2023 WET SEASON AGRICULTURAL PERFORMANCE IN NIGERIA: NATIONAL REPORT

National Agricultural Extension and Research Liaison Services (NAERLS)
Ahmadu Bello University, Zaria
www.naerls.gov.ng

Federal Ministry of Agriculture and Rural Development (FMARD)
Garki, Abuja

2023 Wet Season Agricultural Performance Survey in Nigeria:

National Report

National Agricultural Extension and Research Liaison Services,

Ahmadu Bello University

P.M.B. 1067, Zaria,

Nigeria

www.naerls.gov.ng

Certified By

The National Technical Committee on Agricultural Statistics

Collaborators: FDA, FDAE, P&PCD, FDF&A, FDAP&HS, FDV&PCS, NBS, NASC, NIRSAL, NIFOR, NiMET, IAR, IAR&T, NRCRI, NCRI, LCRI, NAPRI, FEWSNET, SG2000, State ADPs and MOA

December 2023

National Agricultural Extension and Research Liaison Services Ahmadu Bello University, Zaria

FMAFS

NAERLS

VISION

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.
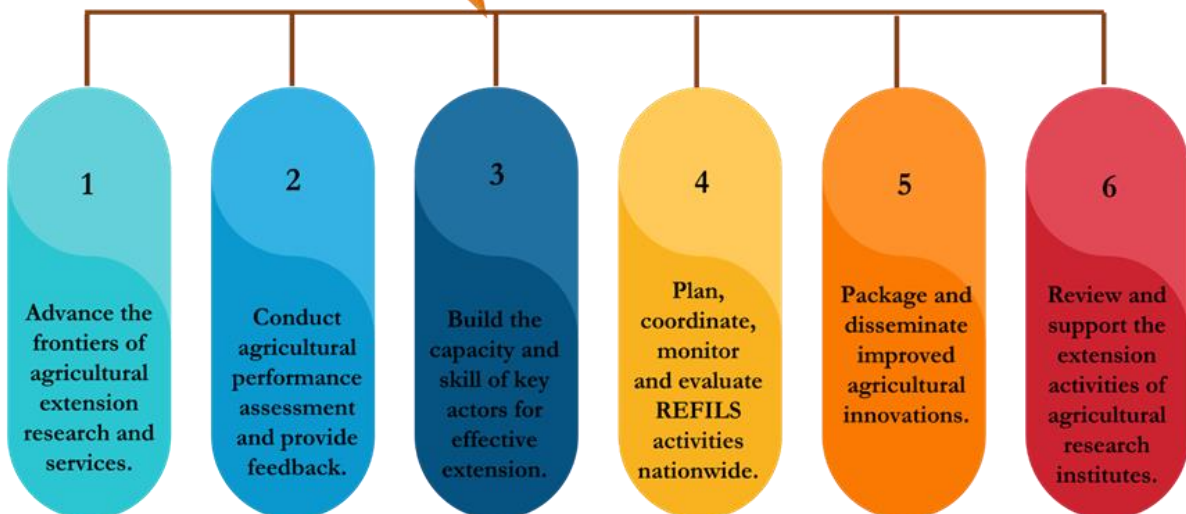
MISSION

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

MANDATE

1
Advance the frontiers of agricultural extension research and services.

2
Conduct agricultural performance assessment and provide feedback.

3
Build the capacity and skill of key actors for effective extension.

4
Plan, coordinate, monitor and evaluate REFILS activities nationwide.

5
Package and disseminate improved agricultural innovations.

6
Review and support the extension activities of agricultural research institutes.

PREFACE

Annually, our teams of scientists visit many communities, across all 36 states, and the Federal Capital Territory to assess agricultural performance in Nigeria. The 2023 Wet Season Agricultural Performance Survey was conducted from 28th August to 4th September. Every year we mount amended and improved logistics and data collection and reporting systems, putting into consideration existing realities. Thirteen teams of three scientists per team, on average, visited three states. Our system of rapid management, reporting and monitoring continues to help us capture real-time information from farmers, state agricultural development programmes, and ministries of agriculture and food security. This report provides insight into the 2023 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 of the performance of policy as well as progress made on federal and state governments' special interventions and programmes on agriculture. The outputs of the evaluation exercise, that is, the executive summary and the national report copies, are usually circulated to government agencies and other stakeholders for national planning and development decision-making. Also, the findings and statistical contents are guides for evidence-based policy formulation and focused research in agriculture.

In 2023, flood incidences were reported in almost all the states though with moderate effects on crops, livestock, and humans. The frequency, severity, and possible devastating flood from heavy rains were continuously monitored, even after our scientists had returned from the field. On the field, we validate our data while on the field through observation of official documents, visits to farms and points of incidence as well as wrap-up meetings with state executives at the point of exiting the field. The information presented in this executive summary is based on data provided by the State Ministries of Agriculture, ADPs, farmers, agencies, and parastatals. We pledge to continuously be responsive with our duties, even as we have been constrained with funds, transportation systems and insecurity across our working terrains. Nevertheless, the 2023 wet season survey was conducted in collaboration with many agencies and organizations, including the technical departments of the Federal Ministry of Agriculture and Food Security (FMAFS) - 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), 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.

The 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 Food Security, Senator Abubakar Kyari and the Honourable Minister of State for Agriculture and Food Security, Senator Dr Aliyu Sabi Abdullahi for their untiring support. We greatly appreciate the support of NAERLS' Board Chairman and Vice-Chancellor, Ahmadu Bello University, Zaria, Professor Kabiru Bala. 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

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

FMAFS   -   Federal Ministry of Agriculture and Food Security

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 or Not Applicable
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 2023 Wet Season Agricultural Performance Survey was conducted from the 28th of August to 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 questionnaires, 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

Generally, the data obtained in 2023 showed that the precipitation (rainfall) rate reduced in the Northern part of the country and increased in the southern part. The number of average rainy days in the southern part of the country increased significantly compared to 2022 while the number of rainy days in the northern part decreased in all the zones except for North-East. Despite this record, twenty-one (21) states across the country recorded dry spell occurrences that affected the growth and development of different types of crops. Even with this record, there was still excessive rainfall that led to flood occurrence in not less than 18 states as of August. This shows the impact of climate change across the country.

Flood Damage Assessment

In August 2023, there was excessive rainfall leading to flood occurrence in not less than 18 states. The affected crops were Cassava, Maize, Sorghum, Rice and Cowpea. Additionally, some animals like small ruminants, poultry and aquaculture were affected. Mild flooding was witnessed in Bauchi and Gombe states. Taraba and Kwara States experienced a severe rate of flooding. Plateau State also recorded mild flooding. Kebbi State witnessed mild flooding in Yauri. In Osun State, three (3) LGAs experienced floods that affected crops and livestock production and some buildings. Ondo State experienced flood across the State; the severity level of the flooding was mild. Besides Imo State, all other states in South-East zone experienced floods ranging from mild to severe. It is recommended to adequately use the receding moisture from the flood plains for rice and vegetable farming especially.

Procurement and Distribution of Agrochemicals, Fertilizers, Farm Equipment

Twenty-six (26) states made available seeds of maize, rice, cowpea, millet, sorghum, and vegetables.

Certified Seeds

Agro-Chemicals

Sixteen (16) states made available herbicides and pesticides.

Cassava cuttings and yam seeds were procured and distributed by some states.

Cassava cuttings & yam seeds

Fertilizers

Twenty-two (22) states procured and distributed fertilizers two major types of fertilizers (NPK and Urea).

Cost of Fertilizer across the Zones

1 — NPK: ₦25,750 Urea: ₦21,500 — North Central

2 — NPK: ₦25,000 Urea: ₦23,500 — North East

3 — NPK: ₦25,000 Urea: ₦20,600 — North West

4 — NPK: ₦24,150 Urea: ₦22,500 — South East

5 — NPK: ₦23,500 Urea: ₦25,000 — South South

6 — NPK: ₦29,500 Urea: ₦21,000 — South West
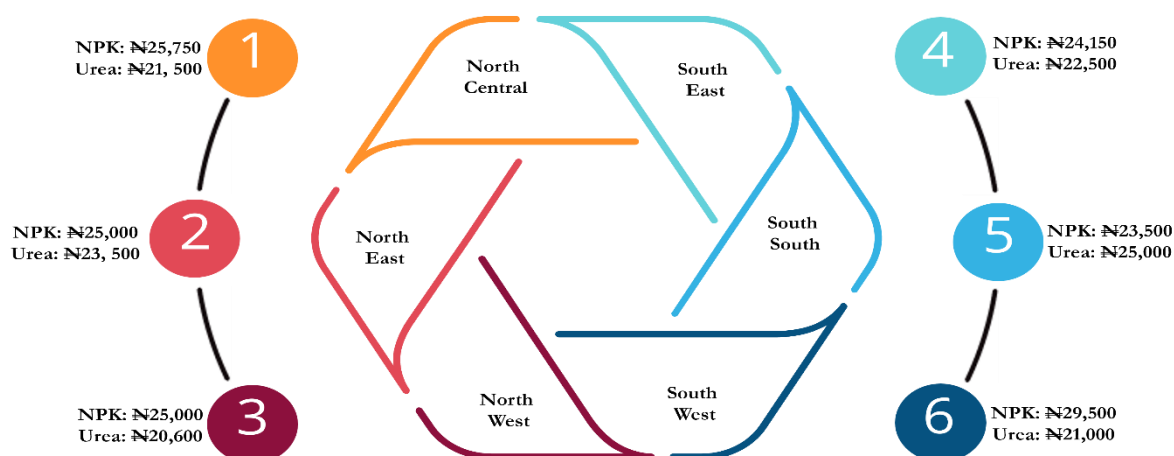
The average cost of NPK 15-15-15 and Urea in 2022 was ₦22,500 and ₦23,200 per bag respectively compared with ₦25,400 and ₦22,350 respectively in 2023, that is, a 12.8% increase for NPK and 3% decrease for Urea. The other blends of NPK and some other fertilizers range from ₦22,000 – ₦30,000 per bag.

Incidence of Pests and Diseases on Crops

Pests and diseases caused crop losses up to 75 percent in some farms in Nigeria estimated at between 2.5 to 43,000 hectares of land in 2023. Cereals and legumes, roots and tubers, fruits, vegetables, and tree crops were affected in thirty-three (33) states and the FCT.

Maize crops were afflicted by different infestations, including fall armyworm, stem borer, downy mildew, smut, spittle bug, bacterial blight, maize streak, bacterial blight, and leafy blight. The impact of fall armyworm was substantial in several states, including FCT, Kogi, Plateau, Kano, Abia, Ebonyi, Enugu, Akwa Ibom, Rivers, Lagos, Ogun, and Oyo. However, in Benue, Kwara, Niger, Adamawa, Bauchi, Gombe, Kaduna, Katsina, Zamfara, and Imo states, the effect of fall

armyworm on maize was moderate. The Southwest region exhibited the lowest estimated yield loss, with an average value of 2.5%.

Data on rice cultivation in nineteen (19) states of the Federation showed that Kwara, Kogi, and Anambra experienced severe impacts, whereas Nasarawa, Niger, Taraba, Adamawa, Yobe, Bayelsa, Rivers, and Oyo states encountered milder effects. The reported pests and disease incidences include brown spots, rice blasts, bacterial leaf blight, fall armyworm, African gall mites, stem borer, rodents, quelea birds, and smut. The data revealed that rice blast incidents were observed in ten (10) out of the nineteen states, with estimated yield losses of 5 to 40%.

The incidence of disease and pest infestations on roots and tubers (cassava, yam, cocoyam, potato, and ginger) was reported in nineteen (19) states in 2023. Cassava mosaic virus, green spider mites, root rot, white flies, brown leafy spots, leaf blight, wilting, and molt all impacted cassava production. However, cassava mosaic infestation was predominant in nine (9) out of fifteen (15) where cassava disease infestations were reported. Yam mosaic, anthracnose, viral disease, rodents, nematode, insects, yam beetle, and cricket borer affected yam farms in 2023 in (8) states (Benue, Nasarawa, Abia, Anambra, Ebonyi, Delta, Ekiti, and Ondo). In Ekiti State, due to the severity, a yield loss of 5% was projected, while in Ebonyi, Delta, and Ondo states crop yield could decrease by 10-25 percent.

Pest and disease infestations on cashew, cocoa, citrus, and mango were prominent in eight (8) states. In Kwara State, cashew plants were affected by locusts, while cocoa was infested by mealy bugs, capsid bugs, black pods, cocoa swelling virus, and pod borer (with severity) in Kwara, Akwa Ibom, and Osun states. The effects of all these attacks could lead to yield losses of more than 35%. Okro was attached by a viral disease across many states in the country.

Incidents of pest and disease infestation on cashew, cocoa, citrus, and mango were recorded in eight (8) states. In Kwara State, cashew plants were affected by leaf locusts, while infestation of cocoa by mealy bugs, capsid bugs, black pods, cocoa swelling virus, and pod borer were reported in Kwara, Akwa Ibom, and Osun states. The pod borer disease incidence was severe. The effects of all the attacks could lead to a yield loss, presumably more than 35%.

Agricultural Mechanization and Animal Traction
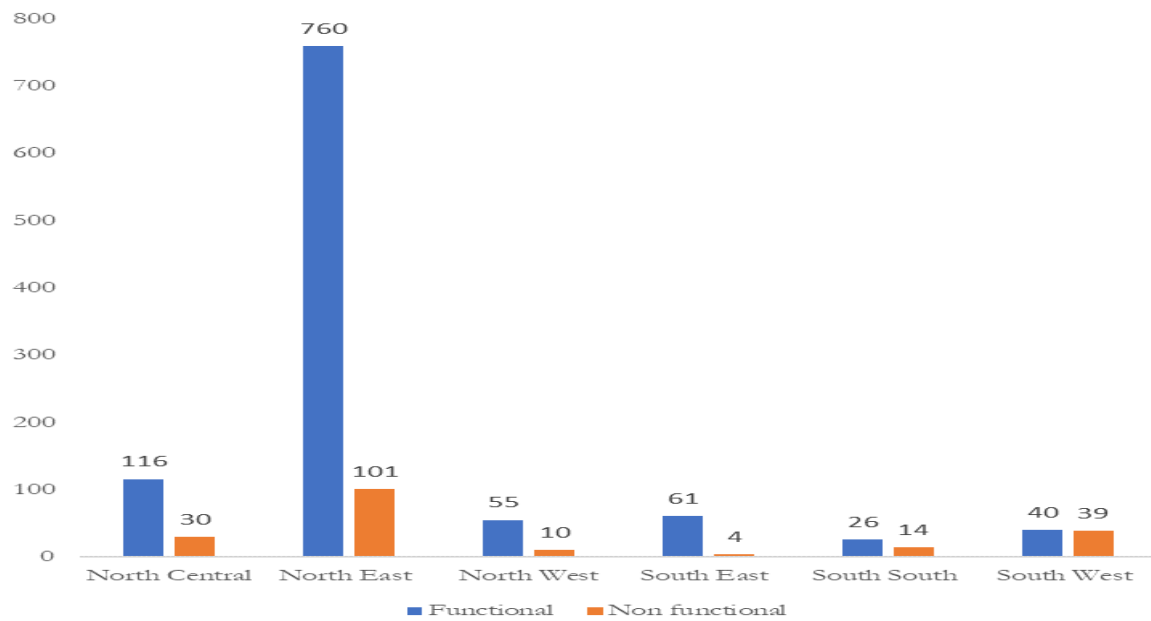
Status of government-owned tractors across the geopolitical zones in 2023
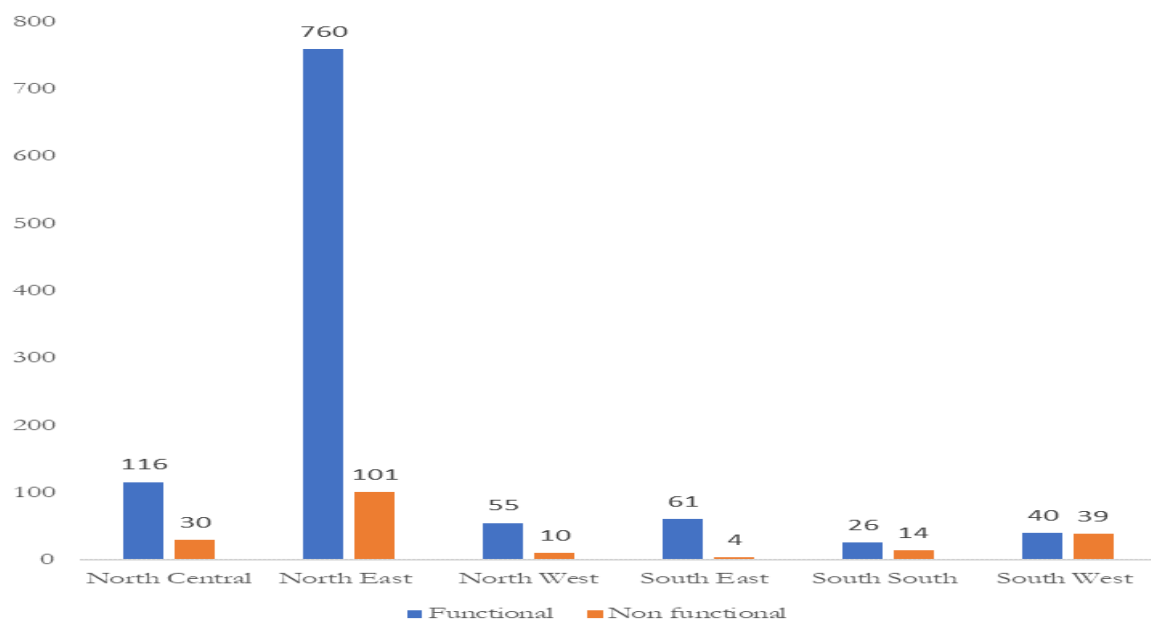
Status of privately-owned tractor across some geopolitical zones in 2023

Cost of Tillage Operation

	Ploughing (Fadama)	Ploughing (Upland)	Harrowing	Ridging
North Central	₦57,500	₦40,000	₦45,625	₦34,375
North East	₦40,250	₦50,500	₦58,750	₦12,750
North West	₦53,666.67	₦52,833.33	₦43,500	₦39,083.33
South East	₦48,600	₦48,600	₦32,000	₦39,200
South South	₦36,250	₦70,500	₦65,500	₦60,000
South West	₦40,500	₦36,000	₦30,200	₦31,000

Cost of land preparation using tractor vs animal traction

The cost of tillage operations using animal traction was 50% on the same land area compared with the use of tractors. However, the cost of ridging operations was almost at parity for animal or tractor use.
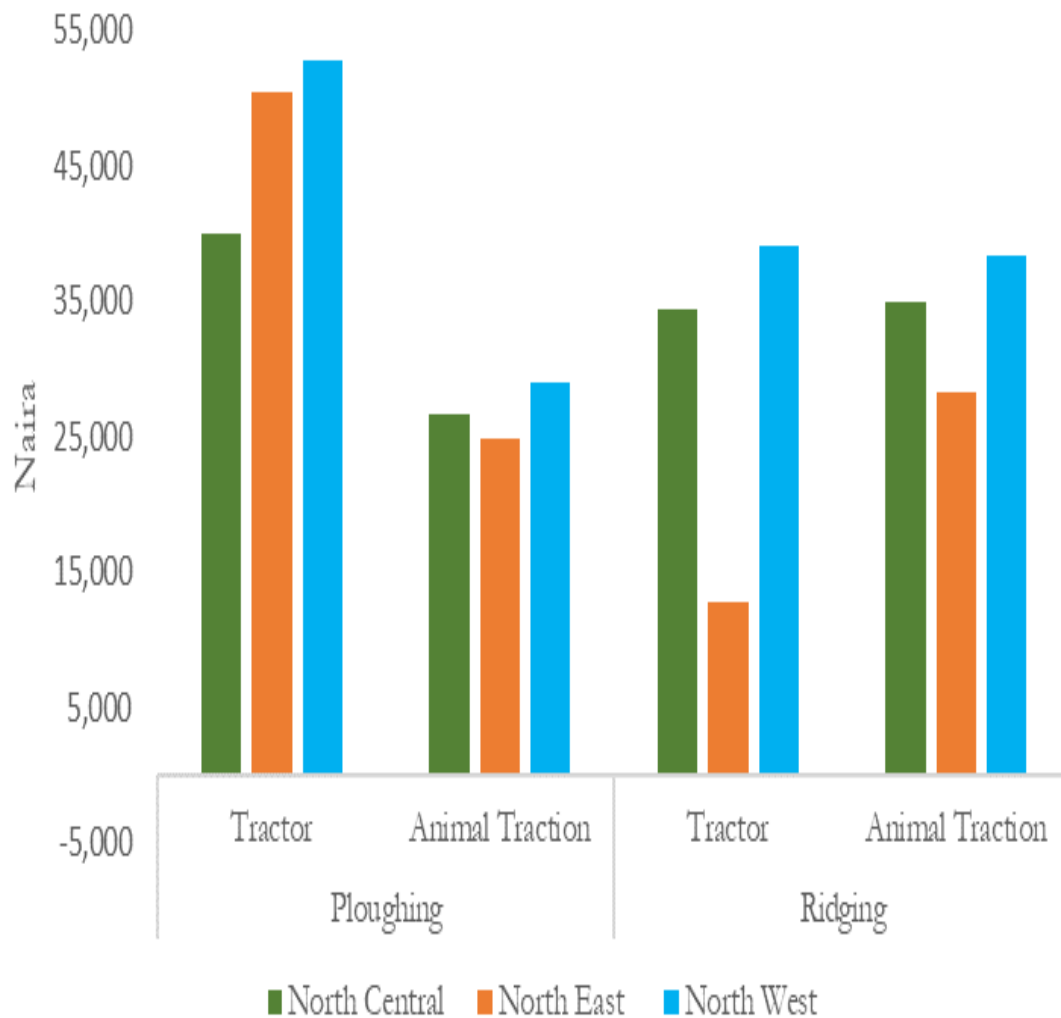
The use of simple hand farm tools (cutlass and hoes) is still the predominant practice by majority (80%) of farmers across the nation.
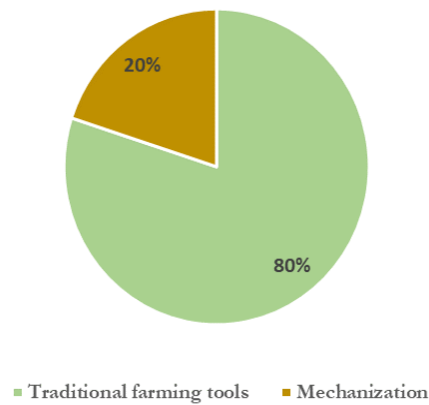
Prominent tools used for farm operations

