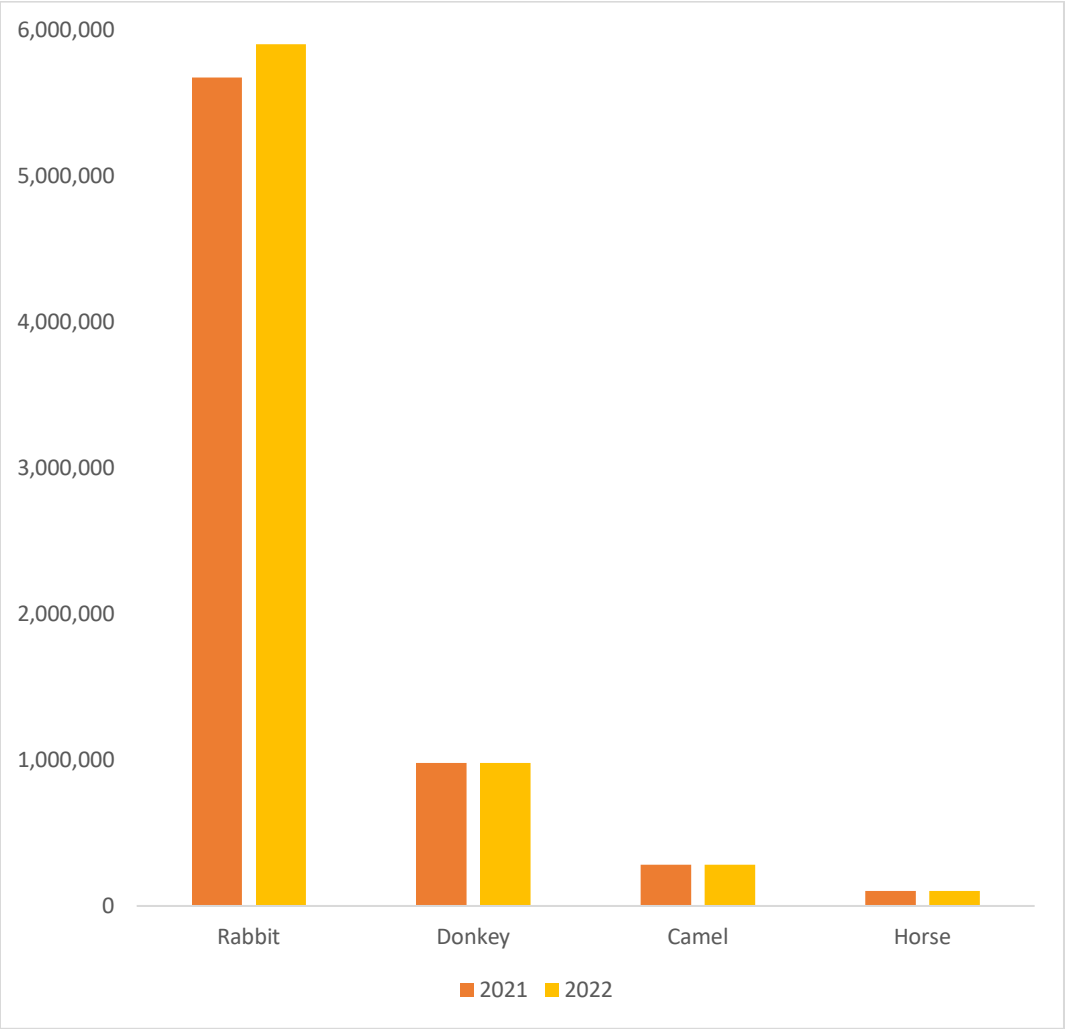

Figure 13.8: Population of other livestock in Nigeria

13.2 Livestock Production Inputs

Table 13.2 shows the information on livestock farm inputs procured and distributed to farmers. Most states did not procure livestock farm inputs. Only 11 states procured livestock farm inputs. Most of the inputs procured by the states were considered accessible and affordable by the farmers. Meanwhile, the quantity procured did not meet the estimated requirements.

Table 13.2: Livestock Farm Inputs (Government Sources)

States	Inputs	Quantity provided			Quantity Distributed	No of the farm families benefited	Is it considered accessible by farmers?		Is it considered affordable by farmers?		Total Estimated requirement for your State
		FG	State	Others			Yes	No	Yes	No	
Benue	Poultry drugs			NEMA	1200 packs of vitalyte 1200 pack of antibiotics	100	Yes				4560
	Poultry feeds			NEMA	540 bags (25kg)	100	Yes				20,700 bags
North-Central											
Borno	Day old chicks		120000		50000	50000	Yes		Yes		3000000
North East											
Kano	Day old chicks		State		15000	500	Yes		Yes		250000
	Poultry Vaccine		State		1000 vials	100	Yes		Yes		
	Poultry feeds		State		25 MT	500	Yes		Yes		1000 MT
Kebbi	Wheat Offal		State		10500 tonnes	5250	Yes		Yes		15000 MT
	Salt Lick		State		1520 blocks	760	Yes		Yes		9500 Blocks
	Cotton seed cake		State		1200 tonnes	1200	Yes		Yes		5623 MT
North West											
Imo	Noiler				6300	420	Yes		Yes		20000
	Gumboro Vaccine				6000	420	Yes		Yes		40000
	Poultry feeds				4000	420	Yes		Yes		40000
South East											
Akwa-Ibom	Day old chicks		3000		3000	100		No		No	300000
	Poultry feeds	300 Bags			300 bags	100		No		No	10000 Bags
	Livestock feeds	300 bags			300 Bags	300		No		No	30000
Delta	Day old Chicks		45000		45000	120					
	Poultry vaccines		7500 doses		5000	120	Yes		Yes		6000

	Poultry feeds		8190 Bags		8190 Bags	120					
Edo	NCDV	2000 doses			2000 doses	1000	Yes		Yes		2500 doses
	CBPP Vaccine	51000 doses			51000 doses						200000 doses
	PPR Vaccine	6000 doses			6000 doses						150000 doses
	FMD Vaccine	450 doses			450 doses						200000 doses
South South											
Ogun	Pullets		637,392		573653	63739	Yes				
	Broilers		353,846		318461	35385	Yes		Yes		
	Turkey		1,300		1170	130					
Osun	Broilers	3000	200000		203000	200	Yes		Yes		100000
	Poultry feeds	35 tons	700 tons		735 tons	200	Yes		Yes		3500000 MT
	Livestock Feeds	5 tons			5 tons	100	Yes		Yes		
Oyo	Day old chicks	100000	50000		90000	10000	Yes		Yes		500000
	Chick mash		50000 kg		50000 kg	10000		No		No	800000Kg
	Starter feed		100000 Kg		80000 Kg	10000		No		No	
	Grower feed		120000 Kg		100000 Kg	10000		No		No	
	Soybean Meal		10000 tons		5000 tons	8000					500000 tons
	Maize		50000 tons		10000 tons	8000					100000tons
	Wheat Offal		30000 Tons		20000 tons	8000					70000 tons
	Palm Kernel Cake		40000 tons		20000 tons	9000					100000 tons
South West											

13.3 Livestock Pests and Diseases

Table 13.3a shows the occurrence and trend of cattle diseases across Nigeria. Lumpy skin disease (LSD) was the only malady reported from Adamawa State. the disease was reported in 21 local government areas (LGAs) in the state. All the animals affected by the disease were reported dead. Contagious bovine pleuro-pneumonia (CBPP) is the most prevalent disease in the North-Eastern part of the country, with incidences in both Bauchi and Borno States. The government provided vaccines for CBPP in Borno State. In the North-West and North-Central states, CBPP is still the most prevalent disease with incidences in Kaduna, Kebbi, Kano. Sokoto, Kogi, Nasarawa, Taraba states but apart from Nasarawa and Taraba states, governments provided intervention in form of CBPP vaccinations in all the North-Western and North-Central states. Ogun and Oyo states also had incidences of CBPP in the South-West as well as Rivers state in the South-South. Contagious bovine pleuro-pneumonia prevalence was recorded in 2022; it led the loss of many cattle. A project like the JP 28 of the 1970s should be rolled out to tackle the loss incurred due to this disease.

Table 13.3a: Livestock Pests and Diseases (Cattle)

State	Disease or Pest	Location	Total number of cases reported	The number of animals affected	Number vaccinated or treated	Number culled due to infection	Mortality	Intervention
FCT	Trypanosoma	All Area Councils	1500	25	1475	-	-	Treatment
	Helminthiasis	All Area Councils	2500	58	2442	-	-	Treatment
	CBPP	All Area Councils	45	23	22	-	5	Vaccination
Kogi	CBPP	4 LGAs	2,000	2,000	-	500	1000	-
	Tuberculosis	21 LGAs	2000	100,000	-	15,000	1,500	-
	FMD	10 LGAs	200,000	400,000	-	10,000	5,000	
Kwara	FMD	Ilorin	15	105	-	-	-	-
	Trypanosomiasis	Alapa	41	81	-	-	-	-
Nasarawa	CBPP	Across 13 LGAs	852	3424	2065	1282	23	-
Taraba	CBPP	16 LGAs	2,208	44,160	835,016	-	-	-
	FMD	16 LGAs	3,540	260,010	-	-	-	
	Trypanosomiasis	16 LGAs	35,480	435,136	435,200	-	-	
North-Central								
Adamawa	LSD	All 21 LGAs	480	480	-	-	480	-
Bauchi	CBPP	All LGAs	55	1500	800	250	8	-
Borno	Babesiosis	Gubio	131	250	250	10	3	Medication
	CBPP	Bayo	10	345	705	12	7	Vaccination
	FMD	Monguno	5	85	835	15	-	Treatment
North-East								
Kaduna	CBPP	23 LGAs	-	1500	12,780	-	215	Vaccine
	FMD	5 LGAs	-	500	490	-	10	Treatment
	Dermatophilosis	23 LGAs	-	200	195	-	5	Treatment
Kano	CBPP	Gwarzo, Ajingi, Wudil, Karaye, Bebeji	6	3651	700	-	25	Mass vaccination statewide
	Black quarter	Rano	2	200	500	-	-	Vaccination
	Ectoparasitism	44 LGAs	100	1,000	1,000	-	-	
Kebbi	CBPP	Birnin Kebbi, Jega, Kalgo	433	1,552	21,340	60	30	Vaccination
Sokoto	CBPP	Sokoto	500	7,000	10,000	800	500	Vaccination

North-West								
Akwa Ibom	Ectoparasitism	Uyo and Itu	-	342	342	16	-	Vaccination
Bayelsa	Ectoparasitism	Yenagoa	-	3220	-	-	-	Treatment
Edo	Foot Rot	200	50,000	-	-	-	-	Testing Kit
	Trypanosomiasis	470	40,000	-	-	-	-	Surveillance
	CBPP	150	40,000	-	-	-	-	Sample Collection
Rivers	Abscess	Obio-Akpo	101	80	-	-	-	-
South-South								
Ogun	CBPP	Odeda	12	12	12	-	-	-
	Pregnancy Toxaemia	Odeda	1	1	1	-	-	-
Ondo	Tick infection	Statewide	5000	70	200	80	-	Tick spraying
Oyo	CBPP	All LGAs	2871	2871	-	-	-	-
	FMD	All LGAs	3568	3568	-	-	-	
	TB	All LGAs	12455	12455	-	-	-	
	Trypanosmas	All LGAs	11576	11576	-	-	-	
	Streptothricosis	All LGAs	9765	9765	-	-	-	
South-West								

The Table below (Table 13.3b) shows the country's information on sheep and goat diseases. In the North-East, high cases (9500) of Peste des petits ruminants (PPR) were reported. The government has provided vaccines in Borno State. Cases of PPR and parasitism were the only diseases reported in the North-West. In Kano and Bauchi states, cases of PPR and parasitism were recorded in all LGAs. The state governments in the North-West provided vaccinations against PPR. Cases of PPR were reported in all North-Central, South-Western, South-Eastern and South-Southern states. Foot and mouth disease (FMD) is a viral disease was with endemic history in Nigeria in 2022. But from the information available this year, fewer cases of FMD have been reported. Cases were only reported in the FCT (59) and Anambra (700). The fewer cases of FMD reported could be an indication of the effectiveness of the vaccination exercises carried out in different states of the country.

Table 13.3b: Livestock Pests and Diseases (Sheep and Goats)

State	Disease or Pest	Location	Total number of cases reported	The number of animals affected	Number vaccinated or treated	Number culled due to infection	Mortality	Intervention
Benue	Goat: PPR	-	-	-	250,000	-	-	-
FCT	Sheep: PPR	All area councils	1,590	70	1,520	-	-	Vaccination
	Helminthiasis	All area councils	3,050	107	2,950	-	-	Treatment
	FMD	All area councils	59	39	20	-	-	Treatment
Kogi	Sheep: PPR	21 LGAs	10,000	10,000		8,000	5,000	-
	Helminthiasis	21 LGAs	20,000	20,000	15,000	-	1,000	
	Ectoparasitism	21 LGAs	10,000	10,000	10,000	-	-	
	Goats: PPR	21 LGAs	20,000	20,000	5,000	7,000	5,000	
	Helminthiasis	21 LGAs	10,000	10,000	8,000		1,000	
	Vulvovaginitis	10 LGAs	10,000	10,000	1,000	100		
Kwara	Sheep: PPR	Asa	23	35	58	1	1	-
	Tuberculosis	Ilorin	11	158			1	
	Goats: PPR	Asa	14	54	201	5	2	
	Tuberculosis	Ilorin	1			1		
Nasarawa	Sheep: PPR	13 LGAs	3411	4844	4081	6830	18	-
	Goat: PPR	13 LGAs	1948	4018	3734	114	21	-
Taraba	Sheep: PPR	16 LGAs	16,340	542,000	643,000	-	-	-
	Helminthosis	16 LGAs	305,111	420,000	420,000	-	-	
	Ectoparasitism	16 LGAs	289,000	510,000	301,056	-	-	
	Goats: PPR	16 LGAs	20,500	430,000	735,000	-	-	
	Helminthosis	16 LGAs	10,411	385,000	635,000	-	-	
	Ectoparasitism	16 LGAs	60,500	120,105	426,000	-	-	
North-Central								

Bauchi	Sheep: PPR	All LGAs	120	5000	4000	600	24	-
	Goats: PPR	All LGAs	100	4500	4000	450	18	-
Borno	Sheep: PPR	Konduga	7	175	175	13	-	Vaccination
	Goats: PPR	Bama, Gwoza	19	780	780	31		Vaccination
North-East								
Kaduna	Sheep: PPR	-	23	276	750	-	40	Vaccination
	Goats: PPR	-	23	30,000	30,000	-	100	Vaccination
Kano	PPR	44 LGAs	9	750	3,031	-	-	Mass vaccination
	Ecto & Endo parasititism	44 LGAs	100	3,003	3,003	-	-	-
	PPR	44 LGAs	9	753	803	-	-	-
	Ecto & Endo parasitism	44 LGAs	1000	3000	3000	-	-	-
Kebbi	Sheep: PPR	Birnin Kebbi, Argungu, Yauri	1,956	4,292	13,568	157	93	Vaccination
	Goats: PPR	Birnin Kebbi, Bagudu, Zuru	891	4,086	16,665	270	237	Vaccination
Sokoto	Sheep: PPR	Sokoto	10,000	12,000	50,000	1,000	1,200	Vaccination
	Goats: PPR	Sokoto	11,000	15,000	60,000	1,500	3,000	
North-West								
	Sheep: PPR	17 LGAs	500	500	-	-	-	-
Abia	Goats: PPR	17 LGAs	11150	11150	-	-	-	
	Sheep: PPR	-	10	150	150		90	-
Anambra	Goats: PPR	-	20	450	450		276	-
	Sheep: PPR	Ebonyi	-	500	-	-	-	-
	FMD	Abakaliki	-	100				
	Pneumonia	Afikpo Ebonyi	-	50				
	Goats: PPR	Izzi and Ebonyi	-	-				
Ebonyi	FMD	Izzi and Afikpo	-	700				

	Pneumonia	Ebonyi	-	200				
South-East								
Akwa Ibom	Sheep: PPR	Oron, Ibesikpo Asutan	1,960	1,952	1,952	8	2	Vaccination
	Goats: PPR	Statewide	30,000	29,790	29,790	200	10	
Bayelsa	Sheep: Foot rot	Yenagoa	-	63	-	-	-	-
	Goat: PPR		-	105	105	30	28	
Edo	Sheep and Goats: PPR	-	100	95,000	-	-	-	Provision of drugs/vaccines
	Mange	-	200	95,000	-	-	-	Security training
	Helminthiasis	-	200	40,000	-	-	-	Advisory services
Rivers	PPR	Obio-Akpor	35	35	-	-	-	-
South-South								
Ekiti	Goats: PPR	Ekiti	2000	1,975	1,975	300	25	Vaccination
	Helminthosis	Ekiti	2,500	1,850	1,850	-	-	Treatment
Lagos	Sheep: Helminthiasis	Abk North	16	16	16	-	-	
	Footrot		2	2	2	-	-	
	Tetanus	Abk North	3	3	3	-	-	
	Goats: Helminthiasis	Abk North	19	19	19	-	-	-
	Piroplamosis	Abk North	7	7	7	-	-	-
	PPR	Abk North	7	7	7	-	-	-
Ogun	Sheep: PPR	Statewide	4,000	3,000	2,000	200	4	Vaccination
	Goats: PPR		4,000	3,000	2,000	200	4	
Ondo	Sheep: PPR	-	4000	3000	2000	200	4	Vaccination
Osun	Sheep: PPR	Osogbo, Ikirun	2	76	-	13	15	-
	Goats: PPR	Ife Central, Ilesha West, Ede North	3	135	75	-	42	

Oyo	Sheep: PPR	All	2125	2125	-	-	-	
	Babesiosis	All LGAs	2345	2345	-	-	-	
	Foot Rot	All LGAs	3785	3785	-	-	-	
	Helminthiasis	All LGAs	5680	5680	-	-	-	
	Goats: PPR	All LGAs	3258	3258	-	-	-	
	Ectoparasite	All LGAs	6543	6543	-	-	-	
	Helminthiasis	All LGAs	7650	7650	-	-	-	
	Strepthroricosis	All LGAs	2865	2865	-	-	-	
South-West								

The major endemic poultry diseases in Nigeria have always been the Newcastle disease (NCD), Infectious bursal disease (IBD), coccidiosis, salmonellosis and fowl cholera. Avian influenza (AI) is another disease that has been endemic in Nigeria since 2006 after the first outbreak was experienced. In the North-East, NCD has been reported in Bauchi and Borno states. However, the government has provided vaccinations in Borno State. In the North-West, Kano, Kebbi and Kaduna states have all reported cases of AI. The highly pathogenic avian influenza (AI) variant was reported in Kano State. In all the North-Western states affected, depopulation of the affected flocks has been carried out. This is an important biosecurity measure to curtail a further spread of the disease to susceptible bird populations within and outside the states. There is a widening gap in poultry sufficiency in Nigeria, if AI is allowed to thrive without policies to eliminate it, there could be poultry reduction. This is a threat to Nigeria's effort to attain food self-sufficiency. In the North-Central, Benue, Kogi and the FCT have all recorded cases of AI. Depopulation was carried out as an intervention in the FCT. In Benue and Kogi states, 200,000 cases of fowl cholera were reported. In Kwara, Nasarawa and Taraba states, NCD was the major disease reported in 2022; With the exception of Lagos, all South-South and South-West reported NCD cases. Anambra, Ebonyi and Imo states in the South-East also had cases of NCD. In the South-South, all states reported AI cases except Akwa-Ibom state. However, those states offered no government intervention (Table 13.3c).

Table 13.3c: Livestock Pests and Diseases (Poultry)

State	Disease/Pest	Location	Total number of cases reported	Number of animals affected	Number vaccinated or treated	Number culled due to infection	Mortality	Intervention
Benue	NCD	21 LGAs	200,000	200,000	150,000	2,000	50,000	-
	Fowl Cholera	21 LGAs	100,000	100,000	80,000	1,000	2,000	
	Avian Influenza	10 LGAs	50,000	100,000	-	80,000	90,000	
FCT	Avian Influenza	All Area Councils	404,200	404,200	-	404,200	-	Depopulation
Kogi	NCD	21 LGAs	3,000,000	200,000	150,000	2,000	5000	
	Fowl Cholera	21	100,000	100,000	80,000	1000	2,000	
	Coccidiosis	LGAs	50,000	100,000	-	80,000	90,000	
Kwara	NCD	Ilorin	5	2.227	2,227	-	15	Treatment
Nasarawa	NCD	Across 13 LGAs	28	5691	2816	782	585	-
	Fowl Pox	13 LGAs	6	1791	1095	82	185	-
	IBD		24	1486	8312	32	96	-
Taraba	NCD	16 LGAs	435,000	1,635,000	3,150,000	-	-	-
	IBD	16 LGAs	625,000	1,205,000	2,1110,000	-	-	
	CRD	16 LGAs	105,000	562,000	1,236,000	-	-	
North-Central								
Bauchi	NCD	All LGAs	1,200	100,000	100,000	25,000	20	-
Borno	NCD	MMC	15	650	650	55	35	Vaccination
	IBD	Biu and Jere	9	880	880	60	43	
North-East								
Kano	HPAI (Bird Flu)	Ungogo, Gwale, Nasarawa, D/Tofa, Kumbotso, Dala, Bebeji, Madobi	23 Farms	300,063	-	-	300.063	AI surveillance Depopulation Decontamination
	NCD	Statewide	-	500,000	300,000	-	-	Biosecurity

Kaduna	Avian Influenza	-	10	572,750	-	527,780	284,801	Depopulation and Disinfection
Kebbi	NCD	Birnin Kebbi	246	1,031	246	-	22	Treatment
	Avian Influenza	Dandi, Zuru	7,121	7,121	-	-	7,121	Depopulation
Sokoto	NCD	Sokoto	3,000	10,000	500,000	5,000	10,000	Vaccination
North-West								
Anambra	NCD	40	18,000	18,000	-	9,000	-	-
	IBD	25	12,500	12,500	-	625	-	-
	Pullorum	18	18,000	18,000	-	1.080	-	-
	Coccidiosis	10	5,000	5,000	-	250	-	-
Ebonyi	IBD	Afikpo North	-	1,000	-	-	-	-
	NCD		-	2,000	-	-	-	
	CRD		-	5,000	-	-	-	
Imo	NCD	Owerri Municipal	10	15,000	14,000	10,000	5,000	-
South-East								
Bayelsa	Avian Influenza	Yenagoa	8	10,600	-	8,020	-	Treatment
	Coccidiosis	Yenagoa	3	1,820	1,820	-	150	-
	Fowl Typhoid	Yenagoa	1	1,820	1,820	-	250	
Delta	AI	-	36	2,449,006	-	186,421	449,000	-
Edo	Avian Influenza	-	300	-	-	-	-	Lab Equipment
	New Castle Disease	-	250	-	-	-	-	
	Coccidiosis		280	-	-	-	-	Training
Rivers	Avian Influenza	Obio-Akpor	20,135	-	-	20,133	20,133	-
South-South								
Ekiti	Coccidiosis	Ado Ekiti	4,500	3,000	3,000	500	15	Treatment
	NCD	Ado Ekiti	3,000	3,000	3,000	150	25	Vaccination

	Fowl Pox		2,500	2,500	2,500	10	10	Vaccination
Lagos	Avian Influenza	Ajah	5,280	5,280	-	-	5,280	Decontamination
Ogun	Salmonellosis	Abk North	4	1,060	1,060	-	-	Treatment
	Salmonellosis	Odeda	6	4,800	4,800	-	-	
	New Castle Disease	Odeda	5	2,700	2,700	-	-	
	Helminthiasis	Ewekoro	5	6,100	1,370	-	-	
Ondo	Coccidiosis	18 LGAs	40,000	10,280	10,000	200	20	Vaccination
	IBD		100,000	40,000	100,00	100	10	
	Newcastle Disease		-	-	-	-	-	
Oyo	Avian Influenza	All LGAs	23578	23578	-	-	-	-
	NCD	All LGAs	25695	25695	-	-	-	
	IBD	All LGAs	12785	12785	-	-	-	
	Fowl Pox	All LGAs	16753	16753	-	-	-	
	Coccidiosis	Al LGAs	11965	11965	-	-	-	
South-West								

Table 13.3d shows the trend in swine diseases across Nigeria. African swine fever (ASF) is a highly contagious viral disease of pigs. This disease was reported in all the area councils of the FCT. It was also reported in Kwara and Nasarawa states in the North-Central. In the North-East, only Bauchi state reported cases of the disease in 2 LGAs. In the North-West, only Kaduna and Kebbi states reported cases of swine diseases. Both states only reported cases of ASF. Abia, Ebonyi, Imo states are the states with reported cases of ASF. Akwa-Ibom state in the South-South recorded the highest number of ASF cases (34,250). Bayelsa and Delta states have also reported cases. Only Delta state provided compensation to affected farmers. No effective vaccine is available against ASF hence the need for adequate biosecurity measures on farms. Another important swine disease is Erysipelas. This disease was only reported in Anambra and Oyo states. It is a contagious bacterial disease that can be prevented by observing strict biosecurity.

Table 13.3d: Livestock Pests and Diseases (Swine)

State	Disease/Pest	Location	Total number of cases reported	Number of animals affected	Number vaccinated or treated	Number culled due to infection	Mortality	Intervention
FCT	ASF	All Area Councils	258	258	-	78	180	-
Kogi	Helminthiasis	10 LGAs	20,000	30,000	21,000	-	-	-
Kwara	ASF	Asa	4	6	-	-	6	--
Nasarawa	ASF	2 LGAs	2	8	6	2	1	
North-Central								
Bauchi	ASF	2 LGAs	5	-	-	85	90	-
North-East								
Kaduna	ASF	5	5	101	-	-	-	Disinfection
Kebbi	ASF	Zuru, D/Wasagu	173	219	-	21	29	Treatment
North-West								
Abia	ASf	Umuahia North	67	1740	-	-	-	-
Anambra	Erysipelas	-	10	6,000	6,000	-	1,200	-
	Ascariasis	-	20	10,000	10,000	-	-	-
Ebonyi	ASF	Izzi, Abak	3	500	-	5,000	3,300	-
	Trypanosomiasis	Ohukwu, Ebonyi	2	10	-	-	-	
Imo	ASF	Owerri	2	50	45	10	5	-
South-East								
Akwa Ibom	ASF	Ikot Abasi, Ibiono Ibom, Ukanafun	34,250	29,820	29,820	4,344	86	
Bayelsa	ASF	-	2	48	-	10	12	-
Delta	ASF	-	43	4219	-	-	4,219	Payment of Compensation
Rivers	Helminthiasis	-	80	14	-	-	-	-
South-South								
Ekiti	ASF	Ikot Abasi	4,950	4,900	4,900	50	-	

Ondo	Helminthiasis	11 LGAs	300	300	500	-	-	Deworming exercise
Osun	Olaoluwa	4	150	-	-	-	145	-
Oyo	ASF	All LGAs	5453	5453	-	-	-	-
	Mange	All LGAs	1356	1356	-	-	-	-
	FMD	All LGAs	978	978	-	-	-	-
	Erysipelas	All LGAs	1255	1255	-	-	-	-
	Iron Deficiency	All LGAs	3150	3150	-	-	-	-
South-West								

In the North-East, Adamawa State reported the highest disease cases with respect to donkeys, horses and camels. Five hundred cases of ectoparasite infestation were reported in Horses. Bauchi, Borno and Yobe states reported less than 500 cases of diseases. All North-Eastern states reported African horse sickness (AHS). This is a viral disease that affects horses in the Sub–Saharan Africa. Equine influenza and dermatophilosis were the diseases reported in the North-West. Only Kaduna and Sokoto states were affected in the region. Despite the endemic cases of AHS, no case was reported in the North-Central states. In Benue and Taraba states, trypanosomiasis, helminthiasis, laminitis and ectoparasite infestation account for the 716 cases of disease that affected horses. Treatment intervention was offered against trypanosomiasis in Taraba State. (Table 13.3e).

Table 13.3e: Livestock Pests and Diseases (Donkeys, Camels, Horses)

State	Disease/Pest	Location	Total number of cases reported	Number of animals affected	Number vaccinated or treated	Number culled due to infection	Mortality	Intervention
Benue	Trypanosomiasis	-	18	434	-	-	-	Treatment
	Horses: Ectoparasitism	4 LGAs	20	20	-	-	-	--
	Helminthiasis	4 LGAs	25	25	-	-	-	
Taraba	Horses: Laminitis	16 LGAs	25	102	260	-	-	-
	Helminthosis	16 LGAs	73	135	362	-	-	
North-Central								
Adamawa	Horses: Ectoparasites	All 21 LGAs	500	500	300	5	6	-
Bauchi	Donkeys: African Horse Sickness	8 LGAs	2	150	-	-	27	-
	Camels: Helminthosis	2 LGAs	-	50	50	10	-	
	Horses: African Horse Sickness	15 LGAs	6	200	-	-	13	
Borno	Camels: Diarrhoea	Jere	13	13	-	-	-	-
	Horses: Helminthiasis	MMC	2	7	7	-	-	
	Lameness	Jere	1	3	3	-	-	
	Bloat	Dikwa	1	5	5	-	-	
Yobe	Horses: AHS	Statewide	200	110	250	-	-	Vaccination
North-East								
Kaduna	Horses: Equine Influenza	-	-	120	-	-	-	Vaccination
Sokoto	Dematophilosis	Sokoto	750	400	600	500	400	-
North-West								