Constraints of tractors for farm operations
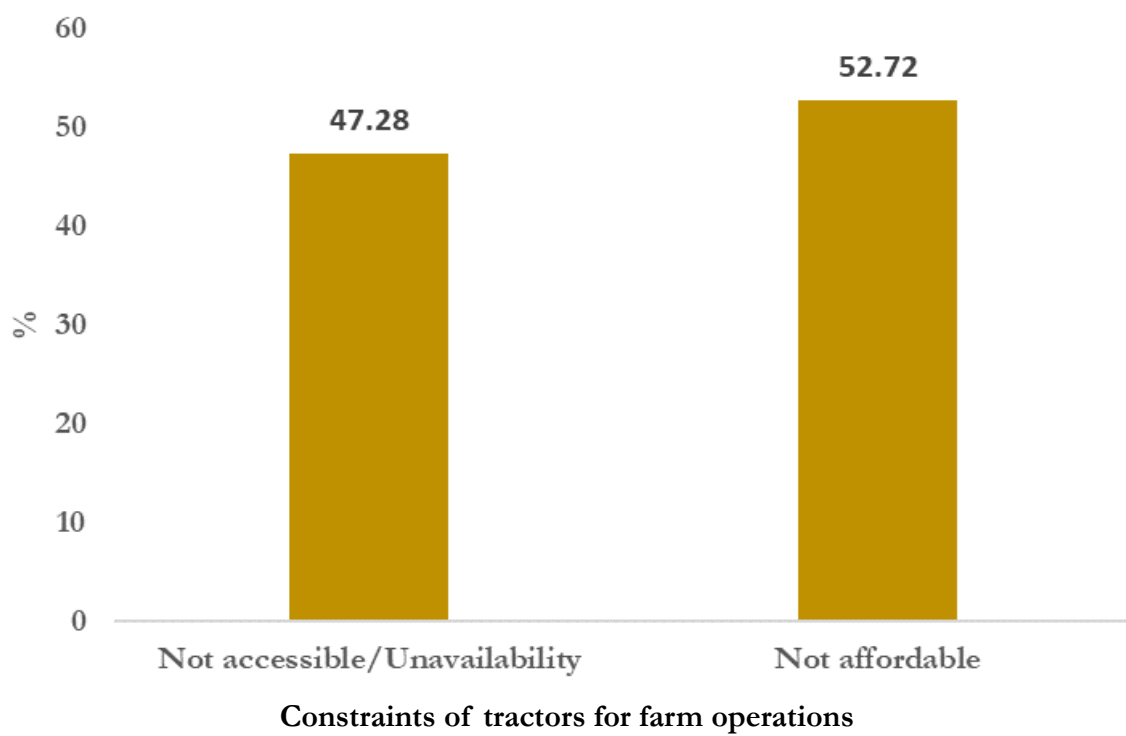
Post-Harvest Losses

Crop postharvest loss		
Zones	**Range (%)**	**Major products lost**
North-Central	20 - 50	Rice, Maize Cowpea
North-East	10 - 35	Rice, Maize, Cowpea, Sorghum and millet
North-West	20 - 45	Rice, Maize & Cowpea
South-East	25 - 45	Rice, Maize, Cassava & Yam
South-South	10 - 35	Rice, Maize, Cassava & Yam
South-West	15 - 40	Rice, Maize, Cassava, Yam & Tomatoes

Livestock products postharvest loss		
Zones	Range (%)	Major products lost
North-Central	10 - 30	Milk, Egg, Beef, Layer Meat
North-East	5 - 25	Milk, Egg, Mutton, Chevon, Beef
South-East	5 - 30	Egg, Beef, Chevon, Mutton, Broiler Meat
South-South	5 - 30	Egg, Broiler Meat & Layer Meat
South-West	10 - 25	Egg, Broiler & Layer Meat, & Chevon

No data was available across the states and FCT on post-harvest losses in fisheries, although FAO 2020 estimated 23.15% for domestic fish products in Nigeria.

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 a general increase in the cost of production of major crops in Nigeria in 2023. The average national production cost of maize increased from ₦296,027 in 2022 to ₦381,856 in 2023. Within the same period, Rice was ₦344,006 to ₦432,181; millet, ₦190,831 to ₦222,892; sorghum ₦291,481 against ₦205,417; Cowpea ₦284,217 to ₦203,908; Groundnut ₦208,254 to ₦285,773; while Soybean increased from ₦287,157 to ₦337,350.

Comparative analysis of cost of production for major crops in Nigeria in 2023 showed that rice production cost was the highest for cereals with 26% increase, while soybean production cost, among legumes, was the highest with 17% increase. Obviously, at 42% increase in cost of production in 2023, change in sorghum cost of production was the highest for all major crops (rice, cocoyam, cassava, millet, groundnut, cowpea, maize, yam, soybean and sweat potato) while at 11% increase, yam cost of production was the least. Thus, no cost of production increase for any crop production in Nigeria in 2023 was less than 11% increase. Technically, the market prices of these crops in 2023, especially from the last quarter of 2023 to the first quarter of 2024 would increase.

The data for millet and sorghum production cost were from the northern part of the country. In the southern part, the average production cost rose for cassava from ₦371,770 to ₦471,775 in

2023. Cocoyam production cost rose from ₦386,167 to ₦486,500), sweet potato cost of production increased from ₦212,500 to ₦292,376. For yam production, the cost increased from ₦920,493 to ₦1,025,026. The increment in the cost of production for all the crops recorded this year implied that most families in Nigeria may face tough time getting these crops in the market due to high market prices across all the states. The crops are part of the major family food in any average Nigerian home.

% Change	29%	26%	21%	20%
2023	₦381,856	₦432,181	₦486,500	₦471,775
2022	₦296,027	₦344,006	₦386,167	₦371,770
	Maize	**Rice**	**Cocoyam**	**Cassava**

% Change	42%	38%	38%	32%
2023	₦291,481	₦285,773	₦292,376	₦214,217
2022	₦205,417	₦208,254	₦212,500	₦296,027
	Sorghum	**Groundnut**	**Sweet Potato**	**Cowpea**

% Change	17%	17%	11%
2023	₦222,892	₦337,350	₦1,025,026
2022	₦190,381	₦287,157	₦920,493
	Millet	**Soybean**	**Yam**
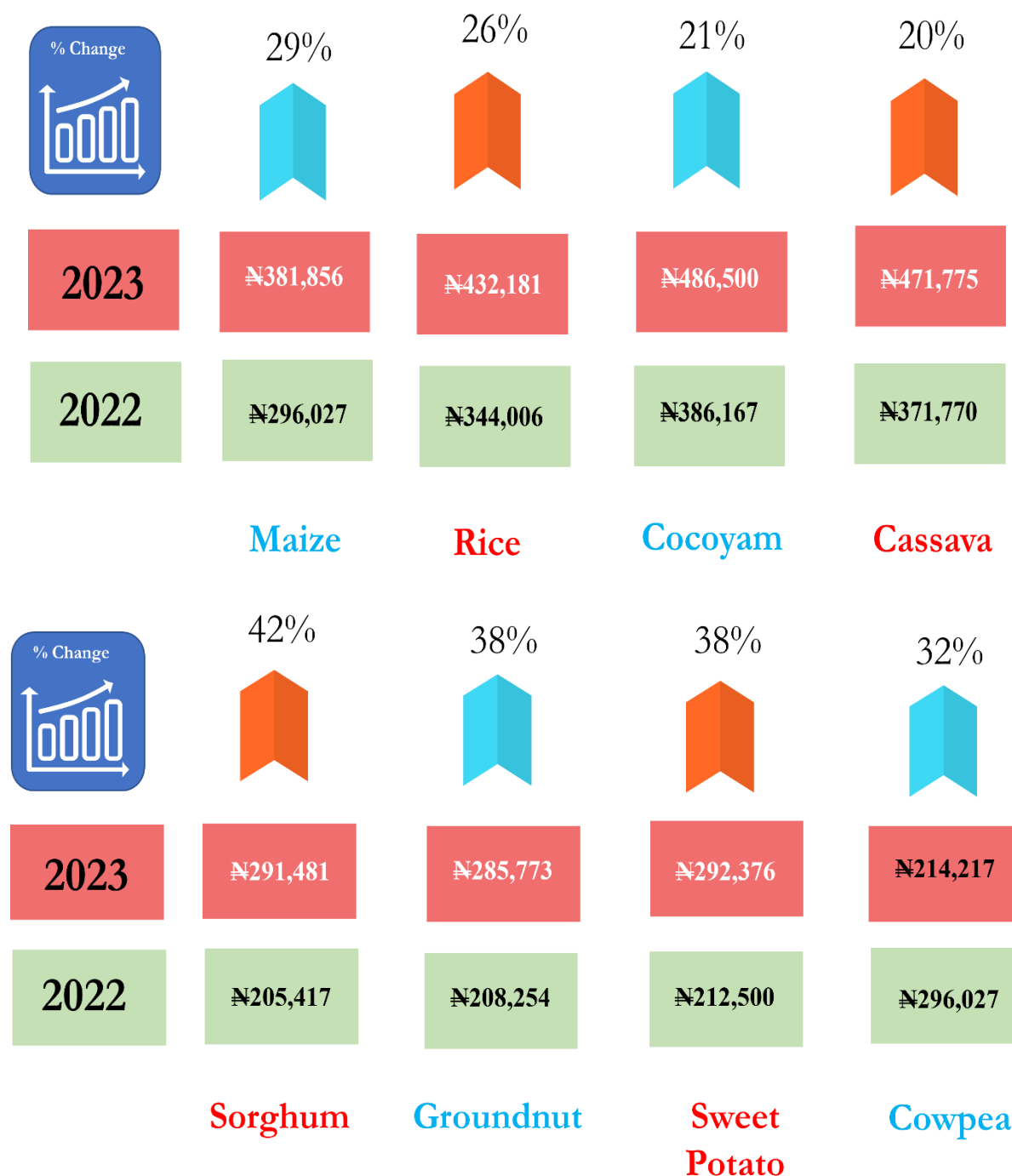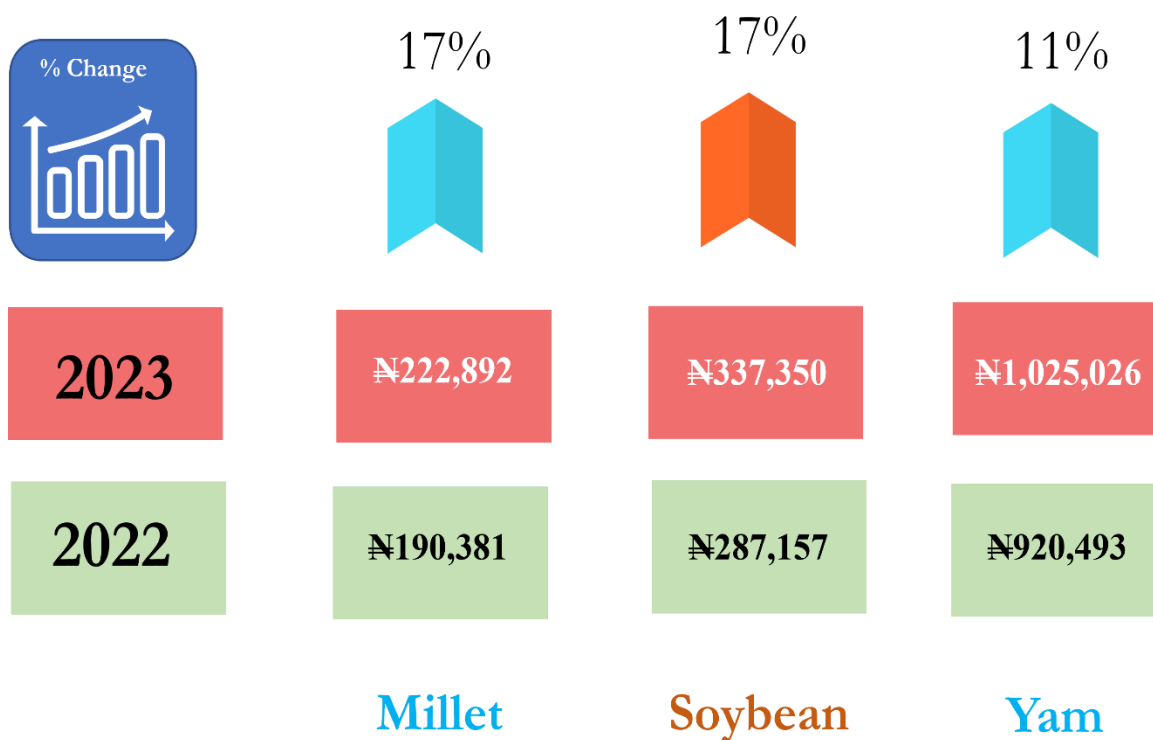
Food Commodity Prices

Maize			
Zones	**July 2022 price (₦/Kg)**	**July 2023 price (₦/Kg)**	**July 2022-2023 (% change)**
North-Central	334.5	826	146.93
North-East	316	639	102.21
North-West	328.67	588.57	79.08
South-East	490	787.5	60.71
South-South	537	707.7	31.79
South-West	532.83	725.5	36.16
The price of maize increased significantly in North-Central and North-East zones by over 100% in July 2023 when compared to July 2022.			

Milled Rice			
Zones	**July 2022 price (₦/Kg)**	**July 2023 price (₦/Kg)**	**July 2022-2023 (% change)**
North-Central	576.25	877.18	52.22
North-East	524	959	83.01
North-West	577.2	931	61.30
South-East	1,050	1,600	52.38
South-South	812	1,208.6	48.84
South-West	880	1,500	70.45

In July 2023, the South-East zone experienced the highest average cost for milled rice at 1,600 ₦/Kg, while the North-Central zone had the lowest average price at 877.18 ₦/Kg.

Beef			
Zones	**July 2022 price (₦/Kg)**	**July 2023 price (₦/Kg)**	**July 2022-2023 (% change)**
North-Central	2,145.63	2,786.62	29.87
North-East	2,212	2,342.25	5.89
North-West	1,780	2,683.33	50.75
South-East	3,850	5,050	31.17
South-South	2,437.4	3,691.4	51.45
South-West	2,525	3,600	42.57

The highest percentage change in price of beef, was recorded in the South-South and South-West zones, while the lowest was recorded in the North-East zone.

Production Estimates of Major Crops
Cereals (Maize, Millet, Rice and Sorghum)
The estimated total production in 2023 was slightly above 11 million MT as against almost 13 million MT in 2022, signifying a decrease of 17.2%. The total land area cultivated with maize in 2023 was 5.1 million hectares lower than 6 million hectares cultivated in 2022; the new figure came with a disturbing decrease of 19.5%. Among the ten top-most states for maize production in 2023, Kaduna State recorded the highest with an estimated output of 1 million MT.

The estimated production for 2022 was 8.6 million MT compared with 2023 production which was almost 9 million: a percentage increase of 3.58%. Likewise, land area dedicated for rice production in 2022 and 2023 were 4,445,382.90 ha and 4,509,840.95 hectares, respectively: indicating a marginal increase of 1.43 %.

The national sorghum production estimate was 6,806,372.50MT in 2022 and 6,401,599.74MT in 2023, indicating a decrease in production by 6.32 percent. The total cultivated land area for sorghum in 2022 was 5,768,970.00ha as against 5,235,092.54 ha in 2023 with a marginal decrease of 1.22%.

The total estimated output in 2022 was 1,941,220.00 MT and 1,549,047.50 MT in 2023, indicating a production decrease of 25.32%. The estimated total land area cultivated for millet in 2022 was 2,020,000.00 hectares and 1,542,876.00 hectares in 2023. This means a 23.62% decrease was recorded across the states. Estimated production for 2023 showed that Yobe State recorded the highest production at almost 250,000 MT. For the estimated land cultivated for millet in 2023, Yobe had the highest, more than 150,000 hectares.

Legumes (Cowpea and Groundnut)

The national estimated production for cowpea in 2022 was 3,687,759.04 MT but in 2023, 3,924,970.23 MT was recorded with a 6.04 percent increase in production. The estimated national aggregate land area for cowpea production in 2022 was 4,778,634.47 hectares as compared with 4,817,580.34 hectares in 2023. This implies a slight increment in land area by about 0.81 percent. Gombe State was the highest producer with almost 300,000MT. For the estimated land cultivated for cowpeas in 2023, Kogi State recorded the highest with more than 300,000 hectares.

The total production estimate for groundnut in 2023 was 4,965,228,25 MT which is an indication of a 4.97% increase from the value 4,718,253.53 MT estimated for 2022. The total cultivated land area for groundnut in Nigeria was 4,426,876.22 in 2023 indicating a marginal increase of 1.19% from 4,374,383 hectares of the cultivated area of land in 2022. Estimated production for groundnut in 2023 put Bauchi State as the highest producer with slightly more than 600,000 MT. Bauchi still maintained the lead for land area cultivation, with almost 500,000 hectares (same as in 2022).

Root and Tuber (Yam and Cassava)

Land area dedicated for yam cultivation increased by 1.77% from 6,114,658 hectare in 2022 to 6,224,722ha in 2023. Production also increased from 52,190,928 MT in 2022 to 53,398,028 MT in 2023 reflecting a 2.26% increase. Niger State produced the highest volume of yam in 2023 (5,000,000 MT).

Total cassava production increased by 2.24% from 61,657,582 MT in 2022 to 63,068,548 MT in 2023. Benue State produced the highest volume (4,000,000 MT). A total of 9,153,856 hectares of land were committed to cassava production in 2023, more than the 9,005,269 hectares cultivated in 2022. This implies 1.65% increase.

Cotton and Ginger

The national estimate for cotton production was 279,350.70 MT in 2022 and 298,691.36 MT in 2023. The results indicated an increase in production by 6.48%. The total estimated land put under cotton production was 382,868.45 hectares in 2023 as against 378,965.11 hectares in 2023, indicating an increase of 1.02%. Katsina State was the highest producer of cotton in 2023, estimated at 45,000MT. For the cultivated land areas in 2023, Bauchi State cultivated the most, with 70,000 hectares (slightly above what it cultivated in 2022).

The Ginger Farmers Association reported that the loss from a strange disease on ginger production could be about 10 billion Naira. The national estimated output decreased by 46.93%, that is, from 744,810 MT in 2022 to 395,249.53 MT in 2023. The national land area dedicated to ginger production increased from 87,930 hectares in 2022 to 89,082 hectares in 2023. These results indicated a 1.3% increase in land cultivated in 2023. Kaduna State was still the highest producer (213,277.26 MT) of ginger among the four states that cultivated the crop in 2023. Kaduna State cultivated about 40,000 hectares (the highest) among the four states.