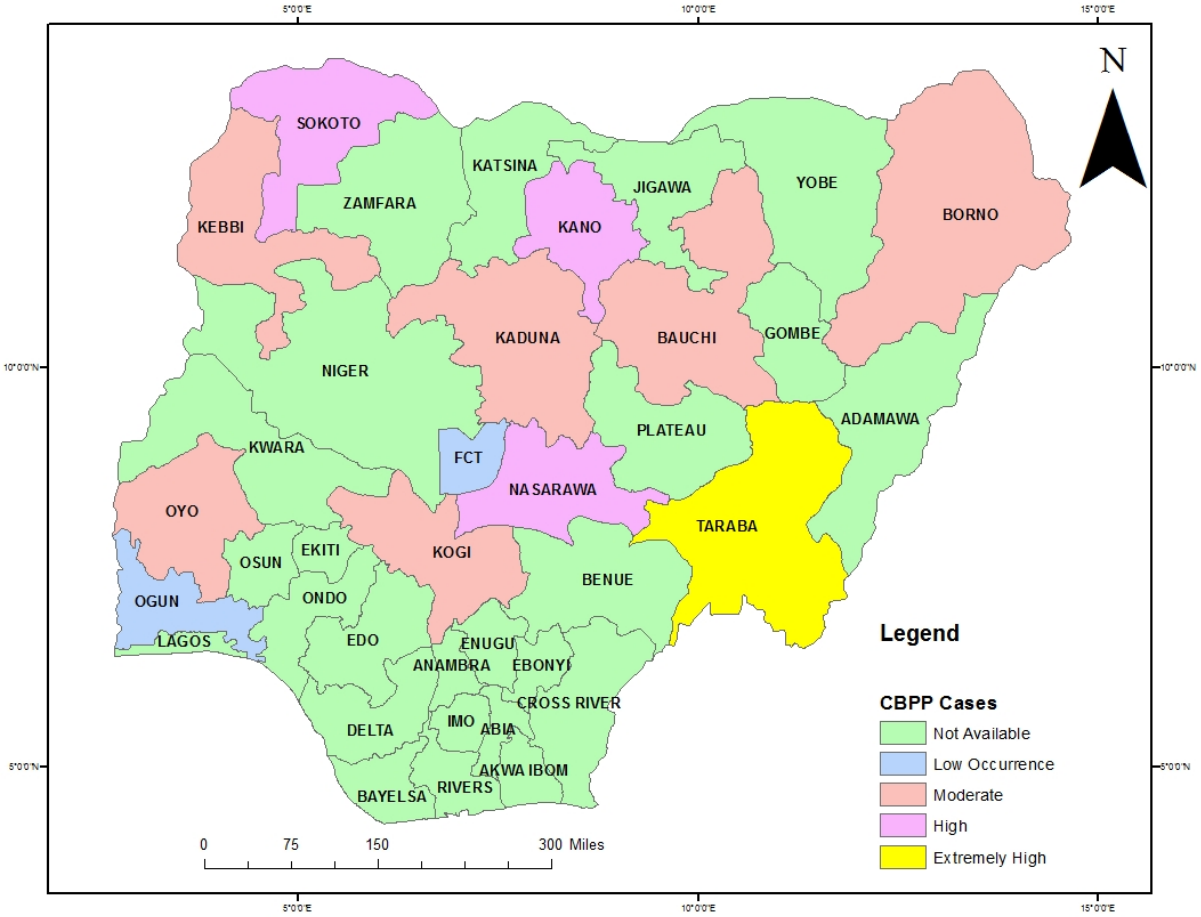

Figure 13.1: States with incidences of CBPP in 2022

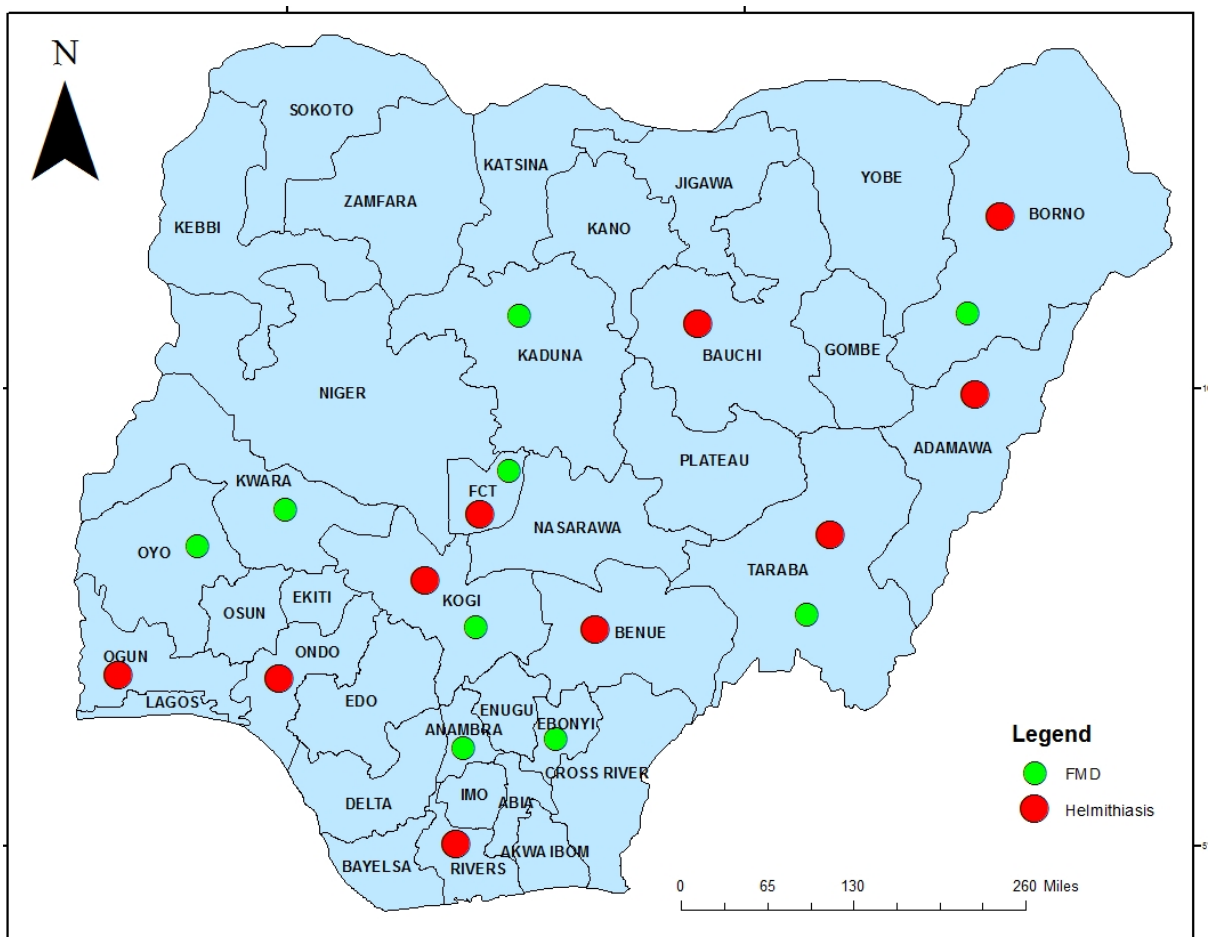

Figure 13.2: States with incidences of FMD and Helminthiasis in 2022

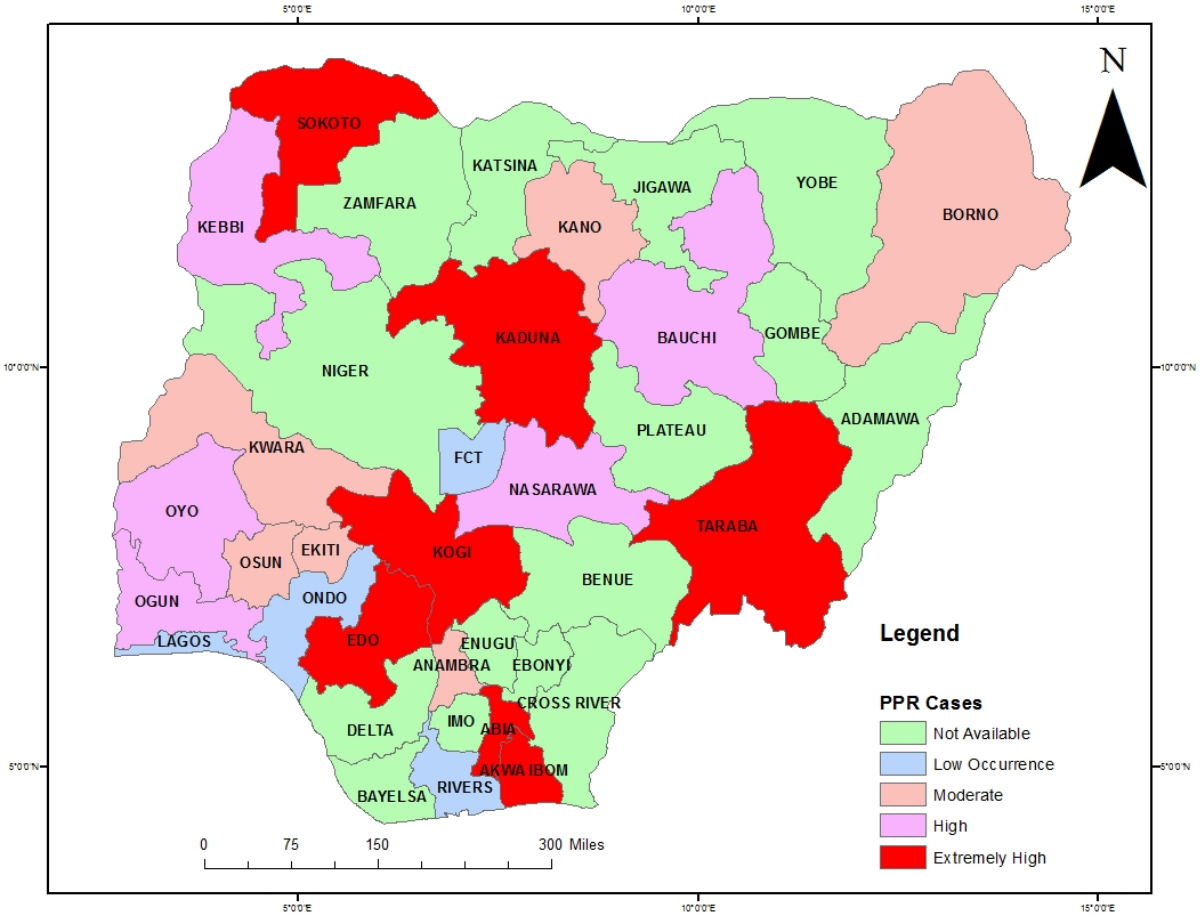

Figure 13.3: States with incidences of PPR in 2022

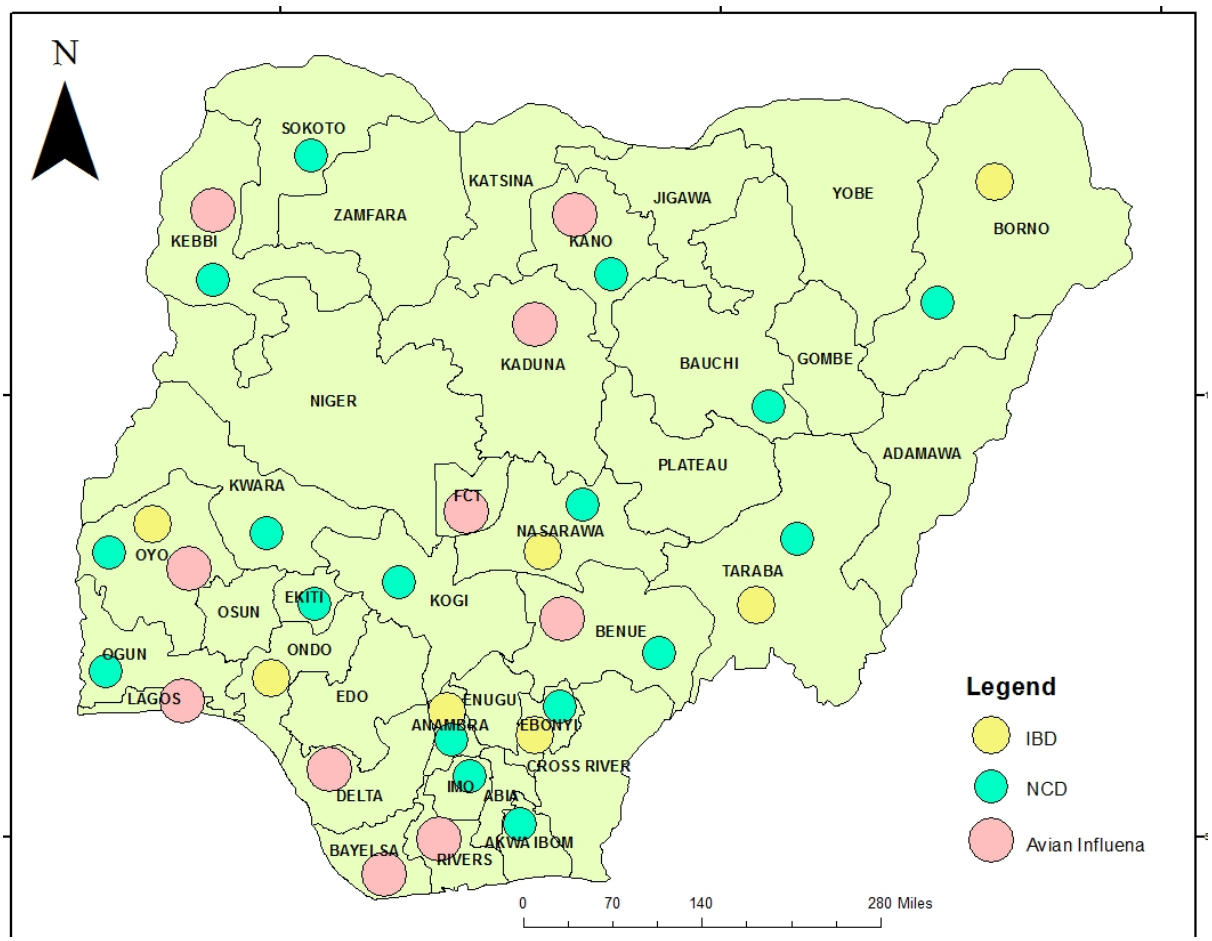

Figure 13.4: States with incidences of poultry diseases

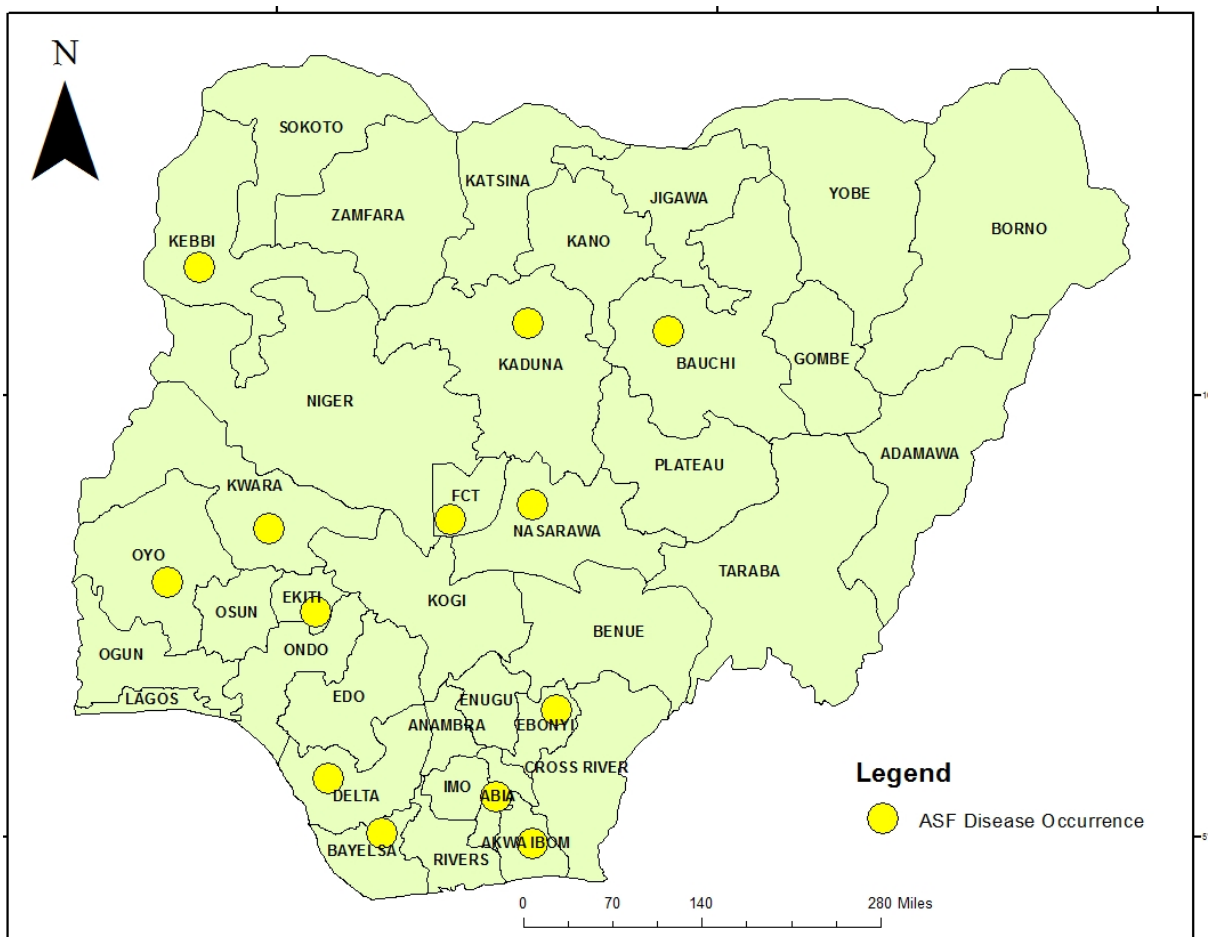

Figure 13.5: States with incidences of African swine fever (ASF)

13.4 Livestock-Related Facilities

Table 13.4a shows tanneries in the different agroecological zones. Most of the tanneries are in the North-West. Kano state has the highest (12) number of tanneries followed by Sokoto state with 11 facilities.
Table 13.4b Shows information on hatcheries. Majority of the functional hatcheries are in South-West agro-ecological zone. A total of 13 hatcheries were located in the South-West and only one was nonfunctional. he North central a total of 14 hatcheries are located in the North-Central but only 6 are functional. The concentration of these hatcheries in the South-West zone has contributed to the high cost of day-old chicks due to high cost of transportation to other zones.
Table 13.4c shows the information on slaughter slabs. The South-West has the highest (281) number of slaughter slabs followed by North-West with 88 facilities. Table 13.4d shows the information on livestock markets in Nigeria.
Table 13.4e shows the information on feed mills in the different agro-ecological zones. The south west has the highest (293) number of feed mill compared to other zones. This could be due to the large number of poultry farms situated in the southwest.
Table 13.4f shows the information on veterinary clinics. In the North-central zone, Benue and Taraba have a total of 46 veterinary clinics but only 13 are functional. The state with the highest number of veterinary clinics in Lagos. There is a need for the rehabilitation of the nonfunctional veterinary clinics which will help in terms of animal health and will also boast animal production.
Table 13.4g shows the information on grazing reserve. Majority of the grazing reserves in the various states across the agro-ecological zones are nonfunctional. Some of them have been encroached by crop farmers or have been abandoned. There is need for the various state government to bring these grazing reserves to a functional state so as to be able to control indiscriminate grazing by pastoralist on ranches in the zones. Most of the ranches are located in the northern zone of the country and this could be attributed to the large number of livestock produced in the zones.
Table 13.4i shows the information on ranges. Only three zones gave information on ranges. In North-central zone, Benue has one range while in the North East, Yobe reported 24 facilities, Bayelsa and Cross Rivers states had one each. One of the challenges facing the ranches was is encroachment.

Table 13.4a: Livestock-Related Facilities in Nigeria (Tanneries)

State	Total Number in state	Location (LGAs)	Status				Remarks
			Functional		Non-functional		
			2021	2022	2021	2022	
Kogi							
Nasarawa	3	Lafia, Keffi	3	3			
Plateau	1	Jos South			1	1	
North-Central							
Borno	2	Gombole	1	1	1	1	
North-East							
Sokoto	11	Sokoto	11	11	2	2	
Kano	12	Statewide	3	9			
Bauchi	2	Katagum, bauchi					
North West							
Anambra	1	Ufuma	1	1		1	
South East							
Lagos	1	Agege					
South West							

Table 13.4b: Livestock-Related Facilities in Nigeria (Hatcheries)

State	Total Number in state	Location (LGAs)	Status				Remarks
			Functional		Non-functional		
			2021	2022	2021	2022	
Benue	3	Makurdi, Gboko			3	3	There isa need to make them functional
Nasarawa	1	Lafia/Karu	1	1			
Kwara	3	Oyun			3	3	
Plateau	5	Jos South, Barkin Ladi	3	3	2	2	
Kogi	1	Adavi	1	1			Need for improvement
Taraba	1	Jalingo	1	1			
North-Central							
Borno	2	Jere	1	1	1	1	
Yobe	1	Potiskum			1	1	
Adamawa	1	Mayo Belwa	1	1			
North-East							
Kano	2	D/Tofa, Bebeji	0	0	2	2	
Kaduna	1	Chikun	1	1			
Sokoto	1	Sokoto South			1	1	
North-West							
Imo	3	Owerre municipal	3	3			
Ebonyi	1				1	1	
Enugu	2		2	2			
South-East							
Edo	1	Ikpoba-Okha					Require funding and support
Akwa-Ibom	2	Use Offot, Mbiaya Uruan	2	2			
Rivers	2	Emohoa, Edub	1	1	1	1	
South South							
Ogun	6	Odogbolu, Ewekoro, Obafemi, Odeda	6	6			
Osun	4	Osogbo, Iwo, Ede	4	4			
Ekiti	1	Ekiti West	1	1			
Ondo	3	Akure South, Ifedore, Ondo West	2	2	1	1	
South-West							

Table 13.4c: Livestock-Related Facilities in Nigeria (Slaughter Slab)

State	Total Number in state	Location (LGAs)	Status				Remarks
			Functional		Non-functional		
			2021	2022	2021	2022	
Kogi	20	State Wide					
FCT	35	All Area	35	35			
Benue	49	Across the 23 LGAs	49	49			There is a need foan r upgrade
Plateau	35	All LGAs	20	20	15	15	
Taraba	28	16LGAs	21	19	7	9	
Nasarawa	13	13 LGAs	13	13			
North-Central							
Borno	27	27 LGAs	27	27			
Bauchi	225	20 LGAs	100	80	125	145	
North-East							
Sokoto	78	All LGAs	78	78			
Kano	217	All LGAs	209	209	8	8	
Kaduna	23		23	23			
Jigawa	27	27 LGAs	27	27			
North-West							
Anambra	43	All LGAs	43	43			
Imo	6	Okigwe	6	6			
Ebonyi	25		13	13	12	12	
South-East							
Edo	85	Statewide	85	85			
Cross River	36		36	36			
Akwa-Ibom	63	All LGAs	63	63			
Delta	46		46	46			
Bayelsa	8	Yenegoa, Ogbia, Nembe, Kolga, Southern Ijaw	7	5	1	3	
Rivers	81	Obio/Akpo	43	43	39	39	
South-South							
Ogun	48	Abeokuta South, Abeokuta North, Odeda, Obafemi Owode, Sagamu, Ikenne, Ijebu North, YewaSouthh, Yewa North, Imeko-Afon, Ifo, Ado-Odo, Ota	53	48	0	5	
Lagos	23	Agege, Ikorodu, Badagry, Epe, Alimosho, Surulere, Mushin, Etti-Osa, Lagos Island	20	20	3	3	Non-functional is still under construction
Ekiti	8	Ado, Ilawe	8	8			
Ondo	54	Across the state	54	54			
Osun	248	State wide	248	248			
South-West							

Table 13.4d: Livestock-Related Facilities in Nigeria (Livestock Market)

State	Total Number in state	Location (LGAs)	Status				Remarks
			Functional		Non functional		
			2021	2022	2021	2022	
Kwara	12	Barutin, Kaima, Moro, Edu, Ajase	12	12			
Plateau	10	Jos North, Wase, Q.P, Kanam, PKN	10	10			
Nasarawa	4	Lafia, Karu, Keffi, Wamba	4	4			
Kogi	15		15	15			
Taraba	16	16 LGAs	16	16			
North-Central							
Borno	15	Biu, Bama					
Bauchi	60	All LGAs		60			
North-East							
Sokoto	25	All LGAs	25	25			
Kano	44	All LGAs	44	44			All need expansion due to high number of livestock traded
Jigawa	10	6 LGAs	10	10			
Kaduna	9		9	9			
North-West							
Anambra	19		19	19			
Imo	31	Owerre west	31	31			
Ebonyi	31	Spread across 13 LGAs	31	31			
Enugu	17	State wide					
South-East							
Akwa-Ibom	16	16 LGAs	16	16			
Bayelsa	3	Yenagoa					
Cross River	18		18	18			
Edo	33	State wide					
Rivers	10	ObioAkpor, Phalga	8	8	2	2	
South-South							
Ogun	24	Abeokuta South, Abeokuta North, Ijebu N/E, Ijebu North, Ijebu Ode, Ifo, Sagamu, Ewekoro, Ipokia, Odeda, Imeko Afon, Ado-Odo, Ota, Ikenne					
Lagos	3	Ikorodu, Agege, Ojo, Oko-Oba, Alaba	3	3			Over 50 unapproved livestock markets scattered across the state
Ondo	31	Across the State	31	31			
Osun	30	State wide	30	30			
South-West							

Table 13.4e: Livestock Related Facilities in Nigeria (Feed Mills)

State	Total Number in state	Location (LGAs)	Status				Remarks
			Functional		Non functional		
			2021	2022	2021	2022	
Kogi	2	Lokoja, Adavi	2	2			
Kwara	85	Ilorin	85	85			
Benue	3	Makurdi		1	2	2	
Plateau	65	Jos South, Jos North	60	60	5	5	
Taraba	4	Jalingo, Zing	4	4			
Nasarawa	20	Lafia, Karu, Nasarawa	20	20			
North-Central							
Yobe	5	Across the state			5	5	Rehabilitation needed
Bauchi	1	Bauchi					
North-East							
Kano	4	Nasarawa and Gezawa	4	4			
Sokoto	5		5	5			
Kaduna	2		2	2			
North-West							
Anambra	15		13	13	2	2	
Imo	2	Owerre North	2	2			
Ebonyi	2	Abakaliki					
Enugu	5	5 LGAs					
South-East							
Delta	5	Asaba					
Edo	7	Oredo					
Rivers	5	ObioAkpor	4	4	1	1	
South-South							
Lagos	10	Agege, Epe, Ikorodu, Ojo	10	10			
Osun	210	Across the stste	210	210			
Ogun	42	Within the 3 senatorial district	65	42	0	23	
Ekiti	10	Ado and Ijero					
Ondo	21	Across the State	20	21			
South-West							

Table 13.4f: Livestock Related Facilities in Nigeria (Veterinary Clinics)

State	Total Number in state	Location (LGAs)	Status				Remarks
			Functional		Non functional		
			2021	2022	2021	2022	
Kogi	25	All LGAs	25	25			
FCT	8	All Area	8	8			
Benue	30	Across all LGAs	10	10	20	20	
Taraba	16	16 LGAs	3	3	13	3	
Nasarawa	7	Lafia, Karu, Wamba, Keffi	7	7			
North-Central							
Borno	6						
Bauchi	16	16 LGAs	16	16			
North-East							
Sokoto	33		27	27	6	6	
Kano	27		25	25	2	2	
Kaduna	27	23 LGAs	21	21	6	6	
Jigawa	8	5 LGAs	8	8			
North-West							
Anambra	30		30	30			
Imo	35	Owerre Municipal	35	35			
Ebonyi	4		3	3	1	1	
Enugu	18	17 LGAs	3	2	3	2	
South-East							
Bayelsa	1						
Cross River	18		18	18			
Akwa-Ibom	32	31 LGAs	32	32			
Edo	48	State wide					
Rivers	82		82		82		
South-South							
Ogun	11	Abeokuta North, Sagamu, Ijebu Ode, Ijebu North, Yewa South, Yewa North, Remo North, Imeko, Afon, Obafemi Owode, Ipokia, Ifo	9	9	2	2	
Lagos	197	Agege, Surulere, Ajah, Ikorodu, Badagry, Ojo, Epe	197	197			Out of the 197 clinics 190 are private veterinary clinics
Ekiti	10		4	4	6	6	
Ondo	22	18LGAs	15	15			
Osun	7		7	7			
South-West							

Table 13.4g: Livestock Related Facilities in Nigeria (Grazing Reserves)

State	Total Number in state	Location (LGAs)	Status				Remarks
			Functional		Non functional		
			2021	2022	2021	2022	
Kogi	2	Kabba, Omala			2	2	Underdeveloped and encroached
Kwara	17	Patigi, Baruten	2	2	15	15	
Plateau	2	Jos South, Bokkos	2	2	2	2	
Taraba	9	9 LGAs	9	9			Most of the reserves are heavily encroached
Nasarawa	7	Doma, Keana, Awe, Asakio, Gidata	7	7			
North-Central							
Yobe	32	Across the state					Reseeding and funding needed
Bauchi	80	7 LGAs					
North-East							
Katsina	1	Safana	1	1			
Kano	34	34 LGAs	34	34			Pasture establishment
Kaduna	17	17 LGAs	5	5	12	12	
Jigawa	472		27	27	445	445	
Sokoto	19		19	19			
North-West							
Bayelsa	1		1	1			
Cross River	1		1	1			
South-South							
Ogun	3	Yewa South, Imeko Afon, Yewa North	0	0	2	3	
Ekiti	1	Ikole	1	1			
South-West							

Table 13.H: Livestock Related Facilities in Nigeria (Ranches)

State	Total Number in state	Location (LGAs)	Status				Remarks
			Functional		Non functional		
			2021	2022	2021	2022	
Kogi							
Kwara	1	Kaima	1	1			
Benue	2	Ikyogen, Makurdi	1	1			
Plateau	6	Jos South	3	3			
Taraba	4	A/Kola, Donga, Bali			4	4	
North-Central							
Yobe	3	Across the state		1		2	Reestablishment needed
Adamawa	4	Demsa, Fufore, Michika	3	3	1	1	
Bauchi	2						
North-East							
Katsina	5	Daura, Dutsin Ma, Batsari, Bakori, Kankia	3	3	2	2	
Kaduna	2				2	2	
North-West							
Anambra	4	Orumba Aguata					
South-East							
Bayelsa	1		1	1			
Edo	3	State wide	3	3			
Cross River	1		1	1			
Akwa-Ibom	1	Adadia, Uram	1	1			
Delta	2	Onuba, Aniocha North					
South-South							
Ogun	10	Odeda, Ado-odo Ota, Sagamu, Ijebu North, Ijebu Ode, Obafemi Owede, Ewekoro	7	10	0	0	
Ekiti	1	Ikole	1	1			
Osun	3	Iwo, Ife, Osogbo					
Sout-West							

Table 13.4i: Livestock Related Facilities in Nigeria (Ranges)

State	Total Number in state	Location (LGAs)	Status				Remarks
			Functional		Non functional		
			2021	2022	2021	2022	
Benue	1	Ushongo			1	1	
North-Central							
Yobe	24	Across the state			24	24	Encroachment
North-East							
Bayelsa	1		1	1			
Cross River	1		1	1			
South-South							

13.5 Major Livestock Markets in Nigeria

Table 13.5 shows major livestock markets across the different agro-ecological zones in Nigeria. Most of the states have markets for cattle, sheep and goats. Most of the swine markets are situated in the southern part of the country. This could be due to the religious off-limits attached to swine consumption in some northern parts of the country.

Table 13.5: List of Major Livestock Markets in Nigeria

State	Cattle	Sheep	Goats	Poultry	Swine
Kogi	Felele, Lokoja Oziokutu, Adavi LGA Bagama-Omala Gidan Gwari-Ajeokuta Okehi	Anyigba Okuwie Okene	Afogamgam-Ankpa Okene Anyigba	Bagana Lokoja Okene	Obajana Kabba Anyigba
Kwara	Ilesha Kaima Ajase-Ipo Iyana-Share Oke-ose	Ilesha Kaima Ajase-Ipo	Ilesha Kaima Ajase-Ipo	Bokolo Obbo Akerebiatal	
FCT	Dei-dei Kugbo Kogo	Dei-dei Kugbo Kogo	Dei-dei Kugbo Kogo	Dei-dei Kugbo Kogo	
Benue	Makurdi International cattle market Katsina-Ala cattle market Otukpo livestock market	Makurdi International cattle market New garage market Otukpo Gboko main Market	Makurdi International cattle market New garage market Otukpo Gboko main Market	Otukpo main market Wurukum market, makurdi Gboko main Market	Tsar market
Plateau	Yan Shanu (Jos North), Kara (Bukuru, Bashar (Wase), Amper (Bassa)	Binchi (Bassa), Yan Shanu (Jos North), Kara (Bukuru)	Binchi (Bassa), Yan Shanu (Jos North), Kara (Bukuru)		
Taraba	Ngurere, Iware, Tella, Bantaje, Garba Chede	Iware, Tella, Garba Chede	Iware, Tella, Garba Chede	Jalingo, Wukari, Tella	Zing, Ibi, Wukari
Nasarawa	Lafia, Keffi, Wamba, Karu	Lafia, Keffi, Wamba, Karu, Obi, Doma, Toto			
Niger	Kara/Jebba, Kuta, Tunga mallam, Beji, Mariga	Izom, Lambata, Wuya Kantin	Wawa, Kawo, Zumba/Gwada	Minna, K/Gora, Bida, Mokwa, Suleja, New Bussa	Gwada, Adunu, Gaba
North-Central					
Gombe	Gombe Livestock market, Kumo,	Gombe, Kwadon, Lalaipido	Dukku, Kumo, Dogarawa	Gombe, Kumo, Kwadon	Billiri, Shamgom, Kaltungo

	Kuri, Lalaipido, Bajoga				
Borno	Maiduguri, Monguno, Gubio, Bama/Banki, Miringa/Biu	Uba, Bulumkutu, Kwaya kusar,	Bama, Biu, Gwoza	Maiduguri, Jere, Biu	
Yobe	Potiskum, Garin Alkali, Dama, Nguru, Gaidam	Potiskum, Garin Alkali, Gaidam	Potiskum, Garin Alkali, Babbangida	Potiskum, Bade, Damaturu	
Bauchi	Soro, Azare, Alkeleri, Gamawa, Maraba/Katagum	Gamawa, Nabordo, Maraba	Azare, Soro, Maraba L/K	Bauchi, Azare, Soro	Bogoro,Bai, Yelwa-Bauchi
North-East					
Sokoto	Illela Achida Yar Bututu Take Maikasuwa Tangaza	Ruwa Wuri Achida Dodari	Bodinga Wamako Gurunyo	Sokoto Gwadabawa Tangaza	
Katsina	Charanci Maiadua Dankama Sheme Kafur	Dutsin-Ma Jibiya Garki	Ajiwa Gagadama Kaita		
Kebbi	Amogoro Gunki Bunza Ambursa Dodoru	Bunza Dodoro Makera	Bunza Dodoro Makera		
Kano	Wudil, Kwanan Dangora, Getso, Danbata, Falgore	Badume, Shuwaki, L/Zango	Badume, Shuwaki, L/Zango	Taraun, Sabon Gari, Janguza, Rimi	
Kaduna	Anchau, Makarfi, Tudun Sanbu, Mariri, Lamban Zango, Gadan Gayan, Jere, Kasuwan magani	Anchau, Makarfi, Tudun Sanbu, Mariri, Lamban Zango, Gadan Gayan, Jere, Kasuwan magani	Anchau, Makarfi, Tudun Sanbu, Mariri, Lamban Zango, Gadan Gayan, Jere, Kasuwan magani	Anchau, Makarfi, Tudun Sanbu, Mariri, Lamban Zango, Gadan Gayan, Jere, Kasuwan magani, Katsit Kafanchan	Katsit Kafanchan
Jigawa	Gujungu, Shuwarin, Maigatari	Jabo, Shuwarin, Maigatari	Shuwarin, Gujungu, Maigatari	Hammayayi, Shuwarin, Maigatari	
North-West					
Anambra	Amansea Awka-Etiti Uli	Afor Nnobi Oye Nimo Nkwo Igbo Ukwu	Afor Nnobi Oye Nimo Eke Ekwulobi	Ochanja Afor nnobi Eke Awka	Eke Ekwulobi

Imo	Obinze Ogbe Ahaura Mbaise Okigwe Orlu	Egbu Road Owerre North Obinze	Egbu Road Obinze Amaraku	Relief Market, World Bank Market, Egbeda Mordern Market	
Ebonyi	Gariki Abakaliki, Hausa quarters, Ike Imoha, Isi-Eke	Gariki Abakaliki, Hausa quarters, Onu-Eke	Gariki Abakaliki, Hausa quarters, Onu-Eke	Gariki Abakaliki, Hausa quarters, Onu-Eke	Ezzangbo, Iboko and Onweke
South-East					
Rivers	Iriebe Elelewo Okuyagn	Iriebe Mile 3	Iriebe Mile 3	Mile 3 Mile 1 Rumuokoro	Omoku
Edo	Eyean, Aduwawa, Okada Junction, Irua, Uromi	Aduwawa, Temboga, Eyaen	Aduwawa, Temboga, Eyaen	Oliha, Aduwawa, Ekiosa	
Cross River	Bacoco	Bacoco	Akim, Mariam, Atakpa, Esukmba Akpabuyo	Akim, Mariam, Atakpa, Esukmba Akpabuyo	Watt Market/Akpabuyo, Mairna Beach, Marian Market
Akwa- Ibom	Uyo/Itam Itu, Obo Annang, Essien Udim, Afa Urua, Urua Udionyang, Urua ete	Urua Otoh, Urua Ekpo Nwa, Urua Udionyang, Uyo, Uya Oron	Urua Otoh, Urua Ekpo Nwa, Urua Udionyang, Uyo, Uya Oron	Itam, Urua Otoh, Urua Ekpo Nwa, Urua Udionyang, Uyo, Uya Oron	Obo Annang, Ukam, Ikot Ibritam, Urua Ikpe, Esit Eket
Delta	Oko Asaba, Agbor, DSC Road Warri, Ekiogbe- Ugheli, sapele	Oka Asaba, Ekiogbe- Ugheli, sapel	Oka Asaba, Ekiogbe-Ugheli, Ase Road	Asaba, Agbor, Warri	Sapele, Agbor, Warri
South-South					
Ogun	Atokun Oluwanisola Ogere Abule Odo Rounder Abata Bosero Kenny Ventures Alamutu Imowo	Kutu Imowo Olomore Ogere Itoko Rounder Isheri Owede-Ifo	Imowo Olomore Ogere Itoko Rounder Isheri Owede-Ifo	Funmodara Ijebu Igbo Oke Aje Ijebu Ode	Tube Ipokia
Lagos	Oke Oba Agege Alaba-rago Sabo Market	Oke Oba Agege Alaba-rago Sabo Market	Oke Oba Agege Alaba-rago Sabo Market	Aiyedoto, Ojo Erikorodo Ikorodu Araga	Oke Aro Gberigbe

Oyo	Akinyele, Iseyin, Ago Are, Budo Musa, Eruwa	Oranyana-Ibadan, Oyo-Owede, Akinyele-Ibadan	Iseyin, Akinyele-Ibadan, Oyo-Owode	Molete-Ibadan, Akesan-Oyo, Eruwa	Ogbomosho (Oke Owede), Oyo, Ibadan
Osun	Egbedoda, Orisunbare-Oshogbo, Sabo ile Ife, Aro dapson Ile ife, Egbejoda, Ama Junction	Oja-Oba Oshogbo, Powerline Oshogbo, Oja Timi Ede	Oja-Oba Oshogbo, Powerline Oshogbo, Oja Timi Ede	Oluode Oshogbo, Atakumosa Ilesa, Sabo Ile Ife	Alakumosa Ilesa, Elelede osogbo, okesa Ilesa
Ekiti	Ado-Ekiti, Central Abattoir	Atikankan Ado, Otun, Moba,	Atikankan Ado, Otun, Central Abattoir, Moba	Atikankan Ado, Otun, Moba	Atikankan Ado, Otun, Moba
Ondo	Sango, Imo Arigidi, Kara	Sango, Imo Arigidi, Arigidi Akoko	Mojere, Oja oba (Owo), Oja Oba (Ose)	Oja-Oba, Okitipupa, Odulua, Owena	Ciroma, Ode-Irele, Yaba, Olokuta, Ore, Agadagba obun, Ese-odo
South-West					

13.6 Livestock Markets and Volume of Livestock Traded

Table 13.6 shows the major livestock markets in the different zones, and the volume of livestock traded in 2021 and 2022. The North West has no information on swine traded.