Benniseed

The production estimate for 2023 is 453,244 MT more than the 482,914 MT for 2022,

indicating 6.14% increase. Benue State was the highest producer of benniseed in 2023 with an estimated 80,000 MT. Benniseed also recorded an increase of 1.48% in the national land area cultivated for production. The estimated land area cultivated was 523,477 hectares in 2022 and 531,356 hectares in 2023.

Tomato

The national tomato production estimate for 2023 is 3,784,207 MT indicating a 2.54% increase over the output recorded in 2022. The land area dedicated also increased from 871,155 hectares in 2022 to 884,832ha in 2023. These results implied a 1.55% increase. Gombe State was the highest producer of tomato in 2023 with 350,000 MT. Kano State cultivated the largest land at slightly more than 45,000 hectares.

Livestock Production

Cattle

Projected cattle population in 2023 is 61,715,054 with highest population found in Kogi State (10,019,107). Population estimates were based on report of National Agric. Sample Survey (NASS 2011). The projections are being revised.

Sheep

The total population of sheep in 2023 is 63,566,506. The largest population is found in Kogi State (10,319,681). Population estimates were based on report of National Agric. Sample Survey (NASS 2011).

Goats

The total population of goats in 2023 is 112,018,467. The largest population is found in Zamfara State (8,352,466). Population estimates were based on report of National Agric. Sample Survey (NASS 2011).

Chicken

The total population of cattle in 2023 is 674,871,805. The largest population is found in Kano State (43,581,479). Population estimates were based on report of National Agric. Sample Survey (NASS 2011).

Livestock Disease

Contagious Bovine Pleuro-Pneumonia (CBPP) was widespread across all geopolitical zones, with Nasarawa and Taraba states reporting high cases. Foot and Mouth Disease (FMD) was prevalent in all zones except South-West and South-South, while Anthrax re-emerged in North-Central (Niger State) and South-West (Lagos). Other diseases such as Lumpy skin disease (LSD) and Foot rot were reported in specific states, small ruminants, *Peste des petit* ruminants (PPR) remained endemic, affecting all states except Ekiti and Lagos. Colic infectious affects horses in Bauchi State more than in other states. African Horse Sickness, Equine influenza, and Equine viral arteritis were noted in specific areas. Laminitis was reported only in Osun State, and Helminthosis was common in Kogi and Bauchi states. Newcastle disease (NCD) was the most prevalent poultry disease affecting all states. Other diseases like Fowl typhoid, Coccidiosis, Fowl cholera, and Marek's disease were reported in various regions. Avian influenza (AI) remained endemic with Niger State reporting cases in all LGAs. African swine fever (ASF) was widespread in most zones with the highest incidences in Cross River State. Diamond skin disease (Erysipelothrix) was reported in Bayelsa. Piglet anaemia was reported in Ekiti and Osun.

Fisheries Production

Catfish species accounted for over 78% of fresh and smoked fish traded in all the states, followed by tilapia species (15%). Other fish species traded were Heterobranchus species, Heterotis species, Labeo species, and *Lates niloticus*. Captured fisheries provided most of the fish species traded as both fresh and smoked products in all the states. Diseases of fish reported across the 6 zones were scanty and not properly classified, this was likely due to inadequate skilled manpower to identify and classify some of the prevalent fish diseases. Major commercial fish farms and hatcheries available across the zones are privately owned and contribute to employment and as a means of livelihood for many.

Agricultural Development Programme Extension Activities
Major challenges of ADPs

Problems Requiring Research

Horticulture	Livestock	Fisheries	Agricultural Mechanization and Irrigation	Agroforestry	Crop	Women in Agriculture
Good agricultural practices for horticultural crops	Least-cost and high-quality animal feeds.	Ascertaining the most suitable feed for industrial-scale fish production	Training of SMS on mechanization, harvesting, transportation and processing of agricultural products.	Research in farming system related to Agroforestry technology for farmers' adoption.	Development of more pest and disease-tolerant varieties.	Development of gender-friendly equipment for farming and processing.
Breeding of pest and disease resistant and high yielding varieties that are adaptable to ecology	Improving genetic qualities/growth performance, Management of major livestock disease,	Breeding of highly prolific fish species	Simple and environmentally friendly machines need to be developed and distributed to farmers at an affordable prices	Development of new technology on tree production.	Research on seed development.	Evaluating the importance of women's involvement in agricultural value chain activities.
Development of progeny orchid with improved varieties.	Research into systemic values of keeping animals ranching.	Water quality management and disease prevention		Research need for identification of economic trees.	Development of early maturing varieties of crops.	Training of women in agro-processing, group dynamics, value addition and extension service delivery.
Nursing fruits and orchard development for income generation by different categories of farmers..	Vaccine development					

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1.0   INTRODUCTION

This Executive Summary is divided into thirteen (13) thematic areas which include the methodology, rainfall situation, flood occurrences, crop pests and diseases, use of improved farm inputs, agricultural, mechanization, postharvest losses, grain reserves, cost of production for major crops in Nigeria, food commodity prices, production estimates for major crops, livestock production situation, fisheries production situation, agricultural development programmes, and extension activities, Special projects/programmes, general constraints in agricultural production for 2023 as well as conclusion and recommendations.

These thematic areas are elaborated with short prose and related charts. The presentation of the thematic information areas flows into one another, enhancing logical relationships to be easily formed while reading and using the contents. The interconnectedness of the contents in each of the thematic areas is proof of our systematic application of data collection, analysis, and presentation (which we have improved every year). We are very critical of the coherence of information among the diverse data that were put together in the executive summary, which is expanded in the full National Report. It is important to also say that the contents are fully considered in the light of the four strategic objectives of the APS which are to:

(i.) Assess the performance of the agricultural sector during the wet season and forecast the likely production output for the year.

(ii.) Identify constraints to increase agricultural productivity.

(iii.) Identify conditions affecting effective technology transfer and advisory services within the season.

(iv.) Provide feedback on field situations and farmers' problems for improved research and policy action.

The 2023 APS fieldwork was conducted from the 27th of August to the 2nd of September by NAERLS in collaboration with relevant agencies, ministries, and related organizations. This executive summary is also presented to the public during the World Food Day celebration by the Honourable Minister of Agriculture and Food Security. Findings in the report assist the government in assessing the agricultural sector's performance, as well as providing policy direction in achieving the desired food security drive for the country.

2.0   METHODOLOGY

Team Formation

Thirteen (13) multi-disciplinary teams of three scientists each surveyed the 36 States of the Federation and FCT using Participatory Rural Appraisal (PRA) techniques. Each team covered three States within seven days. They focused on obtaining information through filled questionnaires from MOAs and ADPs.

Data Collection

Early data collection on information that may not change within the year (e.g., ADPs staff and funding, Agricultural mechanization, etc.) was done between 17th and 21st July 2023. The staff of our Zonal Offices were deployed to conduct early data collection.

The primary data collection instrument was questionnaire (copies were served to the ADPs, Ministries and other Parastatals). Structured questionnaires, checklists, field visits, focus group discussions, key-informant interviews and review of official documents were used in data collection. The questionnaire was pre-tested using farmers from one of the NAERLS-adopted villages.

Farmers' interviews were conducted using phone calls. Farmers who were interviewed were sampled among commodity-based farmers' associations. Limited field visits were involved in the 2023 APS exercise because of time and funds.

Data Validation

A preliminary analysis of information obtained from farmers through phone interviews was done before the field exercises. Our teams were provided with the preliminary results of the farmers' survey. Validation of information obtained from farmers was done with the Commodity-Based Farmers' Association. Teams conducted wrap-up sessions with agriculture stakeholders in each of the States based on information obtained from ADPs, MOAs and preliminary results of farmers' interviews.

3.0   WEATHER SITUATION

3.1 Rainfall and Rainy Days

Generally, data obtained in 2023 showed that the precipitation (rainfall) rate reduced in the Northern part of the country and increased in the southern part (Tables 3.1 - 3.6). The number of average rainy days (Tables 3.7 - 3.12) in the southern part of the country increased significantly compared to 2022 while the number of rainy days in the Northern part decreased in all the zones except for North-East. Despite this record, twenty-one (21) states across the country recorded dry spell occurrences that affected the growth and development of different types of crops. Even with this record, there was still excessive rainfall that led to flood occurrence in not less than 18 states as of August. This shows the impact of climate change across the country.

North-Central

In 2023, all the states in the zone witnessed the onset of rain (Figure 3.1) in March, except for Kwara and Plateau states which both experienced rainfall in January. The zone recorded a mean rainfall of 1342 mm in 2023 which was lower than the 2022 recorded of 1533 mm. For mmonthly rainfall, the highest mean (298mm) (Figure 3.2) was recorded in the month of September 2023. Plateau State recorded 101 rainy days for the year, less than what was recorded in 2022 with 111 rainy days.
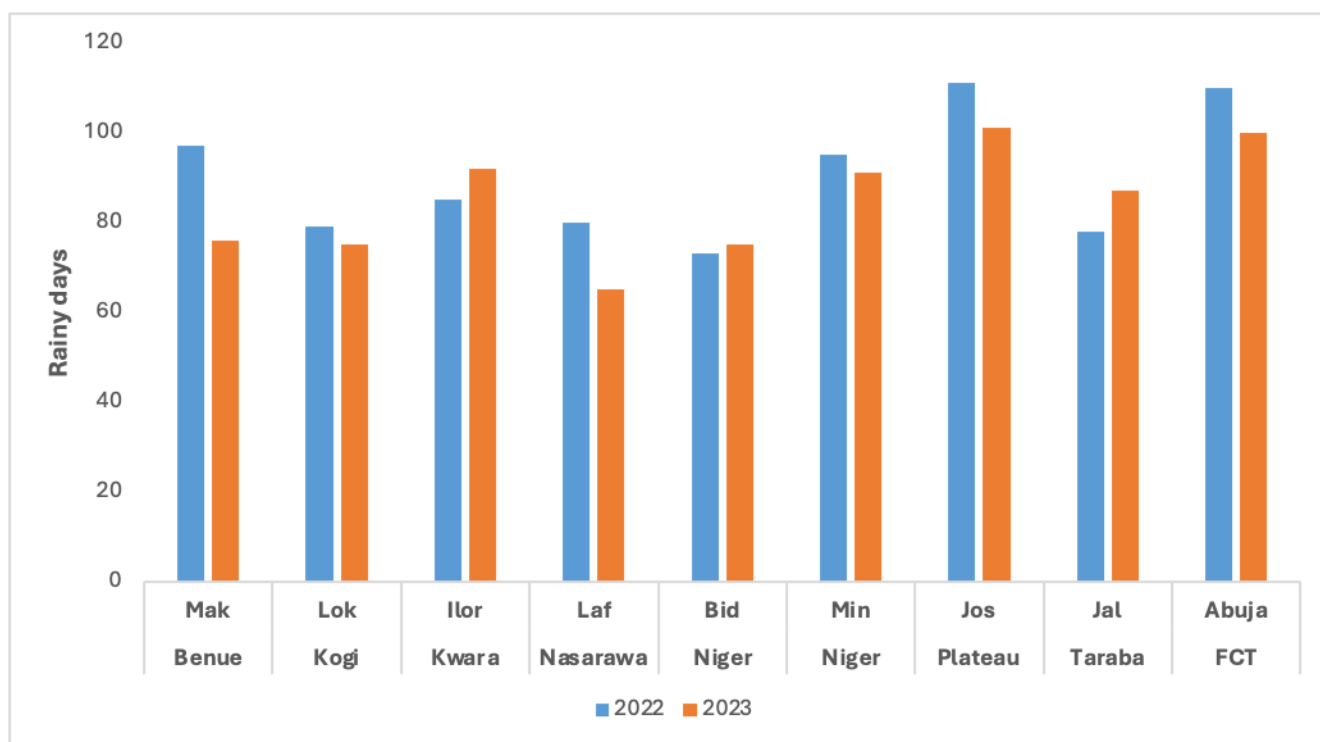
Figure 3.1: North-Central Rainy day (January - December)
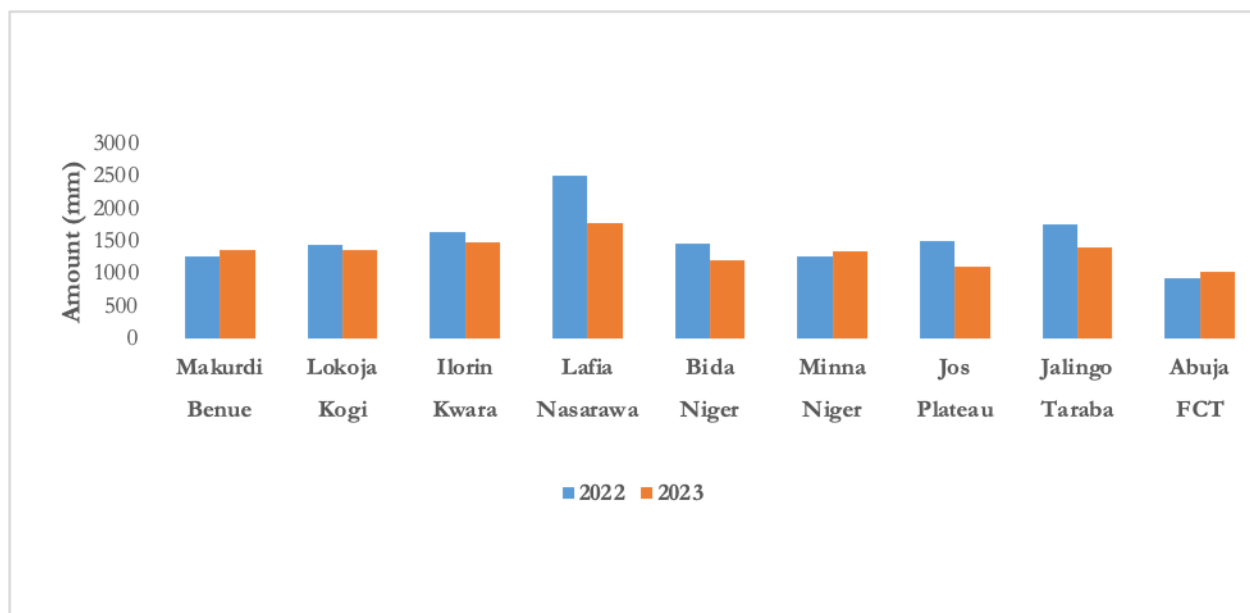
Figure 3.2: North-Central Rainfall Distribution (January - December)

North-East

All states in the zones witnessed their first rain in April for the year 2023 besides Yobe State (Potiskum), where farmers experienced theirs in January. Bauchi State had the highest total rainfall of 661.4 mm, while Nguru station in Yobe State received the lowest (323.9 mm). Adamawa State recorded the highest rainy days of 67 (Figure 3.3) while Nguru in Yobe State recorded the least (29 days). The zone had less rainfall for 2023 in comparison to 2022 rainfall. Besides Yola in Adamawa State that experienced more rainfall (Figure 3.4) in 2023 with small margin, 2022 amount of rainfall twice what was experienced in 2024 by other states.
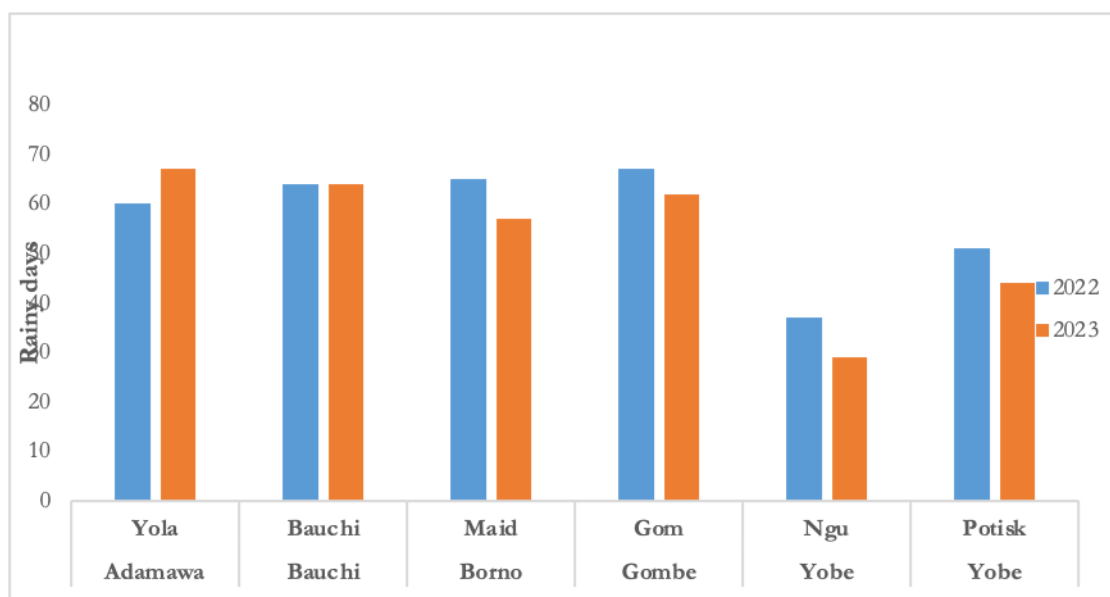
Figure 3.3: North-East Rainy day (January - December)
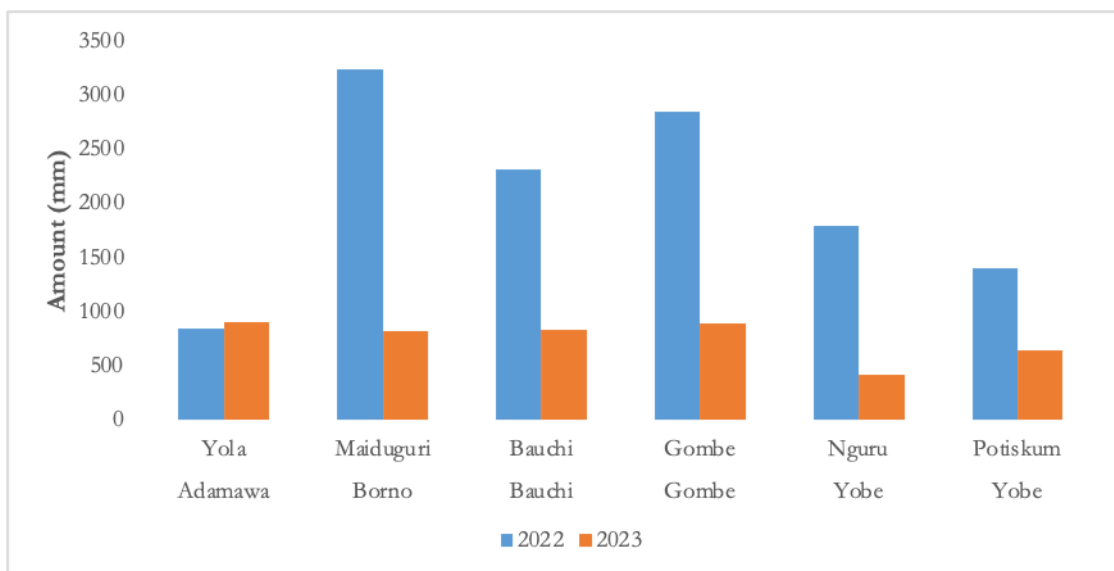
Figure 3.4: North-East Rainfall Distribution (January - December)

North-West

The zone experienced 56 days of rain on average in 2023, however, Kaduna State had 90 rainy days as the highest total of rainy days in the zone. In 2023, Kaduna State witnessed its first rainfall (Figure 3.5) in March, Jigawa, Katsina and Kebbi states had theirs in April while Kano, Zamfara and Sokoto had first rainfall in May. In 2023, Jigawa recorded the most rainfall in the zone, with a value of 1678 mm (Figure 3.6), while Kano recorded the lowest value of 697 mm.
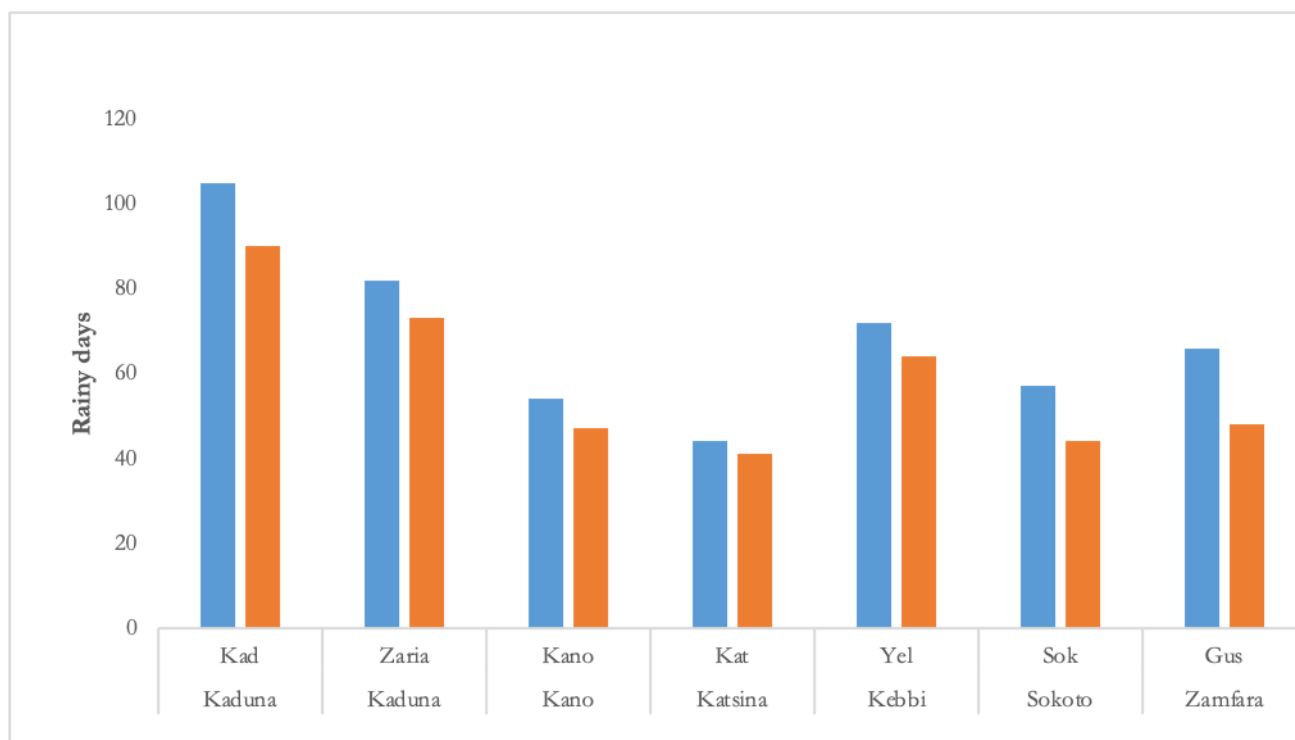
Figure 3.5: North-West Rainy day (January - December)

Figure 3.6: North-West Rainfall Distribution (January - December)

South-East

Apart from Enugu State which had its first rainfall in March, all other states recorded their first rainfall in January 2023. On average the zone experienced 134 days of rain in 2023 and this was more than the 121 days experienced in 2022. The rainy days of 150 (Figure 3.7) was recorded in Abia State. Imo State recorded the highest rainfall with a value of 2428.9 mm while Abia recorded the lowest rainfall value of 2086.9 mm. Irregular rainfall was experienced in the zone (Figure 3.8).
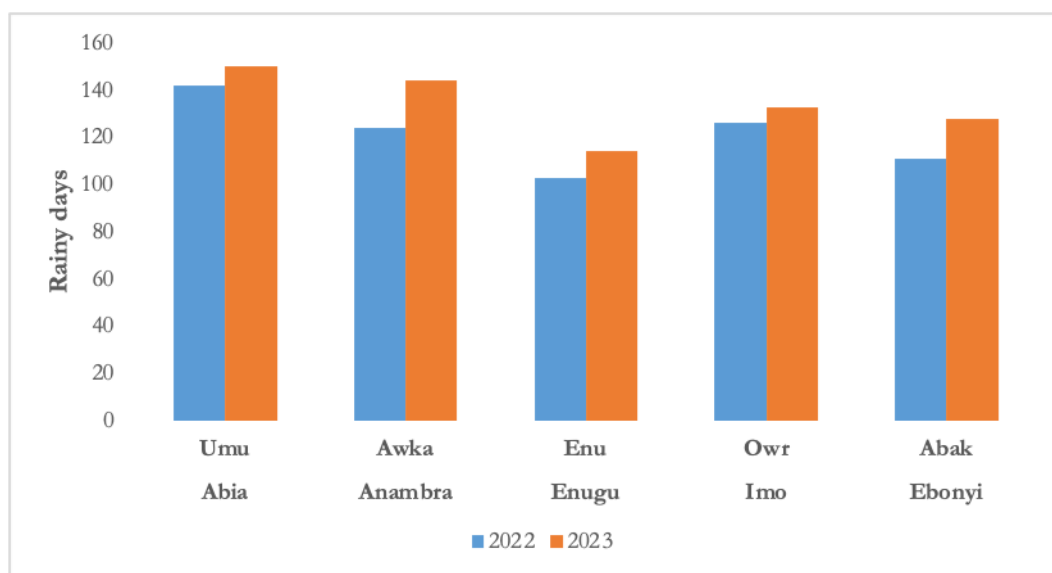
Figure 3.7: South-East Rainy day (January - December)
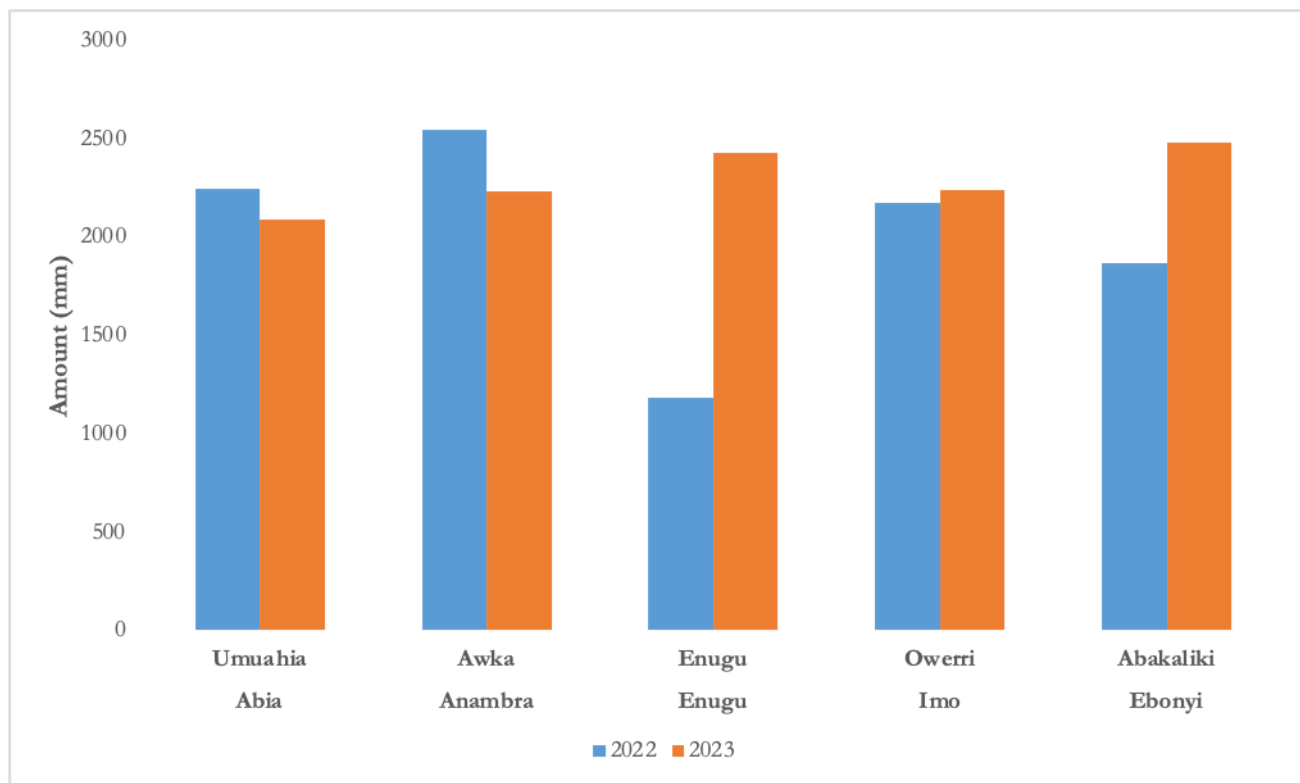
Figure 3.8: South-East Rainfall Distribution (January - December)

South-West

On average, the zone experienced 108 days of rain in 2023, this was more than 103 days recorded in 2022. Ekiti State experienced the highest rainy days in the zone with 128 days (Figure 3.9) while Oyo state recorded the lowest number of rainy days of 76. In 2023, all the states in the zone recorded their first rainfall in January except Oyo State that experienced theirs in February. The maximum amount of rainfall was recorded in September, 3236 mm which was higher than 2022 value of 2583.3 mm. The highest precipitation was recorded in Ibadan, the capital of Oyo State as 2572 mm (Figure 3.10), followed by Oshodi in Lagos State with 2302mm.
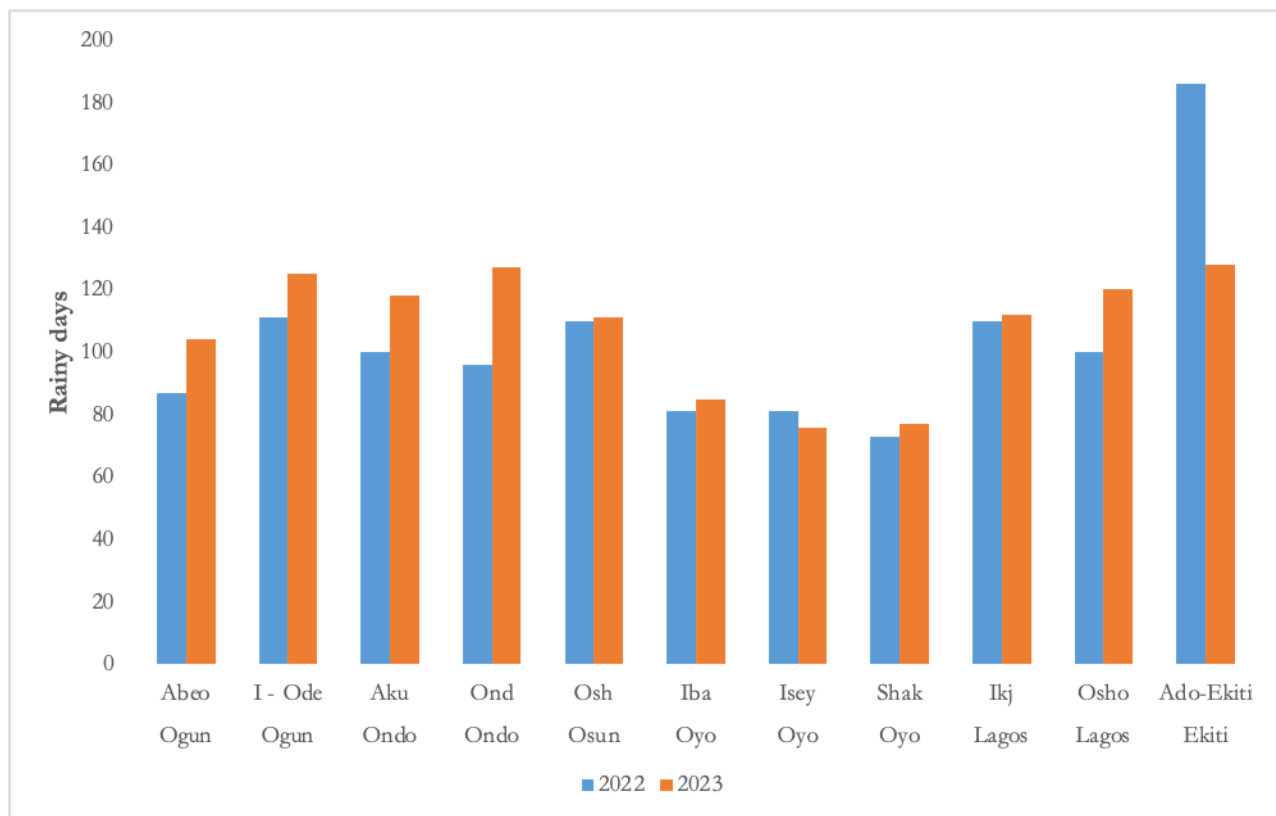
Figure 3.9: South-West Rainy day (January - December)
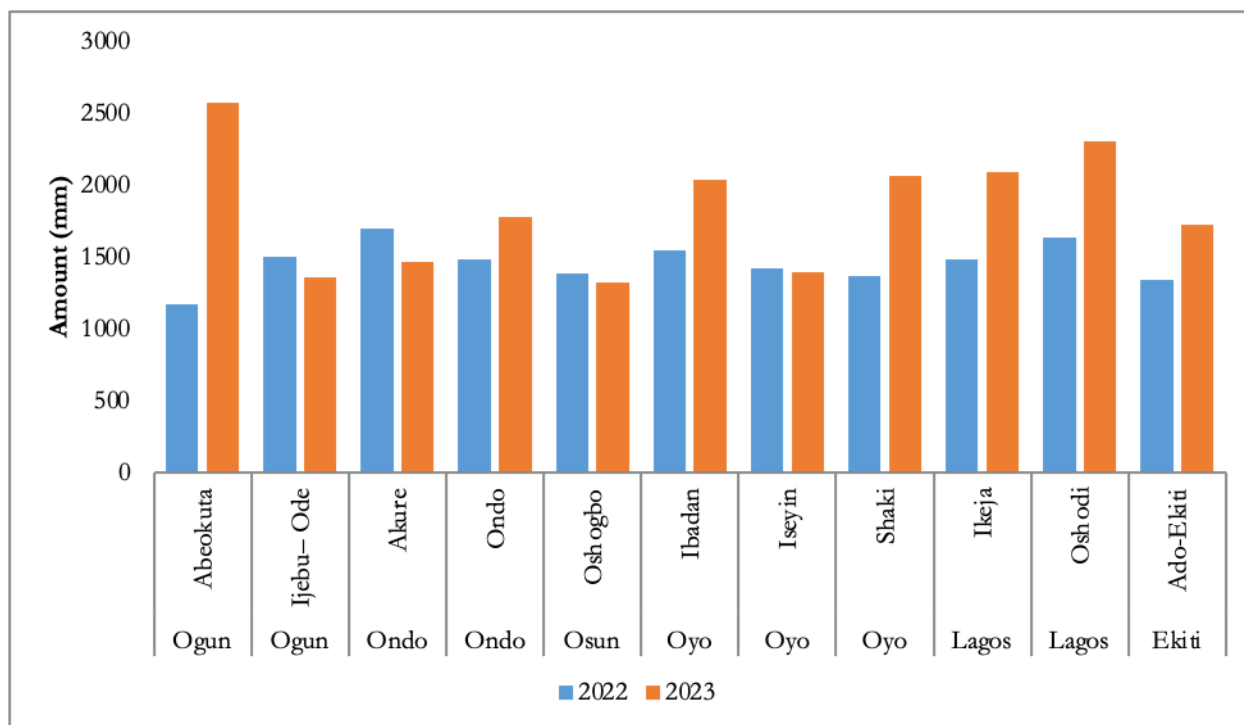
Figure 3.10: South-West Rainfall Distribution (January - December)

South-South

Rainy season began in January for all the states in the zone. There was an average of 154 rainy days experienced by the zone in 2023, which was higher than 2022 that recorded 131 days (Figure 3.11). The zone recorded a value of 1982.4 mm (Figure 3.12) rainfall in 2023 which was higher than 2022 with a value of 1580.2 mm.
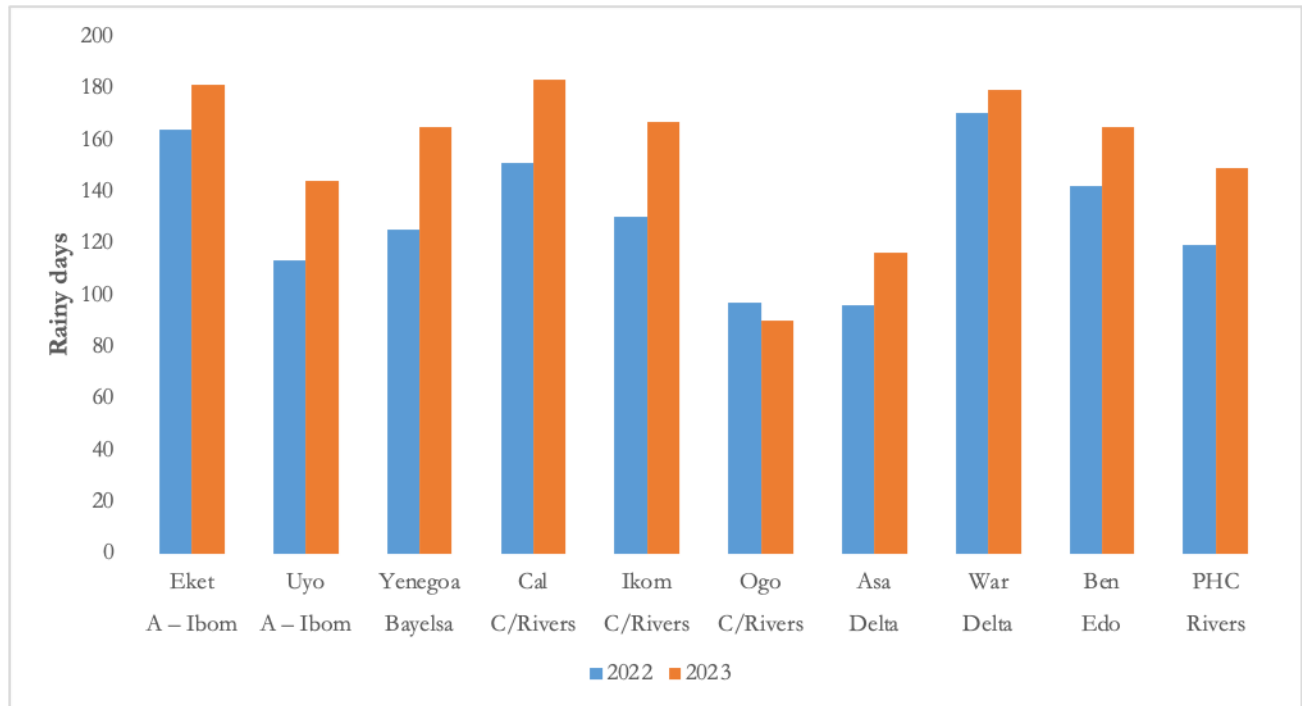
Figure 3.11: South-South Rainy day (January - December)
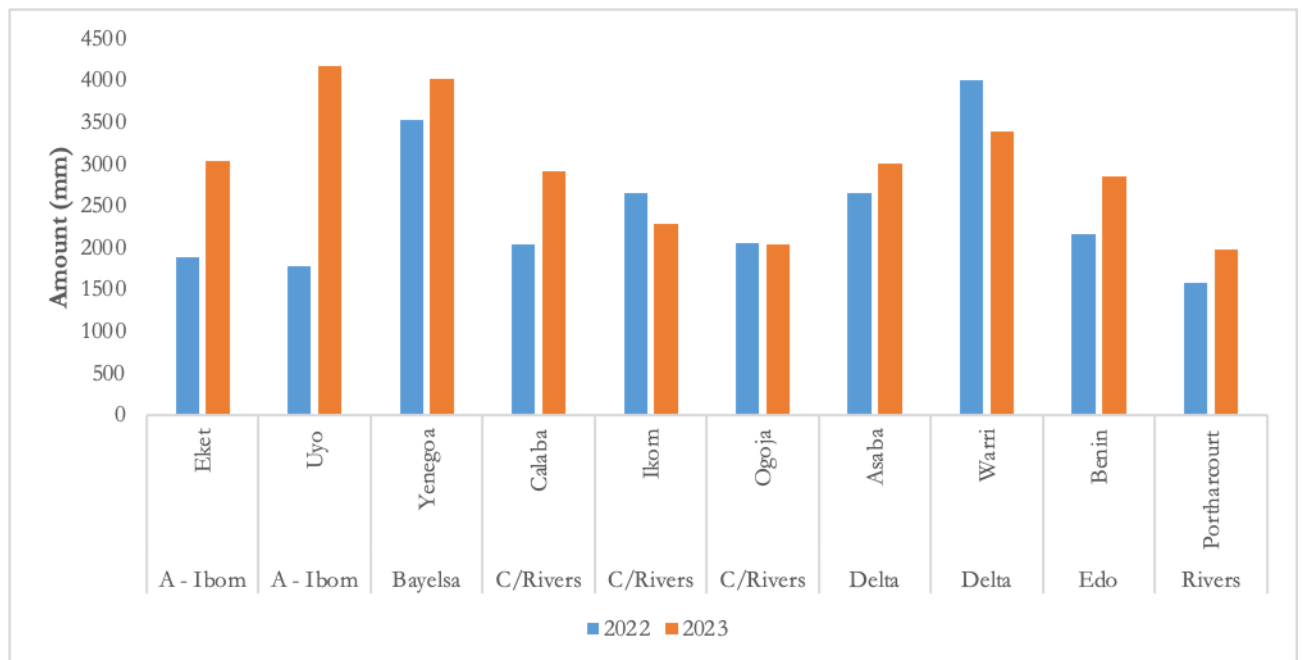
Figure 3.12: South-South Rainfall Distribution (January - December)