Table 13.6a: Volume of Trades of Livestock in Major Livestock Markets in Nigeria (North Central)

State	Livestock Market	Livestock type									
		Cattle		Sheep		Goats		Poultry		Swine	
		2021	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**
Benue	Markurdi	223950	206150	510000	345000	1450000	1030000				
	Katsina-Ala	80400	70005								
	Otukpo	79600	74250								
	New Garage, Otukpo			230000	203000	760000	810000				
	Gboko main market			190800	165000	898053	900000	1810000	1650000		
	Otukpo main market							1998000	1872000		
	Wurukum							1765000	1450000		
	Tsar market									450000	405000
FCT	Dei Dei market	16423	16253	71426	53146	298838	36805	114181	112854		
	Kugbo	261	266	5248	6064	1448	868				
	Kogo	5110	3650	3920	3100	8030	9595				
Taraba	Iware	32020	31870	20000	23000	30000	31500				
	Garba Chede	30656	36400	16000	18000	14000	16300				
	Nguroje	47850	49600								
	Tella	22000	19800	24000	25500	16000	18300	16000	18000		
	Bantaje	16800	19014								
	Jalingo							130000	125000		
	Wukari							60000	32000	8000	6000
	Zing									5600	8000
	Ibi									2300	1800
Plateau	Kara Bukuru	12900	5090	497	185	1663	876				
	Yan Shanu	3008	1255	5425	1518						
	Binchi, Bassa			200	104	541	295				
North-Central											

Table 13.6b: Volume of Trades of Livestock in Major Livestock Markets in Nigeria (North East)

State	Livestock Market	Livestock type									
		Cattle		Sheep		Goats		Poultry		Swine	
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Adamawa	Mubi international mkt	43296	6500	1840	1500						
	Ganye int'l market	16545	4996								
	Song cattle market	2551	1273	2400	1700	2516	1400				
	Ngurore cattle market	28786	19400			3572	4758				
	Girei	8750	3732	4687	1300	2100	1500				
	Numan Market									1325	1770
	Lamurde									1245	
	Demsa									125	
Borno	Bama					303458	318631				
	Biu					362003	380135	408095	428500		
	Gwoza					327947	344345				
	Banki	362745	380883								
	Uba			269781	283270						
	Gubio	448745	471182								
	Bulumkutu			175050	183802						
	Kwaya Kusar			234490	246214						
	Monguno	463095	486250								
	Maiduguri market	297848	312740					397846	417738		
	Jere							317032	332384		
	Miringa	349680	367164								
Bauchi	Alkaleri cattle market	130000	110000								
	Soro cattle market	111000	10000			10000	10000	700000	700000		
	Azare cattle market	183000	152000			156000	150000	800000	800000		
	Gamawa cattle market	83600	80000	114000	132000	14,300					
	M/Liman Katagun mkt	458000	400000	23,500		150000	150000				
	Nabardo L/market			28200	93000						
	Bauchi							100000	1000000		

	Bogoro									1500	1000
	Boi									500	500
	Yelwa Bauchi									960	800
Yobe	Garin Alkali market	72000	76000	19200	22400						
	Damaturu market			12000	14300						
	Nguru market	57600	62400								
	Geidam market	48000	57600	13920	15200	21600	24300				
	Kuka Reta					7200	9300				
	Bayamari					12144	16400				
	Yadin Bunu	38900	40800								
	Potiskum market	96000	105600								
	Galda							24000	26400		
	Maimalari							16000	12800		
	Buduwa							9120	12800		
Gombe	Gombe main market	20160	21250	109260	119320			1461800	1600000		
	Lalapaido market	16960	16009	89743							
	Kumo market	18793	18250			102551	115134	2984000	2680010		
	Kuri	18330	17668								
	Bajoga	14550	14980								
	Kwadon market			100340	112021			370000	384000		
	Dogon ruwa market					89770	90445				
	Billiri market									2190	2197
	Kaltungo market									980000	993000
	Dukku					120000	150000				
	Shomgom									1970	1980
North-East											

Table 13.6c: Volume of Trades of Livestock in Major Livestock Markets in Nigeria (North West)

State	Livestock Market	Livestock type									
		Cattle		Sheep		Goats		Poultry		Swine	
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Sokoto	Illela market	1200	700								
	Achida market	2000	1500	1000	500						
	Yarbulutu	500	300								
	Take maikasuwa	700	300								
	Tangaza	500	300					1500	500		
	Ruwa Wuri market			500	200						
	Dodari			500	300						
	Gadabawa							2000	1000		
	Bodinga Kara market					500	250				
	Wamako					300	150				
	Gurunyo					300					
	Sokoto market							5000	3000		
Kano	Wudil market	800000	809503								
	K/Dangora market	600000	613261								
	Getso market	205102	207127								
	Danbatta market	150036	151662								
	Falgore market	57002	59003								
	Badume			32018	34126	39317	43123				
	Shuwaki			46906	48215	50017	53553				
	L/Zango market			40008	42011	53652	53197				
	Tarauni							33048	35502		
	Sabon Gari							36126	39067		
	Janguza							41003	43811		
	Rimi							23166	25008		
Kebbi	Amagoro	155000	60000								
	Gunki	160000	80000								
	Bunza	165000	75000	200000	100000	140000	70000				
	Ambursa	150000	65000								
	Dodoru	170000	80000	150000	80000	135000	70000				
	Makera			125000	60000	130000	65000				
North-West											

Table 13.6d: Volume of Trades of Livestock in Major Livestock Markets in Nigeria (South East and South-South)

State	Livestock markets	Livestock Type									
		Cattle		Sheep		Goats		Poultry		Swine	
		2021	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**
Ebonyi	Gariki Abakaliki	2000	2500	4000	4500	6000	6200				
	Eke Imoha	3000	3500								
	Hausa Quarters	1000	1500	3500	4000						
	Isi-Eke	500	600								
	Onu-Ike			5000	5600	5000	5800				
	Ezzangbo									5000	6000
	Iboko									10000	11000
South-East											
Akwa-Ibom	Uyo/Itam	2397	2465							30000	30000
	Obo Annang	1218	1348							13109	14321
	Afa Urua	967	1238								
	Urua Udoinyang	1897	1573	643	618						
	Urua Ete	378	475								
	Urua Otoh			143	306						
	Urua Ekpo			270	336						
	Uyo			987	1232						
	Uya Oron			507	489						
	Itam							593420	788760		
	All major markets							3106243	4286237		
	Ukam									5430	6321
	Ikot ibritam									8670	9018
	Urua Ikpe									5435	5489

	Esit Eket									3792	3801
Cross River	Bakoko	200000	100000	100000	15000						
	Akim					20000	20000				
	Mariam					100000	100000			100000	100000
	Atakpa					15000	15000				
	Watt									250000	250000
Edo	Eyean	650000	700000	54000	60000	54000	60000				
	Aduwawa	55000	65000	60000	60000	60000	60000	850000	900000		
	Okada Junction	53000	60000								
	Uromi	97000	100000								
	Irrua	72000	72000								
	Temboga			25000	30000	25000	30000				
	Oliha							550000	600000		
	Ekiosa							550000	600000		
River	Iriebe cattle market	40156	38989	5328423	5069898	1206224	1086001				
	Elenwo cattle market	4500	4700								
	Okuyagu market	536	647								
	Mile 3			1004067	986657	1004067	986657	9886644	11656536		
	Mile 1							10986041	12056444		
	Rumuokoro							11056004	13086343		
	Omoku									150000	170000
South-East and South-South											

Table 13.6e: Volume of Trades of Livestock in Major Livestock Markets in Nigeria (South West)

State	Livestock Market	Livestock type									
		Cattle		Sheep		Goats		Poultry		Swine	
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Ekiti	Central Abattoir, Ado Ekiti	21958	1673	5530	323						
	Atikakan, Ado			3500	500						
Lagos	Oko-Oba, Agege	153194	289458			27932	53030				
	Sabo Market	10942	95120	16504	5601	30900	17678				
	Alaba-Rago	21885	96486	16139	5930	23058	17467				
	Aiyedoto Ojo							150000			
	Erikorodo, Ikorodu							50000			
	Araga							80000			
Ogun	Isheri Kaara			34412	10216	32068	13082				
	Atokun	21669	15023								
	Oluwanisola	117859	62095								
	Abule Odo	5846	441								
	Rounder	1100	50	1070	650						
	Abata	50	20								
	Bosero	60	25								
	Kenny Ventures	60	15								
	Alamutu	15250	7940								
	Imowo	5846	2398	5002	1301	5259	2342				
	Kuto			1005	243	845	205				
	Olomore			1500	420	478	102				
	Ogere			34701	16945	66628	28490				
	Itoku			330	560	528	342				
	Owode Ife			3510	1580	1365	834				
	Funmodara Ijebu Igbo							19500	426		
	Oke Aje Ijebu Ode							36434	13520		
	New Market, Ijebu Ode							7430	2400		
	Ogere Toll Gate	53678	19107								

Osun	Egbejoda, Sekona	15000	16000								
	Orisumbare, Osogbo	30000	25000								
	Sabo, Ile Ife	25000	20000					480000	420000		
	Aro Dapson	5000	4000								
	Egbejoda, Ana Junction	70000	30000								
	Powerline, Osogbo			300000	210000	240000	184000				
	Oja-Oba			180000	15000	160000	100000				
	Oja Timi, Ede			240000	180000	136000	120000				
	Oluode market							1000000	989000		
	Atakumosa Ilesa							840000	920000	63000	65000
	Elelede									26000	13000
	Okesa, Ilesa									8000	7000
South-West											

13.7 Livestock Related Risks

In the North, only Kwara, Taraba and Kebbi states have reported occurrences of pastoralist-farmer conflicts. This is shown in Table 13.7a below. The highest number of livestock was lost in Kwara State (500). While the highest loss of human lives was recorded in Taraba State (50). About 47 hectares (Ha) of maize were also lost in Taraba State. In the North-West, 2 haof millet were lost due to pastoralist-farmer conflict that happened twice. In the South-East, Ebonyi State witnessed pastoralist-farmer conflicts 6 times, this resulted in the loss of 8 human lives, 89 livestock and 20 ha of rice. AkwaIbom and Edo states are the only states that experienced this form of conflict where 16 lives and 118 livestock were lost. In the South-Western part of the country, available information shows that 3 states (Ekiti, Ogun and Oyo states) were the only states that reportedly witnessed pastoralist-farmer conflict. In Ekiti State no human lives or livestock were lost, though the conflict resulted in the loss of 2 ha of cassava and maize. In Ogun State, 8 human lives and some farmlands were destroyed. In Oyo State, 400 livestock and 80 human lives were lost. The loss may have huge socio-economic impact if left unattended.

Table 13.7a: Information on Pastoralist-Farmer Conflicts and the Extent of Damage

State	Frequency of occurrence	Location	Number of livestock lost	Crops losses / Crop type/ Area destroyed (Ha)	Number of human life lost	Other losses e.g. Houses etc.	Suggested wats for prevention
Kwara	3	Baruten	500	Maize	-	-	
Taraba	4	Gassol	75	Maize/ 47 Ha	15	50	Constant dialogue
North -Central							
Kebbi	2	Birnin Kebbi	-	Millet/ 2 Ha	-	-	Provide security
North-West							
Ebonyi	6	Igbeagu, Izzi	89	Rice/ 20 Ha	8	4	Pasture
South-East							
Akwa Ibom	-	Oruk Anam, Mkpat Enim, Uyo	108	Cassava/ 12.5 Ha	8	Farmland, Houses	Peaceful dialogue
Edo	-	Ovia N.E, Ikpoba Okha, Esan, N.E	10	Maize/ 75 Ha	8	-	Ranching, Conflict Resolution
South-South							
Ekiti	4	Ido-osi, Ikole	-	Cassava and Maize/ 2 Ha	-	-	Discourage open grazing
Ogun	40	Yewa North, Ad-Odoota	-	-	8	Farmland	-
Oyo	20	Ibarapa, Ogbomosho, Saki	400	Maize and Cassava/ 1200 Ha	80	50	Ranching
South-West							

Cattle rustling was only been reported in Taraba State from the North-Central where 4 incidents were reported. Kebbi State is the only state that reported cattle rustling incidents in the North-West. In the South-east, 5 heads of cattle were lost in 5 separate incidents in Ebonyi State. Twenty incidents were reported in the South-South (Edo State) though no information was available on losses incurred. In the South-West, 5 lives and 20 livestock were lost in Oyo State; some farmlands were destroyed in Ogun State. (Table 13.7b).

Table 13.7b: Information on Cattle Rustling and The Extent of Losses

State	Frequency of occurrence	Location	Number of livestock lost	Crop losses		Number of human life lost	Other losses e.g houses, etc	Suggested ways for prevention
				Crop Type/Area destroyed (Ha)				
Taraba	4	Gassol, K/Lamido	-	-		-	-	Investment in education, Poverty reduction
North -Central								
Kebbi	23	Danko, Wasagu, Ribah		-	-	-	-	Provide security
North-West								
Ebonyi	5	Uhaukwu		5	-	-	-	Security
South East								
Edo	20	Etsako East, Etsako West		-	-	-	-	Ranching, Conflict Resolution
South-South								
Ogun	16	Yewa North, Ogun Waterside, Obafemi Owode		61	-	-	Farmland	-
Oyo	10	Oyo, Ibarapa, Saki		20	-	10	-	Ranching
South-West								

As shown on Table 13.7c below, limited information was available as regards the situation of kidnapping and the extent of loss caused by kidnapping incidents. In Nasarawa and Taraba states, 6 and 7 kidnappings were reported respectively. In Ebonyi State, 4 kidnapping incidents were reported; resulting into the loss of 4 livestock and 7ha of farmland. Farmlands were destroyed following 22 kidnapping incidents in Ogun State, while in Oyo State 20 livestock and 10 lives were lost.

Table 13.7c: Information on Kidnapping and the Extent of Losses

State	Frequency of occurrence	Location	Number of livestock lost	Crop losses Crop type/area destroyed (Ha)	Number of human life lost	other losses e.g houses, etc	Suggested ways for prevention
Nasarawa	6	Totto, Keffi, Kokona, Akwanga, Lafia, Nasarawa	2	-	-	-	Job creatio, Education
Taraba	7	Jalingo, Gassol	-	-	-	-	Investment in education/ poverty reduction
North-Central							
Ebonyi	4	Ebonyi	4	7	-	-	Security
South-East							
Edo	-	Ovia N.E, Orinwon, Ovia S.W	-	-	5	-	Improved security network
South-South							
Ogun	22	Yewa North, Ogun Waterside, Ewekoro	-	-	-	Farmland	-
Oyo	10	Oyo, ibarapa, Saki	20	-	5	-	Increase security
South-West							

14.0 FISHERIES PRODUCTION SITUATION

Aquaculture production for the year 2021 for all the agro-ecological zones is shown on Table 14.1a. The results revealed that South-west had the highest production of fish producing about 1,085,442 metric tons, followed by South-east with 612,218.5 metric tons. The least production value of 3586.29 was recorded for the south-south geo-political zone. However, in the year 2022, South-east was the highest with the aquaculture production figure of 660,000 metric tons followed by the South-west with the value of 102,271.7 metric tons.

Available data revealed that only fifteen (15) states gave the artisanal production figures and the details are presented on Table 14.1b. Akwa Ibom had the highest number of fish species captured for 2021 and 2022. Fourteen (14) different fish species was captured by the fishermen in the state, this is followed by Lagos state with 10 different species. Most states caught lesser quantity of fish in 2022 as compared to 2021. This may be due to the over exploitation of the fishery which resulted into low catch per unit effort, it could also be due to high cost of fishing inputs. Previously, the government used to procure and distribute fishing inputs at 50% discount but unfortunately, such subsidy is no longer available therefore, fishermen have to rely on their low income to procure fishing inputs.

Aquaculture inputs provided by states is presented on Table 14.2. In 2021, only seven (7) out of the thirty-six (36) and the FCT procured and distributed fisheries and aquaculture inputs. These states are: Borno, Delta, Ekiti, FCT, Katsina, Lagos and Ondo states. Most of the inputs provided were fingerlings and fish feeds. This was aimed at assisting the farmers in the various states to boost their fish production though the quantities were insufficient. The inadequate quantities of the fishing inputs are attributed to the poor funding status of the ADPs and the states ministry of agriculture. Only Lagos and Benue states provided inputs for artisanal sub-sector. Lagos provided fourty-three (43) canoes and outboard engines while Benue state provided sets of fishing nets. This shows that the artisanal sub-sector which provides over 80% of the Nigerian domestic fish production is by far neglected which explains why the government is spending huge amount of money in fish importation in order to bridge the demand and supply gap which is given at 1.9 million metric tons.

In 2022, four more states Akwa-Ibom, Bayelsa, Benue, Edo and Imo states procured and distributed fishing inputs like, Fingerlings, Fish feeds, Collapsible tanks, Canoes and nets. There is great need for the government to ensure proper funding of the fisheries sector as the sector contributes about 3-5% of the agriculture share of the gross domestic product (GDP). Boosting fisheries production will help the populace in meeting up with their protein requirement and also, encourage fish exports thereby increasing the nation's foreign reserves.

The quantity of fresh and smoked fish marketed in 2022 shows that catfish species were the most traded fish species in all the states, this was followed by tilapia which is favourably cultivated and traded in Nigeria (Table 14.3). Other fish species traded were Heterobranchus species, Heterotis species, Labeo species, Lates niloticus etc. Captured fisheries provided most of the fish species traded in both fresh and smoked in all the states. The reason for this was high cost of aquaculture inputs especially high cost of fish feeds which is about 65-70% cost of production. This invariably led to an increase in pressure on wild fish stock due to the reduction in aquaculture production output. This may affect the stock in the artisanal fisheries in the long run therefore, aquaculture production needs to be encouraged by provision of the necessary production inputs at subsidized rates.

Fish diseases were reported across the 6 zones (Table14.4). The reported cases of diseases are scanty and not properly classified, this was likely due to lack of skilled manpower to identify and classify some of the fish diseases that were prevalent. Some of the diseases reported were Saproligniasis,

swollen belly, swollen eyes, white barbells, and gill rot. Similarly, cases of pests such as alligator, snakes, birds and frogs were reported in Ogun and Akwa-Ibom States. The treatments and preventive measures applied to pests and diseases were antibiotics, water quality monitoring and management.

Major commercial fish farms in the country is presented on (Table 14.5). From the data given by twenty-six states, Edo state had the highest number of recorded commercial fish farms in the country with a total of thirty-nine fish farms, followed by Lagos State with twenty-seven (27); Kwara State had fourteen (14) commercial fish farms. The highest production capacity of 500, 000 metric tons was recorded for Kumbotso and Wamako fish farms located in Kano and Sokoto states respectively. All the commercial farms were privately owned.

Data on commercial fish hatchery from the zones in 2022 is scanty, available data showed that only 15 states provided data on major commercial fish hatcheries in Nigeria in 2022 (Table 14.6). All the fish hatcheries were owned by individuals. Nasarawa and Sokoto states had the highest fish fingerling production of 1,025,000 and 1,500,000 fingerlings respectively in the Northern part of Nigeria. Edo State had the highest fingerlings production of 1,000,000 in the South in 2022.

Table 14.1a: Aquaculture Production in States in 2021 and 2022

State	Species	Production in 2021 (MT)	Production in 2022 (MT)
North Central			
Benue	Clarias sp	2.5	2.8
	Heterobranchus sp	1.05	100.2
FCT	Clarias sp	328.183	96.07
Kogi	Tilapia	12.62	7.69
	Clarias Heterotis	61821.57 0.25	20.453.1 0.03
Nasarawa	Clarias	250	210
	Heterobranchus	80	50
	Gymnachus	20	5
	Chana absura	10	15
Niger	Clarias spp.	101,026	-
Plateau	Tilapia	1.8	1.9
	Heterobranchus	0.7	0.6
	Carp	0.3	0.4
	Clarias spp.	1.5	1.8
North East			
Adamawa	Clarias sp	110	130
	Tilapia sp	70	73
	Others	55	65
Bauchi	Clarias sp.	17	-
	Tilapia sp	9.5	-
Borno	Tilapia spp	900	912
	Clarias spp	2,000	2,500
Taraba	Clarias	54,977	40,855
Yobe	Clarias	1,700	470,000
	Tilapia	115,000	78,000
North West			

Jigawa	Clarias sp	167.93	100.93
	Heterobranchus sp	140	-
	Tilapia sp	177.93	394.43
Katsina	Clarias sp	1,533	1,512
	Tilapia	582	576
	Heterotis	24	167
Kebbi	Clarias sp	52	52
	Heterobranchus sp	40,000	40,000
	Carp	50	NA
	Tilapia	23,000	23,000
	Heteroclarias	25,000	25,000
	Nile perch	11,000	10,000
Sokoto	Clarias sp	5,000	10,000
	Tilapia sp	3	-
Zamfara	Clarias sp	190	-
	Tilapia sp	110	-
South East			
Abia	Clarias sp	0.45	0.9
	Heterobranchus sp	0.8	-
	Carp	0.25	-
Ebonyi	Clarias sp	80,000	120,000
	Heterobranchus sp	3000	NA
	Tilapia	40,000	80,000
Imo	Clarias	235,000	180,000
	Tilapia	16,000	120,000
	Others	210,000	160,000
South South			
Akwa-Ibom	Catfish	837.94	3,772.85
	Tilapia sp	344.65	2,816.43
	Croaker	97.64	243.89
	Horse mackerel	8.37	78.96
	Sardinella	267.57	877.11
	Others	57.12	2,677.87
Cross-River	Clarias sp	830	-
	Heterobranchus	33	-
	Heterotis	810	-
Delta	Clarias spp	16,000	-
	Heterobranchus	10,101	-
	Tilapia	2,116	-
Rivers	Clarias	300	310
South West			
Ekiti	Clarias sp	2601	
Lagos	Clarias spp	26,642	21,450
	Tilapia sp	1290	3268.85

	Chrysichthys sp	6543.49	3305.08
	Heterotis spp	10.58	15.2
Ogun	Clarias spp	829,795	
	Tilapia spp	250	
Ondo	Clarias sp	10,000	6,500
	Tilapia sp	85,000	5000
	Chrysichthys sp	15,000	1,000
Osun	Clarias sp	19,500	304.6
	Tilapia sp	20,000	
	Heterotis sp	70	
Oyo	Clarias sp	39,860	36,420
	Tilapia sp	17,000	14,209
	Heterotis spp	4,320	3,927
	Late spp	4,320	3,927
	Gymnarchus spp	3,240	2,945

Table 14.1b: Artisanal Fisheries Production in States in 2021 and 2022

State	Species	Production in 2021 (MT)	Production in 2022 (MT)
North Central			
Benue	Clarias spp	298.17	450.05
	Heteroclarias	150.30	110.40
FCT	Clarias sp	33.641	47.32
Kogi	Clarias	10,725.6	155.17
	Tilapia	6,933	100.28
	Alestes	3.21	0.04
	Citharinus	8.45	4.26
	Synodontis	7	NA
	Heterobranchus sp	6	NA
Kwara	Clarias sp	2,103.61	NA
	Oreochromis	3.53	NA
	Polypterus	0.89	NA
	Heterotis	26,951	30.71
Nasarawa	Clarias	70	75
	Heterobranchus	15	25
	Gymnachus	2	5
	Chana absura	1	1
	Heterotis/Tilapia	80	90
Niger	Clarias sp	43,076	NA
Plateau	Tilapia	1.5	1.0
	Heterobranchus	0.5	0.5
	Carp	0.02	0.03
	Clarias	0.7	0.9
Taraba	Clarias	22,821	19,991
North East			
Adamawa	Catfish	170	180
	Tilapia	85	87
	Others	71	90
Borno	Catfish	1,400	1,600
	Tilapia	100	101
	Heterotis	400	420
	Alestes	311	319
	Momyrus	200	196
Yobe	Catfish	780,000	345,000
	Tilapia	670,000	230,000
	Heterotis	40,000	120,000
	Trunk fish	570,000	98,000
	Lung fish	130,000	72,000
North West			
Jigawa	Clarias	299.93	226
	Tilapia	289.93	189.93

	Heterotis	299.93	101.04
	Lates niloticus	467.46	307.06
	Lung fish	49	44
	Bagrus	467.46	204.04
Katsina	Catfish	1,810	1,783
	Oreochromis niloticus	2,249	2,239
	Lates niloticus	271	265
	Heterotis niloticus	174	167
Kebbi	Catfish	60,000	60,000
	Tilapia	30,000	30,000
	Nile Perch	70,000	6,500
	Heterobranchus	30,000	40,000
Sokoto	Clarias	20	5,000
	Tilapia	15	6,000
	Heterobranchus	3	-
	Gymnachus	2	3
	Bagrus	1	-
	Lates niloticus	3	1
Zamfara	Clarias	192	-
	Tilapia	107	-
	Synodontis	122	-
	Labeo	120	-
South East			
Abia	Catfish	0.8	1.1
	Tilapia	0.45	0.8
Ebonyi	Catfish	60,000	100,000
	Tilapia	28,000	50,000
Imo	Catfish	150,000	110,000
	Tilapia	110,000	130,000
	Carp	5,000	40,000
	Others	113,000	150,000
South-south			
Akwa-Ibom	Baracuda	13.02	24.65
	Bunga	24.56	30.64
	Catfish	587.39	463.24
	Crayfish	259.32	375.61
	Croaker	130.33	145.22
	Grunters	19.32	21.64
	Horse Mackerel	10.03	9.73
	Mullet	22.05	21.64
	Sardinella	72.59	85.34
	Soles	20.77	11.33
	Snapper	33.61	28.47
	Thread fin	22.75	26.37

	Tilapia sp	11.98	15.45
	Shining nose	339.32	406.38
Delta	Catfish	26, 840	
Rivers	Cray fish	10.07	
	Sadinella	1.20	
	Bonga sp	0.74	
South-West			
Ekiti	Catfish	622	NA
Lagos	Clarias	165,440	33.65
	Pseudotolithus sp	9,414	1845.78
	Pomadasosis sp	4,308	0.906
	Tilapia	5444.49	11.03
	Chrysichthys spp	446.3	0.83
	Polydactyllus	0	2508.46
	Ethmalosa	0	2531
	Heterotis	16.8	1.47
	Mormyrus spp	2.3	0.3
	Lutjanus spp	0	959.32
Ondo	Catfish	100,000	256,250
	Tilapia	85,000	86,875
	Chrysichthes	15,000	25,625
	Schilbe mystus	1,000	10,250
Osun	Catfish	24	16
	Tilapia	1.1	1.0
	Carp	1.3	1.4
	Heterotis	3.1	3.2
	Electric fish	0.5	0.6

Table 14.2: Fisheries Input Situation in the States

States	Types of input	Quantity Procured		Quantity Distributed	
		2021	2022	2021	2022
North Central					
Benue	Juveniles	-	20,000	-	20,000
	Fish feeds	-	600	-	600
	Collapsible tank	-	40	-	40
	Canoes	-	34	-	34
	Nets	-	170	-	170
	Floats	-	6,800	-	6,800
	Twine ropes	-	170	-	170
	Sinkers	-	170	-	170
	Rolls of threads	-	170	-	170
	Smoking kiln	-	34	-	34
FCT	Cold storage facility	15	-	15	-
	Fish feed	400	-	400	-
	Collapsible fish tanks	10	-	10	-
	Smoking kiln	10	-	10	-
North East					
Borno	Fingerlings	500	10,000	10,000	500
	Fish Feed (bags)	-	1000	1000	-
	Fish Ponds	50	50	45	40
North West					
Kano	Fingerlings	-	18,000	-	18,000
	Fish feeds	-	36,000	-	36,000
Katsina	Fingerlings	15,000	-	15,000	-
	Fish feeds (bags)	300	-	300	-
	Borehole	3	-	3	-
South East					
Imo	Fish Fingerlings	-	1610,000		12000
	Fish Feed	-	300,000		-
South South					
Akwa Ibom	Fingerlings	-	310,000	-	310,000
	Juveniles	-	465,000	-	465,000
	Fish feed	-	1,800kg	-	1,800kg
	Fishing Net	-	150	-	150
	Floaters	-	300	-	3000
Bayelsa	Fingerlings	-	583,000	-	583,000
	Fingerlings	-	11660	-	11660
Delta	Fish feeds	9,540	-	9,540	-
	Fingerlings	180,000	-	180,000	-
Edo	Fingerlings	-	87,000	-	87,000
	Fish feeds	-	2,340	-	2,340
South West					
Ekiti	Tilapia	340	350	200	300
	Catfish	800	350	1000	400

Lagos	Outboard Engine	43	-	43	-
	Fish feed (bag)	3200	414,620	3200	414,620
	Fingerlings	-	500,000	-	500,000
	Brood stock	-	200,000	-	200,000
	Juveniles	-	29,0500	-	29,0500
Ogun	Agric lime (Mt)	-	5000	-	5000
	Nets	-	100	-	100
	Life Jacket	-	500	-	500
Ondo	Juvenile	3,000	-	3,000	-
	Fish net	1800	-	-	-
	Pond x 3	1800	-	-	-
	Pumping machine	1			
	Lime	75			
Osun	Net	-	400	-	400
	Rope	-	25	-	25
	Twine	-	20	-	20
	Lime	-	20	-	20

Table 14.3: Fresh and Smoked Fish Traded in the States

State	Fish species	Quantity of fresh fish traded		Quantity of smoked fish traded	
		2021	2022	2021	2022
North Central					
Benue	Clarias spp	230.42	117.41	515,500	80,000
	Heterobranchus spp	125.20	12.5	118	60,000
	Tilapia spp	50.2	40.6	10,000	5,000
	Aletes spp	NA		NA	
	Synodontis spp	3.21	1.52	282	141
	Lates niloticus	7.2	4.72	120	41
	Labeo spp	10.4	5.2	135	50
FCT	Clarias spp	1.2	6,685	506.74	276.25
	Gymnachus	7,157		1,464.095	
	Lates niloticus	103.354	47.32		
	Ice (Frozen fish)	Na	Na		
Kogi	Clarias sp	19,660	18,621	21054	930
	Heterobranchus	20,192	15,203	10311	433
	O. niloticus	21,253	25,432	12,432	21,611
	Heterotis sp	12,025	10,221	2,141	3,143
	Lates	511	611	25,831	6,321
	Gymnachus sp	36,081	1,178	3,481	5,673
Nasarawa	Clarias spp	100	150	170	190
	Heteroranchus spp	100	170	180	200
Plateau	Clarias	2.5	1.9	1500	600
	Heterobranchus	1.0		900	
	Tilapia	1.5	2.2	500	250
	Hybrid	1.5		500	
	Carp	10.5		2250	
Taraba	Clarias spp	24,336	24,904	28,004	26,613
North East					
Bauchi	Clarias spp	23.38		25.48	
	Tilapia	14.81		11.09	
	Heterobranchus sp				
	Heteroclarias				
	Synodontis				
	Labeo				
	Lates				
	Cyprino carpio	10.51		7.54	
	Alestes spp	6.11		4.54	
	Heterotis spp	4.70		3.39	
Borno	Clarias spp	1,400	2,000	14,000	16,000
	Tilapia	100	900	90	90,000
	Heterotis	600	710	600,000	710,000
	Alestes	400	430	400,000	430,000
	Momyrus	219	245	219,000	245,000
North-West					

Katsina	Catfish	1,412	1,396	1,384	1,372
	Tilapia	1,788	1,688	1,602	1,482
	Heterotis niloticus	170	158	98	72
	Lung fish	45	39	41	32
	Lates	269	262	194	169
Kebbi	Catfish	11,000	10,000	6,000	5,000
	Tilapia	12,000	12,000	2,000	6,000
	Heterobronchus spp	9,000	9,000	4,000	3,000
	Nile perch	1,000	9,000	4,000	3,000
Zamfara	Clarias sp	120		110	
	Tilapia sp				
Nasarawa	Clarias	75,000		70,000	
	Tilapia	89,000		112,000	
	Heterotis	41,000		101,000	
Sokoto	Clarias sp	164	85	125	80
	Heterobranchus sp	40	40	50	35
	Heteroclarias	12	20	25	57
Kano	Clarias	450	450	482	486
	Tilapia	230	245	228	243
Jigawa	Tilapia	400	300	200	100
	Clarias	320	200	150	100
	Heterotis	60	60	70	65
	Lates	60	60	70	65
	Bagrus	60	60	70	65
South East					
Abia	Clarias sp	700		420	
	Tilapia	400		400	
	Carp	250		220	
Anambra	Clarias	25,000		25,000	
Imo	Makrel	60000		65000	
	Clarias	21,000		26,000	
	Tilapia	11,000		30,000	
	Carp	15,000		22,000	
South South					
Akwa-Ibom	Clarias spp	603.2	625.2	309.34	341.32
	Tilapia	464.3	475.2	317.95	323.76
	Barracuda	8.69	10.21	6.73	6.85
	Bonga	24.27	25.19	22.75	25.92
	Catfish	84.31	88.32	61.08	62.43
	Crayfish	406.7	411.32	109.34	116.32
	Croaker	106.2	119.3	63.15	65.42
	Grunter	13.45	15.76	8.44	9.17
	Horse Mackerel	5.37	6.43	3.42	4.18
	Mullet	13.47	15.72	4.95	5.13
	Ray	12.66	12.98	1.97	2.34
	Sardinella	61.25	65.35	43.67	51.32
	Soles	23.27	24.52	6.32	6.85

	Snapper	16.43	17.98	8.37	8.52
	Thread Fins	11.72	12.05	2.99	3.18
Edo	Clarias fingerlings	329,00		369,00	
	Feed (kg)	320,775		359,775	
Rivers	Clarias spp	300	300	300	250
	Tilapia	200	350	350	300
South West					
Lagos	Catfish	18.45	3,075	2343	1,025
	Tilapia	2751.4	8,698	11838.5	2,175
	Heterotis	11.42		1525.5	
	Gymnachus	77.85		54870	
	Chrysichthys	2956.4	3,075	5533.05	1,025
	Croaker	3720.3		1777.27	
	Grunthers	2080.1		9804.00	
	Shiny nose Polydactylus sp	1276.5	2,213	290.1	737.5
	Redsnapper	1457		563.7	
	Sphyraena (Baracuda)	15502		400	
	Momyrus sp	83.5		6194	
	Ethmalosa sp	2144	2000	1863	2000
	Synodontis spp	88.3		7130	
	Crayfish	NA		2500.8	
Ogun	Clarias spp	500	200	28,000	15,000
	Tilapia	400	150	20,000	10,000
	Heterobranchus	300	100	100	40
	Lates	200	100	80	40
	Momyrus	500	200	150	80
	Crayfish	400	200	300	150
	Bagridae	100	50	40	20
	Carp	300	100	200	50
	Heterotis	700	300	200	150
	Crabs	500	200	100	60
Oyo	Clarias spp	32,200	32,020	6,800	4,500
	Tilapia	1,160	1,060	920	850
	Heterotis spp	520.5	500	350	300
	Lates niloticus	3,730	-	2,455	2,420
	Gymnachus spp	2,300.7	300	1,500	1,500
	Snake heads	312	180	230	215
	Bagrus sp	121	40	73	70
	Chrysichthyes sp	1,360	50	1,100	950
	Synodontis sp	320	50	175	155
	Prawn	412	100	320	300

Table 14.4: Pest and Diseases of Cultured Fish

State	Fish spp Affected	Pest/disease name	Location of incidence (LGA)	Severity (light, moderate, heavy)	Estimated loss %	Control measure(s) undertaken
North-Central						
Benue	Tilapia	Skin Lesion	Agatu	Light	10	
	Clarias	Skin Lesion	Makurdi	Moderate	15	
	Heterbranchus	Skin Lession	Kastsina-Ala	Light	10	
Nasarawa	Clarias spp	Broken head, white spots Frayed barbels	Lafia 13 LGAs	Light Moderate	20 20	Improve water exchange Use of saline solution
Taraba	Clarias spp	Skin infection	Ibi and Takum	Moderate	30	--
North-East						
Kebbi	Clarias spp	Bacterial infection	B/kebbi	Moderate	10	
	Tilapia	Fungal infection	-	Moderate	30	-
Zamfara	Catfish	Worms	Gusau	Moderate	10	-
North-West						
Adamawa	Clarias spp	Fungal infection	Yola South	Moderate	30	Disinfection and cleaning of water tank
Bauchi	Clarias spp	Gill rot	Bauchi	Moderate	25	-
	Tilapia	Swollen skin	Ganjuwa	-	25	
	Heterobranchus spp	Skin infection	Bauchi	Mild	10	Water management
South East						
Ebonyi	Catfish	Saproligniasis	Afikpo	Light	2	Use of Lime
	Tilapia	Gill rot	Afikpo	Light	3	Water management
Imo	Catfish	Fin rot	Owerri north	Light	3	Chemo-therapy
		Gill rot	Owerri west	Light	2	Chemo-therapy
	Tilapia	Leeches	Oguta	Light	5	Chemo-therapy
		Fin rot	Olu	Light	3	Chemo-therapy
South South						
Akwa-Ibom	Catfish	Snakes/birds	state-wide	Light	5	Netting/sanitation
	Catfish	Swollen belly	-	-	10	Antibiotics/management
Cross-Rivers	Catfish	Saproligniasis	Biase	Heavy	50	Antibiotic
Edo	Catfish	Bacterial infection	Ikpoba-Okha	Moderate	-	Antibiotics
Bayelsa	Catfish	Fin rot	Yenagoa	Moderate	40	Antibiotic
Delta	Clarias spp	Swollen abdomen	Ughelli south	Light	10	Antibiotics
	Clarias spp	Broken skull	Oshimili south	Light	5	-

South West						
Oyo	Catfish	Brushed mouth/body	Iddo	Light	2.5	Antibiotic
	Catfish	Swollen Eye	Egbida	Light	1	Antibiotic
	Catfish	White Barbells	Otuyobe	Heavy	5	Antibiotic
	Catfish	Gill rot	Lagetu	Heavy	5	Antibiotic
	Catfish	White spots on the body	Akinyube	Heavy	5	Antibiotic
Ekiti	Clarias spp	Broken head	Ado Ekiti	Moderate	5	Antibiotics
	Tilapia	Tail fin rot	-	Moderate	3	Antibiotics
Ogun	Catfish	Pest: Alligator, Snakes, Birds, Frogs Diseases: white Spots, Crack head, Fin rot	Across the state	Light	0.25	Free consultation
	Tilapia	Leeches, birds	Across the state	Light	0.25	-
	Heterotis	Snakes birds	Across the state	Light	0.25	-

Table:14. 5. Major Commercial Fish Farms in the States

State	L.G.A	Ownership	Species	Capacity	Actual Production	
					2021	2022
North-Central						
FCT	G/Lada	Private	Clarias	12,000	12,000	-
	G/lada	Private	Clarias	2,000	2,000	-
	Bwari	Private	Clarias	30,000	30,000	-
	Bwari	Private	Clarias	10,000	10,000	-
Kwara	Ilorin West	Private	Clarias	120,000	120,000	-
	Ilorin South	Private	Clarias	17,000	17,000	-
	Ifelodun	Private	Clarias	10,000	10,000	-
	OgidiII/south	Private	Catfish	17,000	1,752,000	1,760,000
	Agbejila/Asa	Private	Catfish	11,000	500,000	510,000
	Agbejila/Asa	Private	Catfish	13,000	320,000	350,000
	Egbejila/Asa	Private	Catfish	14,000	340,000	350
	Egbejila/Asa	Private	Catfish	16,000	360,000	3
	Ajegunle/Asa	Private	Catfish	14,000	344,000	70,000
	Akeyan	Private	Catfish	15,900	356,000	355,000
	Odore/Asa	Private	Catfish	15,000	349,000	357,000
	Odore/Asa	Private	Catfish	12,000	310,000	357,000
	Egbejila/Asa	Private	Catfish	12,600	312,000	311,000
	Odore/Asa	Private	Catfish	14,000		345,000
Niger	Bosso	Private	Catfish	5000	5000	-
North East						
Adamawa	Yola south	Private	Catfish/Tilapia	15	6.5	8.5
	Yola north	Private	Catfish/Tilapia	22	9.2	12.3
	Girei	Private	Catfish/Tilapia	10	4.3	5.7
Bauchi	Bauchi	Private	-	6,000	12,000	-
	Bauchi	Private	-	7,000	14,000	-
	Bauchi	Private	-	6,000	12,000	-
	Bauchi	Private		12,500	15,000	-
Gombe	Y.Deba	Private	Catfish	15,000	Na	-
	Maigari	Private	Catfish	5,000	-	-
	Umar	Private	Catfish	10,000	-	-
	Aliyu	Private	Catfish	12,000	-	-
Yobe	Damaturu	Private	Catfish	2	2	1
	Damaturu	Private	Catfish	10	7	4
	Damaturu	Private	Catfish	5	4	2
North -West						
Katsina	Katsina	Private	Catfish	3000	5000	-
	Katsina	-	Tilapia	5000	6500	-
Kebbi	B. Kebbi	Private	Catfish	60,000	30,000	30,000
	Bunza	Private	Catfish	120,000	100,000	100,000
	Zuru	Private	Catfish	80,000	70,000	70,000
	Yauri	Private	Catfish	30,000	20,000	20,000
Kano	Mariri	Private	Catfish	250,000	250,000	-

	Sheka-Kumbotso	Private	Catfish	100,000	120,000	-
	Kano Municipal	Private	Catfish	150,000	200,000	-
	Gwale	Private	Catfish	200,000	385,000	392,000
	Kumbotso	Private	Catfish/Tilapia	400,000	750,000	720,000
	Kumbotso	Private	Catfish/Tilapia	500,000	630,000	800,000
	Kumbotso	Private	Catfish/Tilapia	206,000	315,000	392,000
		Private	Catfish/Tilapia	50,000	40,000	85,000
Sokoto	Wamakko	Private	Catfish	500,000	670,000	1,025,000
	Kware	Private	Catfish	250,000	520,000	750,000
	Sokoto-south	Private	Catfish	800,000	750,000	900,000
Zamfara	Gusau	State	Catfish	10,000	10,000	-
	Kaura namoda		Catfish	1000	1000	-
South East						
Abia	Osisioma			500	10,000	-
	Abayi		Catfish		7000	-
	Ikwuano		Catfish	500	6000	-
	Umuchi-Akuma	Private	Catfish	500	6000	-
	Isiala-ngwa	Private	Catfish	500	4000	
Anambra	Nnewi south	Private	Catfish	10,000	10,000	10,000
	Nnewi south	Private	Catfish	10,000	10,000	10,000
	Nnewi south	Private	Catfish	10,000	10,000	10,000
	Orumba south	Private	Catfish	10,000	10,000	10,000
	Orumba north	Private	Catfish	10,000	10,000	10,000
	Aguata	Private	Catfish	10,000	10,000	10,000
Ebonyi	Ikwo	Private	Heterotis spp	2,500		
	Abakaliki	Private	Catfish	31	30	32
	Abakaliki	Private	Catfish	40	30,000	31,000
	Afikpo	Private	Catfish	80	80,000	80,000
	Afikpo	Private	Catfish	100	100,000	100,000
	Ohaezara	Private	Catfish	50	50,000	50,000
Enugu	Enugu east	Cooperative	Catfish	20,000	50,000	-
	Enugu south	Private	Catfish	10,000	18,000	-
	Nkanu east	-	Catfish	2,500	30,000	-
	Orji-river	-	-	10,000	NA	-
Imo	Orlu	Private	Catfish	20,000	35,000	20,000
	Owerri West	Private	Catfish	15,000	45,000	30,000
	Aboh Mbaise	Private	Catfish	15,000	54,000	30,000
	Owerri north	Private	Catfish	5,000	10,000	6,000
	Owerri north	Private	Catfish	10,000	17,000	10,000
	Oguata	Private	Catfish	10,000	NA	NA
	O/Egbema	Private	Catfish	10,000	12,000	5,000
South South						
Akwa-Ibom	Ikot epene	Private	Catfish	20,000	10,000	-
	Nsit-atai	-	-	10,000	10,000	-
	Ibiono	-	-	10,000	10,000	-
	Uyo	-	-	4,000	2,500	-

	Ika	-	-	5,000	5,000	-
	Ikot epene	Private	Catfish	15,000	10,000	12,000
	Ibiono Ibom	Private	Catfish	10,000	5,000	8,000
	Uyo	Private	Catfish	15,000	4,000	12,000
	Ibiono Ibom	Private	Catfish	5,000	-	5,000
	Ika	Private	Catfish	8,000	5,000	8,000
Delta	Isoko south	Private	NA	10,000	9,500	10,000
	Isoko south	Private	NA	8,000	8,000	10,000
	Oshimili north	Private	NA	6,000	6,000	8,000
Edo	Ikpoba-okha	Private	Catfish	100,000	200,000	100,000
	Oredo	Private	Catfish	400,000	800,000	400,000
	Oredo	Private	Catfish	60,000	120,000	60,000
	Oredo	Private	Catfish	100,000	200,000	100,000
	Ikpoba-okha	Private	Catfish	80,000	160,000	80,000
	Oredo	Private	Catfish	50,000	100,000	50,000
	Oredo	Private	Catfish	350,000	700,000	350,000
	Ikpoba-okha	Private	Catfish	100,000	200,000	100,000
	Egor	Private	Catfish	100,000	200,000	100,000
	Etsako-central	Private	Catfish	200,000	400,000	200,000
	Ikpoba-okha	Private	Catfish	120,000	240,000	120,000
	Ikpoba-okha	Private	Catfish	200,000	400,000	200,000
	Ikpoba-okha	Private	Catfish	50,000	100,000	50,000
	Oredo	Private	Catfish	200,000	400,000	200,000
	Ikpoba-okha	Private	Catfish	150,000	300,000	150,000
	Ikpoba-okha	Private	Catfish	60,000	120,000	60,000
	Oredo	Private	Catfish	50,000	100,000	50,000
	Ikpoba	Private	Catfish	50,000	100,000	50,000
	Oredo	Private	Catfish	60,000	120,000	60,000
	Oredo	Private	Catfish	80,000	160,000	80,000
	Ikpoba-okha	Private	Catfish	50,000	100,000	50,000
	Ikpoba-okha	Private	Catfish	70,000	140,000	70,000
	Ikpoba-okha	Private	Catfish	60,000	120,000	60,000
	Ikpoba-okha	Private	Catfish	50,000	100,000	50,000
	Oredo	Private	Catfish	60,000	100,000	50,000
	Ikpoba-okha	Private	Catfish	40,000	120,000	60,000
	Ikpoba-okha	Private	Catfish	40,000	80,000	40,000
	Esan central	Private	Catfish	50,000	80,000	40,000
	Oredo	Private	Catfish	55,000	100,000	50,000
	Ikpoba-okha	Private	Catfish	80,000	110,000	55,000
	Oredo	Private	Catfish	40,000	160,000	80,000
	Oredo	Private	Catfish	30,000	80,000	40,000
	Ego	Private	Catfish	30,000	60,000	30,000
	Ikpoba-okha	Private	Catfish	40,000	60,000	30,000
	Oredo	Private	Catfish	50,000	80,000	40,000
	Ikpoba-okha	Private	Catfish	60,000	100,000	50,000

	Ikpoba-okha	Private	Catfish	50,000	120,000	60,000
	Orhionmwon	Private	Catfish	60,000	100,000	50,000
	Orhionmwon	Private	Catfish	60,000	120,000	60,000
Cross River	Calabar South	-	Catfish	10,000	50,000	-
	Ogoja	-	-	5,000	75,000	-
	Calabar Municipal	Private	Catfish	20,000	3MT	4 Tons
	Bek	Private	Catfish	10,000	2.5MT	3 Tons
Rivers	Obio/akpor	Private	Catfish	5,000	4000	
	Ahoada west	-	-	5000	5000	-
South West						
Ekiti	Ado	Private	Tilapia	5,000	30,000	50,000
	Ado	Private	Catfish	50,000	100,000	80,000
	Ado	Private	Heterotis	40,000	80,000	80,000
	Ado	Private	Catfish	30,000	60,000	50,000
	Ikere	Private	Tilapia	5,000	15,000	12,000
Lagos	Ikorodu	Private	Catfish	36,000	60	36
	Ikorodu	Private	Catfish	36,000	72	30
	Ikorodu	Private	Catfish	36,000	30	24
	Ikorodu	Private	Catfish	60,000	30	24
	Ikorodu	Private	Catfish	60,000	36	24
	Ikorodu	Private	Catfish	60,000	36	24
	Ikorodu	Private	Catfish	30,000	24	16
	Ikorodu	Private	Catfish	60,000	60	36
	Ikorodu	Private	Catfish	30,000	30	18
	Ikorodu	Private	Catfish	60,000	60	36
	Bogije	Private	Catfish	10,000	5,000	3,000
	Ikorodu	Private	Catfish	60,000	24	24
	Ikorodu	Private	Catfish	24,000	16	32
	Ikorodu	Private	Catfish	12,000	10	12
	Ikorodu	Private	Catfish	12,000	12	12
	Ikorodu	Private	Catfish	11,000	6	6
	Ikorodu	Private	Catfish	12,000	5	10
	Ikorodu	Private	Catfish	20,000	20	9
	Ikorodu	Private	Catfish	12,000	10	10
	Ikorodu	Private	Catfish	6,000	4	6
	Ikorodu	Private	Catfish	25,000	20	20
	Ikorodu	Private	Catfish	20,000	15	20,000
	Ikorodu	Private	Catfish/Tilapia	10,000	10	10
	Ikorodu	Private	Catfish	15,000	10,000	11,000
	Ikorodu	Private	Catfish	6,000	6	6
	Ikorodu	Private	Catfish	10,000	7	7
	Ikorodu	Private	Catfish	15,000	11	11
Ogun	Abeokuta South	Private	Catfish	100,000	-	-
-	Abeokuta South	-	Catfish	100,000	-	-
	Ipokia	Group	Catfish	500,000	-	-

	Ijebu	Private	Catfish	-	-	-
	Yewa South		Catfish	-	-	-
	Fish shoal	Private	Catfish	100,000	100,000	-
	Ogun fish hatchery	Private	Catfish	100,000	100,000	-
	Iseya,Ilase	Group	Catfish	500,000	500,000	-
Ondo	Akure south	Private	Catfish/Tilapia	10,000	10,000	
	Akure south	Private	Catfish/Tilapia	15,000	10,000	
	Akure north	Private	Catfish/Tilapia	10,000	3,000	5,000
Oyo	Egbeda	Private	Tilapia	100,000	20,000	
	Ibadan	-	Tilapia/Catfish	250,000	60,000	
	Oluyole	-	Catfish	500,000	80,000	-

Table: 14.6 (Contd): Major Commercial Fish Hatchery in the States

State	L.G.A	Ownership	Species	Capacity	Actual Production	
					2021	2022
North-West						
Kano	Minjibir	Private	Catfish	200,000	200,000	
	Sheka-Kumbotso	Private	Catfish	100,000	120,000	
Katsina	Katsina	Private	Catfish	50,000	50,000	
Sokoto	Kware	Private	Catfish Fingerlings & Juveniles	500,000	670,000	1,025,000
	Wamako	Private	Catfish Fingerlings & Juveniles	250,000	520,000	750,000
	Sokoto south	Private	Fingerlings	800,000	750,000	900,000
North East						
Gombe	Dadin-Kowa	State govt	Catfish	NA	NA	
Bauchi	Bauchi	Bauchi ADP	Catfish	30,000	22,000	
Yobe	Damaturu	Private	Catfish	2,000	2,000	10,000
	Damaturu	Private	Catfish	10,000	7,000	4,000
	Damaturu	Private	-	5,000	4,000	2,000
North-Central						
FCT	Gwagwalada Kuje, Bwari AMAC	Private	Clarias and Tilapia	400,000 450,000 100,000	400,000 100,000 450,000 100,000	
Nasarawa	Keffi	Private	Clarias spp	200,000	1,000,000	1,500,000
South West						
Ogun	Ewekoro	Private	Catfish	200,000	-	
	Ewekoro	Private	Tilapia	1,000	-	
	Abk south	Private	Tilapia & catfish			
	Isiwo, Ijebu Ode	Private	catfish	-	-	
Ondo	Akure South	Private	Fingerlings	5,000	7,000	Na
	Igoba Akure North	Private	Juveniles	2,000	3,000	Na
South East						
Imo	Oguta	Govt	Catfish	100,000	-	
	Owerri west	Private	Catfish	40,000	32,000	
	Izombe	Private	Catfish	20,000	240,000	
Abia	Aba	Private	Catfish		185,000	
South South						
Cross River	Calabar municipal	Private	Fingerlings	150,000		
	Calabar municipal	Private	Fingerlings	350,000	80,000	150,000
Edo	Oredo	Private	Fingerlings	300,000	900,000	600,000

	Ikpoba-Okha	-	-	100,000	300,000	200,000
	Egor	-	-	100,000	300,000	200,000
	Etsako-Central	-	-	200,000	Na	Na
Akwa Ibom	Uyo	Private	Fingerlings	5,000	20,000	
	Abak	Private	Fingerlings	30,000	30,000	
	Ahoada west	-	-	5,000	5,000	

15.0 AGRICULTURAL DEVELOPMENT PROGRAMME EXTENSION ACTIVITIES

15.1 Funding Situation

Funding of extension activities remains a key issue agricultural extension delivery. There are a variety of funding arrangements in Nigeria, both public and private. Over the years, provision of funding for the ADPs is an exclusive responsibility of the state government. However, there are funds from donor agencies based on participation of the ADPs in the implementation of some projects. Such agencies were majorly international (UNDP, JICA, GIZ etc) and NGOs. Table 15.1 compared the status of ADP funding across the country in 2021 and 2022. In general, public funding of state ADPs in 2022 worsen compared with previous year. However, Taraba ADP recorded 100% achievement of target budget. Other States include Cross River (81%), Lagos (62.5%), Osun (50.1%), Ogun (33.3%), Jigawa (13.2%), Akwa-Ibom (9.4%) and Ondo (9.3%). Abia and Edo ADPs received less than 1% of targeted funds. About 22% of the ADPs that provided funding records received no fund as at the time of the survey. Only 22 States ADP provided funding records.

Table 15.1: Status of ADP Funding in 2021 and 2022

State	2021			2022			
	Target (₦)	Achieved (₦)	%	Target (₦)	Achieved (₦)	%	% diff.
North-Central							
Kwara	16,351,120	5,775,365	35.32	1,940,047	5,174,500	266.72	231.39
Niger	70,000,000	35,000,000	50	50,000,000	0	0	-50
Nasarawa	2,493,000,000	24,639,000,000	988.32	2,472,000,000	20,656,000,000	835.59	-152.73
Taraba	83,109,964.50	83,109,964.50	100	174,125,000.00	174,125,000	100	0
North-East							
Adamawa	1,660,000.00	16,000,000	963.85	1,660,000,000	0	0	-963.85
Bauchi	144,000,000	60,000,000	41.67	258,390,628	-	0	-41.67
Gombe	249,785,000	185,714,219.24	74.35		8,139.45	0	-74.35
North-West							
Jigawa	425,850,000	727,204,637.60	170.76	625,000,000	82,421,860.41	13.18	-157.58
Katsina	210,000,000	150,000,000	71.43	-	-	0	-71.43
Sokoto	50,000,000	-	0	-	-	-	-
South-East							
Abia	350,000,000	100,000	0.028	450,000,000	3,000,000	0.667	0.639
Ebonyi	10,000,000	9,650,000	96.5	9,069,500	-	0	-96.5
Enugu	40,000,000	800,000	2	30000000	-	0	-2
South-South							
Akwa Ibom	22,180,000	1,000,000	4.51	21,180,000	2,000,000	9.44	4.93
Bayelsa	-	-	0	10000000	-	0	0
Cross River	416,112,119.3	264,034,333	63.45	34,287,159.4	27,897,016	81.36	17.91
			0	4,989,600	3,552,600	71.20	71.20
Edo	162,837,752	16,000,000	9.83	162,837,752	14,000	0.0085	-9.817

South-West							
Ekiti	129,265,284.02	5,705,000	4.41	93,216,493	0	0	-4.41
Ogun	105,593,781.11	237,449,886.99	224.87	534,417,586.45	177,936,648.33	33.29	-191.57
Lagos	222,000,000	90,000,000	40.54	144,000,000	90,000,000	62.5	21.96
Oyo	20,000,000	328,500	1.64	10,000,000	-	0	-1.64
Osun	209,120,000	108,985,600	52.12	126,630,000	63,465,000	50.12	-2
Ondo	80,000,000	10,330.00	0.013	100,000,000	9,350,089.89	9.35	9.337

NOTE: There were no data from 12 states and FCT

15.2: Performance Indicators of ADPs

Agricultural extension performance is tied to specific indicators. In 2022, the indicators assessed include number of farm families covered by extension, number extension workers, number of visits by village extension agents (VEAs), technology transfer and feedback mechanisms, strategies for technology dissemination, status/condition of farmers group development and management, extension agent (EA)-farmer ratio and status of Farmer Field Schools (FFS) (Table 15.2a – f).

15.2.1: Number of Farm Families

Farm families are the recipients of agricultural technologies in all farming communities. Successful diffusion and adoption of agricultural technologies is dependent on the high number of farm families reached in targeted communities. Bauchi (987,925), Kogi (696,000), Niger (919,062), Akwa-Ibom (685,095), Yobe (593,228), and Lagos (558,420) posted the highest number of farm families. Compared to previous records, the number of farm families remains on the increase across the states. This implies that more extension personnel should be recruited in order to ensure that new entrants to farm can be effectively covered/serviced by extension. Data on the number of farm families from other states include: Delta (545,987), Kebbi (525,000), Ebonyi (500,000), Borno (420,000), Abia (410,345), Cross River (481,506), Oyo (415,030), Zamfara (401,000), Gombe (393,105), Edo (360,000), Kwara (300,000), Taraba (288,000), Nasarawa (252,606), Enugu (242,542), and FCT (175,000).

15.2.2: Number of Extension Workers

Active frontline extension workers involved in agricultural extension delivery in Nigeria include the Block Extension Agents (BEAs) and the Village Extension Agents (VEAs). The higher the number of VEAs and BEAs; the better the extension coverage in the state. States are usually delineated into extension Cells/Circles, Blocks and Zones. A Cell/Circle that is meant to be manned by a VEA should ordinarily not be more than a manageable eight (8) villages, in order to enhance effective coverage. Shortage of extension workers have been reported over the years across all states of the country. Report available indicate that Benue, Kwara, and Enugu states have 3, 12, and 21 extension workers, respectively. Imo, Osun, Bayelsa Borno, Oyo, Yobe, and Ekiti states have less than 36 extension workers. This result implies that substantial parts of most states in Nigeria do not feel the presence of extension workers. This has attendant negative consequence on the national food productivity.

15.2.3: Farm Visits by VEAS

Farm visits remains the core function of VEAs. Technology dissemination is highly dependent on regularity of VEAs' visits. The frequency of VEAs' visits to farmers is a function of availability of tangible mobility. VEAs and BEA(WIA) are supposed to visit farmers for four (4) days per week. Hence, VEAs/BEAs visit per year is estimated by multiplying the expected number of working weeks for each VEA/BEA by 4. The state

aggregated number of visits is estimated by multiplying the result obtained by the number of VEAs/BEAs in the state. It must be noted that when extension workers are domiciled in their areas of coverage, it usually enhances the number of farm visits they could perform. Niger (15000), Ebonyi (13,400), Oyo (12480), Gombe (7542), and Lagos (7418) recorded the highest number of farm visits in 2022. Ekiti (6245), Cross River (5450), FCT (3600), Kaduna (2050), Benue (85), and Kogi (24) recorded low visits. Compared to previous years, the record of farm visits by extension agents remained low in 2022.

15.2.4: Technology/Knowledge Sharing, Transfer and Feedback Mechanism

Technology sharing/transfer is usually done via the Monthly Technology Review Meeting (MTRM) and Fortnightly Trainings (FNT). While the MTRM provides opportunity for researcher to interact with the SMSs, the FNT is a medium for interaction between the SMSs and the VEAs (including the BESs and BEAs). Due to paucity of fund, (occasioned by the withdrawal of World Bank funding) the MTRM was adjusted to hold quarterly while the FNT adjusted to hold monthly. In 2022, record of MTRM revealed that only 10 States conducted MTRM as follows: Abia (4), Ekiti (3), Lagos (3), Ebonyi (3), Rivers (3), Benue (2), Kogi (2), Gombe (2), Edo (2), and Kwara (1). It's a clear indication that technology sharing is in a state of comma. The FNT is supposed to be conducted for about 52 times in a year. For FNT, only 10 states conducted up to 10 FNT as at the end of August: Abia (24), Kogi (18), Ebonyi (17), Benue (16), Oyo (16), Lagos (14), Akwa-Ibom (13), Rivers (12), Cross-River (12), and Edo (10). Ekiti 7, Ogun 6, Plateau 5, Jigawa Imo 1. Almost 60% of the States did not conduct FNT in 2022. This implies that there is a big gap between the National Agricultural Research Institutes (NARIs) and the ADPs, thereby, making frontline extension workers (and consequently farmers) not to have access to new research technologies. It means that farm productivity could be moving to worrisome decline.

15.2.5: Technology Dissemination Strategies (OFAR, MTP, SPAT)

Within the ADP system, technology dissemination to farmers is demonstrated through On-Farm Adaptive Research (OFAR), Management Training Plot (MTP) or the Small Plot Adaptive Technique (SPAT). OFAR, MTP and SPAT are famer-managed but mostly funded by the ADPs, especially in provision of inputs, technical back-up and logistics. Hence, the number of OFAR, MTP or SPAT established by the ADP depend availability of funds. ADPs were requested to supply the number of each of the trials as well as the number of replicates. Only Jigawa (5), Kogi (3), Taraba (2), Lagos (2), Ogun (1) reported OFAR activities. SPAT information reveals the following: Abia (8520), Adamawa (1950), Akwa Ibom (676), Cross River (600), Edo (567), Bayelsa (390), Ebonyi (354), Kaduna (300), Ekiti (45), Lagos (9). Information on number of MTPs established across each state indicates Imo 2124, Kano 1352, Ogun 265, Abia 228, Ebonyi 187, Ekiti 72, Kaduna 70, Nasarawa 68, Lagos 17, Akwa-Ibom 17, Zamfara 12, Taraba 4, Rivers 3, Kogi 3, Edo 2. The data provide revealed a decline compared to previous years. Very poor performance in establishment of OFAR, MTP and SPAT portends poor technology dissemination/delivery.

15.2.6: Farmers' Groups Development and Management

Formation, development and management of farmers' group is a major strategy for enhancing participatory extension. Shortage of extension agents demands that the available few works with farmers groups rather than individuals. With inadequate number of extension agents, it becomes expedient to work with group of farmers rather than individual. This will ensure more reach by the EA. Moreso, less time will be expended on the field. This background makes it more expedient for EAs to farm farmers' groups and ensure that they are well-managed. Data provided by states across the country indicated Ebonyi (15,000), Edo (1365), Lagos (610), Cross River (305), Niger (270), Akwa-Ibom (188), Taraba (167), FCT (165), Kogi (120), Abia (88), Yobe (80), Kaduna (75), and Ekiti (45) had the number of farmers' group attached respectively. Going by the number of

farmers in each of the states, there is clear indication that the activity of forming farmers into groups was poorly done across the states. Inadequate training on group formation and management could be the reason for this poor achievement.

15.2.7: Extension Agent: Farm Family Ratio (EA: FF)

The effectiveness of village extension agent (VEA) largely depends on the number of families serviced by the VEA. This is traditionally referred to as Extension Agent-Farm family ratio (EA:Farmer). The EA:FF ratio for a State is estimated by dividing the number of farm families by the sum of VEA and BEA(WIA) Achieving the recommended 1:800-1000 has proved very difficult over the years due to dwindling in the number of VEAs even in the face of increasing number of farmers across the states. Data provided include Adamawa (1:15,000), Edo (1:12,000), Yobe (1:11,865), Enugu (1:9702), Akwa-Ibom (1:9,385), Oyo (1:9,022), Cross River (1:7,894), Gombe (1:6,048), Lagos (1:5,641), Kogi (1:5,568), and Borno (1:5,000). Others were Kwara (1:4,839), Ekiti (1:4,082), Delta (1:3,765), Ebonyi (1:3,704), Niger (1:3,662), Taraba (1:3,600), Nasarawa (1:3,414), Zamfara (1:3,342), Bayelsa (1:3,183), Abia (1:2,952), Kebbi (1:1,721), and Ogun (1:1,514). All the states that provided data had high EA:FF ratio. This trend continues to worsen every year. No doubt, the need for an emergency solution is dire. The national average is estimated at 1:5,443.

15.2.8: Trainings of Farmers

For enhanced technology adoption, farmers' knowledge and skills need to be increased and sharpened regularly. This can only be achieved through regular and formal training and re-training. The efficiency of cooperative groups can also be bettered via training. Training should be a function of need and availability of fund. Training of farmers here indicates the number of farmers trained in 2022.

Kaduna trained 7500, Ekiti indicated 2670, while Kebbi (1500) and Edo (1365) recorded above 1000. Jigawa (700), Rivers (650), Taraba (468), Akwa-Ibom (220), Kwara (200) trained less than 1000 farmers in 2022. Lagos (115), Abia (81), and Niger (78) trained less than 200 farmers. Compared to previous years, training of farmers greatly reduced. This might not be unconnected with poor funding. In fact, majority of states across the nation did not stage any formal training for farmers in 2022.

15.2.9: Status of Farmer Field *Schools (FFSs)*

Farmer Field School (FFS) is a participatory extension approach which encourages farmer-centered using the agro-ecosystem analysis (AESA) for establishing learning fields and conducting daily activities through experiential learning with individual farmers. The FFS brings multiplier effects, thereby, enhancing VEAs'. Status of FFS is the number of FFS (and not the number of farmers participating in FFS) in different States of Nigeria. Taraba posted 160 FFSs in 2022, as Lagos indicated 81. Zamfara reported 32, while Kebbi has 30 FFSs. Edo 26, Ekiti has 16 in 2022 compared to 24 in 2021, Jigawa Abia 1, Oyo 1. The few states that provided data on status of FFS indicated that FFS as an extension approach is yet to be fully adopted as an extension approach across the States.