3.2 Maximum Temperature

North-Central

All the states in this zone had an increase in temperature in 2023 in comparison to what was observed in 2022. The mean maximum temperature in March 2023 was higher (38.6 ^{0}C). In 2023 Taraba and Nasarawa states recorded the highest mean temperature of 34.5^{0}C (Figure 3.13) while Jos in Plateau State recorded the lowest at 28.2^{0}C.
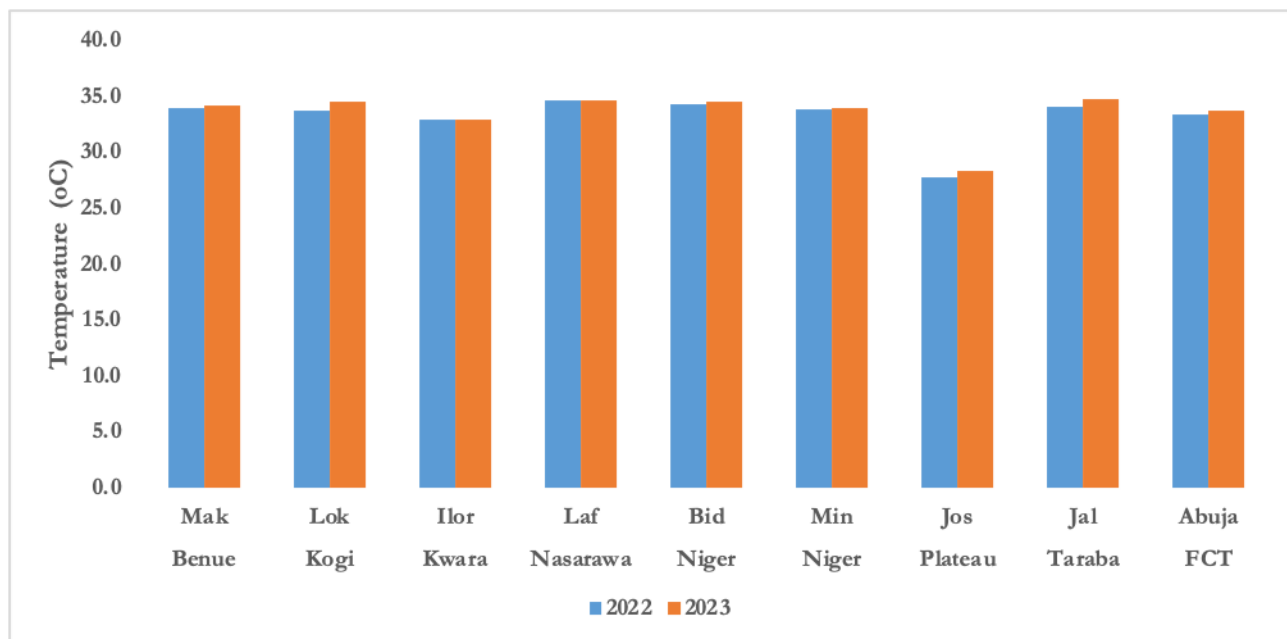
Figure 3.13: North-Central Max. Temperature (^{o}C) (January - December)

North–East

Except for Nuguru in Yobe State and Borno in Maiduguri, where there was higher temperature, the mean maximum temperature (34.62^{0}C) across the zone in 2023 was slightly higher than the one experienced in 2022 (34.09^{0}C). In 2023, Yobe and Borno states recorded the mean monthly temperature of 36.3^{0}C (Figure 3.14) as the highest in the zone. Adamawa State recorded the lowest mean temperature for 2023 at 32.9^{0}C (lower than 34.9^{0}C) recorded in 2022. The states in this zone experienced dry spell from May to July and a mild severity of damage to crops in Bauchi State.
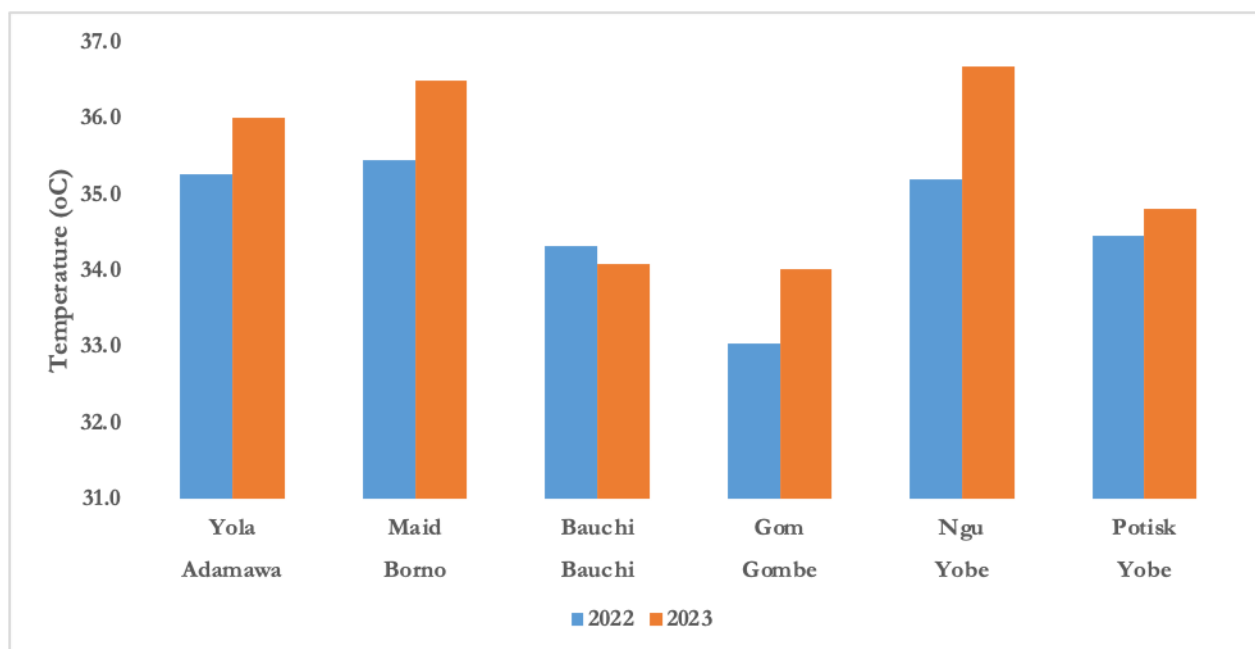
Figure 3.14: North-East Max. Temperature (°C) (January - December)

North-West

In comparison to 2022 records, temperature increased in all the states in the zone in 2023. The change might be due to climate change. In 2023, Sokoto State recorded the highest mean maximum temperature of 36.2^{0}C and Kaduna recorded the lowest (32.2^{0}C) (Figure 3.15). These values were higher than those recorded in 2022 for both states, which were (34.8^{0}C) and (32.0^{0}C) respectively. There was dry spell across all the states in this zone between May and August.
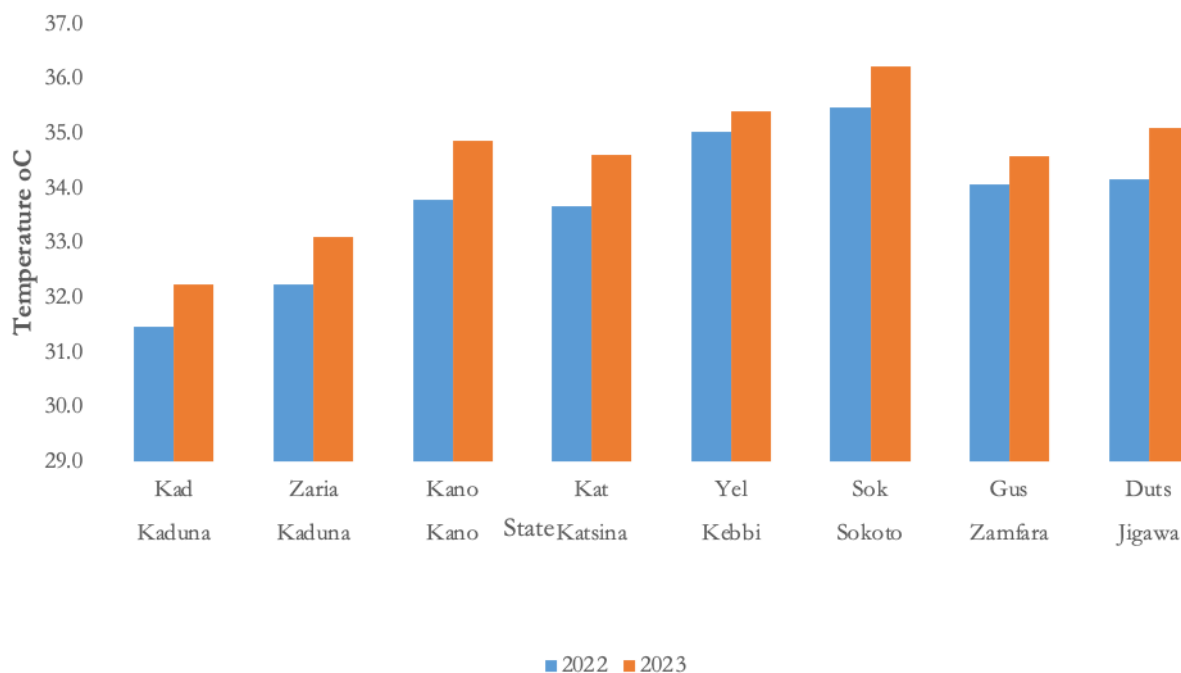
Figure 3.15: North-West Max. Temperature (°C) (January - December)

South-East

While the zone mean maximum temperature was 32.8^0C in 2022, it was reported at 33.8^0C in 2023, indicating an increase in temperature. The month of February in 2023 was with the highest mean temperature (36.8^0C), while the month of August had the lowest at 30.6^0C as mean temperature. Ebonyi State had the highest mean temperature of 33.8^0C as shown in Figure 3.16, which was higher than what was recorded (33.6^0C) in 2022. Imo State experienced the lowest mean temperature in 2023 at 32.4^0C compared to Anambra State with 32.6^0C. Anambra State experienced very severe dry spell in the zone while states like Imo and Enugu had none.
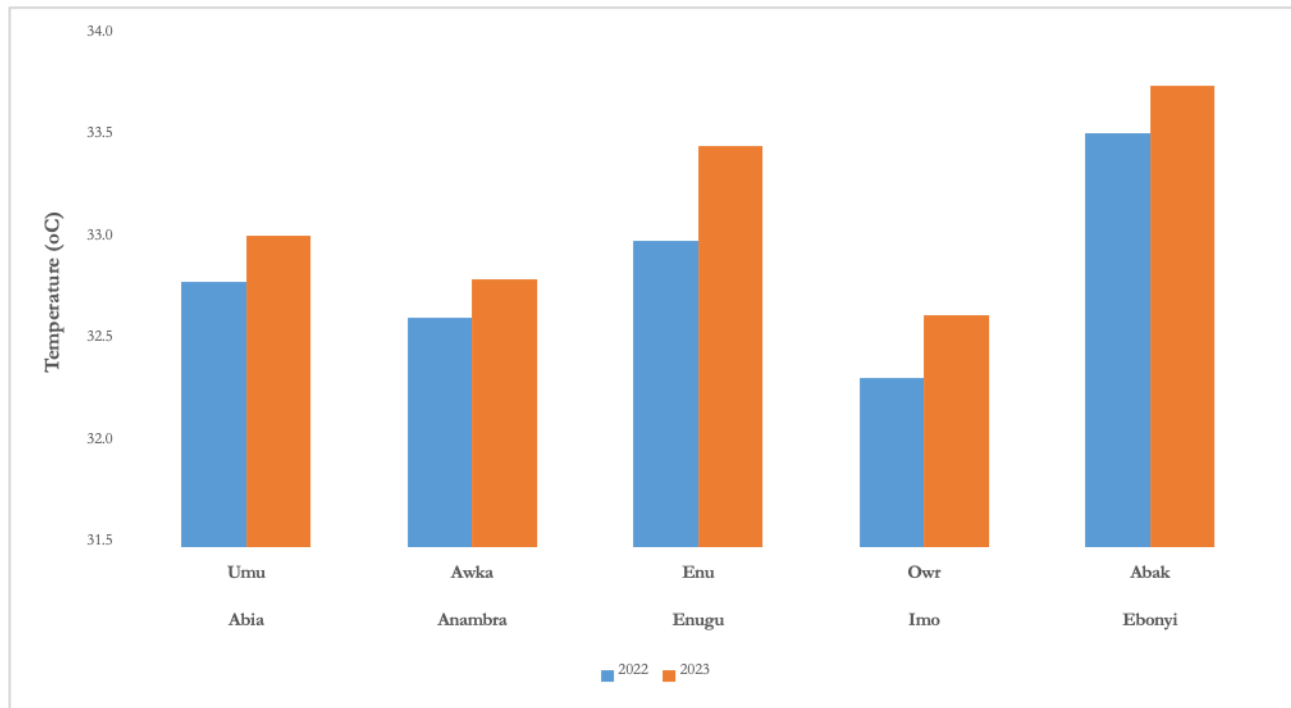
Figure 3.16: South-East Max. Temperature (^{o}C) (January - December)

South-West

Most of the states in this zone experienced an increase in temperature between 2022 and 2023. The average temperature in 2023 was (32.5^0C) which was more than the average (32.2^0 C) in 2022. at Abeokuta, Ogun State, the highest monthly temperature was in April (43.1^0C) (Figure 3.17) and was higher than (37.7^0C) recorded in February 2022. Also, there was dry spell experienced in Ekiti, Lagos, Osun and Oyo states.
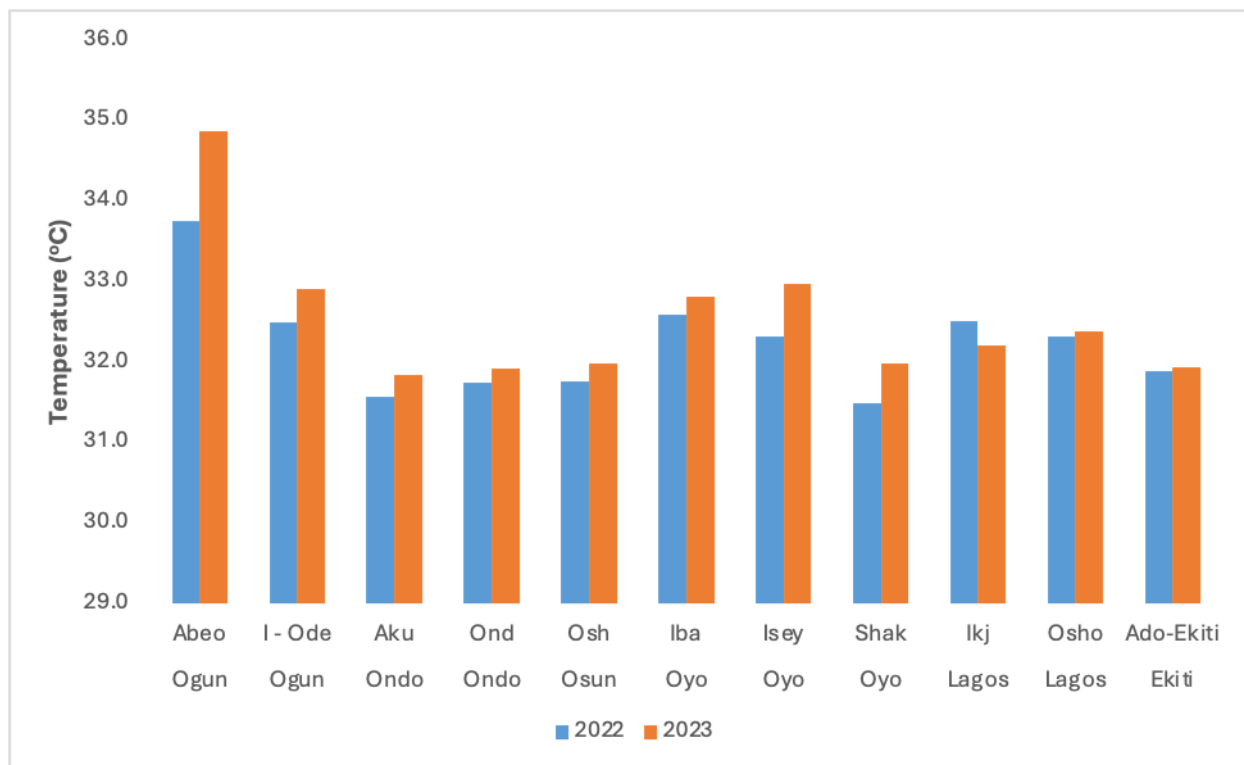
Figure 3.17: South-West Max. Temperature (°C) (January - December)

South-South

In some states, the temperature dropped, while it increased in some cities including Ogoja and Ikom in Cross river State and Yenagoa in Bayelsa State. The mean temperature for 2023 was reported as (32.6^{0}C) (hotter than the (32.3^{0}C) temperature) recorded in 2022 in the zone. In 2023, Eket in Akwa Ibom State recorded the lowest temperature at (29.3^{0}C) while Asaba in Delta State recorded the highest temperature at (35.4^{0}C) (Figure 3.18).
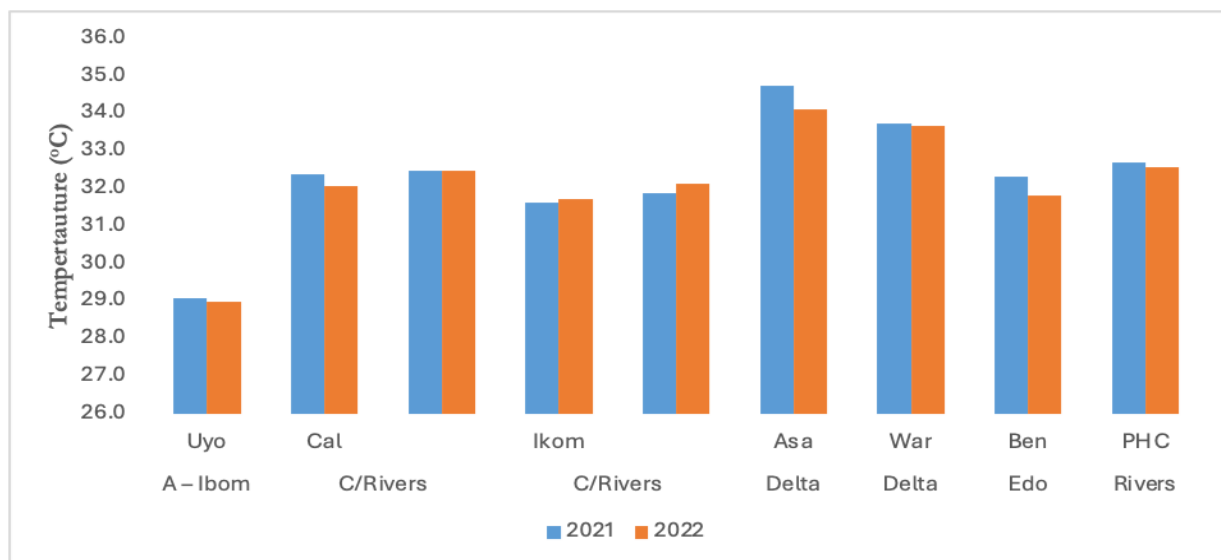
Figure 3.18: South-South Max. Temperature (°C) (January - December)

Table 3.1: Comparison of 2022 and 2023 Rainfall Situation (mm) in the North-Central Agro-Ecological Zone (Jan - Dec)