Table 15.2a: Extension Activities /Workers in the North-Central Zone

State	Years	Target/Achieve Ment	№ of Farm Families	SMSs	BES	BEA's/WIA	VEAs	MTRMs / QTRMs	FNTs/MTs	VEAs' Visits	OFARs	SPATs	MTPs	№ of Groups /Coops	EA/Farmer Ratio	№ of farmers Trained	№ of farmers field schools
Benue	2021	Tar	-	15	48	48	384	4	24	196	-	-	-	-		-	-
		Ach	-	4	4	-	2	4	16	176	-	-	-	-		-	-
	2022	Tar	-	-	46	-	268	4	24	196				-			
		Ach	-	-	3	-	5	2	16	85				-	0		
FCT	2021	Tar	200,000	36	26	26	131	12	24	7200	-	1310	324	120	1:1274	-	-
		Ach	175,000	24	16	9	75	-	-	3600	-	-	-	60	1:2083	-	-
	2022	Tar	200,000	36	26	26	131	12	24	7200	-	1310	524	120	1:1274	-	-
		Ach	175,000	24	16	9	75	-	-	3600	-	-		165	1:2083	-	-
Kogi	2021	Tar	464000	24	36	36	-	12	24	-	-	-	4	-		-	-
		Ach	69600	18	28	36	-	-	16	-	-	-	3	-		-	-
	2022	Tar	464000	24	36	36	192	12	24	48	4	-	4	300	1:2035	100	-
		Ach	696000	15	28	28	97	2	18	24	3	-	3	120	1:5568	-	-
Kwara`	2021	Tar	400000	20	64	64	400	12	-	-	-	20	-	16	1:862	-	-
		Ach	400000	16	12	8	12	1	-	-	-	-	-	3	1:20000	-	-
	2022	Tar	400000	16	64	50	400	12	24	-	4	4	-	16	1:889	200	-
		Ach	300000	16	12	50	12	1	-	-	-	-	-	-	1:4839	200	-
Nasarawa	2021	Tar	252606	18	32	32	253	12	24	-	-	-	78	-	1:886	-	-
		Ach	252606	16	25	16	62	4	20	-	-	-	78	-	1:3239	-	-
	2022	Tar	252606	18	32	32	253	12	24	-	-	-	68	-	1:886	-	-
		Ach	252606	14	14	14	60	-	-	-	-	-	68	-	1:3414	-	-
Niger	2021	Tar	-	15	46	46	1000	12	24	60000	-	-	-	108		-	-
		Ach	838461	15	46	30	221	0	-	12830	-	-	-	108	1:3340		-
	2022	Tar	919062	15	46	46	1000	12/3	24/12	60000	-	-	15	150	1:879	150	-
		Ach	919062	15	46	30	221	-	-	15000	-	-	-	270	1:3662	78	-
Plateau	2021	Tar	-	27	57	54	-	-	-	-	-	-	-	-	0	-	-
		Ach	-	25	42	1	-	-	-	-	-	-	-	-	0	-	-
	2022	Tar	325,025	18	54	54	450		26					-	1:645		
		Ach	-	16	54	9	433		5					-	0		
Taraba	2021	Tar	288000	8	30	30	288	12	4	-	-	-	-	240	1:906	-	-
		Ach	288000	4	16	8	36	5	3	-	-	-	-	142	1:6545	-	-
	2022	Tar	288000	8	30	30	288	12	4	-	-	-		240	1:906	-	-

		Ach	288000	8	14	8	72	-	3	-	2	-	4	167	1:3600	486	160	

Ach = Achieved; Tar = Targeted

Table 15.2b: Extension Activities/Workers in the North-East Zone

State	Years	Target/Achievement	№ of Farm Families	SMSs	BES	BEA's/WIA	VEAs	VEAs' Visits	MTRMs / QTRMs	FNTs/MTs	OFARs	SPATs	MTPs	№ of Groups /Coops	EA/Farmer Ratio	№ of farmers Trained	№ of farmers field schools
Adamawa	2021	Tar	-	24	46	46	320	12486	12	26		320	-	-	1:800	3097	14
		Ach	-	-	46	46	110	-	-	-	-	320	20	21,200	1:10000	3097	14
	2022	Tar	-	24	24	-	320	-	-	-	-	-	-	-	1:800	-	-
		Ach	-	-	-	-	88	-	-	-	-	1950	-	-	1:15,000	-	-
Bauchi	2021	Tar	8000	21	33	32	266	-	12	24	-	-	-	-	1:27	-	-
		Ach	10,000	15	25	17	110	-	-	-	-	-	-	-	1:79	-	-
	2022	Tar	987925	24	60	60	500	-	-	-	-	-	-	-	1:1764		
		Ach	987925	24	40	25	180	-	-	-	-	-	-	-	1:4819		
Borno	2021	Tar	514000	5	200	800	1000	-	-	-	-	-	-	65000	1:286	-	-
		Ach	258000	3	50	100	34	-	-	-	-	-	-	4200000	1:1925	-	-
	2022	Tar	650000	5	200	800	1000	-	-	-	-	-	-	750	1:361	-	-
		Ach	420000	2	31	50	34	-	-	-	-	-	-	-	1:5000	-	-
Gombe	2021	Tar	436809	8	66	139	463	29376	12	-	-	-	-	-	1:726	-	-
		Ach	436809	4	-	17	55	9135	-	-	-	-	-	-	1:6067	-	-
	2022	Tar	393105	11	66	139	463	29376	12						1:653	-	-
		Ach	393105	11	-	14	51	7542	2						1:6048	-	24
Yobe	2021	Tar	593,228	20	35	35	500	50	12	24	50	30	20	170	1:1109	25000	200
		Ach	593,228	10	13	15	35	20	--	--	-	-	-	70	1:11865	-	-
	2022	Tar	593,228	20	35	35	500	50	12	24	50	30	20	200	1:1109	-	-
		Ach	593,228	11	12	15	35	20	-	-	-	-	-	80	1:11865	-	-

Ach = Achieved; Tar = Targeted

Table 15.2c: Extension Activities/Workers in the North-West Zone

State	Years	Target/Achievement	№ of Farm Families	SMSs	BES	BEA's/WIA	VEAs	VEAs' Visits	MTRMs / QTRMs	FNTs/MTTs	OFARs	SPATs	MTPs	№ of Groups /Coops	EA/Farmer Ratio	№ of farmers Trained	№ of farmers field schools
Jigawa	2021	Tar	620010	5	-	-	-	1	-	-	-	-	-	-		-	-
		Ach	620,010	5	-	-	-	1	-	-	-	-	-	-		-	-
	2022	Tar	-	20	-	81	278	-	-	12	15	-	30	-		1000	10
		Ach	-	5	-	54	278	-	-	2	5	-	6	-		400	2
	2022	Tar	806400	28	28	450	200	26800	12	24	20	4200	3500	480	1:1241	15000	-
		Ach	35178	28	28	200	200	2050	7	14	0	300	70	75	1:88	7500	-
Kano	2021	Tar	1350000	8	176	-	1381	3	-	-	-	5500	1300	250		-	-
		Ach	6250	3	176	-	1381	3	-	-	-	5500	1300	100		-	-
	2022	Tar	-	32	176	48	1500	-	-	-	-	-	1352	-		-	-
		Ach	-	32	176	48	1500	-	-	-	-	-	1352	-		-	-
Katsina	2021	Tar	-	3	34	568	-	-	-	12	-	-	-	-		-	-
		Ach		3	34	126	-	-	-	12	-	-	-	-		-	-
Kebbi	2021	Tar	525000	8	30	340	500	20	-	-	12	-	-	-	1:625	2500	30
		Ach	525000	8	30	170	135	15	-	-	12	-	-	-	1:1721	2500	30
	2022	Tar	525000	8	30	340	500	20	-	-	-	-	-	-	1:625	1500	30
		Ach	525000	8	30	170	135	15	-	-	-	-	-	-	1:1721	1500	30
Zamfara	2021	Tar	-	10	40	40	500	-	-	-	-	-	-	-		-	-
		Ach	-	10	30	10	149	-	-	-	-	-	-	-		-	-
	2022	Tar	688207	8	40	40	320	-			-	-	12		1:1912		32
		Ach	401000	6	30	10	110	-			-	-	12		1:3342		32

Ach = Achieved; Tar = Targeted

Table 15.2d: Extension Activities/Workers in the South-East Zone

State	Years	Target/Achievement	№ of Farm Families	SMSs	BES	BEA's/WIA	VEAs	VEA Visits	MTRM / QTRMs	FNTs/MTs	OFARs	SPATs	MTPs	№ of Groups /Coops	EA/Farmer Ratio	№ of farmers Trained	№ of farmers field schools
Abia	2021	Tar	650,000	18	38	38	424	22256	12	26	5	-	-	-	1:1407	306	-
		Ach	410345	18	38	38	132	11228	-	14	-	-	-	-	1:2414	170	-
	2022	Tar	650000	18	38	38	424	-	12	24	5	8520	372	144	1:1407	306	81
		Ach	410345	18	36	38	101	-	4	24	-	8520	228	88	1:2952	81	1
Anambra	2021	Tar	10000	20	20	20	-	5	12	24	-	40	2	200	1:500	-	-
		Ach	4050	20	20	4	-	5	-	24	-	20	1	95	1:1013	-	57
	2022	Tar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Ach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ebonyi	2021	Tar	100,000	15	24	26	-	20000	12	26	-	5000	515	25000	1:3846	-	-
		Ach	700000	15	24	26	-	14120	`1	17	-	2550	185	15000	1:26923	-	-
	2022	Tar	1000000	15	24	26	500	21000	12	26	-	5000	515	25000	1:1901	-	-
		Ach	500000	15	24	26	109	13400	3	17	-	354	187	15000	1:3704	-	-
Enugu	2021	Tar	800,000	30	17	17	342	396	-	72	-	-	50	-	1:2228	-	-
		Ach	242,542	10	11	4	21	100	-	48	-	-	-	-	1:9702	-	-
	2022	Tar	800,000	30	17	17	342	396	-	72	-	-	50	-	1:2228	-	-
		Ach	242,542	10	11	4	21	100	-	50			-	-	1:9702	-	-
Imo	2021	Tar	-	15	38	38	286	286	-	24	-	-	2793	-	0	-	-
		Ach	-	15	27	0	70	70	-	16	-	-	2056	-	0	-	-
	2022	Tar	-	15	27	27	27	-	12	24	-	-	2793	-	0	-	-
		Ach	-	15	27	27	27	-	-	1	-	-	2124	-	0	-	-

Ach = Achieved; Tar = Targeted

Table 15.2e: Extension Activities/Workers in the South-South Zone

State	Years	Target/Achievement	No of Farm Families	SMSs	BES	BEA's/WIA	VEAs	VEA Visits	MTRMs / QTRMs	FNTs/MTs	OFARs	SPATs	MTPs	No of Groups /Coops	EA/Farmer Ratio	No of farmers Trained	No of farmers field schools
Ak/Ibom	2021	Tar	689095	30	40	40	274	33600	12	26	-	5125	234	1624	1:2195	500	-
		Ach	685095	28	40	18	66	7986	-	18	-	1026	12	288	1:8156	160	-
	2022	Tar	685095	30	40	40	274	53	12	26	-	2645	106	640	1:2182	500	-
		Ach	685095	27	34	20	53		-	13		676	17	188	1:9385	220	-
Bayelsa	2021	Tar	95497	12	8	32	174	58	12	24	-	636	29	50	1:464	-	-
		Ach	95474	4	-	-	29	-	-	-	-	390	-	50	1:3292		
	2022	Tar	95,494	12	8	8	174	-	12	29	5	667	29	-	1:525	-	-
		Ach	95,494	3	-	-	30	-	-	-	-	390	-	-	1:3183	-	
C/River	2021	Tar	-	15	18	18	144	13632	12	24	-	355	-	1500	0	3180	24
		Ach	481506	15	18	18	71	8221	-	16	-	150	-	500	1:5410	3180	24
	2022	Tar	-	15	18	18	144	12288	12	26	-	1280	-	646	0	-	-
		Ach	481506	15	18	0	61	5450	0	12	-	600	-	305	1:7894	-	-
Delta	2021	Tar	545987	12	25	25	200	-	12	24	6	-	25	-	1:2427	-	-
		Ach	545987	12	25	15	133	-	-	14	-	-	3	-	1:3689	-	-
	2022	Tar	545987	12	25	25	200	-	12	24/12	4	-	-	-	1:2427	-	-
		Ach	545987	12	25	25	120	-	-	24	-	-	-	-	1:3765	-	-
Edo	2021	Tar	300,000	9	36	-	288	208	12	26	3	1600	20	7140	1:1042	7140	-
		Ach	300,000	7	1	-	-	144	-	10	3	567	2	1,365	#DIV/0!	1,365	-
	2022	Tar	350,000	9	36	36	288	208	12	26	-	1600	20	7140	1:1080	7140	26
		Ach	360,000	7	22	-	23	144	2	10	-	567	2	1365	1:12000	1365	26
Rivers	2021	Ta	450,000	3	96	-	283	96	12	24	-	-	3	-	1:1590	1,000	-
		Ach	28,000	3	9	-	66	48	3	12	-	-	3	-	1:424	-650	-
	2022	Tar	450,000	3	96	-	283	96	12	24	-	-	3	-	1:1590	1,000	
		Ach	28,000	3	9	-	66	48	3	12	-	-	3	-	1:424	650	

Ach = Achieved; Tar = Targeted

Table 15.2f: Extension Activities/Workers in the South-West Zone

State	Years	Target/Achievement	№ of Farm Families	SMSs	BES	BEA's/WIA	VEAs	VEA Visits	MTRMs / QTRMs	FNTs/MTs	OFARs	SPATs	MTPs	№ of Groups /Coops	EA/Farmer Ratio	№ of farmers Trained	№ of farmers field schools
Ekiti	2021	Tar	200,000	16	16	16	112	24,576	12	24	-	320	256	100	1:1563	900	90
		Ach	200,000	14	16	15	58	11,136	5	8	-	60	124	72	1:2740	240	24
	2022	Tar	200000	16	16	16	112	24575	12	24	-	320	250	100	1:1563	3000	90
		Ach	200000	12	16	14	35	6245	3	7	-	45	72	45	1:4082	2670	16
Lagos	2021	Tar	-	36	16	16	128	12672	12	26	12	15	30	500	0	250	81
		Ach	558420	36	16	9	90	7418	3	14	2	9	17	610	1:5641	115	81
	2022	Tar	-	36	16	16	128	12672	12	26	12	15	30	500	0	250	81
		Ach	558420	36	16	9	90	7418	3	14	2	9	17	610	1:5641	115	81
Ogun	2021	Tar	360000	20	20	20	126	72189	12	-	-	-	105	-	1:2466	-	-
		Ach	168000	17	18	18	105	60500	3	-	-	-	75	-	1:1366	-	-
	2022	Tar	360000	20	20	20	126	-	12	12	3	-	460	-	1:2466	-	-
		Ach	168000	16	18	17	94	-	-	6	1	-	265	-	1:1514	-	-
Ondo	2021	Tar	180000	16	18	18	256	950	12	24	-	-	-	248	1:657	-	-
		Ach	98000	10	18	11	48	75	-	-	-	-	-	67	1:1661	-	-
Osun	2021	Tar	256000	5	31	31	248	5952	12	24	-	2	-	65	1:918	300	-
		Ach	256000	5	-	-	30	744	-	24	-	-	-	26	1:8533	140	-
	2022	Tar	256000	5	31	31	248	5952	12	24	-	2	-	65	1:918	300	
		Ach	256000	5	-	-	30	650	-	14	-	-	-	32	1:8533	120	
Oyo	2021	Tar	415,030	20	33	33	224	63360	12	24	5	-	-	-	1:1615	-	27
		Ach	415,030	14	28	15	40	14784	1	24	1	-	-	-	1:7546	-	1
	2022	Tar	415030	20	33	33	264	63360	12	24	5	-	-	-	1:1397	-	27
		Ach	415030	14	28	12	34	12480	-	16	-	-	-	-	1:9022	-	1

Ach = Achieved; Tar = Targeted

15.3: List of Technologies Under OFAR, MTP, SPAT

The major strategies adopted by the ADPs to disseminate proven new technologies to farmers are the On-farm Adaptive Research (OFAR), Management Training Plots (MTPs) and Small Plot Adoption Techniques. Technologies disseminated under these strategies are usually aimed at addressing particular field problems. Hence, technologies for dissemination would differ from one state to another. Such technologies include introduction or popularization of new varieties, new agronomic practices, control of pests and diseases, varietal performance evaluation, across crop, livestock, fisheries and agro-processing etc. Each technology is expected to be replicated in different locations within the state. Relevant inputs for the trials are usually supplied by the extension agency. Table 15.3 shows that only few ADPs (Bauchi, Yobe, Akwa-Ibom, Cross River, Edo and Ogun) reported the list of technologies conducted under OFAR, MTP and SPAT. These results were not encouraging compared to that of2021; although there were ADPs who adopted one or two of the technologies as their strategy for dissemination of technology in 2022. The results also showed that there was more prospect of adoption of the OFAR MTP and SPAT technologies in the southern ADP zones than in the north. They also showed that there were positive adoption of one or more of the technologies across the states as there were some states that have adopted either OFAR, MTP, SPAT or a combination of the two technologies.

Table 15.3: List of Technologies Tried Under OFAR, MTP and SPAT

State	OFAR	MTP	SPAT
North-East			
Adamawa			Plant population (14) Varietal (270) Agrochemicals (220) Microdozing (348) Albib (1050), Aflasafe (21) Composting (27)
Bauchi	Effects of fertilizer on millet (1)	Gawal-01—Rice (24 plots) TGX1448-1-2 Soybean (20 plots) SAMAZ 15 Maize C5R-01 Sorghum (24 plots) SAMNUT 24 (92 plots) SAMPEA 20-PRB (57 plots) NOILER BIRDS (280) Goats (42) Naphier grass (200) Sampea 14 (148-IT99K-573-1-1	Collaborative trials
Borno	-	2 2 1	Varietal trial (4) Fertilizer response (2) GAP (2)
Yobe	Promotion of Sampea 19 (20) Promotion of Samnut 24 (25)	Spacing (15) Micro dosing (15) Spraying Technique (15)	Planting Spacing (20) Fertilizer application (20) Spraying (20)
Taraba	Pod borer resistant variety demonstration (6) Rice seed multiplication (10)	PBR -Cowpea (4)	
North-West			
Kaduna	-	GAP (70)	GAP (300)

State	OFAR	MTP	SPAT
Kano	Seed Variety Spacing Spraying Innoculum Aflasafe		Maize Sorghum Millet Soyabeans Groundnut Cowpea Cucumber
Kebbi	Demonstration of cowpea pods borer (20) Resistance variety (6) Demonstration of Samsogh 47 variety (8)	NIL	Rice Advice technology (200) Pod-borer cowpea variety (20) Safe use of Agroxcals (35)
Jigawa	NIL	NIL	Fertilizer tree concept (1)
Zamfara	SRI Practices (20)	-	-
South-East			
Abia	NIL	C/M.T (38) C/ME (20) C/M/SP (46)	C/ME (250) C/M/SP (1500) C/M/COCOYAM (200) Y/MIN.Fb CP (220) Y/M/G (180) SHEEP/GOAT (160) SWAMP RICE (200) RABBITERY (240) PIGGERY (210) POULTRY (190)
Anambra	-	-	Yam minisetts Late maize Plantain/Banana Soil erosion
Enugu	NIL	Late Planting (5); Plant distance (2)	Swamp Rice (25); Cassava Site (22)
Imo		YMCV (Alt row) (420) CMV (500) YMCV (Conventional (480) Artificial brooding of local chicks (246)	YMCV (Alt row) (480) CMV (500) YMCV (Conventional (500) Artificial brooding of local chicks (280)
South-South			
A/Ibom	Evaluation of Pro vitamin A Cassava variety IN AKS Evaluation of productivity and acceptability of broiler chicken raised on sand litter Effect of productivity of culturing catfish using maggot as protein source Evaluation of soil amendment and fungicide application for the control of Taro Leaf Blight (TLB)	Cassava/Maize/Vegetable (6) Yam/maize/ Vegetable (4) Shrimp rice management (5) Poultry Production (4) Concrete fish pond (2) Plantain, banana, cocoyam (1)	Cassava/Maize/Vegetable (109) Yam/maize/ Vegetable (15) Dr Season Vegetable (119) Swamp Rice (30) Poultry Production (80) Pig Production (20) Artificial brooding of local chicks (34) Concrete fish pond (7) Forest vegetable (4) Plantain, banana, cocoyam (19)
Cross River	Evaluation of Privita Cassava variety adoption in CRS	Oil palm nursery (105) Establishment of good practice in cocoa (53)	Cassava, Maize IC (150) Row planting in rice (200) False parboiling of rice (45) Cassava sole (250)

State	OFAR	MTP	SPAT
		Use of juveniles for fish ponds (30)	Homestead fish pond (25) Sheep/goat upgrading (28) Poultry management (1001) Use of Juveniles (45) Stocking ponds
Delta	Evaluation of Pro vitamin A Cassava variety		
	Evaluation of insecticides in control of Yam beetle		
	Effect of feeding artificial diet on growth of deschromics nitoticus		
	Demonstration of protein enriched floor		
Rivers		Yam minisett (3) Dry season vegetable (3)	Yam minisett (12) Homestead fishpond (10) Cassava/Maize (60) Dry season vegetable (18) ??? of sheep/goat (8)
South-South			
Bayelsa	NIL	Plantain/cocoyam Cassava/maize Inter crop of spat Prod/processing Bredding Goat Chicks Home head fish Prod cost mgt Snat farms Dry season e.g production of swamp rice	Maize/Cassava Mgt (40) Seed yam Droth(50) Fish pond Mgt (5) Plantain cocoyam (40) Yam /maize/Cassava(25) Swamp Rice prd (60) Cassava/cocoyam (70) Sheep/Goat (30) Rabbit/eaaring (45) Artificial breeding (25)
Edo	Evaluation of yield and Acceptability of sweet potato varieties grown under three ecological zones. Utilization of concentrate for fattening of small ruminant Demonstration of the economics of mono- sex culture of tilapia (Oreochromis niliticus) Demonstration of the Utilization of 2 varieties of pro-vit A cassava being popularize in Edo State	Cassava Based Crop Mixture Yam Minisett Technology Maize production Soyabean Cowpea Rice production	Yam-Based Crop Mixture Cassava-Based Crop Mixture Yam Minisett Technology Plantain/banana production Pineapple production Soyabean Cowpea Sweet Potato Rice Cocoyam production
South-West			
Ogun	Past harvest effects of inorganic and organic fertilization Comparison of the use of orange flesh sweet potato (OFSP)Past and flour in making confectionaries	Seed yam production Sole cassava production using ALKILIMO Tools Maize/cassava intercropping using ALKILIMO tools	Seed yam production (68) Storage of grains in pic Bags (48) Control of insect pest in maize (141) Pot borer resistant in cowpea (3) Fattening of sheep and Goat (61)

State	OFAR	MTP	SPAT
			Treatment of foot rot deases (124) Value addition to fish (74)
Ondo	-	-	Maize (opp) (106) Cassava (sole) (36) Plantain intercrop with cassava Vegetable (drilling method) (18)

Note: There were no data from 14 states and FCT

15.4: Radio Programmes

Radio is a powerful communication tool acknowledged as a very important means of reaching the rural farmers. Radio programmes has shown the potential for agricultural extension to benefit from the reach and the relevance that broadcasting information can achieve. Agricultural programmes aired on the radio in different states in 2021 and 2022 are shown on Table 15.4. Obviously, there was a decline in the number of agricultural programmes aired on radio across the states in 2022. The reason for this trend, according to data extracted from the ADPs, was poor funding in the face of high cost of airtime and reduction in budget for the radio programmes by their various sponsors. However, some states (Plateau, Gombe, Taraba, Yobe, Kaduna, Kano, Katsina, Kebbi, Jigawa, Zamfara, Abia, Ebonyi, Akwa-Ibom, Ekiti, Lagos and Ogun) reportedly aired some agricultural radio programmes in 2022 (Table 15.4).

The table shows that the Northern states had more radio programme aired in comparison to the Southern states. It implies that many farmers, even in the rural areas could have access to those radio programmes which could have sensitized and provided awareness to various technologies and innovations for increased farm yield productivity and farmer's livelihood.

Table 15.4: Radio Programmes (Agriculture) Aired in 2022

State	Programmes title	Number Proposed		Number achieved		Time aired	Station aired	Programme duration	Language	Cost of airing per annuum	Sponsor
		2021	2022	2021	2022						
North-Central											
FCT	Agric Scope Green Land	24	24	4	Nil	7:00pm	Kapital Fm	15minutes	English	-	Collaboration with Kapital Fm
Kogi	Farmers forum	52	52	-	-	6:30pm	Radio Kogi	30min	-	1300000	ADP
Kwara	Maize Prog.	1		1			99.1FM	45 mins	English & Yoruba	45,000	KWSG
	Rice Prog.	1		1			99.1FM	45 mins	English & Yoruba	45,000	KWSG
	Cowpea Prog.	1		1			99.1FM	45 mins	English & Yoruba	45,000	KWSG
Nasarawa	Wealth Alternative	48	48	35	-	6:30pm	NBS	30mins	English	2,160,000	NBS
	Mu Koma Gona	48	48	35	-	2:00pm	NBS	30mins	Hausa	2,160,000	NBS
	Arziki na Gona	48	48	35	-	3:30pm	PFN	30mins	Hausa	1.700,000	PFN
	Noman Shinkafa Jari	-	48	-	-	5:00pm	NBS	1hour	Hausa	2,160,000	Farm Net GIZ
Niger	Advocacy for more gender inclusion in Agriculture					8:30am	Radio	1hr	English		MARD
Plateau	Women in Active Farming	3	3	3	1	4-430pm	FM Jos	30mins	Hausa and Birom	64,000	PLSG
North-East											
Adamawa	Noma Tushen Arziki	52	52	52	0	4:00pm	Gotel	1hour	Hausa	-	OXFAM
Bauchi	Akoma Gona	52		32		8.30	BRC	30 mins	Hausa	800,000	BSADP
	Noma da Raya Karkara	52		32		4.30	Albarka	30 mins	Hausa	10404	BSADP
Borno	Kuloro	16	24	14	-	7:30pm	BRTV	30min	Kanuri	-	BOSG
Gombe	Noma Tushen Arziki	52	48	32	48	8:30pm	GMC	30mins	Hausa	-	UNDP
Taraba	PROSELL Kekif Noma Tushin Arziki	26	26	5	6	11:00am	TSBC	60mins	Hausa	-	PROSELL

State	Programmes title	Number Proposed		Number achieved		Time aired	Station aired	Programme duration	Language	Cost of airing per annuum	Sponsor
		2021	2022	2021	2022						
Yobe	Zauren Manoma	48	45	40	30	1:00pm	YBC	1hour	Hausa	150,000	YBSG/NGOs
North-West											
Kaduna	Noma Babbar Sana'a	104	104	-	-	3:15pm	Nagarta Radio	15mins	Hausa	600,000	KADA
	Kasaurara Manoma	104	104	-	-	9.45 am	FRCN	15 mins	Hausa	796,000	KADA
	Wheat Production	-	10	-	6	9:30am	KSMC	30mins	Hausa	-	-
	Ina Manoma	-		-							
Kano	Noma da Kiwo	13	13	13	13	7:30pm and 5:30pm	Rahama Radio	30mins	Hausa	-	KSADP
	Kartane Samuanoma	53	53	52	30	8:30pm	Katsina state Radio	30 mins	Hausa	120000	KTARDA
aKatsina	Naduke	96		96		-	GM	20 mins	Hausa		KTARDA
Kebbi	Sallama Manoma	50	60	30	45	-	Kebbi Radio	30min	Hausa	-	KANDA
	IFAD take kira.	45									
	Naduke	50									
	Don Manoma	50									
Jigawa	Jarda Jaeoran Manoma	24	24	12	8	5:00pm	Jigawa Radio	30mins	Hausa	420,000	Jigawa State
Sokoto	Mukoma Gona	18				8.30pm	R/Radio	30 mins	Hausa	1,200,000	SADP
Zamfara	Fillin Zanfara Project	22	24	18	12	3:30pm	Zamfara Radio	30 mins	Hausa	540,000	ZADP
South-East											
Abia	Aka Ajaja	12	12	4	2	11am	BCA	45mins	Igbo	25000	ADP
Ebonyi???	Agric One hour Agronomic	54	54	20	34	4:30pm	EBBC	1hour	English	2,187,000	MANR
Enugu	Kahamalu	48		26		1:30-3pm	FRCN	1 hr 30mins	Igbo	960,000	Min of Agric
		48		28		6:30-7pm	ESBS	30 mins	English	720,000	Min of Agric
		48		28		5-6pm	Dream FM	1 hr	Igbo	540,000	Min of Agric

State	Programmes title	Number Proposed		Number achieved		Time aired	Station aired	Programme duration	Language	Cost of airing per annuum	Sponsor
		2021	2022	2021	2022						
	Sensitization on effective use of the one stop Agric center. Training on correct planting of Cassava value chain.										
	Empowerment of women and youths through distribution of poultry pens, feeders & drinkers, Docs and feeds	-		-							
South-South											
Akwa-Ibom	Agric. Education Programme in our dialect	50	30	20	15	5:30pm	AKBC Radio (90.5)	30 mins	English and Ibibio	25,000	Min of Agric
	Radio farmer	104	104	-	-	6:30pm	AKBC	15mins	English/Efik	2,000,004	AKSG
	Radio Discussion	20	15	18	8	7:45pm	Xcel FM (106.9)	1hour	English and Ibibio	30,000	Min of Agric
	Farm Jingles	100	40	70	23	5:45pm	Comfort FM (95.1)	15mins	English and Ibibio	10,000	Min of Agric
	Farm Slogans								English and Ibibio	8,000	Min of Agric
Cross River	World food day program	1	-	1	-	-	CRBC	-	-	-	-
Edo	Farming Hints	12		2		6.30pm	EBS	30mins	Pigin English	600,000	Edo ADP
South-West											
Ekiti	Agbeloba	288	288	196	168	5.45 am	BSES	10 mins	Yoruba	1 million	State Govt
Lagos	Boluyo	52	52	23	30	6:25pm	Radio Lagos 107.5fm	-	-	-	-
Ogun	Agbe-Afokosoro	52	52	52	29	8.30 pm	OGBC	15 mins	Yoruba	6000000	OGSG

State	Programmes title	Number Proposed		Number achieved		Time aired	Station aired	Programme duration	Language	Cost of airing per annuum	Sponsor
		2021	2022	2021	2022						
	New Iroyin	5		2		Evening	OGBC, Root FM, Fresh, Rock city	2 mins	English & Yoruba		Min of Agric
Osun	Aye Agba	-		-			OSBC		Yoruba	1.6 million	
	Vaccination of animals	-		-		3 SLOTS	OSBC	3	Yoruba	9,000	Min of Agric
	Distribution of Cocoa seedlings	6		6		6 slots	OSBC	6	Yoruba	20,000	Min of Agric
Oyo	Agbeloba	52	52	-	-	5:00pm	AMULUDUN	15mins	Yoruba	1,144,000	OYSG

Note: There were no data from 7 states

15.5: Television Programmes

Television offers a great avenue for disseminating (audio and video) agricultural information to farmers. Such programmes are meant to create awareness and showcase successes in agricultural technology adoption. The basic aim is to enhance technology adoption through improved knowledge and skills of farmers so as to improve their productivity. Table 15.5 provides information on such agricultural programmes aired in different States in 2022. Only few states (Gombe, Katsina, Zamfara, Abia, Ebonyi, Akwa-Ibom, Cross River, Ekiti and Ondo) provided information on agricultural programmes televised in 2022. There was a slight increase in the number of such programmes by the ADPs compared to the 2021 records.

The table shows that majority of the states that adopt television programmes as a means of information dissemination to farmers were from the Southern Zone. This implies that the farmers in the southern part of the country could have been more exposed to new technologies and practices which could be assessed through television programmes.

Table 15.5: Television programmes aired in different States in 2022

State	Programmes	No. Proposed		No. achieved		Time of Airing	Station Aired	Programme duration	Language	Cost of Airing per annum	Sponsor
		2021	2022	2021	2022						
North-Central											
FCT	Agric Scope	12	12	Nil	Nil	-	NTA	-	-	-	-
Kogi	Farmers forum Back to land	52	52	NIL	NIL	6:30pm	NTA	30mins	English, Igala, Ebira, Yoruba, Hausa	4320000	ADP
Kwara	Agbeloba	12		-			NTA Ilorin	25 mins	English & Yoruba	540,000	KWS
Niger	Advocacy for gender inclusion in agriculture	-	-	-	-	-	TV	30mins	English	250,000	MARD
Nasarawa	Noma Turshi Arziki	24	24	22	-	4:00pm	NBS	30mins	Hausa	1.980,000	NBS
North-East											
Adamawa	Noma Tushen Arziki	-	-	-	-	7:45pm	ATV	45mins	-	-	ADST
Gombe	Noma da Kiwo	-	-	2	52	8:30pm	GMC	30mins			Sakatara
	Fall Distribution and Post-Harvest Management	-	-	-	1		NTA	30mins			
	Revenue Produce	-	-	-	2		Amana	1hour	English/ Hausa		BOI Radio
North-West											
Kano	Noma da Kiwo	6	6	6	-	8:00pm	ARTV Kano	30mins	Hausa	-	KSADP
Katsina	Naduke	52	52	52	30		KTTV	30 mins	Hausa	231000	KTARDA
Jigawa	Jarda Jagoran Manoma	103	103	62	-	7:30PM	NTA Dutse	30mins	Hausa	300,000	Jigawa State Government
Zamfara	Noma Tushen Arziki	6	12	3	4	11pm	NTA	30 mins	Hausa	648,000	NTA

State	Programmes	No. Proposed		No. achieved		Time of Airing	Station Aired	Programme duration	Language	Cost of Airing per annum	Sponsor
		2021	2022	2021	2022						
South-East											
Abia	AKA AJAJA	12	12	1	1	7:30am	BCA TV	45mins	Igbo	25,000	ADP
Ebonyi	Ebonyi Today	1	1	1	1	11:00pm	EBBC and Salt	1hour	English	4,500,000	MANR
Enugu	Agric half hour	24		16		6-6:30	NTA	30mins	English	720,000	Min of Agric
	Farmers' forum	24		12		5-6pm	ESBS	1 hr	English	360,000	Min of Agric
South-South											
Akwa Ibom	Afe Mbono	50	50	40	40	11:30am	AKBC TV	45mins	Ibibio	50,000	Min of Agric
	Farm Jingles	100	100	60	60	5:45pm	AKBC TV	10mins	English	20,000	Min of Agric
	Farm Slogans	100	100	70	65	1:30pm	AKBC TV	10mins	English	20,000	Min of Agric
	TV Discussions	20	25	20	8	5:30pm	AKBC TV	30mins	English and Ibibio	60,000	Min of Agric
	Agric Documentation	5	5	5	4	10:00am	AKBC TV	2hours	English	80,000	Min of Agric
	The Farmer	52	52								
Cross-River	Good morning Cross River	1		Every wednesday	Every wednesday	7:30am	CRBC	2hrs	English	-	CRBC
Edo	Farming Hints	52	52	2	-	6.30pm	EBS	30mins	Pidgin English	600,000	Edo ADP
South-West											
Ekiti	Lahere	52	52	48	28	5.30 pm	BSES	30 mins	Yoruba	1.2 million	State Govt
Ogun	Agbelere	52	-	52	-	5.30 pm	OGTV	30 mins	Yoruba and English	-	Min.of Agric
Ondo	Obalagbe	10	10	-	-	-	-	-	-	-	
	Fadama nsebebe	-	52	-	52	9:00pm	OSRC TV	30mins	Yoruba and English	2,200,000	Government

State	Programmes	No. Proposed		No. achieved		Time of Airing	Station Aired	Programme duration	Language	Cost of Airing per annum	Sponsor
		2021	2022	2021	2022						
Osun	Aye Agba	-		-							
Oyo	Ise Agbe	52	52	-	-	5:00pm	BCOS	30mins	Yoruba	3,900,000	OYSG

Note: There were no data from 15 states

15.6 Problems Affecting the Effective Performance of ADPs in Nigeria

Undoubtedly, all Agricultural Development Programmes (ADPs) has one objective in common which is to increase food production and farm incomes for the majority of the rural households in the defined project regions, thus improving the standard of living and welfare of the farming population, with the hope of reducing abject poverty. The ADPs appeared to have strong support to continue as agricultural development implementing agents in the states. This however, has not been translated into support in budgetary funding, so that most Agricultural Development Programmes have experienced serious funding constraints when Bank loan support declined. The major constraint to the performance of ADPs across the six geographical zones as depicted on Table 15.6 showed that inadequate funding appears across all the zones of the Country. This was followed by shortage of trained extension personnel and inadequate mobility as other major problems affecting the poor performance of the various ADPs across the geographical zones of the country.

15.6: Problems Affecting the Effective Performance of ADPs

States	Problems
North-Central	
Niger	-Inadequate funding of OFAR, MTRM, FNT -Inadequate funds for field activities. -Insufficient trainings of availability staff -Inadequate machineries
Plateau	-Poor funding -Lack means of mobility -Shortage of staff due to retirement and death of personnel
FCT	-Aging of staff population - Poor funding -Poor staff motivation -inadequate mobility
Taraba	-Funding constraint - Inadequate trained personnel -Obsolete infrastructure.
Nassarawa	-Inadequate funding - Inadequate staffing -Inadequate mobility
North East	
Borno	Inadequate Staffing Poor funding
Yobe	Lack of mobility Poor funding Insecurity Inadequate staffing
North-West Zone	
Kano	Poor mobility Inadequate funding Inadequate trainings on modern agricultural techniques
Katsina	Inadequate funding Lack of support and intervention from federal government Understaffing
Kebbi	Poor funding Inadequate capacity building Understaffing Lack of effective supervision
Jigawa	Poor funding

States	Problems
	Inadequate staffing Inadequate staff capacity building
Sokoto	Poor funding Inadequate capacity building Inadequate qualified staff and replacement of staffs
Zamfara	Inadequate staff due to retirement Lack of mobility Poor salary structure Inadequate support from state government
South-East	
Anambra	-Poor funding -Lack of mobility -Low motivation of staff -Paucity of extension agents -Inputs for farm demonstrations
Ebonyi	-Inadequate number of extension agents. -Inadequate funding -Lack of mobility
Enugu	-Inadequate number of extension agents -Non releasing of budgetary allocation -In existence of synergy between ADP and donor assisted projects -Lack of mobility
Imo	-Lack of operational funds -Retirement of key staff without replacement.
South-South Zone	
Akwa-Ibom	-Poor funding -Insufficient extension staff -Inadequate field vehicles for monitoring -Non-payment of hazard transport allowance
Bayelsa	Poor funding Shortage of staff
Cross-river	-Paucity of funds -Shortage of staff
Delta	-Late or non-release of funds - Low capacity-building and training for staff - Very low staff strength
Edo	-Inadequate frontline extension workers -Inadequate fund for field activities -Inadequate operational vehicles
Rivers	- Lack of funding - Lack of personnel
South-West	
Ekiti	Insecurity Poor funding
Oyo	Inadequate funding Poor mobility Inadequate staffing
Ondo	Poor funds Lack of mobility for extension staffs
Ogun	Dilapidated office buildings Poor mobility Insecurity Inadequate extension personnel and support staff
Osun	Lack of funding Lack of mobility

States	Problems
Lagos	Funding Staffing Mobility

Notes: There were no information from 8 states.

15.7 : NGOs Participation in Extension Activities

The information presented on Table (15.7) shows the NGOs participating in extension service delivery across the six geo-political zones in Nigeria. All the state ADPs with the exception of Katsina, Kaduna, Jigawa and Kano (NW), Enugu, Ebonyi, Abia and Imo (SE) and Taraba states (NC) provided information on the activities of NGOs in their respective states. The various NGOs collaborated with the state ADPs in the areas of extension support; livestock; crop production livelihood project; health and nutrition; and value chain. The major NGOs identified were Sasakawa, CRS, JICA, IFAD, FAO, USAID, GIZ, UNBP, AGRA, WISE, CEEPE, YMCA, Harvest Plus, MEDA, Mercy Corp, FFL, UNDP, TRIMMING, N-Power PROJECT, and CARITA.

Table 15.7 NGOs Participating in Extension Service Delivery

State	NGO	Activities	Location	No of Farm families Reached
North-Central				
Kogi	Sasakawa	Extension	5	60
	CRS	Seed Enterprise and general services	3	
	JICA	Field trials and capacity building		
Benue	BN-CARES	Provision of farm equipment		27,393
	UNBP/GEF/IAP	Demonstrations	2 LGDs	5,472
	GIZ	Capacity buildings	20 LGDs	9000
	SASAKAWA	Demonstrations	5 LGDs	500
Niger	AGRA	Capacity building	----------	
	IFAD	Trimming	----------	
	USAID	----------	----------	
	JICA	----------	----------	
	HARVEST PLUS	Sensitization	20 LGAs	
Kwara	WISE	Cash crop and tree growing	Asa and Ilorin South	20
	CEEPE	Farming	Asa and Kaima	40
Nasarawa	YMCA	Private Extension	Obi,Ikposage	------
	AGRA	Transfer of Technology	Lafia, Dom, N/Eggon	-
Plateau	GIZ	Rayfield	5LGAs	29,000
FCT	JICA	Horticulture, Nutrition and Hygiene	Dabi and Ibwa	180
North East				
Adamawa	Mercy Corps	-	7 LGAs	-
	NURU	-	3 LGAs	-
	UNDP	-	2 LGAs	-
	NG CARES	-	21 LGAs	-
	UNDP-GEF	-	2 LGAs	-
	CRS	-	4 LGAs	-

State	NGO	Activities	Location	No of Farm families Reached
Bauchi	Ox Farm	Promote e-driven economic growth and improved condition for rural farmers	Gamawa,Katagum,Ningi,Darazo, Alkaleri and Tafawa Balewa.	-------
	Mennonite Economic Development Associates (MEDA)	Women and youth, market ouitlet, linkage and processing.	Bauchi,Toro,Dass,Warji, Ganjuwa,Katagum and Jamaare.	-
Borno	NBC	DRY Season	Jere	1745
	Mercy corp	Agro-training	MMC	710
	G.I.Z	AGRED	Jere/Mafa	2380
Gombe	SASSAKAWA	Extension Services	2 LGA	500
	UNDP	Resilience	1 LGA	92*200
	TRIMING	Irrigation	State	1250
Yobe	Save the Children	Livelihood	3 LGAs	5000
	Mercy Corp	Livelihood	5 LGAs	7000
	CRS	Livelihood	2 LGAs	3000
	UN	Agriculture	4 LGAs	-
North-West				
Kaduna	GIZ	GAP & FBS	Across the state	Over 100,000
	AGRA		Across state	Over 30,000
Kano	IITA	-	44 LGAs	-
	ICRISAT	-	44 LGAs	-
	SASAKAWA	-	44 LGAs	-
Kebbi	OXFARM	Capacity building of farmers and extension staff	B/kebbi, Jega, Danku, Wasagu	5000
Zamfara	IFAD	Extension services	All over the state	-
	NG CARES (FADAMA III)	Input support	Statewide	-
	TRIMMING PROJECT	Input support	Maradun T/mafara, Bakur	-
South-East				
Abia	Determinant Extension Service	Soil/Plant health management	Umuahia	---------
Imo	Foundation for livelihood (FFL).	Assessment of biofortified crops	Imo	11,000
South-South				
Akwa-Ibom	Domita Farms	Crops, L/S, Fisheries	Uyo	220
	Vika Farms	Integrated	Uruan	65
	Isobara Farms	Crops	EssiienUdim	30
	Edet Farms	Processing	EssiienUdim	25
	Cnc Compost Serv. Ltd	Crops	All zones	40
Cross River	USAID Feed the Nation	Video production	Cross river	25
Delta	USAID-FEED	-	-	2000
	NAEAS	-	-	2000
	THE FUTURE	-	-	2000
Edo	LAPO	Credit and extension support to farmers	Statewide	-

State	NGO	Activities	Location	No of Farm families Reached
	GIZ	Training of farmers	Statewide	-
	IDRC	Training of trainers	Statewide	-
	Caritas	Training of Youth	Statewide	-
South-West				
Ogun	JDPC	Extension services	6LGAs	-------
	SASAKAWA	Extension services	15LGAs	-------
	JDPC	Extension services	7LGAs	16,000
	GIZ	Cassava	11LGAs	13,000
	AGRIQ	Cassava/Rice, value chain	12LGAs	6,000
Ondo	St. Peters Catholic Church, Akure	Training of Ext. Agents and farmers	Akure	120
	ILO	Training of Ext. Agents and farmers on Child labour.	4 LGAs in Ondo State	500
Osun	JICA	Technical support	LGAs	600
Oyo	CATO	Technical support	LGAs	100
	JDPM OYO	Weed management	Oyo and Ogbomosho	1500
	JDPC IBADAN	Weed management	Ibarapa Axis	1800
Lagos	BATN foundation	Product improvement	State wide	775,000
	Dangote	----------	State wide	775,000
	ALLA AQUA	----------	State wide	770,000
	IITA	Training of youth in agripreneaur	State wide	75,000

Note: There were no information from 10 states

15.8 : Training Needs

The trainings conducted to staff and farmers in other to improve their basic knowledge and skills by ADPs across the zones are revealed in Table 15.8. The subject matter where training needs were actually identified were GAP, Advanced TV/Radio production, social media, ICT, crop production, livestock/fisheries, pest and disease management, record keepings, soil and water conservation, capacity buildings in satellite imagery, agricultural machineries and operations modern rural extension techniques, capacity building and gender development and empowerment, soil testing, step down trainings, FFS trainings, monitoring and evaluation and the configuration of ODK for data collection analysis among others. The category of personnel requiring these trainings included VEAs, M&E staff, EAs, Farmers, Extension staff, RD staff, ICT staff, Research personnel, BES, VEW, WIA, SMS, Planning and Statistical Officers, Enumerators, Technical staffs, BEA, Women. The table showed that majority of the states in the zones conducted trainings for their staff and farmers with the exception of a very few states. This further showed that there were training needs in the agricultural zones; even though, the ADPs were actively involved in the capacity building of the farmers and staff.

The subject matter where training needs were actually identified were GAP, advanced TV/Radio production, social media, ICT, crop production, livestock/fisheries, pest and disease management, record keepings, soil and water conservation, capacity buildings in satellite imagery, agricultural machineries and operations modern rural extension techniques, capacity building and gender development and empowerment, soil testing as well as step-down trainings.

Table 15.8: Training Needs of ADPs

State	Subject matter	Category of personnel	No of personnel
North-Central			
Kwara	Training on handling of post-harvest looses	All extension agents	300
	Training on proper maintenance of tools and machineries	All extension agents	300
	Training on more ways to manage disease outbreak in commercial farming.	Fishery officers, Extension agents and fish farmers.	50
Kogi	Pre-season training	SMS, BES, BEA, EAS	60
	Post season training	SMS, BES, BEA, EAS	60
Niger	Long term (Schools)	Snr.Intern, Jnr staff	
	Short term (seminal/widely)	Snr,Intern,Jnr staff	
	NYSC (Agric Practical)	Graduate	
	IT Students (Agric project)	Undergraduate	
	Preservation of fruits and vegetables	WIA,SMS,,BES,AES	
	Integrated pest management (IPM)	CEO,DCEO,ZEO,EAs	
FCT	Performance Improvement	GL 06 - 15	227
	Team Building and Leadership Skills	GL 13 - 17	113
	Community Participation and Conflict Sensitivity	GL 08 - 15	
	Strategic Planning and Project Implementation	GL 13 - 17	113
	New and Improved Technology	GL 07 - 14	217
	In-Crop Production, Processing New and Improved Technology Livestock and Fisheries Production and Processing	GL 07 - 14	217
Taraba	Extension skill	EA	72
	Climate Smart Agriculture	Extension Personnel	116
	Basic ICT	Extension Personnel	116
Plateau	Radio Training	-	-
	Publication	-	-
Nasarawa	Pre-season Training	Extension staff	155
North-East			
Adamawa	Pre-season	Senior staff	66
Borno	TOT trainings	SMS	10
	Step down training	EAs	54
	FFS Training	EAs	30
Gombe	Configuration ODK	Enumerator	4
	Information Technology	EAs	25

State	Subject matter	Category of personnel	No of personnel
	Record Keeping	Farmers	400
Yobe	Pre-season training	EAs	50
	Conducting survey training	Enumerators	50
North-West			
Kano	GAP	EAs	1500
Katsina	Advanced TV/Radio production techniques	TV & Radio producers (KTARDA)	2
	Social media usage	PRO & MPO	2
	Advanced audio visual and camera operations techniques	Camera man	1
Kebbi	Crop production	EAs	70
	Pest control	EAs	70
	Disease control	EAs	50
	Livestock production	EAs	50
	Fisheries	EAs	60
	Soil and water conservation	EAs	40
	Computer	Enumerator	20
Jigawa	Capacity building on crop estimation using satellite imagery	M & E Officers, Technical Staff and Agric Ext. service officers	6
	Training on emergency response and disaster risk reduction	Technical Staff and Agric Ext. service officers	6
	Training on agric machineries operation and maintenance	Agric mechanization officers	2
	Capacity building on ICT to extension officers	Block extension supervisors (BES), Village extension agents (VIA) and Women in Agriculture (WIA)	366
	Capacity building on climate mitigation and resilience	M & E Officers, Technical Staff and Agric Ext. service officers and other field staffs	450
	Training on improved techniques on IYCF	WIA Staff, M &E Staff	37
	Capacity building on homestead income generating activities for women	WIA Staff	35
Sokoto	GAP	EAs	200
	Data collection, compilation and analysis	M & E	5
Zamfara	Climate change	EA/FARMERS	4
	Soil Doc Kit training NPK test	EA/FARMERS	4
	Agro web	EA/FARMERS	4
	Negative effect of agrochemical	EA/FARMERS	3
South-East			
Abia	Expansion of value	EA's	60
	Climate smart Agric	SMS	18
	E-Extension	SMS/EA's	105
	Livestock management	EA's/SMS/Farmers	105
	Poultry management	EA's/SMS/	105

State	Subject matter	Category of personnel	No of personnel
	Fishery production/Management	EA's/SMS	105
	Agro forestry		105
Anambra	Good agronomic practices	EA's, BEA's	72
	Minisett in Banana	EA's, BEA's	72
Ebonyi	Good Agronomic practices (GAP)	ZMs,ZEOs,SMS,BEAs,EAs	100
	Crop value chain(Rice &Cassava)	ZMs,ZEOs,SMS,BEAs,EAs	----
	Establishment of OFAR,MTPs	All field staff	----
	Effective extension methods	ZMs,ZEOs,SMS,BEAs,EAs	-----
	Upgrade in ICT	ZMs,ZEOs,SMS,BEAs,EAs	-----
	Post-harvest handling of crops	ZMs,ZEOs,SMS,BEAs,EAs	-----
	Good record keeping	ZMs,ZEOs,SMS,BEAs,EAs	------
Enugu	FNTs, BM for Village Extension Agents	EAs	22
	TOT for the SMS on various subject matters	SMS	10
Imo	Computer usage or application	All staff	200
South-South			
Akwa-Ibom	Mushroom Production	EAs, BEAs, BESs, SMSs	53, 20,34, 27
	Greenhouse Vegetable Production	-do-	-do-
	Artificial Insemination	-do-	-do-
	Fish (egg) Hatching	-do-	-do-
Bayelsa	MTRM	PM, DIRECTORS, SMS, ZMSs and AEOs	
	MT	EAs, DES, DDES, ZMSs, AEOs, BEAs, BES.	
	PRESEASONAL TRAINING	EAs, SMS and BEA	
Cross Rivers	Training on video	Extension staff	100
	Shep approach	Extension staff	40
Delta	Pre-season training.	All front staff and extension field.	Not specified
	Management of value Chain in cassava processing and stabilization.	All front staff and extension field.	Not specified
	ICT training	Admin, accounting, HRD, PME and others	Not specified
Edo	Agricultural production survey training	Enumerators	36
	Policy dialogue engagement in extension service delivery	SMS,BES	
	Management of Beetle	SMS,BES	50
	Infestation in yam production	SMS,BES	32
	Cadre Harmonise framework on food and nutrition	SMS,BES	2
	TOT of good agronomic practices on cassava production.	BES and EAs	10
	Workshop on effective extension delivery services in Nigeria	Director of Extension	1
	Cassava-Based workshop	Extension Officer	1
	Seminar on bee keeping	Extension Officers	3
	Seminar on poultry production	Extension Officer	1

State	Subject matter	Category of personnel	No of personnel
	Refresher TOT for FBS trainers and supervisors	MIS Officer	1
	Cat fish production	Famers	47
	Industrial training on Agric production	SMS	15
	Training of Trainers on Cat fish production/processing	EAs, CPO and I.T students	15
	Hatching of clarias fingerlings	Technical Staff	46
	Fishery & pig production	Technical Staff	15
	Crop product & Animal Husbandry	Technical Staff	20
	Snail Production	Technical Staff	36
	Cassava stem multiplication	Technical Staff	20
	Weather Report Training	Enumerators	36
	Market survey Training	Enumerators	36
	Audio-visual media production Tech for Agric& Rural Development	CCO/Cameraman	2
	Computer Network & Internet connectivity	MIS	2
	Budget preparation skills	Director of planning Monitoring &Eval/MIS	3
	Monitoring & Evaluation in Agric Business	Evaluation officer	3
	Mainstreaming gender & the invulnerable groups into Developmental programmes	Head women in Agriculture	
South-West			
Ogun	Training of Trainers (ToT) in Agricultural and Rural Development.	Management staff	2
	Extension Communication Strategies and Dissemination.	Senior staff	2
	Gender issues and Development	Senior staff	2
	Credit Procurement and Administration	Senior staff	2
Osun	Rural and Agricultural management training	EAs/SMS	10
Oyo	Effective extension delivery/ E-extension	GL 08-16	14
	Basic computer training	GL 08-16	8
	Climate Smart Agriculture	GL 08-16	14
	Training on value addition	GL 08-15	8
	Good agricultural practices on major crops grown in Nigeria	GL 08-15	6
	Good agricultural practices of non-crop	GL 08-15	12
	Enterprises	GL 08-15	16
	Communication training	GL 08-15	3
Lagos	Fortnight Training	Extension Officers	72
	Climate Smart Agriculture	Extension Officers	72
	E-extension on interactive Voice System	Extension Officers	72
	Community Approach to Extension	Extension Officers	72
	Advanced Management Courses	HFA, Head WIA, DES	3
Ekiti	Training on scientific reporting and ICT	SMSs	15
	Training on Good Agricultural Practice (GAP)	EAs	30

State	Subject matter	Category of personnel	No of personnel
	Agric Business Practice and implementation management	Planning officers and Enumerators	
	Management on Extension and advisory services	EOs and EAs	10
	Gender development and empowerment.	WIA	10

Note: There were no information from 5 states.

15.9: Major Problems of Extension Services in Nigeria.

Agriculture is the bedrock of economic development in Nigeria. However, the development of the sector cannot be achieved without an efficient and effective extension system. Thus, there is the need for a well-articulated and comprehensive Agricultural Extension Policy (AEP). The Nigerian extension service is bedeviled by several problems as identified on Table 15.9 across the states in the six agro-ecological zones of the country. These include inadequacy and instability of funding, poor logistic support for field staff, use of poorly trained personnel at local level, ineffective agricultural research extension linkages, insufficient and inappropriate agricultural technologies for farmers, disproportionate Extension Agent: Farm Family ratio and in recent times the prevalence of insecurity especially in the NE and NW zones. This showed there were still problems in extension service in all the six (6) zones in Nigeria.

Table 15.9: Problems of Extension Services in Nigeria

State	Problems
North-Central	
Kogi	Lack of fund Inadequate field and technical staff Inadequate mobility for field officers Lack of replacement of a retired or death staff.
Niger	Inadequate mobility Inadequate funding of extension activities Inadequate extension workers.
FCT	Poor funding Inadequate funding of extension activities and inadequate extension workers.
Nasarawa	Inadequate vehicles for inspection and supervision of projects and farming activities in the state.
Taraba	Poor funding Inadequate trained personnel Inadequate working materials,
Plateau	Insufficient extension services Insecurity Lack of means of mobility Poor funding
North-East	
Adamawa	Lack of funding
Borno	Inadequate trainings and retraining Poor funding and incentives
Yobe	Lack of mobility Inadequate personnel Poor funding

State	Problems
North-West	
Kaduna	Inadequate Staff Inadequate motivational incentive
Kano	Inadequate mobility Inadequate incentive
Kebbi	Poor funding Insufficient extension service providers Inadequate capacity building of EAs
Jigawa	Inadequate extension personnel Inadequate training of agricultural extension staff High ratio of extension officers to farmers Disparity of salary structure for agric extension agent Inadequate ICT knowledge Inadequate farm inputs Ignorance of the tradition and custom of local communities Inadequate transport facilities
Sokoto	Little or no training and retraining Inadequate funding Lack of mobility
Zamfara	Poor training of EAs Poor renumeration Inadequate mobility
South-East	
Abia	Lack of funding
Anambra	Poor funding Lack of mobility Low motivation in terms of stipends and payment for field activities
Ebonyi	Inadequate number of extension agents, Inadequate funding Lack of mobility
Enugu	Inadequate funding Inadequate number of VEAs Lack of mobility.
Imo	Poor funding Lack of mobility Low motivation in terms of stipends payments for field activities. Very costly farm inputs The Imo ADP also could not acquire the inputs for farm demonstration.
South-South	
Akwa-Ibom	Inadequate extension personnel Non-payment of hazard/field transport allowance Lack of funds /processing equipment for WIA demonstration Lack of mobility/weather outfit
Bayelsa	Fund is a major setback to extension activities Shortage of EAs Lack of mobility
Delta	Poor stipends of extension staff/field staff. Lack of inputs for demonstration.
Edo	Lack of mobility Poor funding and inconsistent release of budget after approval Inadequate qualified frontline extension agents Non-availability of some critical farm inputs
Rivers	Lack of mobility from place to place -Lack of modern facilities digitization and digitalization to meet the global demand

State	Problems
South-West	
Ekiti	Mobility problem Insufficient extension kits
Oyo	Low number of staff Inadequate logistics Inadequate mobility Inadequate training and E-training
Ondo	Poor funding Inadequate field and office staffs Inadequate mobility
Ogun	Inadequate insurance policy Mobility Issues Insecurity Poor funding
Osun	Poor funding Lack of mobility
Lagos	Poor funding Inadequate staff due to redeployment Lack of mobility

Note: There were no information from six states

15.10: Problems Needing Research in the Nigerian Agricultural Sector

Table 15.10 shows identified areas of challenges in the agricultural sector across the six (6) zones that required researches in 2022. The challenges were categorized based on nine (9) prioritized areas; crops, horticulture, livestock, fisheries, agro-forestry, irrigation, agricultural mechanization, extension services and women in agriculture. Problems for research in crops were; pest and disease resistant varieties as well as identification of diseases and control measures, drought resistant varieties, nutrient enrichment/bio-fortification of crops and availability of certified seeds, etc.

- In horticulture, the areas that required research were; pest and disease resistant horticultural varieties, horticultural crops production for income diversification and cross breeding etc. Feed formulation, artificial insemination/ embryo transfer technology, breeding, livestock management, ranching, vaccine development, development of simple and affordable technologies in livestock production etc. were identified as important challenges that required researches in the area of livestock.
- For Agro-forestry, the following were identified as problems needing research; grafting/breeding, increased yield, variety development, value chain development, farming system technology adoption, production and distribution of seedlings, pest and disease control, deforestation control, fruit premature abortion etc. in the area of irrigation; hydroponic/dripping irrigation, supportive drainage system, development of indigenous irrigation equipment, cost of irrigation, soil acidity, irrigation scheduling/scheme, soil and water management and management of pest and diseases in irrigation farming system were identified as problems needing research.
- The development of simple, affordable machines in all agricultural processes and the distribution of such machines are the key areas needing serious research in terms of agricultural mechanization as indicated by all the six (6) zones.

- For extension services, areas such as training/retraining/capacity building on Information and Communication Technology (ICT) of extension agents, scaling up of innovations, extension service delivery etc. were identified to be the areas for research.
- Similarly, women involvement in agriculture: there should responsive research on trainings of women in areas like; group dynamics, value addition, extension service delivery and preservation techniques were identified as problems that require research. Also, it was observed that research should be mounted on the accessibility of farm lands by women for agricultural activities across all states.

Table 15.10. Problems Needing Research.

State	Problem	Identified Area(s) of Research
North-Central		
FCT	Crop	Early maturing varieties of crops. Pest and disease tolerant varieties. Drought tolerant tomato varieties.
	Horticulture	Pest and disease tolerant varieties. Improved shelf life/storage ability. High-yielding varieties.
	Livestock	-
	Fisheries	-
	Agro-Forestry	Alley cropping/farming. Security of Alley crops.
	Irrigation	-
	Agricultural mechanization	-
	Extension Services	Extension methods/approaches. Extension supports. Partnership in extension delivery.
	Women in Agriculture (WIA)	Labour-saving devices. Gender matters. Group dynamics in WIA
Kogi	Crop	Cassava (Identification of symptoms of diseases and control). Rice (Identification of symptoms of diseases and control). Groundnut (Identification of symptoms of diseases and control).
	Horticulture	Cashew; Research in cashew stem girdler and fruit scrapper. Oil palm; Research on increased yield and disease control. Citrus; Research on mosaic disease control and addressing problems/challenges of low yield.
	Livestock	Feed formulation techniques on how to produce high quality animal feeds.
	Fisheries	Retraining on feed formulation and fish farming.
	Agro-Forestry	Mango; Technical training on grafting. Banana; Research on increased yield. Guava; Research on more varieties.
	Irrigation	Effective /efficient water distribution. Cost effective irrigation system. More innovative research on irrigation development of simple and affordable drilling machine that can be operated and afforded by rural farmers.
	Agricultural mechanization	Fabrication of affordable simple machines. Training on durability of agricultural machines.
	Extension Services	Training and development of Information Communication Technology (ICT) for extension staff. Training on legislated Agricultural extension policy.

		Training on regular and timely budgetary provision for extension establishment of innovation platform.
	Women in Agriculture (WIA)	Training of Subject Master Specialist (SMS) of WIA on new nutritional approach. Training of SMS WIA on exclusive breastfeeding. Training of Women and Youths on new skills.
Kwara	Crop	Research on how to curb the problem of fall army worm on maize production. Research on how to prevent cassava mosaic on the field.
	Horticulture	Research on increase in gap and spacing especially on cashew to encourage canopy development before overlapping. Nursing of fruits and orchard for higher income generation.
	Livestock	Breeding artificial insemination and animal nutrition.
	Fisheries	Research on low resistance of Clarisspp to infections. Research on other fish species for commercial fish farming. Research on natural fish feeds and supplements.
	Agro-Forestry	Tree crops e.g Cashew, Cocoa and Mango value chain development.
	Irrigation	Exploitation of groundwater for irrigation through drilling. Handling of pest and diseases in irrigation farming. Soil fertility.
	Agricultural mechanization	Fabrication/Training on calibration of planter, fertilizer, broadcaster and broom sprayer/fabrication.
	Extension Services	Research on how to curb the problem of fall army worm on maize by providing fall army worm maize resistant variety. Inadequate Extension Agents in Ratio of 1:3000.
	Women in Agriculture (WIA)	Research on vegetable processing and preservation to extend shelve-life of the crops.
Nasarawa	Crop	Need for higher yield crops resistant to drought. Inclusion of vitamin A crop gene that are more nutrient efficient. Research into the best way to eradicate the prevalence of Army Worm in Maize production cycle.
	Horticulture	-
	Livestock	There is need for training of staff on livestock production and Management to all livestock officers in the state.
	Fisheries	There is need to research into feed formulation both floating and extruded to ascertain the most suitable for industrial scale fish farming. Improved hybrid of fingerling (genetic and breeding) production. Market and credit facilities accessibility
	Agro-Forestry	There is need for research in farming system related to Agro-forestry technology for farmers' adoption.
	Irrigation	-
	Agricultural mechanization	-
	Extension Services	There is need for research dissimilation through the Monthly Training Review Meeting (MTRM), Forth Nightly Training (FNT)for new innovation and skill to all Extension Agents (EAs).
	Women in Agriculture (WIA)	There is need for training of Block Extension Agents (BEAS) on processing and utilizing of Vitamin A Cassava and Orange fleshed sweet potato to reduce malnutrition, especially on women and children in order to prevent deficiency that causes diseases but boost immune system. Women should be encouraged to participate in farming activities rather than leaving the entire process in the hands of men as observed in the field.
Niger	Crop	More funding due to high costs of inputs.

	Horticulture	-
	Livestock	Improvement in the livestock breeding by using artificial insemination and using alternative herbs in treating livestock.
	Fisheries	Starting capital. Poor management system. Cost of feeding. Feeding fish with live tissues to cut-down length of production i.e. from 6-4 months of production. The use of sex reversal hormones to feed cat fish fry to produce all male cat-fish that burst their growth performance.
	Agro-Forestry	Natural disaster. Land use problem, capital, tree nursery problem. Damages caused by animal/man. Land tenure, serious problem as farmers/foresters may be prevented from growing permanent trees when land is gotten on lease or other means. Production and distribution of tree seedlings. There is high level of illiteracy among farmers and are unwilling to accept or adopt innovations.
	Irrigation	Inadequate funding of programmes. Operation, maintenance and sustainability of irrigation facilities. Providing water regulation by the functioning irrigation scheme. Providing users with agro-technical assistance and monitoring plan field operation schedule.
	Agricultural mechanization	Non availability of working equipment. Fabrication of a simple intermediate device for weeding, harvesting and processing of agricultural produce.
	Extension Services	Inadequate of extension activities. Linkage using ICT Accessibility to modern technology of agriculture e.g. Greenhouse. Agronomy, sexual and asexual propagation technologies.
	Women in Agriculture (WIA)	Inadequate number of WIA staff. Lack of canteen for trials of agricultural products. Preparation of soya bean yoghurt. Solutions on processing and preservation of complementary food.
Plateau	Crop	Control of army worm. Control of Blight in Potato. Production of strawberry and pineapple.
	Horticulture	Control of fruit flies in Mango. Control of disease in orange and avocado pear.
	Livestock	Control of viral diseases such as new castle, African swine fever and Pest des Petite Ruminants (PPR).
	Fisheries	Hatching of fingerlings.
	Agro-Forestry	Control of fruit flies and diseases.
	Irrigation	Use of solar water pumps.
	Agricultural mechanization	Use of simple motorized farm tools such as Rotary hand cultivator and jab planters.
	Extension Services	Adoption rate of new technologies.
	Women in Agriculture (WIA)	Processing of perishable food commodities.
Taraba	Crop	-
	Horticulture	-
	Livestock	Research on livestock feeds and natural resources management is required if the incessant farmers-herders clash is to be curtailed.
	Fisheries	-

	Agro-Forestry	Pragmatic government efforts driven by research solution is clearly needed in curtailing the unhealthy habit of destroying the forest/environment through practices like deforestation.
	Irrigation	-
	Agricultural mechanization	Simple and environmentally friendly machines needs to be discovered to solve farming problems associated with drudgery so as to encourage youth participation in agriculture.
	Extension Services	Research on how to curtail the funding problem bedeviling extension services is earnestly needed for the survival of agricultural extension.
	Women in Agriculture (WIA)	-
North-East		
Adamawa	Crop	Maize – Variety. Smart Agriculture, Crop Geometry. Plant Population.
	Horticulture	Banana – Tissue Culture. Mango – Budding.
	Livestock	-
	Fisheries	-
	Agro-Forestry	-
	Irrigation	-
	Agricultural mechanization	-
	Extension Services	-
	Women in Agriculture (WIA)	-
Borno	Crop	Improved and certified seeds to be available at village level.
	Horticulture	-
	Livestock	Disease management. Cattle ranching.
	Fisheries	Modern aquaculture practices
	Agro-Forestry	Utilization of forest resources in paper and pulp industry.
	Irrigation	-
	Agricultural mechanization	Modern irrigation machinery that is affordable and available.
	Extension Services	Training of more extension agents on modern farming.
	Women in Agriculture (WIA)	-
Yobe	Crop	Training on managing the effect of climate change. Soil and water conservation. Technical report writing.
	Horticulture	Training management on tree crop. Extension management foe sustainable agric production. Post-harvest and storage loses.
	Livestock	Disease management. Feed formulation.
	Fisheries	Diseases and marketing.
	Agro-Forestry	Shelter belts establishment.
	Irrigation	Training on irrigation farming system. Disease and pest management. Post-harvest handling storage and Value addition.
	Agricultural mechanization	Training on modern agricultural mechanization tools and equipment. Training of staff on machine operation. Local content development training of staff on farm machine operation.
	Extension Services	Training management-participatory methodology in agricultural extension management.