State	Station	January		February		March		April		May		June		July		August		Sept		October		Nov		Dec		Total	
		2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Benue	Mak	2	0	0	0	0	1	113	101	107	217	179	144	197	107	298	143	230	469	145	131	0	44	0	0	1270	1357
Kogi	Lok	0	0	0	0	39	46	164	173	158	198	213	122	290	129	345	243	116	267	121	174	0	17	0	0	1446	1367
Kwara	Ilor	0	1	0	26	33	44	179	231	156	157	431	309	101	224	246	126	318	183	178	135	5	47	0	0	1647	1483
Nasarawa	Laf	0	0	0	0	0	26	278	130	224	177	498	369	154	199	667	339	458	403	221	130	0	2	0	0	2500	1774
Niger	Bid	0	0	0	0	23	4	30	92	180	138	275	210	237	222	270	280	339	162	104	51	0	50	0	0	1458	1208
Niger	Min	0	0	0	0	15	3	75	46	67	105	262	261	231	243	268	179	245	371	102	128	0	3	0	0	1264	1337
Plateau	Jos	0	22	0	0	0	32	159	124	209	74	331	143	206	231	242	228	287	184	79	68	0	6	0	0	1512	1112
Taraba	Jalingo	0	0	0	0	0	28	318	51	351	137	421	347	169	220	233	233	212	256	59	97	0	40	0	0	1762	1410
FCT	Abuja	0	0	0	0	6	19	47	40	86	115	174	169	95	150	120	254	207	116	202	132	1	38	0	0	938	1031
Mean		**0**	**3**	**0**	**3**	**13**	**23**	**151**	**110**	**171**	**146**	**309**	**230**	**187**	**192**	**299**	**225**	**268**	**268**	**135**	**116**	**1**	**27**	**0**	**0**	**1533**	**1342**

Source: NiMET

Table 3.2: Comparison of 2022 and 2023 Rainfall Situation (mm) in the North-East Agro-Ecological Zone (Jan - Dec)

State	Station	January		February		March		April		May		June		July		August		September		October		November		December		Total	
		2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Adamawa	Yola	0	0	0	0	0	0	11	56	43	35	218	218	104	119	235	195	0	211	0	74	0	0	235	0	847	908
Borno	Maid	0	0	0	0	0	0	43	7	11	18	138	228	438	104	521	208	521	230	521	18	521	0	521	0	3235	813
Bauchi	Bauchi	0	0	0	0	0	0	42	50	50	88	222	161	249	165	351	197	351	154	351	16	351	4	351	0	2318	835
Gombe	Gom	0	0	0	0	0	0	43	27	166	122	180	171	261	158	440	153	440	146	440	104	440	6	440	0	2848	886
Yobe	Ngu	0	0	0	0	0	0	0	0	0	9	40	75	136	111	323	130	323	81	323	5	323	0	323	0	1792	410
Yobe	Potisk	0	1	0	0	0	0	0	0	3	48	116	199	183	134	219	138	219	121	219	0	219	0	219	0	1395	642
Mean		**0**	**0**	**0**	**0**	**0**	**0**	**23**	**23**	**45**	**53**	**152**	**175**	**228**	**132**	**348**	**170**	**309**	**157**	**309**	**36**	**309**	**2**	**348**	**0**	**2072**	**749**

Source: NiMET

Table 3.3: Comparison of 2022 and 2023 Rainfall Situation (mm) in the North-West Agro-Ecological Zone (Jan - Dec)

State	Station	January		February		March		April		May		June		July		August		September		October		November		December		Total	
		2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Jigawa	Dutse	0	0	0	0	0	0	8	15	0	61	142	196	151	246	460	206	253	67	8	48	0	0	0	839	1022	1678
Kaduna	Kad	0	0	0	0	0	30	139	87	211	127	275	296	472	126	424	293	477	355	157	14	0	37	0	0	2156	1364
Kaduna	Zaria	0	0	0	0	0	1	49	26	59	100	258	162	183	197	300	207	351	156	26	8	0	8	0	0	1225	865
Kano	Kano	0	0	0	0	0	0	0	0	55	25	149	176	168	180	262	141	186	104	8	70	13	0	0	0	840	697
Katsina	Kat	0	0	0	0	0	0	0	1	2	17	92	287	185	327	302	147	184	97	38	1	0	0	0	0	802	878
Kebbi	Yel	0	0	0	0	0	0	123	78	168	50	151	137	265	208	302	297	303	176	57	45	0	0	0	0	1369	990
Sokoto	Sok	0	0	0	0	0	0	10	0	35	75	192	129	580	331	412	103	264	271	19	2	0	0	0	0	1511	911
Zamfara	Gus	0	0	0	0	0	0	47	0	118	21	132	166	204	92	335	322	261	134	42	15	0	27	0	0	1140	775
Mean		**0**	**0**	**0**	**0**	**0**	**4**	**47**	**26**	**81**	**59**	**174**	**194**	**276**	**213**	**350**	**214**	**285**	**170**	**44**	**25**	**2**	**9**	**0**	**105**	**1258**	**1020**

Source: NiMET

Table 3.4: Comparison of 2022 and 2023 Rainfall Situation (mm) in the South-East Agro-Ecological Zone (Jan - Dec)

State	Station	January		February		March		April		May		June		July		August		September		October		November		December		Total	
		2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Abia	Umu	43	15	0	0	54	154	280	232	383	200	207	275	309	103	115	225	473	411	380	404	3	70	0	0	2246	2087
Anambra	Awka	0	10	0	0	88	154	504	113	531	424	334	254	198	192	249	286	240	424	402	215	0	159	0	0	2547	2229
Enugu	Enu	0	0	0	0	56	80	46	43	174	265	153	424	167	315	125	166	131	398	235	327	93	312	1	99	1181	2428
Imo	Owri	24	19	17	0	32	221	335	187	330	304	209	290	306	185	215	252	168	413	377	275	144	94	18	0	2174	2240
Ebonyi	Abak	0	14	0	0	45	135	101	159	179	387	222	176	547	226	274	336	242	472	256	399	0	171	0	0	1865	2475
Mean		**13**	**12**	**3**	**0**	**55**	**149**	**253**	**147**	**319**	**316**	**225**	**284**	**305**	**204**	**196**	**253**	**251**	**424**	**330**	**324**	**48**	**161**	**4**	**20**	**2002**	**2292**

Source: NiMET

Table 3.5: Comparison of 2022 and 2023 Rainfall Situation (mm) in the South-West Agro-Ecological Zone (Jan - Dec)

State	Station	January		February		March		April		May		June		July		August		September		October		November		December		Total	
		2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Ogun	**ABE**	0	0	1	5	107	161	167	100	43	149	340	359	132	360	64	180	153	382	161	600	0	96	0	180	1167	2572
Ogun	I – Ode	0	36	10	1	62	123	130	117	143	151	281	167	396	236	140	105	119	105	164	105	58	105	0	105	1502	1355
Ondo	Aku	0	8	3	39	16	198	244	63	141	190	379	59	240	273	246	169	244	241	134	177	38	49	9	0	1694	1466
Ondo	Ond	0	5	2	80	34	125	245	110	96	165	292	248	259	296	178	155	231	352	147	201	0	43	0	0	1485	1779
Osun	Osh	0	1	5	55	57	75	95	123	182	102	276	135	87	159	172	93	174	133	296	334	39	111	2	0	1385	1322
Oyo	Iba	0	0	3	10	179	62	168	165	62	161	193	541	292	260	138	214	335	286	166	303	12	37	0	0	1549	2038
Oyo	Isey	0	0	0	73	104	74	111	114	69	153	250	204	144	236	339	115	133	95	267	271	0	57	0	3	1416	1395
Oyo	Shak	24	29	0	24	40	86	114	84	48	122	272	409	70	204	285	195	326	418	189	434	0	54	0	8	1368	2067
Lagos	Ikj	0	6	0	30	50	140	172	228	88	179	260	323	248	245	80	54	293	505	146	188	133	181	9	8	1479	2086
Lagos	Osho	2	64	6	110	65	118	232	191	177	238	251	404	297	194	92	26	236	465	169	277	106	192	0	24	1631	2302
Ekiti	Ado-Ekiti	0	50	8	70	133	145	125	128	82	104	214	362	99	194	135	176	339	254	190	155	10	91	0	0	1335	1727
Mean		2	18	3	45	77	119	164	129	103	156	273	292	206	241	170	135	235	294	184	277	36	92	2	30	1455	1828

Source: NiMET

Table 3.6: Comparison of 2022 and 2023 Rainfall Situation (mm) in the South-South Agro-Ecological Zone (Jan - Dec)

Station	January		February		March		April		May		June		July		August		September		October		November		December		Total	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Eket	13	92	7	2	75	138	9	211	217	234	285	681	448	352	178	288	204	475	256	348	133	216	61	5	1886	3041
Uyo	3	142	0	0	85	409	154	349	88	332	133	793	234	437	237	551	524	488	222	356	99	313	0	10	1779	4179
Yen	71	0	40	41	203	343	347	271	496	338	774	857	369	585	99	272	632	542	384	483	116	208	1	82	3531	4021
Cal	9	25	2	1	34	216	187	219	208	200	304	404	298	392	247	311	337	406	326	441	87	261	0	40	2039	2914
Ikom	4	17	0	0	105	168	372	187	384	342	285	358	244	259	346	180	484	214	417	391	2	177	8	0	2653	2292
Ogo	0	0	0	0	0	50	343	53	250	313	161	131	315	310	258	151	307	335	424	535	0	163	0	0	2058	2041
Asa	0	1	0	0	4	132	372	23	433	452	260	471	489	468	191	451	380	545	525	340	0	125	0	0	2653	3007
War	111	174	66	49	251	168	511	216	707	359	400	671	666	407	150	404	493	508	536	307	74	117	47	15	4012	3394
Ben	4	28	53	79	27	312	420	52	284	372	289	472	350	328	154	325	301	432	265	300	19	139	0	17	2167	2854
PHC	140	2	0	15	45	98	184	156	142	314	255	410	89	189	188	155	163	386	258	149	73	107	43	1	1580	1982
Maen	35	48	17	19	83	203	290	174	321	326	315	525	350	373	205	309	383	433	361	365	60	182	16	17	2436	2972

Source: NiMET

3.2 Rainy Days

Table 3.7: Rainy days in the North-Central Agro-Ecological Zone (Jan - Dec)

State	Station	January		February		March		April		May		June		July		August		September		October		November		December		Total	
		2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Benue	Mak	3	0	0	0	0	1	10	5	12	9	15	13	12	10	15	11	20	16	10	6	0	5	0	0	97.0	76.0
Kogi	Lok	0	0	0	0	2	4	10	5	8	9	14	13	12	10	12	13	11	12	10	7	0	2	0	0	79.0	75.0
Kwara	Ilor	0	1	0	1	4	5	8	6	8	14	14	14	10	13	13	12	15	9	11	15	1	1	1	1	85.0	92.0
Nasarawa	Laf	0	0	0	0	0	3	10	3	6	8	11	11	9	10	22	9	12	12	10	8	0	1	0	0	80.0	65.0
Niger	Bid	0	0	0	0	1	2	3	5	7	9	12	15	13	15	10	11	18	12	9	4	0	2	0	0	73.0	75.0
Niger	Min	0	0	0	0	1	1	7	3	8	12	16	14	16	17	17	16	20	18	10	9	0	1	0	0	95.0	91.0
Plateau	Jos	0	1	0	0	0	3	12	7	15	12	16	14	19	20	23	23	18	15	8	3	0	3	0	0	111.0	101.0
Taraba	Jal	0	0	0	0	0	2	4	6	7	9	17	15	12	11	16	13	16	21	6	7	0	3	0	0	78.0	87.0
FCT	Abuja	0	0	0	0	2	4	6	5	13	15	15	13	22	18	14	13	22	15	14	14	1	3	1	0	110.0	100.0
Average		0	0	0	0	1	3	8	5	9	11	14	14	14	14	16	13	17	14	10	8	0	2	0	0	90	85

Source: NiMET

Table 3.8: Rainy days in the North-East Agro-Ecological Zone (Jan - Dec)

State	Station	January		February		March		April		May		June		July		August		September		October		November		December		Total	
		2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Adamawa	Yola	0	0	0	0	0	0	2	3	4	4	10	14	10	14	17	13	13	14	4	5	0	0	0	0	60.0	67.0
Bauchi	Bauchi	0	0	0	0	0	0	2	4	4	6	9	14	14	12	22	13	12	13	1	1	0	1	0	0	64.0	64.0
Borno	Maid	0	0	0	0	0	1	5	5	2	9	8	13	14	10	18	11	14	5	4	3	0	0	0	0	65.0	57.0
Gombe	Gom	0	0	0	0	0	0	1	3	3	10	8	9	15	9	17	13	17	13	6	4	0	1	0	0	67.0	62.0
Yobe	Ngu	0	0	0	0	0	0	0	0	0	1	6	6	5	5	15	11	9	5	2	1	0	0	0	0	37.0	29.0
Yobe	Potisk	0	2	0	0	0	0	0	0	1	3	7	14	12	7	18	12	11	6	2	0	0	0	0	0	51.0	44.0
Average		0	0	0	0	0	0	2	3	2	6	8	12	12	10	18	12	13	9	3	2	0	0	0	0	57	54

Source: NiMET

Table 3.9: Rainy days in the North-West Agro-Ecological Zone (Jan - Dec)

State	Station	January		February		March		April		May		June		July		August		September		October		November		December		Total	
		2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Jigawa	Duts	0	0	0	0	0	0	2	1	0	3	7	10	9	10	18	13	13	5	1	1	0	0	0	0	50.0	43.0
Kaduna	Kad	0	0	0	0	0	3	6	5	11	11	18	16	16	9	22	22	21	19	11	3	0	2	0	0	105.0	90.0
Kaduna	Zaria	0	0	0	0	1	1	3	4	7	8	15	14	12	14	20	18	23	10	1	2	0	2	0	0	82.0	73.0
Kano	Kano	0	0	0	0	0	0	0	0	3	1	8	11	10	9	17	15	15	8	1	3	0	0	0	0	54.0	47.0
Katsina	Kat	0	0	0	0	0	0	0	1	1	2	5	8	9	6	16	14	9	9	4	1	0	0	0	0	44.0	41.0
Kebbi	Yel	0	0	0	0	0	0	3	3	5	3	6	8	14	11	16	19	22	15	6	5	0	0	0	0	72.0	64.0
Sokoto	Sok	0	0	0	0	0	0	2	0	3	3	12	6	15	12	12	11	12	11	1	1	0	0	0	0	57.0	44.0
Zamfara	Gus	0	0	0	0	0	0	1	0	3	0	8	9	15	10	17	14	17	12	5	1	0	2	0	0	66.0	48.0
Average		0	0	0	0	0	0	1	1	3	2	8	8	13	10	16	15	15	11	3	2	0	0	0	0	66	56

Table 3.10: Rainy days in the South-East Agro-Ecological Zone (Jan - Dec)

State	Station	January		February		March		April		May		June		July		August		September		October		November		December		Total	
		2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Abia	Umu	4	2	0	0	6	11	16	11	16	14	17	23	19	20	18	17	24	26	21	18	1	8	0	0	142.0	150.0
Anambra	Awka	0	1	0	0	3	9	15	4	19	20	16	20	18	22	17	17	21	22	15	19	0	10	0	0	124.0	144.0
Enugu	Enu	0	0	0	0	2	10	4	8	13	12	11	16	19	13	13	13	20	20	14	13	6	6	1	3	103.0	114.0
Imo	Owr	4	2	1	0	3	11	12	11	13	16	15	19	16	18	15	12	18	19	21	13	6	12	2	0	126.0	133.0
Ebonyi	Abak	0	1	0	0	2	8	13	9	14	14	12	17	19	17	15	18	19	18	17	20	0	6	0	0	111.0	128.0
Average		2	1	0	0	3	10	12	9	15	15	14	19	18	18	16	15	20	21	18	17	3	8	1	1	121	134

Source: NiMET

Table 3.11: Rainy days in the South-West Agro-Ecological Zone (Jan - Dec)

State	Station	January		February		March		April		May		June		July		August		September		October		November		December		Total	
		2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Ogun	Abeo	0	0	1	2	11	7	6	5	7	13	14	13	7	13	9	8	19	15	10	18	3	8	0	2	87.0	104.0
Ogun	I - Ode	0	5	3	1	6	10	12	8	11	14	14	17	15	17	12	18	18	17	16	9	4	8	0	1	111.0	125.0
Ondo	Aku	0	2	1	3	1	11	11	9	12	11	15	7	14	13	11	18	17	16	14	17	3	8	1	3	100.0	118.0
Ondo	Ond	0	1	1	4	4	10	10	8	9	8	12	20	16	18	14	16	14	17	12	14	4	7	0	4	96.0	127.0
Osun	Osh	0	1	1	3	7	6	9	7	12	10	17	15	9	14	16	11	15	16	19	21	4	4	1	3	110.0	111.0
Oyo	Iba	0	0	1	1	5	4	7	6	6	5	15	15	8	12	12	7	14	15	10	14	3	5	0	1	81.0	85.0
Oyo	Isey	0	0	0	2	4	3	7	3	8	12	14	9	8	12	14	9	12	6	14	13	0	5	0	2	81.0	76.0
Oyo	Shak	2	2	0	1	3	5	9	5	7	10	10	11	8	7	10	10	18	11	8	8	0	6	0	1	73.0	77.0
Lagos	Ikj	0	1	0	2	5	8	9	8	14	13	17	12	11	14	12	13	20	18	11	11	9	10	2	2	110.0	112.0
Lagos	Osho	1	1	1	3	3	8	11	9	12	11	16	17	10	14	9	11	17	22	11	13	9	8	1	3	100.0	120.0
Ekiti	Ado-Ekiti	0	3	1	3	8	11	11	9	10	10	16	20	16	16	13	17	75	15	20	14	15	7	1	3	186.0	128.0
Average		0	1	1	2	5	8	9	7	10	11	15	14	11	14	12	13	22	15	13	14	5	7	1	2	103	108

Source: NiMET

Table 3.12: Rainy days in the South-South Agro-Ecological Zone (Jan - Dec)

State	Station	January		February		March		April		May		June		July		August		September		October		November		December		Total	
		2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
A – Ibom	Eket	2	4	1	1	9	11	3	12	19	15	24	25	22	25	18	17	26	24	23	25	11	21	6	1	164.0	181.0
A – Ibom	Uyo	1	3	0	0	5	13	11	15	9	12	14	19	13	18	12	20	22	18	18	15	8	10	0	1	113.0	144.0
Bayelsa	Yen	2	0	1	1	10	19	15	16	18	14	18	22	15	23	9	13	15	21	15	18	6	14	1	4	125.0	165.0
C/Rivers	Cal	1	3	2	1	7	17	14	17	17	13	19	23	21	24	19	23	22	20	20	21	9	18	0	3	151.0	183.0
C/Rivers	Ikom	1	1	0	0	5	15	19	14	18	19	17	24	0	18	23	22	25	21	20	22	1	11	1	0	130.0	167.0
C/Rivers	Ogo	0	0	0	0	0	3	12	3	13	12	13	7	16	10	10	15	15	14	18	20	0	6	0	0	97.0	90.0
Delta	Asa	0	2	0	0	1	5	11	1	20	14	9	16	18	18	16	18	13	19	8	13	0	10	0	0	96.0	116.0
Delta	War	4	7	5	6	10	12	17	17	20	18	18	25	24	20	14	21	16	23	22	17	16	11	4	2	170.0	179.0
Edo	Ben	1	3	4	3	7	15	17	11	16	14	21	22	20	24	12	19	23	21	15	19	5	12	1	2	142.0	165.0
Rivers	PHC	6	2	0	2	5	9	8	11	16	19	16	20	14	21	16	21	15	22	14	11	7	10	2	1	119.0	149.0
Average		2	3	1	1	6	12	13	12	17	15	17	20	16	20	15	19	19	20	17	18	6	12	2	1	131	154