		Training for effective data collection and report compilation. E-Extension service.
	Women in Agriculture (WIA)	Training on agricultural commodity value addition management for agricultural business. Processing agricultural produce and value addition.
North-West		
Jigawa	Crop	
	Horticulture	Mapping of economic trees
	Livestock	Assessment of livestock count. Animal disease control.
	Fisheries	-
	Agro-Forestry	-
	Irrigation	-
	Agricultural mechanization	Survey on identification number of tractor own by private and for public need to be assess order to compare the number needed and that available in the state.
	Extension Services	
	Women in Agriculture (WIA)	Diseases affecting local chicken e.g. Coccidiosis to maximize women income. Research on how to reduce cholesterol in groundnut oil locally using natural resources. Research on local indigenous trees that can be grown at home that require low demand of water.
Kaduna	Crop	Cereal Crops. Pulse seeds-inoculation. Improved varieties.
	Horticulture	Budding, grafting etc. Nursery of horticultural plants.
	Livestock	Diseases and pest control in Ruminants and non-ruminants, poultry disease and pest. Animal feeds formulation, feeds and feeding stuff. Embryo transfer technology.
	Fisheries	Feeds formulation. Fish Diseases and pest. Breeding and hatching. Fish oil extraction technology.
	Agro-Forestry	-
	Irrigation	Simple irrigation technique.
	Agricultural mechanization	Simple farm machines. The effect of cow dung on soil engineering properties; Infiltration rate, soil texture and porosity.
	Extension Services	Capacity building on new technologies. Communication skills (ICT). Participatory approach, FBS. Scale-up innovation and funding.
	Women in Agriculture (WIA)	Nutrition. Land reforms to enable youth and Women have access to land for farming.
Kano	Crop	Value Addition. Human Nutrition and Bio-fortification.
	Horticulture	-
	Livestock	-
	Fisheries	Feed mill contamination.
	Agro-Forestry	-
	Irrigation	-

	Agricultural mechanization	-
	Extension Services	-
	Women in Agriculture (WIA)	-
Katsina	Crop	Research on all major crops (maize, cowpea, sorghum, cotton) grown in the state especially in the area of pests and diseases like insects, worms, aphids and many more.
	Horticulture	Training on horticultural crops production for diversification of farmer's income sources.
	Livestock	Livestock production especially in the area of breeding, animal feed production and development as well as management of ranches are areas that need extensive research in the state.
	Fisheries	Fish production as emerging enterprises.
	Agro-Forestry	Research on Agro-forestry to control desert encroachment as the state is sharing boundary with Niger republic.
	Irrigation	-
	Agricultural mechanization	-
	Extension Services	Extension service delivery and training to improve service delivery amidst the insecurity problem. .
	Women in Agriculture (WIA)	Participation of women in agriculture and especially in the areas of processing and packaging
Kebbi	Crop	Pre harvest technology. Post-harvest technology. Improve storage system.
	Horticulture	New varieties of fruits and vegetables. Training on pest and disease management. Training on production technology.
	Livestock	Improved animal production technology and disease control.
	Fisheries	New improved technology on fisheries.
	Agro-Forestry	New technology on tree production.
	Irrigation	Training on water and soil management.
	Agricultural mechanization	New agricultural machine and operations.
	Extension Services	Capacity building.
	Women in Agriculture (WIA)	Capacity building for women extension agents.
Sokoto	Crop	Provision of improved varieties of various crops by research institute. Identification and control of different crop diseases.
	Horticulture	Availability of improved seeds that are highly resistant to pest and diseases.
	Livestock	Breeds for cross-breeding with indigenous breeds. Feed formulation using local feed materials, feed conversion efficiency for indigenous breeds fast growing livestock.
	Fisheries	Affordable /cost efficient fish feed formulation/production postharvest/processing and marketing best practices. Productivity of rural community engagement in fishing.
	Agro-Forestry	New technology on tree production. Better forage trees for livestock use. Low cost and high efficient machines.
	Irrigation	Preservation of farm produce. Irrigation scheduling. Management of irrigated soils.
	Agricultural mechanization	Fabrication of new agricultural processing machine that is simple and affordable.
	Extension Services	Training and retraining, mobilization for the staff and additional recruitment of junior officers. Research methodology.

		Teaching analysis/adoption rate.
	Women in Agriculture (WIA)	Funds and training. Preservation techniques and agro-processing of agricultural produce for perishable crops.
Zamfara	Crop	-
	Horticulture	Flower abortion.
	Livestock	Contagious Bovine PleuroPneumnia (CBPP)
	Fisheries	-
	Agro-Forestry	-
	Irrigation	Soil acidification
	Agricultural mechanization	Management of power tillers
	Extension Services	Training on group formation. Training on extension methodologies.
	Women in Agriculture (WIA)	Training on processing sesame, rice and soyabean.
South-East		
Abia	Crop	Cocoyam blight, Maize fall army, Cassava blight. Research on seed development and storage.
	Horticulture	Early maturing and drought resistant crops.
	Livestock	Common disease of poultry and other livestock.
	Fisheries	Local feed production and feed conservation rate.
	Agro-Forestry	Fruit abortion. Value addition on agro forestry produce.
	Irrigation	Effective utilization of irrigation facilities for off-season production.
	Agricultural mechanization	Low cost and affordable farm machinery for farm operatives (weeding, planting, and harvesting).
	Extension Services	Strengthening the Agricultural Development Programs (ADPs) for effective and efficient agricultural extension service delivery.
	Women in Agriculture (WIA)	Value addition training for young women. Youths and women involvement in agriculture.
Anambra	Crop	Sigatoka disease in plans. Army worm attach of Maize.
	Horticulture	Infertility in economic fruit-crops abscission.
	Livestock	Problem of inbreeding in Ruminants.
	Fisheries	Cost of fish feed.
	Agro-Forestry	Rottening of economic plants like Guava, Oranges, Pawpaw etc. Research into die back witnessed in banana. Research into monkey extinction due to infestation.
	Irrigation	-
	Agricultural mechanization	Stumping land to make them tractable.
	Extension Services	-
	Women in Agriculture (WIA)	Perishability of vegetables during glut.
Ebonyi	Crop	Stem borer attack on rice and maize. Cocoyam leaf blast.
	Horticulture	Horticultural varieties. Importation of cross breeds.
	Livestock	Breeding of local chicks materials should be developed. Effectiveness of plat form for sheep & goat. Development of vaccine for swim farm pigs.
	Fisheries	Breeding of fish fingerlings. Raising of juvenile. Fish feed formulation & feeding formular.
	Agro-Forestry	Fruit abortion & delayed fruiting of economic trees. Distortion and rottening of guava fruits. Improved method of processing oil palm fruits.

	Irrigation	Inadequate land development. High cost of irrigation facilities.
	Agricultural mechanization	Land tenure problems.
	Extension Services	Climate change. Effectiveness of e-extension.
	Women in Agriculture (WIA)	Adoption of fortified orange flesh sweet potato on the health and nutrition outcome of rural people. Adoption of pro-vita cassava as the major source of swallow by rural people.
Enugu	Crop	Technologies to cut down the cost of line planting in rice. Research on cocoyam fungal attacks.
	Horticulture	-
	Livestock	Improvement of local goat with exotic breed through cross breeding. Technologies in ranching muturu cattle.
	Fisheries	Fish feed formulation using local sourced materials like carbohydrates and protein material.
	Agro-Forestry	Technologies to demonstrate agro-forestry crops that the state has comparative advantage
	Irrigation	Local fabrication of irrigation equipment using indigenous materials such as Achara.
	Agricultural mechanization	Price affordability of Agricultural mechanization machineries.
	Extension Services	Increase in extension and research contact by constant conduct of Research Extension Farmer Input Linkage System (REFILS), On-Farm Adaptation Research System (OFARS) and MTRMs.
	Women in Agriculture (WIA)	Women and Youths empowerment.
Imo	Crop	Premature wilting of yam vines. Tomato wilt/blight. Development of crop varieties and species that are climate change resilient. Disease and pest resistant crops. Bio-fortified crops.
	Horticulture	Stem/fruit borers in guava. Wilting/blight in cucumber and tomato. Resistant varieties.
	Livestock	Production of hybrid birds with local birds. Feed formulation and production. Hatcheries.
	Fisheries	Alternative fresh water fish to catfish for culture. Production of heterotisfingerlings. Production of monosex Tilapia.
	Agro-Forestry	Effective and affordable mushroom production techniques. Management of natural resources assets in Agro-forestry. Secure sustainable energy from Agro-forestry. Research in Agro-forestry smart agriculture to suit climate change.
	Irrigation	Effective and less expensive irrigation system. Research on different irrigation system.
	Agricultural mechanization	Construction/fabrication of farm equipment with lower cost.
	Extension Services	Marketability of farm produce i.e. changing farmer' attitude from "produce and sell" to "produce to sell". Use of ICT in extension services.
	Women in Agriculture (WIA)	The value addition of orange flesh sweet potatoes/maize for income generation. Different forms of processing specific crop production. Production and processing of exportable products.
South-South		

Akwa-Ibom	Crop	Improvement in the use of oil palm bunch ash in control of army worm attack in maize. Effective control of nematode attack for the production of pepper & tomatoes. Research on updated technologies/agronomic practices.
	Horticulture	Research needs on updated technologies.
	Livestock	Utilization of locally made simple incubator for hatching eggs in poultry production.
	Fisheries	Culturing of other aquatic animals other than catfish. Production of floating fish feed from locally sourced raw materials. Fish feed ingredients and supplements.
	Agro-Forestry	Production of mushroom spawn from locally sourced raw materials.
	Irrigation	-
	Agricultural mechanization	-
	Extension Services	-
	Women in Agriculture (WIA)	Effective control of pasteurization temperature on production of tiger nut milk with a nutritive value.
Bayelsa	Crop	Research needs in rice cultivation.
	Horticulture	-
	Livestock	Animal feed formulation from Cassava and Plantain peels. Livestock farming in poultry, goatry, piggery, rabbitry etc.
	Fisheries	Animal feed formulation from waste.
	Agro-Forestry	Research on the construction of different sizes of honey bee hives and the development of more methods of harvesting bee honey.
	Irrigation	-
	Agricultural mechanization	Needs of tractors and milling machines for farmers' productivity.
	Extension Services	Assessment of awareness of new technologies in farming system.
	Women in Agriculture (WIA)	Women empowerment on processing of crops in making confectionaries.
Delta	Crop	Yam Beetle infestation of yam tubers. Tuta Absoluta on Tomato. Army warm on maize and others.
	Horticulture	
	Livestock	Investigation on Bird Flu and Swine fever.
	Fisheries	
	Agro-Forestry	Black Sigatoka disease on plantain. Fruit premature abortion and rottening.
	Irrigation	-
	Agricultural mechanization	-
	Extension Services	Proper integration of Training and Visit (T&V) and FFS and harmonization to extension models into one unit.
	Women in Agriculture (WIA)	Alternative storage Devises for vegetable.
Edo	Crop	Tomato wilt and Army worm
	Horticulture	-
	Livestock	Management of dropping/dung in populated environment.
	Fisheries	Feed Formulation. Fingerling production. Effective poly-culture management.
	Agro-Forestry	Vegetative propagation for rapid seedling multiplication.
	Irrigation	Water requirement for various crops /Rate of application. Irrigation management in rice fields.
	Agricultural mechanization	Mechanized palm oil production for small palm oil processor. Storage of Agricultural crops. Use of mechanical weeder.

	Extension Services	Mainstreaming of Community Development Driven (CDD) in Extension. Effective use of Social Media Platforms in Extension service delivery. Women in Agriculture (WIA) . Preservation of fruits and vegetables.
	Women in Agriculture (WIA)	Production of spores for edible mushroom.
Rivers	Crop	Training on new production technologies. Eradication of army worm on maize.
	Horticulture	Pest control needs and effective fertilization
	Livestock	Feed cost. Swine fever on pig.
	Fisheries	Problems of effluence discharge due to urbanization. Cost of fingerlings and power for water changing.
	Agro-Forestry	Problem of afforestation and encroachment.
	Irrigation	Supportive drainage system that will back irrigations. Land tenure system.
	Agricultural mechanization	Lack of land clearing machines. Lack of tractor, combine harvester.
	Extension Services	Training and retraining for extension officers. Mobilization from community to community cost. Number of extension workers.
	Women in Agriculture (WIA)	Funding for sensitization of women and Starter pack input for distribution after sensitization.
South-West		
Ekiti	Crop	Effective control of Fall Army Worm particularly on maize. Improved seeds and seedlings. Simple and affordable farm implement. Prevention and eradication of tomato wilt. Control of fruit piecing moth.
	Horticulture	-
	Livestock	Vaccine failure in poultry. In-breeding in rabbit production.
	Fisheries	Fish disease and water quality management. Fish Feed Formulation..
	Agro-Forestry	Control of fruit piercing moth and fruit flies in citrus
	Irrigation	-
	Agricultural mechanization	-
	Extension Services	-
	Women in Agriculture (WIA)	Mushroom production technology. Preparation of recipes from some food crops.
Lagos	Crop	Prevention and control of army worm in maize. Development of wilt resistant tomato varieties. Development of drought resistant cassava varieties.
	Horticulture	Development of varieties of Amaranthus resistant to insect pest. Development of high yielding cucumber varieties
	Livestock	Alternative clean and cheaper source of energy and protein in feeds. Reduction in cost of production. Improved disease resistance in poultry and pig breeds. Alternative livestock feed components. Improved livestock product processing and storage.
	Fisheries	Cheap fishing gears and other fishing materials. Cheap materials for canoe construction. More research work on wesafu (fresh water Tilapia) culture.
	Agro-Forestry	Alternative research into snail feeds. Appropriate fertilizer requirement for plantain, kola nut.

	Irrigation	Overall effect of drip irrigation system in vegetable production. More research into Hydroponics
	Agricultural mechanization	Fabrication of cheap agricultural equipment and implements in other to achieve high quality harvest.
	Extension Services	Continuous training of extension personnel in case of emerging outbreak
	Women in Agriculture (WIA)	Specific programs for nutrition, benefits of nutrition in agricultural produce/products
Ogun	Crop	Pest and disease control. Post-harvest management of crops. Accessibility to research findings.
	Horticulture	Capacity building on Good Agricultural Agronomic Practices. Availability of pest and disease resistant and high yielding varieties that are adaptable to Ogun State Ecology. Input support to farmers, Extension Officers and Agricultural Researchers. Combating effects of climate change in horticultural crops. Irrigation support to horticultural crop farmers. Control of pest and disease. Post-harvest losses.
	Livestock	Improving genetic qualities/growth performance of west African Dwarf goat. Combating African Swine Fever through Local Vaccination. Nutrition and feeding in poultry farming. Research into systemic values of keeping animals.
	Fisheries	Research on cost effectiveness of fish feeds to growth and culture. Development of hatchery and culture techniques. Diversification of fishing methods.
	Agro-Forestry	Modern Farm practice/ crop mix possibilities in Agroforestry Effective and affordable panacea for fruit spoilage or insect pest attack (infestation) in Agro forestry crops e.g. Citrus, Mango. Agro-forestry tools mitigation and adoption to climate change.
	Irrigation	Appropriate irrigation System/method for specific crop. Maintenance of irrigation system. Mini-irrigation unit for smallholder farmers. Database for the design of irrigation models.
	Agricultural mechanization	Linkage development in modern agriculture Fabrication of simple tools for farm mechanization
	Extension Services	Market oriented extension service delivery. Effective communication skill using the e-extension method.
	Women in Agriculture (WIA)	Storage of Rice using PrudileImproved Cowpea PIC) bags and Hermitic aruo by Nigeria Stored Products Research Institute (NSPRI) Evaluation of Quality of product obtained by Sun-drying and oven drying of Ewedu and Okra. Utilization of bio-fortified crops in confectioneries. Assessment of gender-specific obstacles in agriculture.
Ondo	Crop	Funds extension working tools, motorcycle and Hilux vehicles
	Horticulture	Control of pest and disease in citrus
	Livestock	The use of non- conventional as replacement in reduction of cost of formulated feed
	Fisheries	Reduction of fish fry, lost in fingerlings Production
	Agro-Forestry	Use of indigenous tree to feed ruminants
	Irrigation	
	Agricultural mechanization	Design and Production of Implements suitable for tropical climate
	Extension Services	Fund, extension working tools, motorcycle and field vehicles (Hilux)

	Women in Agriculture (WIA)	Funds, processing equipment, training on entrepreneurship skills for women
Osun	Crop	Climate change effect on crop management. Post-harvest preservation of produce.
	Horticulture	Disease and pest attack. Marketability.
	Livestock	Improve indigenous breeds of livestock.
	Fisheries	Breeding of fingerlings. Disease of fish.
	Agro-Forestry	-
	Irrigation	Weather predictability Research.
	Agricultural mechanization	-
	Extension Services	New innovation on crop and livestock production.
	Women in Agriculture (WIA)	Research on value addition and marketing of farm products.
Oyo	Crop	Development of tolerant/resistant maize varieties against fall-army worms. Planting of spices. Production of cowpea varieties with less spraying regime.
	Horticulture	Development of tolerant/improved tomato varieties against tomato wilt disease. Processing and packaging of fruits and vegetables.
	Livestock	African Swine Fever (ASF) in pigs. Adopting organic poultry farming.
	Fisheries	Hygienic fish processing and packaging.
	Agro-Forestry	Development of tolerant/resistant mango varieties against die-back diseases. Effective control and prevention of citrus fruit flies.
	Irrigation	Development of mini-irrigation that is adaptable for individual farmers.
	Agricultural mechanization	Development of mini/intermediate equipment and implements (harvesters, planters, processing machines, shellers) that will be affordable.
	Extension Services	ICT training for the e-extension staff.
	Women in Agriculture (WIA)	Value addition of underutilized legumes Development of gender-friendly equipment for farming and processing.

16.0 SPECIAL PROJECTS/PROGRAMME

The report of Annual Performance Survey (APS) of 2022 on special projects is presented on Table 16.1 below. The report under North-Central (NC) revealed that Benue, FCT, Kogi, Nasarawa, Plateau and Taraba states had detail information on special projects, while Niger State had few special projects but none recorded in Kwara State. It could be argued that some of the states in the zone were less active on special projects due to insufficient funding. However, Benue State special projects included BN-CARES, UNDP/GEF/IAP, GIZ, SASAKAWA and FGN/IFAD-VCDP. The takeoff year was as far back as 2014 up to 2020. This means that, the state did not carry out any new projects in 2022. Key activities include agricultural inputs and service delivery to farmers' production and processing, assets provision to farmers, demonstration plots on value addition, erosion control and afforestation training. Others include capacity building on GAP and Farmer Business School. On the whole, the state had three thousand three hundred and thirty-three (3,333) project sites in most of the Local Government Areas (LGAs).

Data from the projects sites visited showed indicated that many people were beneficiaries of the projects. The projects were sponsored by World Bank/FGN, State Government, UNDP/GEF, FID/EIA, IFAD and JICA. Beneficiaries of the various projects were altogether fifty-five thousand, six hundred and ninety-nine (55,699) farmers. The Federal Capital Territory (FCT) special projects included market-oriented agricultural extension for livelihood improvements. The project took off in 2019. Key activities include horticultural crops marketing and nutrition improvement empowerments and value chain which took place in six LGAs sponsored by JICA. Beneficiaries of the projects were about seven hundred and eighty (780) farmers which were successfully implemented. Kogi state special projects were APPEALS, Value Chain Development Programme (VCDP) and FADAMA CARES. Major activities carried out were on empowerment and value chain development. Special projects in Nasarawa state include SASAKAWA GLOBAL, Small Horticultural Empowerment Promotion (SHEP), Global Agricultural Practice (GAP), Farmers Business School (FBS), Integrated Approach Climate Change on Rice Production System in Nigeria, Good Agricultural Practice on Cassava production and Stem, Value Chain Development Programme (VCDP), FADAMA NC-Cares and UNDP-GEF project. The take-off dates for the various projects were between 2016 and 2022. This means, there were new projects conducted in the state in 2022. The key activities included sessions on improving the production of selected crops (cassava, maize, rice, soya beans and sorghum), training of farmers on evaluation networking market oriented agricultural smallholder farmers, guide on agricultural business, climate change adaptation and mitigation, and training on farm inputs equipment infrastructure, support to farmers on value chain, mainstream on gender, nutrition and financial inclusion.

Others were provision of inputs to livestock and fishery farmers, demonstration of seed multiplication which took place at Kokona and Akwanga Local Government Areas (LGAs). The various projects were sponsored by Japan NGO, JICA, GIZ, IFAD, FGN, World Bank and UNDP-GEF with thirty-seven thousand, five hundred and forty (37540) beneficiaries in total. By implication, it means that, issues regarding agricultural activities were being taken more seriously by many agricultural stakeholders, government agencies and non-government organizations. IFAD and Harvest Plus were the sponsors of the only special projects in Niger State. Plateau State had Potato Value Chain Support Project (PS-PVCP), Rural Access and Agricultural Marketing Project (RAAMP) and Potato Fadama COVID-19 Action and Recovery Economic Stimulus which took off in 2018 and 2021respectively. The key activities were involved spot road improvement, provision of hydraulic structures for irrigation (Water harvesting structure, wash bore and tube well), market commodity survey, capacity building on tissue culture laboratory, road upgrading, rehabilitation, routine

maintenance, DL 12.1 input supply and service provision among others. The site was mainly statewide, sponsored by African Development Bank (AfDB), World Bank (WB) and Federal Government of Nigeria (FGN). Taraba State special projects included Fadama, value chain development and youth empowerment. Empowerment which was the major activity, took off from 1998 up to 2022 as a statewide project sponsored by WB/FGN/TRSG.

North –East (NE) show Bornu, Gombe and Yobe with data on the activities of special projects. Only Adamawa and Bauchi States had no data on special projects. There was need for all the states (especially Adamawa and Bauchi) in the zone to be more active in carrying out special projects that would impact positively on people's livelihood. The only special project carried out by Borno State was FADAMA III N-Care which took off in 2022 on farm inputs distribution as the key activity and was widely conducted in the state. It was sponsored by Borno State Government (BOSG) in which 612,500 households benefited. Gombe state special project was UNDD; Resilient Food security and SASAKAWA. Key activities included value addition of rice and groundnut production which took off in 2019 and storage methods of post-harvest in 1998.These projects were widely carried out in the state sponsored by UNDP and NIppon Foundation with beneficiaries of about 1800 and 700 respectively. The special projects in Yobe involved trainings of Extension Agents (EAs), training and distribution of small ruminants and Women group formation. All the projects took off in 2021. The key activity was training on input support activities and empowerment while the number of project sites was in 19 LGAs sponsored by FGN/World Bank and UN Women which benefited four thousand five hundred (4500) and two hundred (200) respectively.

In the North West zone, Jigawa State had an ongoing special project on Agro climatic resilience in semi-arid landscape, sponsored by the World Bank which commenced in 2022. The key activities of this project were strategic watershed planning, landscape investment and special eco-systems, institutional policy strengthening and project management and community strengthening and investment. However, the number of project sites, percentage of achievement and the number of beneficiaries were yet to be determined at the time of this survey. The second special project sponsored by World Bank in Jigawa State; (NCARES) programme whose key activities were to expand access to livelihood support and food security services and grants for poor and vulnerable households was still ongoing and the number of project sites were 12 LGAs of the state. This was quite commendable, as most of the LGAs in the state were involved in the projects.

However, there was need for the state and other collaborating agencies to carry out more projects whereby additional LGAs would be subsequently carried along. Kebbi State had five (5) special projects Namely; ATASP-1, IFAD/CASP, FADAMA II, RAMP and CARI. These projects had average percentage achievement of 84%. ATASP-1 sponsored by AFDA commenced in 2015 with infrastructural development, outreach activities on rice, sorghum and cassava as its key activities that covered 8LGAs with about 20,000 beneficiaries. IFAD/CASP project which was sponsored by IFAD focused on capacity building on Agricultural services. It had about 20,000 beneficiaries across 14 LGAs of the state. FADAMA II project which commenced in 2014, mainly focused on inputs supply, rural infrastructure and capacity building with about fifteen thousand (15,000) beneficiaries. RAMP started in 2018 and covered about 21 LGAs. The CARI project which was sponsored by CARI took off in 2016 and had about 7 LGAs as number of project sites. Training of farmers, FBS, GAP and CBS were the key activities. In Zamfara State, there were about three special projects; Trimming project SRI, NG-CARES (FADAMA III) and special project on food security (phase III) that are yet to commence.

Data from the South- East (SE) states showed Abia, Anambra, Ebonyi, Enugu and Imo states with detailed activities on special projects. Only Imo State had no record on special projects. The special project in Abia State was only the four million Tera Palm Oil Development project which took off in 2015. This project s not enough and it was long overdue for review. Therefore, there was need for more (new) projects to be conducted in subsequent years. It was sponsored by Abia State government with about 40,000 beneficiaries and was sustainable. The special projects in Anambra were N-CARES, VCDP/IFAD and SHEP Project which took off in 2022 and 2017 respectively. The activities were input services and cassava/rice production sponsored by WAO/FAO/FAD/VCDP and FGN and more than 10000 farmers benefited. The site for the projects covered 10 LGAs. Ebonyi State special projects were sponsored by the International Fund for Agricultural Development (IFAD), Japanese International Co-Operations Agency, agriculture for food and job plans, Nigerian COVID-19 Action Recovery and Economic Stimuli with key activities such as crop value chain development, large quantity of vegetable production, and enumeration of rural farmers, provision of agricultural input & services and upgrading of wet market to function safely. The activities took off differently in 2014, 2021, 2020 and 2022 and it was statewide projects. The projects were sponsored by FMARD, IFAD and World Bank which on the overall benefited one million, six hundred thousand (1600000) farm families. Enugu State has ATASP-1, APEARLS and VCDP which took off in 2017, 2019 and 2020 respectively. Key activities include rice, cassava, sorghum, poultry and cashew production. Projects sites were Udemu, Aninri-Nkan-East which was sponsored by AFDB, World Bank and IFAD. Number of beneficiaries of the projects was not captured in the state report.

Data from the South-South (SS)states included special reports on Akwa-Ibom, Bayelsa, Cross- River, Delta, Edo and Rivers with detailed report on special projects in the states except Delta and Akwa-Ibom states that had no data on special projects. The only special project recorded in Bayelsa state was NG-CARES RAZ which took off in 2022 consisting of increasing food security and safe functioning of food supply chain as the key activity. The project sites were one hundred and fifty (150) sponsored by the World Bank and benefited about fifteen thousand farmers. Cross- River special project was named APPEALS which took off in 2018 with Support technology adoption for rice, cocoa and poultry infrastructure and processing clusters for Women and Youth Empowerment Project (WYEP) as key activities that were statewide conducted. It was sponsored by the World Bank with ten thousand (10,000) beneficiaries. Another special project in the state was Livelihood improvement of family interpose. The take-off was in 2022 with business development training valuation and setting of incubates. The project site was centered around one hundred (100) communities, sponsored by IFAD and fifty (50) farmers benefited. Edo state special projects include Livelihood improvement family enterprises project Niger, Delta (LIFE-ND), Edo AgripreneurProgramme (EAP), Independent Farmers' Initiative (IFI), Cashew Seedling Production (CSP), Fishery Intervention (FI) and N-CARES. All the projects took off between 2019 to 2021and the key activities were land development, crop, Livestock, catfish production and farm mechanization support among others. The project sites were about 80 in number while others were statewide. Although, many projects were carried out in the state but there was need to increase the number of sites and beneficiaries. The projects were sponsored by IFAD, FGN, NDDC, Central Bank of Nigeria and NIRSAL. The actual number of beneficiaries had not been compiled as at the time of filing this report mainly because some of the cultivated farms had not been harvested and more farmers were still indicating interests. The Rivers State special projects included root and tuber production, National Food Security Programme (NFSP), Community Based Natural Resource Programme (CBNRP), FADAMA III and SASAKAWA-G2000. The projects took off between 2013 and still on in 2022. The key activities were research on root and tuber crops and poverty alleviation. The projects were

mainly sponsored by World Bank (WB) and Federal Government of Nigeria (FGN) with five thousand, five hundred and sixty-three (5,563) beneficiaries.

In the South –West (SW) states, Lagos, Ogun, Ondo and Osun states gave report of activities on special projects, while Ekiti and Oyo states had no Data. The special projects in Lagos State were NPFS, APPEALS Project and CARES. They took off in 2007, 2019 and 2022 respectively. Key activities include addressing household food security needs, empowering farmers on three (3) selected crops' value chains and capacity building. The projects were majorly carried out statewide, sponsored by the FMARD and World Bank. Over eleven thousand beneficiaries had been recorded for this project. The Lagos State Government also conducted programs such as the establishment of thirty-two (32) Monthly Technological Plot (MTP) Rice Mill, Imota, Cage and Pen Culture For fish and cattle farm project. Others were Central Food Security System and Logistics Hub, Mid-Level Produce Hub, Eko Agro-Mechanization Development Programme, Agricultural Value Chain Enterprise Activation Programme, Lagos Agri-prenuership Programme, Food Production Centre, Coconut Value Chain Development Project, Lagos Agricultural Scholars' Programme, Establishment of Snailery Estate and Development of Red Meat Value Chain which were largely Women and Youths empowerment projects. The Federal Government of Nigeria (FGN)/IFAD Value Chain Development Programme (VCDP) and CARES FADAMA were the only special projects carried out in Ogun State, consisting of cassava and rice value chain training, and sensitization/ mobilization of farmers' conduct on needs assessment as key activities.

The take-off years of the projects were in 2015 and 2022, conducted across all the LGAs in the state and were mainly sponsored by the World Bank and IFAD; thirty-seven thousand, nine hundred and twenty-two (37,922) farmers have benefitted. Table 16.1also shows activities on Ondo State. The only special project recorded was Farmer Business School (FBS) Skills Development for Youth Employment (SKDYE) which was carried out in 2019. The key activity was Training of Youths on Business skills for self-Employment and Good Agricultural Practices (GAP) on cocoa, maize and cassava. The project was sponsored by GIZ and benefited over two thousand, seven hundred (2,700) youths across eighteen (18) LGAs. In Osun state, the two projects (Small holder empowerment and OSCARES RA2) took off in 2021 and 2022. Small holder empowerment project sponsored by JICA benefited 60 farmers with 92% achievement recorded and Training of small holder vegetables farmers as its key activity while, OSCARES RA2 was sponsored by World Bank(ongoing). The key activities involved inputs, road rehabilitation and asset support forfour thousand, two hundred and twelve (4,212) farmers already.

Table 16.1: Special Projects/Programme

State	Project	Take off year	Key activities	No. of project sites	Sponsors	Percentage of achievement	No. of beneficiaries	Remarks
North-Central								
Benue	BN-CARES	2020	Agricultural inputs and services delivery to farmers. Production and processing. assets provision to farmers.	3330 product sites	WB/FGN/ BNSG	On-going	27393 Farmers	-
	UNDP/GEF/IAP	2018	Demonstration plots. Value addition. Erosion control. Aforestation training.	2 LGAs	UNDP/GEF/IAP/FGN / BNSG	100%	5472	-
	GIZ	-	Capacity building on GAP,FBS	20 LGAs	GIZ/FGN/BNSG	98%	9000	-
	SASAKAWA	-	Demonstration plot	5 LGAs	FID/EIA/ BNSG	95%	5,00	-
	FGN/IFAD-VCDP	2014	Agricultural market development Small holder productivity Enhancement.	8 LGAs	IFAD/FGN/BNSG	76%	21.435	
FCT	Market-Oriented Agricultural Extension for livelihood Improvements	2019	Horticultural Crops Marketing and Nutrition Improvement.	6 LGAs	JICA	100%	780	Very successful

Kogi	APPEALS	2018	Empowerment	21 LGAs	World Bank	-	1700	Ongoing
	VCDD	2020	Value chain		IFAD	-	-	Ongoing
	FADAMA CARES	2022	Empowerment	21 LGAs		-	-	Ongoing
Nasarawa	SASAKAWA Global	2021	Improving the production of Cassava, Maize, Soya beans and Sorghum. Training of farmers on evaluation Networking market oriented Agriculture for small holder farmers. Guide farmers on Rice Production.	5 LGAs	JAPAN NGO	40%	-	-
	Small Horticultural Empowerment Promotion (SHEP)	2016	-	13 LGAs	JICA	80%	150	-
	Global Agricultural Practice (GAP)	2016	-	11 LGAs	GIZ	95%	10435	-
	Farmers Business School (FBS)	2016	Guide on Agricultural Business.	11 LGAs	GIZ	95%	5850	-
	Integrated Approach Climate Change on Rice Production System in Nigeria	2022	Climate Change adaptation and mitigation within selected rice producing community.	4 LGAs	GIZ	15%	5850	-
	Good Agricultural Practice on Cassava production and Stem.	2020	-	4 LGAs	GIZ	98%	1500	-

	Value Chain Development Programme (VCDP)	2019	Farm Inputs Equipment Infrastructure and Training. Support to farmers on value chain. Mainstream on gender, nutrition and financial inclusion, nutrition and financial inclusion and Climate Change.	5 LGAs	IFAD/FGN	70%	7,749	-
	FADAMA NC-Cares	2021	Inputs provision to Livestock and Fishery farmers.	All the 13 LGAs of the State.	World Bank	20%	2,006	-
	UNDP-GEF PROJECT	2018	Demonstration. Seed Multiplication	Kokona and Akwanga LGAs	UNDP-GEF	90%	4,000	-
Niger	IFAD	2015	Training of farmers and input supply	8	IFAD/FGN	75%	open	Ongoing
	Harvest Plus	2022	Sensitization on Vit. A crops	20 LGAs	USAID	55%	open	Ongoing
Plateau	Plateau State Potato Value Chain Support Project (PS-PVCP)	2018	Spot road improvement Provision of hydraulic structures for irrigation (Water harvesting structure, wash	State-wide	AfDB	70%	30,000	-

			bore and tube well). Commodity markets. Diffuse light store. Processing Centres. Capacity building Tissue culture laboratory.					
	Rural Access and Agricultural Marketing Project (RAAMP)	2021	Road upgrading and rehabilitation Backlog maintenance Spot improvement. Road routine maintenance. Market upgrading	State-wide	WB/AfDB/FG	19%	Over 800	Project targeted towards reducing postharvest losses and increased standard of living of rural dwellers, reduction in travel time and cost and increased access to rural road
	Potato Fadama COVID-19 Action and Recovery Economic Stimulus (Fadama-NG)	2021	DL 12.1 Input supply and service provision. DL 12.2 Rehabilitation of rural farm roads. DL 12.3 Provision of Agricultural assets, livestock	State-wide	WB, FG and SG	1: 80% 2: 60% 3: 70% 4: 45%	1: 1500 2: 135 3: 829 4: 560	This presentation is for the first six months, representing 2/4 of project target

			production and small scale primary processing. DL12.4 Upgrading water and sanitation infrastructure existing wet market.					
Taraba	Fadama development	1998	Empowerment	Statewide	WB/FGN/TRSG	98	Ongoing	Ongoing
	Value chain Dev.	2016	Empowerment	8 LGAs	WB/FGN/TRSG	94	Ongoing	Ongoing
	Youth Empowerment	2022	Empowerment	Statewide	FGN	100	Ongoing	Ongoing
North-East								
Adamawa	Agricultural Extension	2022	NURU & NG-Cares	-	-	-	-	-
	Humanitarian Services	-	-	-	-	-	-	-
Borno	FADAMA III N-Care	2022	Farm inputs distribution	State-wide	BOSG	80%	612,500 households	-
Gombe	UNDD; Resilient Food security	2019	Value Addition of Rice and groundnut. Production of energy cook stove. Agriculture and Livestock Management	2	UNDD	75%	500	-
	SASSAKAWA	1998	Storage Methods of post-harvest	Statewide	Nippon Foundation	78%	700	-
Yobe	Training of EAs	2021	Training and input support	17 LGAs	FGN/World bank	70%	4500	-
	Training and distribution of small ruminants	2021	Training and empowerment.	2 LGAs	UN Women	76%	200	-
	Groundnut and fish processing machine	2021	-	-	-	-	-	-