3.3 Maximum Temperature
Table 3.13: North-Central Temperature (ᵒC) January - December

State	Station	January		February		March		April		May		June		July		August		September		October		November		Dec		Average	
		2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Benue	Mak	34.7	35.8	37.4	37.8	38.7	36.8	34.5	35.5	33.3	33.6	31.5	31.3	30.9	31.7	30.0	30.8	30.5	31.1	32.0	33.2	35.4	33.9	35.2	35.4	**33.7**	**33.9**
Kogi	Lok	35.5	36.1	38.2	38.1	38.0	36.9	34.2	36.0	32.3	34.5	31.1	31.5	31.0	31.8	29.6	31.2	30.7	31.0	31.9	33.2	35.2	34.6	35.3	35.6	**33.6**	**34.2**
Kwara	Ilor	34.2	34.7	36.5	36.3	37.3	35.3	33.9	33.8	32.4	32.5	30.7	30.3	29.6	30.6	28.4	29.9	29.2	30.8	31.3	31.7	34.3	33.9	34.3	34.6	**32.7**	**32.9**
Nasarawa	Laf	35.5	36.5	37.6	37.7	38.3	37.2	34.1	36.4	32.5	34.8	31.6	31.0	38.4	31.5	29.2	31.3	38.5	31.7	32.3	33.4	36.1	35.5	35.6	36.8	**35.0**	**34.5**
Niger	Bid	35.2	35,9	37.7	38.0	38.6	38.1	36.4	36.4	34.1	34.0	31.6	31.5	31.0	32.2	29.8	31.2	29.9	31.5	32.1	33.3	35.5	35.2	35.4	35.7	**33.9**	**34.3**
Niger	Min	34.7	35.7	37.4	37.6	38.5	37.8	35.8	36.1	34.5	33.7	30.8	30.2	29.9	30.5	28.5	30.1	29.3	31.0	32.3	32.6	35.8	34.9	35.4	36.2	**33.6**	**33.9**
Plateau	Jos	27.7	28.2	30.2	29.8	32.7	31.3	29.9	30.2	28.4	29.0	26.3	26.1	23.8	26.4	23.3	25.4	25.5	27.0	27.5	28.4	27.8	28.5	27.2	28.2	**27.5**	**28.2**
Taraba	Jal	34.4	36.0	37.0	38.2	39.8	38.6	36.3	37.2	33.6	35.2	31.5	30.6	29.9	31.6	29.6	30.8	30.6	31.0	33.3	33.1	37.2	35.0	35.5	36.5	**34.1**	**34.5**
FCT	Abuja	35.3	36.2	37.6	37.9	37.6	36.4	35.1	35.5	32.8	32.8	30.9	30.2	29.6	30.5	28.3	30.1	28.7	30.6	32.0	32.0	35.3	33.2	35.8	35.3	**33.2**	**33.4**
Average		34.13	34.90	36.62	36.82	37.72	36.49	34.47	35.23	32.66	33.34	30.67	30.30	30.46	30.76	28.52	30.09	30.30	30.63	31.65	32.32	34.71	33.86	34.41	34.92	**33.03**	**33.30**

Source: NiMET

Table 3.14: North-East Temperature (ᵒC) January - December

State	Station	January		February		March		April		May		June		July		August		September		October		November		Decemer		Average	
		2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Adamawa	Yola	33.6	35.2	**36.3**	**37.7**	40.2	40.1	**38.3**	**39.2**	37.4	37.7	**33.2**	**32.8**	31.6	32.8	31.5	32.5	31.0	32.2	34.1	34.4	36.6	36.7	35.0	3.6	**34.9**	**32.9**
Borno	Maid	30.8	33.1	32.4	35.3	38.4	38.9	41.3	40.7	41.1	40.9	37.1	35.1	32.4	34.6	30.1	33.4	31.0	34.2	34.9	37.4	34.6	37.8	33.0	33.9	**34.8**	**36.3**
Bauchi	Bauchi	29.1	31.7	32.5	34.0	37.2	37.8	38.3	38.6	36.7	36.5	33.1	31.8	38.8	32.0	28.8	30.3	31.0	31.7	32.4	33.0	33.0	34.6	31.3	33.1	**33.5**	**33.8**
Gombe	Gom	30.3	32.3	33.5	34.7	38.0	38.2	37.5	38.1	34.8	36.7	32.0	30.9	29.9	31.1	28.3	30.2	31.0	31.3	32.8	33.9	34.3	35.9	32.2	33.1	**32.9**	**33.9**
Yobe	Nuguru	28.9	31.5	32.0	34.1	37.3	38.8	39.5	41.2	42.1	41.7	37.8	36.3	33.0	36.7	31.0	33.1	31.0	35.2	36.5	37.6	34.3	36.7	32.5	32.6	**34.7**	**36.3**
Yobe	Potisk	29.2	31.3	32.1	33.6	38.2	38.1	40.5	39.9	39.9	39.0	34.9	32.7	31.4	32.8	29.4	31.1	31.0	33.2	34.3	35.5	33.5	36.1	31.3	32.3	**33.8**	**34.6**
Average		30.32	32.52	33.13	34.90	38.22	38.65	39.23	39.62	38.67	38.75	34.68	33.27	32.85	33.33	29.85	31.77	31.04	32.97	34.19	35.30	34.37	36.30	32.54	28.10	**34.09**	**34.62**

Source: NiMET

Table 3.15: North-West Temperature (ºC) January - December

State	Station	January 2022	January 2023	February 2022	February 2023	March 2022	March 2023	April 2022	April 2023	May 2022	May 2023	June 2022	June 2023	July 2022	July 2023	August 2022	August 2023	September 2022	September 2023	October 2022	October 2023	November 2022	November 2023	Decemer 2022	Decemer 2023	Average 2022	Average 2023
Kaduna	Kad	30.3	31.2	33.2	32.8	35.9	35.5	34.4	34.5	32.5	33.8	30.2	29.9	28.7	31.2	26.4	29.0	32.5	30.8	34.2	32.4	33.5	33.6	32.6	32.2	32.0	32.2
Kaduna	Zaria	28.8	30.1	33.2	33.3	36.4	36.9	36.4	37.1	35.5	35.6	31.2	31.0	29.3	30.8	27.6	30.0	28.7	32.0	31.1	33.1	32.4	34.3	30.9	32.1	31.8	33.0
Kano	Kano	28.4	30.1	33.2	33.0	36.5	38.2	40.0	39.7	39.1	39.7	35.2	34.9	30.8	32.5	29.1	30.8	30.0	32.9	31.9	33.5	32.6	34.4	30.5	32.2	33.1	34.3
Katsina	Kat	27.7	30.1	33.2	32.6	36.3	37.2	39.6	39.4	38.9	38.9	35.7	34.4	31.2	33.3	29.0	30.9	31.4	32.8	33.4	35.7	32.5	35.2	30.3		33.3	34.6
Kebbi	Yel	33.6	35.4	33.2	38.5	40.3	38.9	38.0	38.2	36.0	35.7	33.3	33.0	31.4	32.4	29.9	31.1	31.3	32.6	33.8	34.1	32.3	36.8	30.1	36.2	33.6	35.2
Sokoto	Sok	30.6	33.4	33.2	36.4	39.7	39.6	41.3	40.6	39.9	39.5	35.5	35.4	31.5	33.3	30.2	31.6	30.3	33.1	33.3	37.4	36.1	38.1	35.8	34.1	34.8	36.0
Zamfara	Gus	30.8	31.9	33.2	33.6	38.2	38.2	39.1	39.4	37.1	38.4	34.2	32.5	30.4	31.8	29.1	30.8	32.1	32.4	35.8	34.3	35.7	34.8	33.1	32.9	34.1	34.3
Jigawa	Duts	29.0	30.4	33.2	33.1	36.9	38.1	40.3	40.0	39.7	39.3	35.0	34.4	31.4	33.6	29.4	31.9	30.3	33.7	33.2	35.2	33.7	36.1	31.7	32.2	33.7	34.8
Average		29.90	31.58	33.20	34.16	37.53	37.83	38.64	38.61	37.34	37.61	33.79	33.19	30.59	32.36	28.84	30.76	30.82	32.54	33.33	34.46	33.60	35.41	31.90	33.13	33.29	34.32

Source: NiMET

Table 3.16: South-East Temperature (ºC) January - December

State	Station	January 2022	January 2023	February 2022	February 2023	March 2022	March 2023	April 2022	April 2023	May 2022	May 2023	June 2022	June 2023	July 2022	July 2023	August 2022	August 2023	September 2022	September 2023	October 2022	October 2023	November 2022	November 2023	Decemer 2022	Decemer 2023	Average 2022	Average 2023
Abia	Umu	33.8	34.8	36.2	36.3	35.3	33.8	33.3	33.3	32.3	33.2	31.3	30.8	30.2	31.2	30.0	30.8	30.6	31.2	31.2	32.2	33.4	32.7	34.3	34.2	32.7	32.9
Anambra	Awka	34.7	35.5	36.7	36.5	35.7	33.9	32.7	33.5	31.6	32.5	30.6	30.0	29.8	30.5	29.2	30.1	30.0	30.3	30.9	31.8	34.0	32.7	35.0	34.3	32.6	32.6
Enugu	Enu	34.3	35.4	36.9	37.0	36.2	34.7	33.5	33.8	32.0	33.5	31.5	31.0	30.3	31.6	29.3	30.7	30.5	30.8	31.3	32.4	34.1	32.9	34.6	33.2	32.9	33.1
Imo	Owr	33.6	34.8	35.3	36.4	34.4	33.2	32.9	32.8	32.0	32.4	30.8	30.2	29.9	31.0	29.7	30.3	30.0	30.3	30.7	31.2	33.5	32.1	34.3	34.4	32.3	32.4
Ebonyi	Abak	35.2	36.7	37.8	37.8	36.9	35.1	34.4	33.6	32.3	33.3	31.6	30.9	30.4	31.5	29.6	31.2	31.0	32.1	32.6	33.0	34.7	33.9	36.1	35.9	33.6	33.8
Average		34.3	35.4	36.6	36.8	35.7	34.1	33.4	33.4	32.0	33.3	31.2	30.6	30.1	31.2	29.6	30.6	30.4	30.9	31.3	32.1	34.0	32.9	34.9	34.4	32.8	33.0

Source: NiMET

Table 3.17: South-West Temperature (ᵒC) January -December

State	Station	January 2022	January 2023	February 2022	February 2023	March 2022	March 2023	April 2022	April 2023	May 2022	May 2023	June 2022	June 2023	July 2022	July 2023	August 2022	August 2023	September 2022	September 2023	October 2022	October 2023	November 2022	November 2023	Decemer 2022	Decemer 2023	Average 2022	Average 2023
Ogun	Abeo	36.3	36.8	37.5	37.7	35.8	35.6	34.5	43.1	33.2	33.3	32.6	31.2	30.4	30.5	29.7	30.8	31.4	30.8	32.2	32.0	35.7	33.4	36.7	**34.1**	**33.8**	**34.1**
Ogun	I - Ode	35.6	35.5	35.9	36.4	34.7	34.0	33.0	33.5	32.4	33.2	31.1	30.7	28.8	29.8	28.5	30.1	29.5	30.4	31.8	32.1	33.7	33.2	35.0	35.2	**32.5**	**32.8**
Ondo	Aku	34.5	34.5	35.7	35.6	35.1	32.4	31.4	31.9	30.3	32.1	29.8	29.6	28.2	29.4	27.6	29.2	28.9	29.6	30.5	31.4	33.2	31.8	33.8	43.7	**31.6**	**32.6**
Ondo	Ond	34.7	35.0	35.8	36.0	34.7	32.9	31.9	32.4	31.0	31.9	30.1	29.2	28.0	29.1	27.7	28.8	29.0	29.7	31.1	31.7	32.9	32.2	34.2	34.5	**31.8**	**32.0**
Osun	Osh	34.7	35.1	36.3	36.2	34.9	33.3	32.1	32.5	31.0	32.0	29.8	29.2	28.3	29.2	27.0	28.4	28.4	29.4	30.4	30.6	32.8	32.1	34.4	35.0	**31.7**	**31.9**
Oyo	Iba	35.3	35.8	36.7	36.6	35.1	34.6	33.1	33.6	32.3	32.8	31.1	29.8	29.2	29.9	27.9	29.4	29.7	30.0	31.5	31.6	34.5	33.3	35.3	35.8	**32.6**	**32.8**
Oyo	Isey	35.3	35.7	37.1	36.8	34.9	34.3	33.6	34.3	32.0	33.2	30.3	30.1	28.7	30.1	26.6	29.3	28.8	31.0	30.4	30.4	33.5	32.7	34.3	34.8	**32.1**	**32.7**
Oyo	Shak	33.7	34.2	35.8	35.6	35.0	34.5	32.3	33.6	31.1	32.2	29.5	28.8	27.9	29.0	26.6	27.9	27.8	28.7	29.9	30.7	33.5	32.8	33.4	34.2	**31.4**	**31.9**
Lagos	Ikj	35.2	34,8	35.3	35.6	34.5	33.8	33.0	33.4	32.2	32.6	31.0	30.4	29.5	29.5	29.4	30.1	29.4	29.9	31.3	32.0	33.2	32.6	33.8	34.6	**32.3**	**32.2**
Lagos	Osho	34.8	34.2	34.9	34.6	34.1	33.5	33.1	33.2	32.4	32.6	30.8	30.9	29.3	29.8	29.1	30.2	27.0	30.0	29.6	32.0	31.2	32.6	32.1	34.2	**31.5**	**32.3**
Ekiti	Ado-Ekiti	34.4	34.7	36.0	35.5	34.4	32.9	31.9	32.5	31.3	32.0	30.4	29.5	29.3	29.1	27.4	29.3	29.4	29.7	31.3	32.1	32.9	33.0	33.6	34.7	**31.9**	**32.1**
Average		**35.0**	**35.2**	**36.1**	**36.1**	**34.8**	**33.8**	**32.7**	**34.0**	**31.7**	**32.5**	**30.6**	**29.9**	**28.9**	**29.6**	**28.0**	**29.4**	**29.0**	**29.9**	**30.9**	**31.5**	**33.4**	**32.7**	**34.2**	**35.5**	**32.2**	**32.5**

Source: NiMET

Table 3.18: South-South Temperature (ᵒC) January - December

| State	Station	January 2022	January 2023	February 2022	February 2023	March 2022	March 2023	April 2022	April 2023	May 2022	May 2023	June 2022	June 2023	July 2022	July 2023	August 2022	August 2023	September 2022	September 2023	October 2022	October 2023	November 2022	November 2023	Decemer 2022	Decemer 2023	Average 2022	Average 2023
A – Ibom	Eket	30.1	30.5	31.0	31.2	30.1	30.4	30.2	29.9	29.5	30.0	28.5	28.5	27.2	27.1	26.0	26.4	27.1	27.7	28.2	28.4	29.3	28.7	30.7	30.4	**29.1**	**29.3**
A – Ibom	Uyo	34.0	35.4	35.8	35.8	34.4	33.7	32.6	33.0	31.8	32.7	30.2	29.2	29.2	29.5	29.2	29.5	29.6	29.7	30.5	31.5	32.7	31.9	34.6	34.7	**32.2**	**32.4**
Bayelsa	Yen	33.9	35.4	35.9	36.1	33.7	33.4	32.9	33.5	32.3	33.5	31.0	30.5	29.9	29.9	29.8	29.8	30.3	30.2	31.1	32.1	33.7	32.5	35.2	35.2	**32.4**	**32.8**
C/Rivers	Cal	33.2	34.1	35.2	35.1	34.3	32.4	32.0	32.6	31.4	32.4	30.4	29.8	29.0	29.6	29.0	29.4	29.8	30.0	30.5	31.4	32.2	31.2	33.5	33.5	**31.8**	**31.9**
C/Rivers	Ikom	33.0	34.7	36.3	36.5	35.5	33.6	32.8	33.0	31.5	33.2	31.2	30.3	30.5	30.6	28.8	30.7	28.8	31.4	30.6	32.2	33.6	32.2	33.0	33.6	**32.5**	**32.8**
C/Rivers	Ogo	35.7	36.4	38.2	38.2	38.3	37.9	35.7	37.0	33.2	33.7	33.6	34.8	31.1	32.5	29.7	32.6	31.4	32.2	32.6	33.3	33.5	34.6	36.5	34.5	**34.4**	**35.4**
Delta	Asa	35.6	36.4	37.6	36.7	36.9	33.9	34.3	34.0	32.8	33.2	31.7	30.6	31.0	30.8	30.4	30.4	31.0	30.6	31.9	32.2	34.8	32.6	36.2	34.5	**33.8**	**33.3**
Delta	War	33.6	33.4	34.0	34.3	33.6	33.3	33.0	32.8	31.7	32.5	30.6	29.9	29.2	29.4	29.3	29.6	29.6	30.1	30.9	31.7	32.7	32.5	33.9	34.7	**31.9**	**31.9**
Edo	Ben	35.2	35.4	36.3	35.9	35.3	33.5	33.2	33.2	32.0	33,7	30.9	30.4	29.1	29.8	28.9	29.8	29.6	30.1	31.8	32.6	33.8	32.9	34.7	35.1	**32.6**	**32.6**
Rivers	PHC	33.2	34.8	35.2	36.4	34.2	33.5	33.1	33.5	32.2	32.3	30.8	30.4	29.8	30.0	29.7	29.9	30.4	30.4	30.8	31.5	32.7	31.9	33.9	34.3	**32.3**	**32.6**
Average		**33.8**	**34.7**	**35.6**	**35.6**	**34.6**	**33.6**	**33.0**	**33.3**	**31.8**	**32.6**	**30.9**	**30.4**	**29.6**	**29.9**	**29.1**	**29.8**	**29.8**	**30.2**	**30.9**	**31.7**	**32.9**	**32.1**	**34.2**	**34.1**	**32.3**	**32.5**

Source: NiMET

4.0 FLOOD OCCURRENCE

As at August 2023, there was excessive rainfall that led to flood occurrence in not less than 18 states. The affected crops were Cassava, Maize, Millet, Sorghum, Rice, Cowpea and Sesame. Additionally, some animals like small ruminants, poultry and fishes were affected.

Mild flooding was witnessed in Bauchi and Gombe states. Taraba and Kwara states experienced severe rates of flooding. Plateau State also recorded mild flooding. Kebbi State witnessed mild flooding in Yawuri.

In Osun State, three (3) LGAs experienced floods that affected crops and livestock production and some buildings. Ondo State experienced flooding across the State; the severity level of the flooding was mild. Besides Imo State, all other states in South-East zone experienced flood ranging from mild to severe. It is recommended to adequately use the receding moisture from the flooded plains for rice farming or other water loving plants.
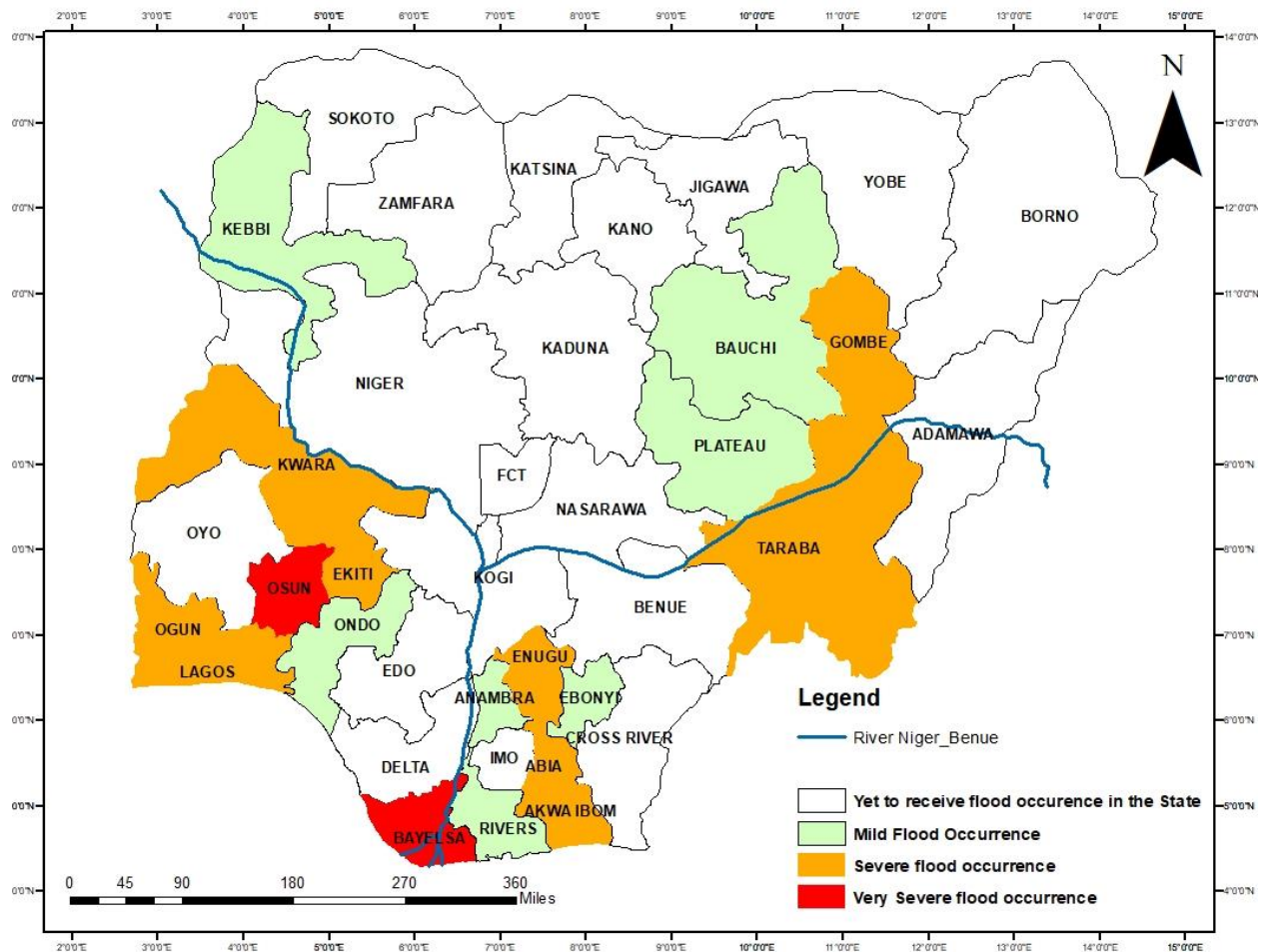
5.0   CROP PESTS AND DISEASES

Pest and disease outbreaks were documented in 33 states and the Federal Capital Territory (FCT). Four categories of crops, including cereals and legumes, roots and tubers, fruits and vegetables, and tree crops, experienced the impact. The severity of cases ranged from light to heavy with maize, rice, cassava, and yam as the most affected. The affected area ranged from 4 to 43000 Ha.