	Women group formation	2021	-	-	-	-	-	-
North-West								
Jigawa	Agro climatic resilience in semi-arid landscapes project	2022	Strategic watershed planning. Landscape investments and special eco systems. Community strengthening and community investments. Institutional and policy strengthening and project management	Not yet determined	WB	Not yet determined	Not yet determined	Ongoing
	FADAMA Project Nigeria COVID 19 action recovery and economic stimulus (N-cares)) Program	-	JG-NCARES program is to expand access to livelihood support and food security services and grants for poor and vulnerable household	12 LGAs	WB	Not yet determined	Not yet determined	Ongoing
Kebbi	ATASP-1	2015	Infrastructural development Out-reach activities On rice, sorghum & Cassava	8 LGAs	AfDB	80%	20,000	Good
	IFAD/CASP	-	Capacity building on agricultural services	14 LGs	IFAD	70%	20,000	Good

	FADAMAII	2014	Inputs supply Rural infrastructure Capacity building	-	-	90%	15000	Good
	RAMP	2018	Rural access	500	WB	Ps	21 LGs	
	CARI	2016	Training of farmers, FBS, GAP & CBS	7 LGAs	CARI	95%	16800	Good
Zamfara	Trimming project SRI	-	-	-	-	-	-	-
	NG-CARES (FADAMA III)	-	-	-	-	-	-	-
	Special project on food security (phase III)	-	-	-	-	-	-	Yet to take off
South-East								
Abia	4 million Tera Palm oil Development	2015	4 million Tera Palm oil Development	1	Abia State Government	90	40000	Sustainable
Anambra	N-CARES	2022	Input services	21 LGAs	FGN	60%	More than 2000	Fair
	VCDP/IFAD	2017	Cassava/Rice	8 LGAs	WAO/FAO/IFAD/VCDP	80%	More than 10000 farmers	Good
	SHEP Project	2022		2 LGAs	JICA/FGN	30% still ongoing	60	Excellent
Ebonyi	IFAD	2014	Crop value chain development	8 LGAs	IFAD/FG	90%	1600000 Farm Families	-
	Japanese International Co-operation Agency	2021	Production of vegetable large quantity	2 LGAs	JICA/FGN	70%	-	-
	Agriculture for food and job plans	2020	Enumeration of rural farmers	13 LGAs	FMARD	5%	-	-
	Nigerian COVID 19 action recovery and economic stimulus	2021	Provision of Agricultural input & services.	13 LGAs	WB/ FGN and SG	3%	-	-

			Labourintensive agric. infrastructure. Up grading wet market to function safely.					
Enugu	ATASP-1	2017	Rice, Cassava and sorghum	Udenu, Isi-uzo, Uzo-uwan	AfDB	-	-	-
	APPEALS	2019	Rice, Poultry, Cashew	State wide	World Bank	-	-	-
	VCDP	2019/2020	Rice and Cassava	Aninri, Nkanu East, Isi-uzo, Udenu, Enugu East	IFAD			
South-South								
Bayelsa	NG-CARES RAZ	2022	Increasing food security and safe functioning of food supply chain	150	World Bank	20%	15000	-
Cross Rivers	APPEALS	2018	Support technology adoption for rice, cocoa and poultry infrastructural support and processing clusters for WYEP	Statewide	World Bank	69.47	10000	Direct beneficiaries
	Livelihood improvement family interpose project - LIFE – ND	2020	Business development training valuation and setting of incubates	100 communities LGAs	IFAD	51.8	50	-

Edo	Livelihood Improvement Family Enterprises Project Niger, Delta (LIFE-ND).	2020	-	50	IFAD/FGN/NDDC and Edo State Government (EDSG)	50%	256	-
	Edo AgripreneurProgramme (EAP).	2019	Crop Production. Livestock Production. Catfish Production. Broiler Production. Farm Mechanization Support. Off-taker/off-taking linkages. Farm Sponsorship (Inputs Provision) Extension Services Provision as well as Extension Services.	30	EDSG and CBN) with Support from NIRSAL	-	Actual number of beneficiaries has not been fully compiled as some of the cultivated farms have not been harvested Again, more farmers are still showing interest	-
	Independent Farmers' Initiative (IFI).	2020	-	-	Edo State Government (EDSG	-	1400)	-
	Cashew Seedling Production (CSP)	2021	-	-	FACAN and collaborate with Edo State ADP	-	Ongoing	-
	Fishery Intervention (FI).	2020	-	-	IOM	-	-	-
	N-CARES.	2021		state-wide	World Bank and IDA	14%	627	Ongoing
Rivers	Root and Tuber	2000	Research on root and tuber crops	13 LGAs	FGN/WB	70%	650	-
	National Food Security Programme	2004	Poverty alleviation	23 LGAS	WB/FGN	75%	1,150	-

	Community Based Natural Resource Programme	2005	Sustainable agriculture	27 Communities in 3 LGAs	IFAD	45%	173	-
	FADAMA 111	2006	Sustainable agriculture	170 Communities	WB/FGN	85%	1,700	-
	Additional Finance	2013-2015	Sustainable agriculture	170 Communities	WB/FGN	85%	1,700	-
	SEEFOR/FADAMA	2013-2021	Sustainable agriculture	19 Communities	WB/FGN	55%	190	-
	SASAKAWA-G2000	2018	Sustainable agriculture	23 LGAs	WB/FGN	ongoing	-	-
	Rivers-CARES	2022	Sustainable agriculture	5 LGAs	WB/FGN	Ongoing	-	-
South-West								
Lagos	NPFS	2007	Addressing harvest food security needs, capacity building, conflict resolution Provision of inputs & revolving loans	10	FMARD	50%	10,103	Funding is inadequate
	APPEALS Project	2019	Empowering farmers on 3 value chains: poultry, rice & aquaculture. Capacity building & training of women, IDPs & youths.	Statewide	WB & FMARD	100%	1615	Training, empowerment of farmers, IDPs, women and youth & Ongoing
	L-CARES	2021/2022	Empowerment of farmers &	Statewide	WB/FMARD/ Lagos State Gov.	Just taking off	4000	-

			capacity building					
	Establishment of 32 MTPH Rice Mill, Imota	-	Provision of direct and indirect jobs	-	-	-	250,000	-
	Cage and Pen Culture For fish	-	Empowerment of Women and Youths	-	Lagos State Gov.	-	140	-
	Lagos State Cattle farm project	-	Creation of direct and indirect jobs		Lagos State Gov.	-	Direct jobs; 1,200. Indirect jobs; 4800.	-
	Central Food Security System and Logistics Hub	-	Establishment of Central Food Security System	-	Lagos State Gov.	-	All Lagosians	-
	Mid-Level Produce Hub	-	Establishment of Mid-Level Produce Hub	-	Lagos State Gov.	-	All Lagosians	-
	Eko Agro-Mechanization Development Programme	-	-	-	Lagos State Gov.	-	128,925 Farm Families	-
	Agricultural Value Chain Enterprise Activation Programme	-	Empowerment	-	Lagos State Gov.	-	19,600	-
	Lagos AgriprenershipProgramme	-	Women and Youth Empowerment	-	Lagos State Gov.	-	2500	-
	Food Production Centre	-	-	-	-	-	All Lagosians	-
	Coconut Value Chain Development Project	-	Coconut Value Chain Development	-	-	-	5000	-
	Lagos Agricultural Scholars' Programme	-	Agricultural Project establishment in Schools	-	-	-	158	-
	Establishment of Snailery Estate	-	Training of Youths in	-	-	-	200	-

			Snailery production					
	Development of Red Meat Value Chain	-	-	-	-	-	3000	-
Ogun	FGN/IFAD Value Chain Development Programme (VCDP)	2015	Cassava and Rice Value Chain	8LGAs	IFAD	-	17,000	The Programme beneficiaries enjoy inputs, equipment, infrastructural supports and capacity building along Cassava and rice value chain
	OG-CARES FADAMA-RA2	2022	Sensitization and mobilization of farmers. Conduct of PRA/Needs Assessment. Preparation of Community Action Recovery Plans (CARPs). Preparation of Community Action Recovery Plans (CARPs) Screening and Validation of Beneficiaries. Profiling of farmers.	All 20 LGAs	WB/FGN/OG SG	-	20,922	The target beneficiaries were pre-determined in Project Appraisal Document
Ondo	Farmer Business School (FBS) Skills	2019	Training of Youths on	18 LGAs of Ondo State	GIZ	67%	Over 700 youths	The FBS SKDYE

	Development for Youth Employment (SKDYE)		Business skills for self-Employment. Training of Youths on Good Agricultural Practices (GAP) on cocoa, maize, cassava & other value chains.				trained so far as at June, 2022	program is on- going
Osun	Small holder empowerment project	2021	Training of small holder vegetables farmers	2	JICA	92	60	Successful
	OS-CARES RA2	2022	Inputs, road rehabilitation and asset support	33 LGAs	WB	12	4,212	Ongoing

17.0 GENERAL CONSTRAINTS IN AGRICULTURAL PRODUCTION FOR 2022

The constraints to agricultural production in 2022 were similar to the previous four years; especially with regard to increasing incidences of insecurity. The data in this section are presented according to the spread of constraints across the country, using the number of states as unit of measurement.

16.1: Rainfall and Weather-Related Challenges

Rainfall and temperature regimes are perhaps the most important factors in determining the potential productivity of various agricultural activities. The effects of irregular rainfall distribution patterns include nutrient leaching and erosion, reduced availability of water and changes in the distribution and incidence of pests and diseases including weeds. Today, therefore, there was increased focus on sustainable adaptation and mitigation practices for climate change impacts in all states. The 2022 weather conditions were considerably better than those of 2021, including higher amount and better patterns of rainfall experienced in the year. However, there were severe incidences of flooding in 15 states (5 each for Northwest, North-Central and South-South zones). Based on the level of prolonged dry spells and poor rainfall patterns across the federation, agricultural production was highly constrained in 2022 (Figure 1).

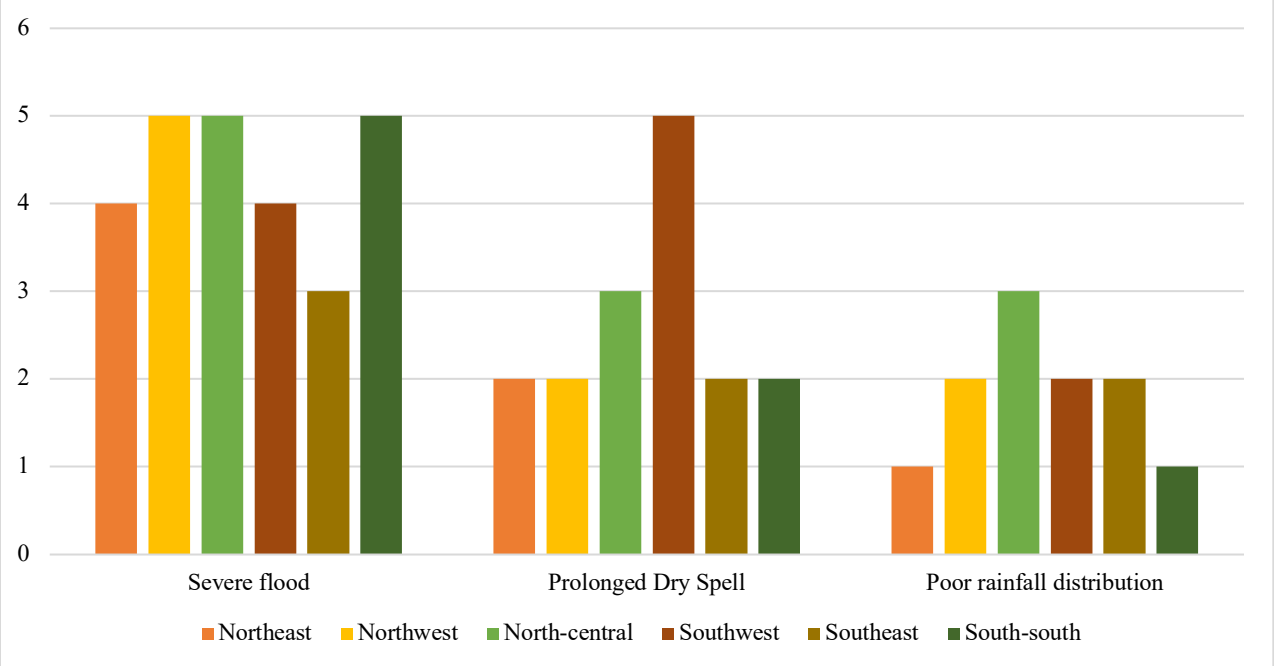

Figure 16.1: Challenges of Weather to Agricultural Activities

16.2: Farm Input Provision, Availability and Accessibility

For smallholder farmers and other actors in the agricultural value chains, access to productivity-enhancing inputs is essential in enabling them to improve the quality and quantity of their production and increase their incomes. The 2022 survey showed that poor farmers in Nigeria faced multiple constraints— such as lack of access, unaffordability, lack of information, and lack of market relationships. Indeed, profitable agriculture is a product of the quality of inputs used (including seeds, animal stocks, fingerlings, fishing nets, fertilizers, herbicides and advisory information) where they are available. This also means that such quality inputs should be adequately available and accessible to farmers. The 2022 survey data (Figure 2) showed that government inputs were largely inadequate in 27 states (for seeds and stocks) and 12 states (for chemicals); untimely in 18 states (for chemicals) and 11 states (for seeds and stocks); unavailable/ inaccessible in 15 states (for chemicals) and 18 states (for seeds and stocks). Fortunately, incidences of adulteration have considerably reduced, compared to previous years.

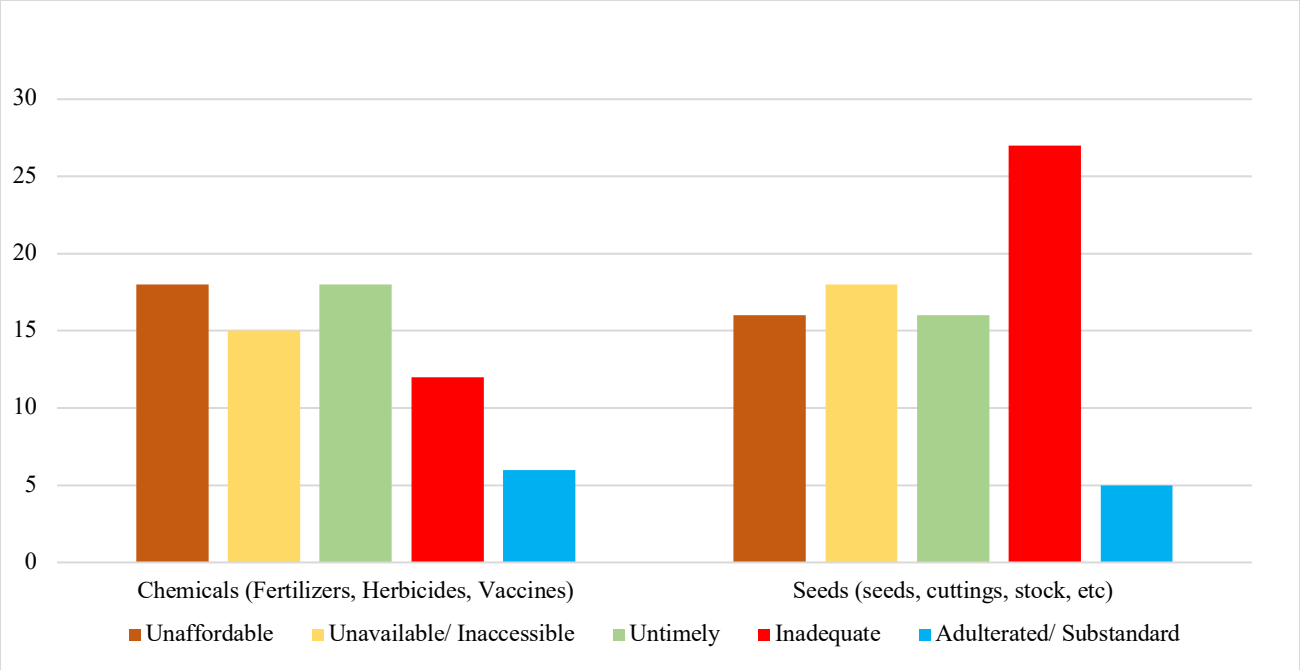

Figure 16.2: Farm Input-related challenges

16.3: Production-Related Challenges (Land, Labour and Diseases)

Since 2011, there has been gradual rise in agricultural production costs. These increase, coupled with the effects of climate change on agriculture, such as the prevalence of pests and diseases, decreasing soil fertility, and drought, are impacting on productivity and agricultural produce. The 2022 data, for example showed that high production costs were reported in 36 states. There was also large-scale report of fall army worm infestation on maize across the country, especially in almost all the North-Central states (Figure 3). There was rice blast, qualia bird attack, aphids, beetle on yam and weevil on cowpea; there were also widespread reports of new castle disease, 'gamboro' and coccidiosis on poultry; CBPP, tuberculosis and foot and mouth disease on cattle; PPR on sheep and goats; birds and

snake attacks on fish. The costs of production were related to land preparation, planting, weeding and harvesting, spraying as well as vaccines for infested livestock.

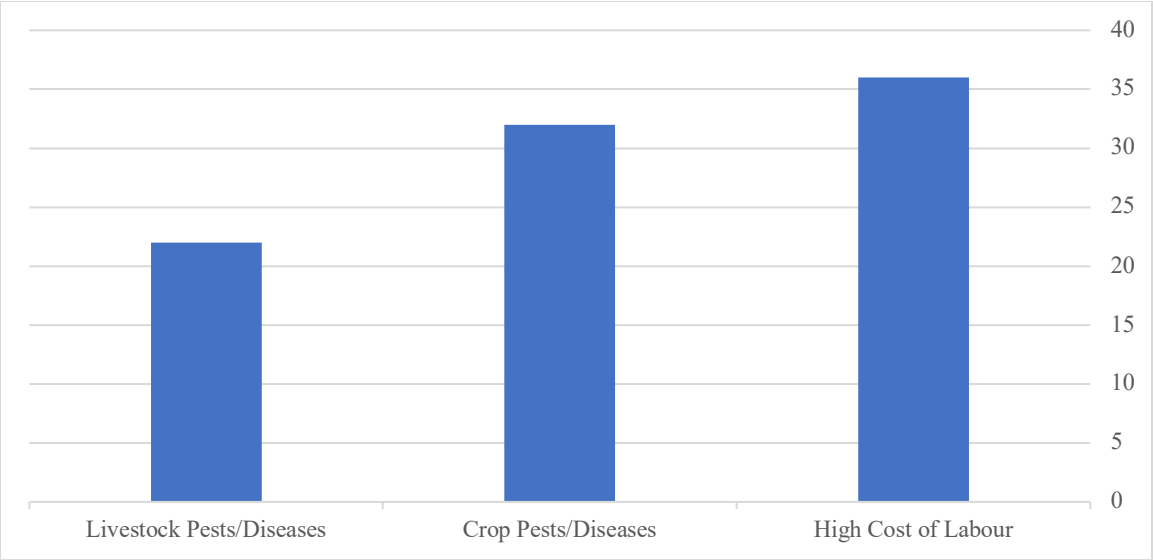

Figure 16.3: Farm production-related challenges

16.4: Agricultural Mechanization

The data in Figure 4 showed that there was no much difference in data on agricultural mechanization for the past three years; the situation slightly worsened in 2022. The survey data showed that Nigerian farmers fared a little better in the previous two years than in 2022. All the indices (tractor availability/ accessibility, suitability and hiring cost, as well as the availability of irrigation infrastructures) was a bit favourable.

Figure 16.4: Data on Mechanization (2020-2022)

16.5: Extension Provision Activities

Agricultural extension and advisory services are critical to the development of a country's agricultural sector. They involve the coordination between people, modern technology and natural conditions. The ADP in each state provides these services that are necessary for developing agriculture and enhancing farmers' livelihoods. Apart from their conventional function of providing knowledge for improved agricultural productivity, the ADPs are expected to also fulfil a variety of functions, such as linking smallholder farmers to high-value export markets, promoting environmentally sustainable production techniques, and helping farmers and rural households to cope with health challenges that affect agriculture and rural development. Without the right application of agricultural technology, no farmer can maximize productivity. The 2022 survey data showed that extension activities have continued to decline. The data in Figure 5 showed that the ADPs were highly under-staffed and underfunded—with about 23 states receiving zero fund at the time of the survey report was compiled/written in September 2022. Moreover, more than half (8) of the fourteen ADPs that received some form of funding claimed the funds were inadequate. The poor funding situation was said to be responsible for the very low level of staff capacity and absence of vehicles for fieldwork. By implication, farmers were not responsively reached with the requisite information and technologies for agricultural productivity. Also, about 30 ADPs had no vehicles for field work. The three-year comparative data showed, however, that the 2020 situation was worst in all cases, perhaps due to the COVID-19 pandemic.

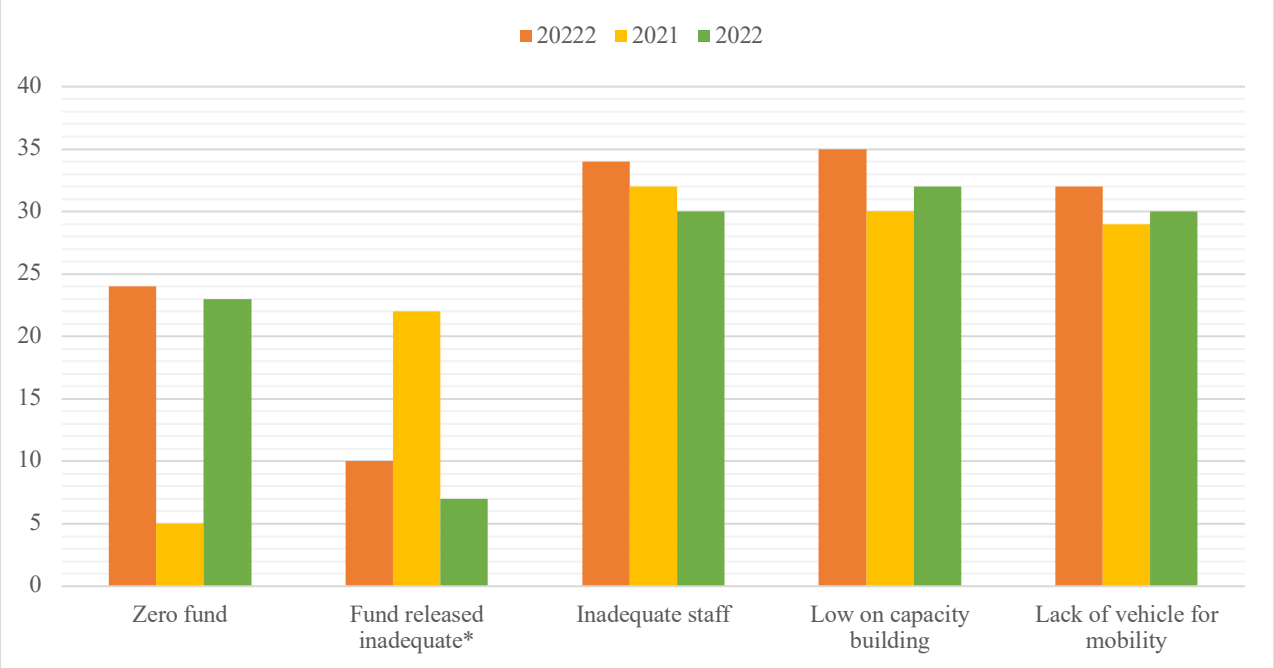

Figure 16.5: Comparative data on constraints related to ADP activities (2020-2022)
NB: *Of the 14 ADPs that got funds for capital projects

16.6: Agricultural Broadcasts

The 2022 survey data in Figure 6 showed that 30 state ADPs were constrained by high cost of airtime to effectively disseminate agricultural programmes. Expectedly, the broadcast of agricultural programmes was compromised by the poor financial and other resources, as presented above in Figure 5. Moreover, 32 ADPs were constrained by the lack of equipment to make such production. Indeed, each state ADP was expected to produce and disseminate agricultural information through conventional and new media to farmers in the languages and formats farmers were familiar with. The consequences of not getting the right information to farmers were grievous, and could have affected farmers' efficient agricultural decision making in 2022.

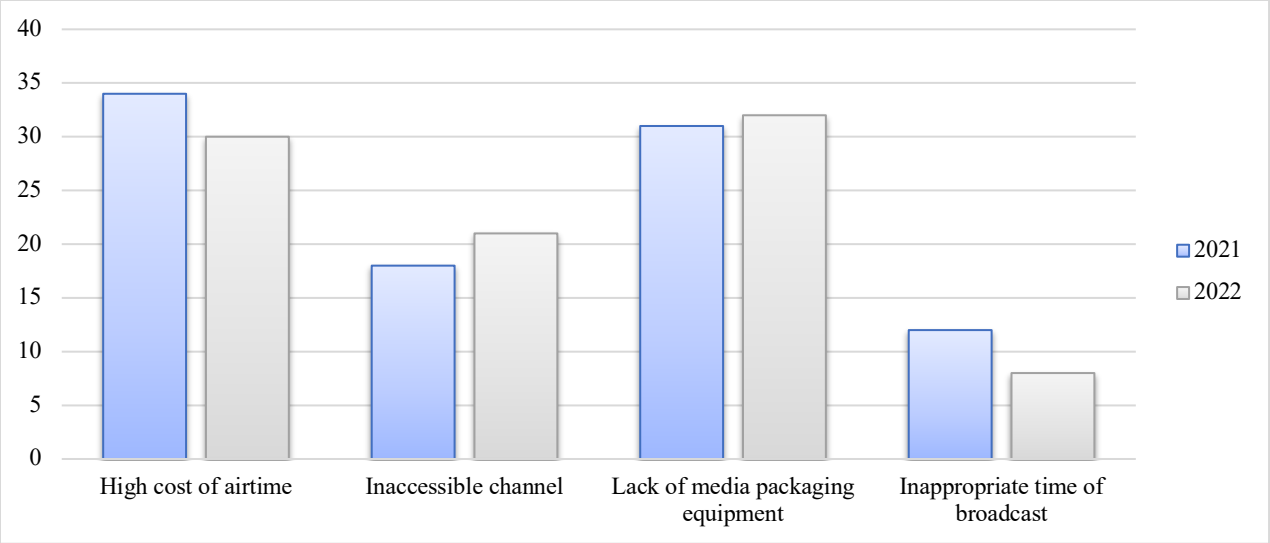

Figure 16.6: Comparative data on constraints in agricultural broadcasts

16.7: E-Extension

Electronic means of extending information to farmers (or e-extension) has various dimensions, including timelines and interactivity. In Nigeria, agricultural operations are time-bound, and associated with uncertainty; hence, e-extension intervention is proving to be the fastest and very reliable means of delivering advisory services to farmers. However, e-extension is still largely a means for farmers in Nigeria to seek and obtain information as a valuable agricultural input. The survey data revealed that, although the 2022 situation was comparatively better than the previous two years, there was still largely the challenges of poor network, inadequate support infrastructure and high cost of data, with regard to e-extension services in the country (Figure 7). This condition, thus, constrained the nation's public extension providers in leveraging on the crucial global superhighways for information dissemination and professional collaboration.

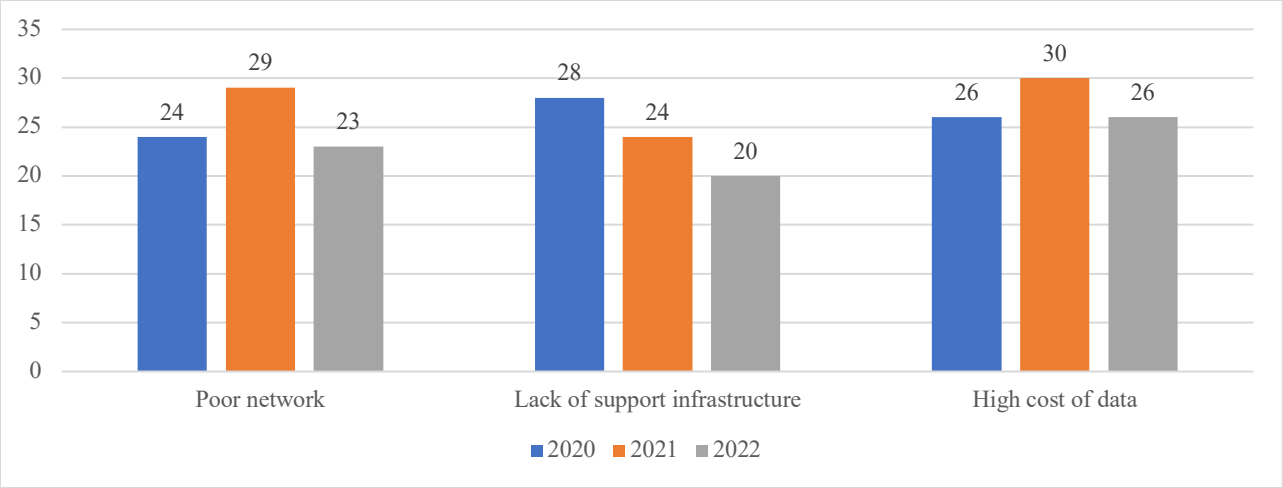

Figure 16.7: Challenges on e-extension (3 years' data)

16.8: Security-Related Challenge

Insecurity is a state of fear or anxiety due to absence or lack of protection. Since 2011, farmers have expressed concerns about widespread insecurity and higher prices of farm inputs in the country, which have impacted heavily on cultivation and access to productive inputs. Besides very high production costs, Nigeria is currently witnessing high level of insecurity—although the government has done a lot to stem the tide. Many farming households have been displaced of their farmlands by cattle herders, for example. Clearly, insecurity poses a threat to agricultural productivity and also economic growth in the country. The data in Figure 8 showed was a drastic decrease in insecurity matters across the nation, especially with regard to insurgency, kidnapping, banditry and communal clashes—compared to the 2020 and 2021 data. However, there was a sharp increase in crop theft and herder/farmer clashes, with prevalence in 33 states and 25 states, respectively in 2022. Notwithstanding, these data generally suggested that government security investment and initiatives were yielding some good results but not considerable enough to allow farmers plan bigger cultivation.

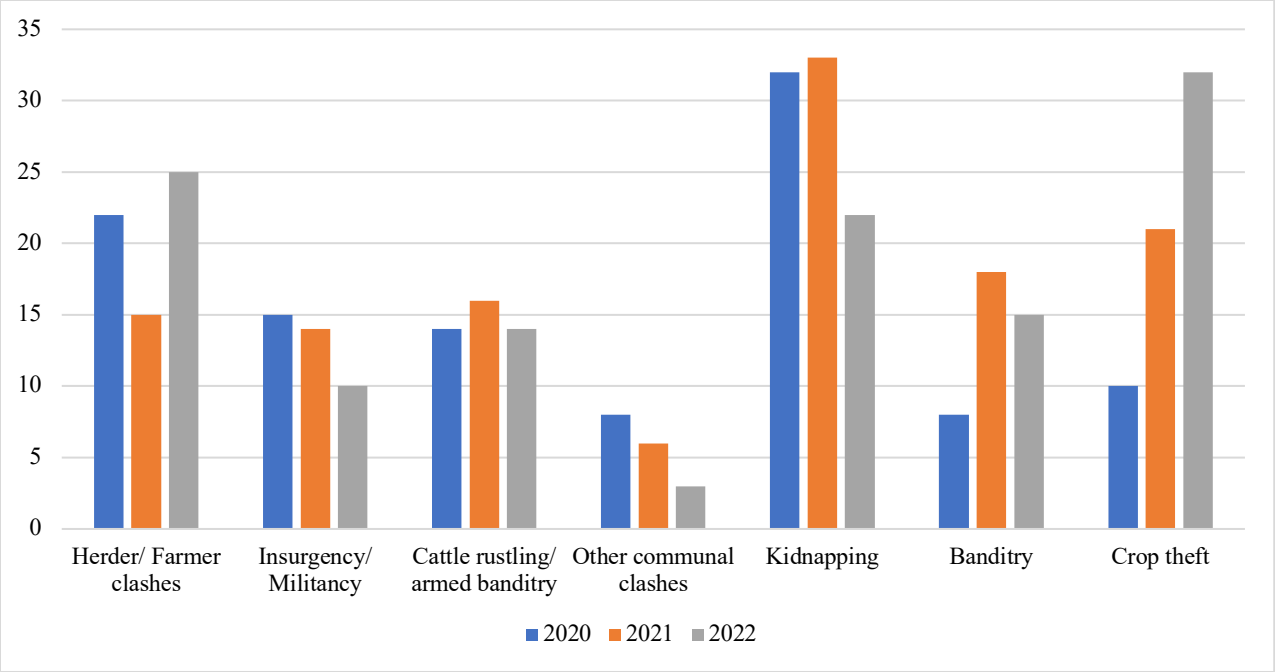

Figure 16.8: Comparative data on constraints related to insecurity (2020-2022)

18.0 CONCLUSION AND RECOMMENDATIONS

CONCLUSION

The 2022 Wet Season Agricultural Performance Survey in Nigeria was conducted with the support and collaboration of all state ADPs, ministries of agriculture, and many other organizations. This report vividly captured the field outlook of agricultural activities and development in the country in the year under review. The results highlighted, among others, the prospect of marginal increase in the national agricultural output, especially on crops—this is despite the widespread occurrences of flooding. Also highlighted were the challenges or constraints to agricultural production during the year, arising from the declining state of extension provision, low use of improved inputs and mechanization, and the sharp increases in the costs of farm labour. Consequently, the following recommendations are made:

RECOMMENDATIONS

1. There is a need for ADPs and State Ministries of Agriculture to have facilities for periodical, regular and continuous agricultural data collection. This is necessary to ascertain timely and accurate collections of credible agricultural data.
2. Relevant government agencies across Federal, State and LGAs should roll out programmes to promote mechanized farming through the use of tractor-coupled implements and labour-saving devices.
3. Policies should be formulated and implemented for the reduction of production and landing costs of farm inputs like agrochemicals, fertilizers, and feeds for fish, and livestock need to be integrated into the national agricultural system. This can be achieved through research and utilization of locally sourced raw materials.
4. Governments should effective utilize grain reserves for storage of agricultural produce should be prioritized. Existing policies in this regard need to be revisited to enhance food security in the country.
5. Responsive alert, emergency control and preventive planning should be in place to management the incessant flood incidences especially when water is released from neigbouring and Nigerian dams One of such preventive mechanisms is building of control dams to be set up for harvesting excess flood water, which could be used for dry season irrigated farming.

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