5.1 Pest and Disease Infestations on Cereals and Legumes

Table 5.1a displays recorded instances of pests and diseases impacting maize across thirty-two (32) states of the Federation. Maize crops were afflicted by various issues, including fall armyworm, stem borer, downy mildew, smut, spittle bug, bacterial blight, maize streak, bacterial blight, and leafy blight. The South-West region exhibited the lowest estimated yield loss, with an average value of 2.5% according to agricultural zones. The affected hectares ranged from 0.5 to 1,700Ha. The intensity of pests and disease infestation was assessed on a scale ranging from light to heavy.

As pests and diseases were documented in all thirty-two (32) states, concerns arose, particularly regarding the potential for a high level of fall armyworm infestations on maize by the end of the season. Even during the survey, the impact of fall armyworm was already substantial in several states, including FCT, Kogi, Plateau, Kano, Abia, Ebonyi, Enugu, Akwa Ibom, Rivers, Lagos, Ogun, and Oyo. However, in Benue, Kwara, Niger, Adamawa, Bauchi, Gombe, Kaduna, Katsina, Zamfara, and Imo states, the effect of fall armyworm on maize was considered moderate. To combat these issues, farmers in the affected states employed various strategies such as using agrochemicals, planting pest-resistant crop varieties, early planting, implementing biological control methods, handpicking, seed treatment, and conducting pre-planting fumigation.

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

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
	Stem borer	Light	15	20	Use of chemical spray
FCT	Fall armyworm	Heavy	45	65	Pesticides application, use of tolerant varieties, and roguing
Kogi	Fall armyworm	Heavy	40	48	Application of insecticides
	Downy mildew	Moderate			Use of systemic fungicide
Kwara	Fall armyworm	Moderate	40	400	Application of chemicals
Nasarawa	Stem borer	Heavy	40		Use of tolerant varieties and application of agrochemicals
Niger	Fall armyworm	Moderate	60	160	Hand picking and use of pesticides
Taraba	Fall armyworm	Light	10	110	Spraying with agrochemicals
Plateau	Fall armyworm	Heavy	40	100	Application of agrochemicals

Agricultural Zone	Pests/Disease	Severity	Estimated Yield loss (%)	Estimated hectares affected	Management
	Smut	Moderate		15	Rogueing
Maize					
North-East					
Adamawa	Fall armyworm	Moderate	15	425	Use of insecticides
	Spittlebug	Moderate	15	425	Use of insecticides
Bauchi	Fall armyworm	Moderate	30	50	Use of insecticides
Borno	Fall armyworm	Light		4	Application of agrochemicals
Gombe	Fall armyworm	Moderate	20	30	Chemical application
North-West					
Kaduna	Fall armyworm	Moderate	40	700	Chemical, GAP, and biological control
Kano	Fall armyworm	Heavy	40		Application of agrochemicals
Katsina	Fall armyworm	Moderate	20	10	Spraying with chemicals
Zamfara	Fall armyworm	Moderate	40		Rogueing
South-East					
Abia	Fall armyworm	Heavy	45	100	Early planting and use of pesticides
Anambra	Maize streak	Heavy	30	70	Chemical control
Ebonyi	Stem borer	Heavy	15	300	Use of resistant varieties and application of insecticides
Enugu	Fall armyworm	Heavy	65	260	Cultural and use of pesticides
Imo	Fall armyworm	Moderate	40	0.5	Use of insecticides
South-South					
Akwa Ibom	Fall armyworm	Heavy	30	1,700	Use of resistant variety, and spraying with agrochemicals
	Stem borer	Heavy	30	1,700	Use of resistant variety, and spraying with agrochemicals
	Maize streak	Heavy	30	700	Use of resistant variety, and spraying with agrochemicals
	Bacterial blight	Moderate	30	800	Use of resistant variety, and spraying with agrochemicals
Bayelsa	Leafy blight	Light	5	5	Pesticides application
Cross River	Fall armyworm	Moderate	31	105	Use of resistant variety, and spraying with agrochemicals
Delta	Fall armyworm	Heavy	10	5	Use of agrochemicals
Rivers	Fall armyworm	Heavy	70	50	Use of resistant variety, and spraying with agrochemicals
South-West					
Ekiti	Fall armyworm	Heavy	15	25	Spraying of agrochemicals
	Stem borer	Light	2.5	0.5	Spraying of agrochemicals
	Streak	Light	5	5	Spraying of agrochemicals
Lagos	Fall armyworm	Heavy	40	40	Good agronomic practices and use of insecticides

Agricultural Zone	Pests/Disease	Severity	Estimated Yield loss (%)	Estimated hectares affected	Management
Ogun	Fall armyworm	Heavy	60		Application of insecticides (Caterpillar force)
Maize					
South-West Cont.					
Ondo	Fall armyworm	Moderate	10		Use of resistant variety, and spraying with agrochemicals
Osun	Fall armyworm	Moderate	30	90	Use of agrochemicals
Oyo	Fall armyworm	Heavy	45	40	Application of insecticides

Table 5.1b illustrates documented occurrences of pests and diseases affecting rice cultivated in nineteen (19) states of the Federation. Kwara, Kogi, and Anambra experienced severe impacts, whereas Nasarawa, Niger, Taraba, Adamawa, Yobe, Bayelsa, Rivers, and Oyo states encountered milder effects. The reported pests and diseases encompassed brown spots, rice blasts, bacterial leaf blight, fall armyworm, African gall mites, stem borer, rodents, quelea birds, and smut. The data revealed that rice blast incidents were observed in ten (10) out of the nineteen states, where rice farms faced disease attacks. Farmers implemented various control strategies, including aerial chemical spraying, the use of ash and agrochemicals, and adherence to Good Agricultural Practices (GAP).

Nasarawa, Adamawa, Bauchi, Yobe, Kano, and Zamfara reported pests and disease infestation on sorghum. The reported pests and diseases are smut, fall army warm, sorghum midge, and stem borer with severity ranging from light to heavy. Fall armyworm infestation was recorded to be heavy in Kano State affecting 800 hectares of sorghum farms while its infestation in Zamfara State was recorded as moderate. The management practices adopted by the farmers were the application of agrochemicals, rogueing, planting of resistant varieties, and good agronomic practices.

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

Agricultural Zone	Pests/Disease	Severity	Estimated Yield loss (%)	Estimated hectares affected	Management
Rice					
North-Central					
Benue	Brown spot	Moderate	10	10	Application of agrochemicals
Kwara	Rice blast	Heavy	30	3	Application of agrochemical
Kogi	Rice blast	Heavy	55	25	Avoid water stress
	Bacterial leaf blight	Moderate			Split application of nitrogen fertilizer
Nasarawa	Fall armyworm	Light	10		use of a resistant variety
Niger	African gall mage	Light	20	80	Spraying of pesticides and hand-picking
Taraba	Rice blast	Light	5	30	

Agricultural Zone	Pests/Disease	Severity	Estimated Yield loss (%)	Estimated hectares affected	Management
North-East					
Adamawa	Rice blast	Light	10	150	Application of insecticides
Bauchi	Rice blast	Moderate	40	100	Application of fungicide
Borno	Rice blast	Moderate	40	40	Use of fungicide
Agricultural Zone	**Pests/Disease**	**Severity**	**Estimated Yield loss (%)**	**Estimated hectares affected**	**Management**
Rice					
North-East Cont.					
Gombe	Fall armyworm	Moderate	20	10	Application of agrochemicals
Yobe	Rice blast	Light			Use of an agrochemical
North-West					
Zamfara	Stem borer	Moderate	30		Spraying with agrochemicals
	Blast	Moderate	20		Spraying with agrochemicals
South-East					
Anambra	Rice blast	Heavy	30	30	Application of agrochemicals
Ebonyi	Stem borer	Moderate	30	200	Use of resistant variety, and good agronomic practices
	Rodents	Moderate	30	400	Good agronomic practices
South-South					
Bayelsa	Rice blast	Light	5		Use of resistant variety, and spraying with agrochemicals
Cross River	Stem borer	Moderate	59	40	Early planting, use of improved varieties, and good agronomic practices
Rivers	Stem borer	Light	5	50	Early planting and use of improved varieties
South-West					
Ondo	Quelea birds	Moderate	20		Aerial spraying
Oyo	Birds	Light	10	30	Birds scaring
North-Central					

Nasarawa	Fall armyworm	Light	5		Use of insecticides
North-East					
Adamawa	Smut	Light	10	160	Application of fungicides
Bauchi	Sorghum midge	Light	40	100	Use of fungicides
Yobe	Stem borer	Light	40	13	Application of agrochemicals
North-West					
Kano	Fall armyworm	Heavy	40	800	Application of agrochemicals
Zamfara	Fall armyworm	Moderate	10	15	Spraying with chemicals

Table 5.1c outlines documented instances of pests and diseases affecting millet, soybean, groundnut, and cowpea cultivated in eleven (11) states of the Federation. In Bauchi State, millet farms were lightly affected by smut, marking the sole reported case of disease infestation on millet. Concerning soybeans, Gombe and Ekiti states reported infestations where aphids, whiteflies, and pod borer affected the crop, ranging in severity from light to moderate.

Groundnut farms in FCT, Bauchi, and Zamfara experienced infections by Stinga (light), Rosset (light), and aphids (moderate), respectively. Cowpeas faced pests and diseases infestation in six (6) states (Kwara, Kogi, Bauchi, Katsina, Ondo, and Oyo), with major recorded issues being weevils, pod borer, stem borer, damping off, aphids, and bird attacks, varying in severity from light to heavy. Farmers employed several management practices for these crops, including the application of agrochemicals, rogueing, planting resistant varieties, and adhering to good agronomic practices.

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	Smut	Light	20	20	Application of fungicides
Soybean	North-East					
	Gombe	Aphid	Light	5		Spraying with agrochemicals
	South-West					
	Ekiti	Whiteflies	Moderate	10	5.7	Spraying of insecticides
		Pod borer	Moderate	15	5	Use of resistant varieties
Groundnut	North-Central					
	FCT	Stinga infectious	Light	7	10	Planting of resistant varieties, early planting, and good agronomic practices

	North-East					
	Bauchi	Rosset	Light	2	10	Use of fungicides
	North-West					
	Zamfara	Aphids	Moderate	30	22	Rogueing
Cowpea	North-Central					
	Kwara	Weevils	Heavy	50	3	chemical spraying
		Pod borer	Heavy	50	3	chemical spraying
	Kogi	Stem borer	Heavy	55		Spraying with insecticide
		Damping off	Moderate			Use of a resistant variety
	North-East					
	Bauchi	Pod borer	Light	10	12	Use of insecticides
	North-West					
	Katsina	Aphids	Light	8	7	Spraying with agrochemicals
	South-West					
	Ondo	Pod borer	Moderate	10		Agrochemical spraying
	Oyo	Pod borer	Moderate	25	10	Spraying of agrochemicals
		Birds attack	Moderate	10	30	Birds scaring

5.2 Pest and Disease Infestations on Roots and Tubers

Records of disease and pest infestations on roots and tubers (cassava, yam, cocoyam, potato, and ginger) were reported in nineteen (19) states in 2023 and are presented in Table 5.2 below. The mosaic virus, green spider mites, root rot, white flies, brown leafy spots, leaf blight, wilting, and molting all impacted cassava production. However, cassava mosaic infestation was found to be predominant in nine (9) states out of the fifteen (15) states where cassava disease infestations were reported. The effect ranged from light to heavy, and it was expected to reduce cassava yield.

The report also revealed that yam mosaic, anthracnose, viral disease, rodents, nematode, insects, yam beetle, and cricket borer affected yam farms in 2023 which affected eight states (Benue, Nasarawa, Abia, Anambra, Ebonyi, Delta, Ekiti, and Ondo). 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 by 10 to 25 percent.

Cocoyam farms in Anambra, Ebonyi, Enugu, and Ekiti states were reported to be infested with dieback, leaf blight, fungal attack, root rot, and nematodes with severity ranging from light to heavy. 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. Records of disease and pest infestations on potato and ginger were reported in 2023 and it was discovered from the table that potato blight, potato bug, and rodents were the major issues in Plateau, Ebonyi, and Oyo states. On the other hand, fungi disease infestation on ginger was reported only in Kaduna State which was considered moderate.

Among the control strategies used to lessen the effects of the aforementioned pests and diseases on the root and tuber crops were cultural management, planting improved cultivars, and the use of agrochemicals.

Table 5.2: Pest and Disease Infestations on Roots and Tubers

Agricultural Zone	Pests/Disease	Severity	Estimated Yield loss (%)	Estimated hectares affected	Management
Cassava					
North-Central					
Kwara	Cassava mosaic	Heavy	30	30	Application of agrochemicals
Kogi	Cassava mosaic	Moderate	30	30	Planting of resistant varieties
	Green spider mite	Moderate			Application of agrochemicals
Nasarawa	Cassava mosaic	Light	5		Application of agrochemicals
South-East					
Abia	Cassava mosaic	Light	10	40	Planting of resistant varieties
Anambra	Cassava mosaic	moderate	30	15	Application of agrochemicals
Kindly confirm this row sir	Cassava mosaic	Moderate	20	50	Application of pesticides
Enugu	Cassava mosaic	Moderate	20	40	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	
South-West					
Ekiti	Cassava mosaic	Light	5	2	Planting of improved varieties
	Leaf blight	Light	5	2	Use of chemicals
Lagos	Tuber rot	Moderate	75	28	Good agronomic practices and early harvesting
Ogun	Wilting of leaves and mottling of root	Heavy	25		Early planting

	Blight	Heavy	20		
Ondo	Cassava white flies	Moderate	15		Chemical and cultural control
Oyo	Mosaic	Light	10	20	Use of resistant varieties
North-Central					
Benue	Yam mosaic	Light	15	5	Application of pesticides
	Anthracnose	Heavy	15	5	Application of pesticides
Nasarawa	Viral disease	Light	5		Use of apron plus
South-East					
Abia	Rodents	Light	30	50	Use of baits
Anambra	Yam mosaic	Heavy	30	60	Cultural control
Ebonyi	Nematode	Moderate	45	60	Planting improved varieties and use of pesticides
	Insect	Moderate	10	40	Application of pesticides
South-South					
Delta	Yam beetle	Heavy	15		Application of agrochemicals
South-West					
Ekiti	Yam beetle	Light	15	5	Application of agrochemicals
	Nematode	Light	15	.5	Application of agrochemicals
Ondo	Cricket borer	Moderate	10	10	Cultural control
South-East					
Anambra	Dieback	Heavy	25	30	Use of insecticides
Ebonyi	Leaf blight	Moderate	10	100	Use of improved varieties and agrochemicals
Enugu	Fungi attack	Heavy	50	120	Cultural and the use of pesticides
South-West					
Ekiti	Root rot	Light	3	2	Use of fungicides
	Nematode	Light	3	2	Soil treatment
North-Central					
Plateau	Blight	Heavy		15	Fungicide application
South-East					
Ebonyi	Potato bug	Moderate	20	90	Use of agrochemicals
South-West					
Oyo	Rodents	Light	8	5	Farm hygiene

Agricultural Zone	Pests/Disease	Severity	Estimated Yield loss (%)	Estimated hectares affected	Management
Cassava					
North-West					
Kaduna	Fungi	Moderate	40	200	The use of fungicide that has metalized copper

5.3 Pest and Disease Infestations on Fruits and Vegetables

Table 5.3 shows the impact of pests and diseases on fruits and vegetables (plantain, okra, vegetable, melon, tomato, and eggplant) across fourteen (14) states of the federation. The report further showed that different issues were recorded for each fruit and vegetable across different states.

In Akwa Ibom and Lagos states, plantains were impacted by black sigatoka and monkeys, but the impact was minimal. The impact of pests and diseases such as viral disease, aphids, and fungi were reported in Nasarawa, Gombe, Kaduna, Lagos, and Taraba states for okra in which their severity ranges from light to heavy.

The effects of pests and diseases were reported on vegetables, melons, and eggplants in six (6) states (FCT, Anambra, Akwa Ibom, Delta, Edo, and Abia). According to the report; viral disease, leaf curl, grasshopper, cochlicella, fall armyworm, melon wilt, and weevil attacked vegetables, melons, and eggplant farms respectively.

The data also revealed the effects of pests and diseases on tomatoes and was recorded for Delta, Ekiti, Lagos, Ogun, and Oyo states. The recorded diseases and pests are tomato wilt, nematode, white fly, tomato rot, bacterial wilt, early blight, late blight, viral infection, and bacterial blight. The effects ranged from light to heavy with yield loss estimated to be 15 to 25 percent. 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	10	10	
Okra	North-Central					
	Nasarawa	Viral disease	Heavy	40		Use of resistant varieties
	Taraba	Viral disease	Heavy	30	90	Rogueing
	North-East					
	Gombe	Aphid	Moderate	10	10	Application of agrochemicals
	North-West					

Crop	Region/State	Pest/Disease	Severity			Control measure
	Kaduna	Fungi	Moderate	30	200	Spraying of fungicide
	South-West					
	Lagos	Viral disease	Moderate	60	22	Good agronomic practices
Vegetable	North-Central					
	FCT	Viral disease	Light			Application of agrochemicals
		Leaf curl	Light			Application of agrochemicals
	South-East					
	Anambra	Grasshopper	Moderate	10	10	Application of agrochemicals
	South-South					
	Akwa Ibom	Cochlicella	Moderate	10	1100	Hand-picking
Melon	South-South					
	Delta	Fall armyworm	Moderate	10	5	Use of agrochemicals
	Edo	Wilt	Moderate	40		Application of agrochemicals
Tomato	South-South					
	Delta	Tomato wilt	Heavy	10	5	Use of agrochemicals
	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
	Lagos	Tomato rot	Moderate	40	15	Good agronomic practices
	Ogun	Bacteria wilt	Heavy	60	20	-
		Early blight	Heavy	45	40	-
		Late blight	Heavy	55	30	Application of fungicides
		Leaf curl	Heavy	40	45	-
		Viral infections	Heavy	35	60	-
	Oyo	Bacterial blight	Light	8	3	Use of improved varieties, cultural control, and crop rotation
Egg Plant	South-East					
	Abia	Weevil	Moderate	20	30	Use of insecticides

5.4 Pest and Disease Infestations on Tree Crops

Table 5.4 presents the reports of pest and disease infestation on cashew, cocoa, citrus, and mango in eight (8) states. In Kwara State, cashew plants were affected by leaf locusts, while infestation of

cocoa by mealy bugs, capsid bugs, black pods, cocoa swelling virus, and pod borer were reported in Kwara, Akwa Ibom, and Osun states. The pod borer disease incidences were severe. The effects of all the attacks could lead to a yield loss that could be more than 35%. In Oyo State, citrus and mangoes were impacted by fruit flies and dieback diseases. The effect of these disease attacks 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.

The cotton infestation was reported in Gombe and Zamfara states. Aphid and leaf curl were the major diseases recorded and their severity was moderate. Application of insecticides, use of resistant varieties, and seed dressing were the management practices adopted by the farmers in combating the disease.

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	Mealybugs	Moderate	15	10	Application of agrochemicals
	South-South					
	Akwa Ibom	Capsid bugs	Moderate	20	1800	Use of fungicides
		Mealybugs	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 agrochemicals
Citrus	South-West					
	Oyo	Fruit flies	Moderate	15	10	Application of insecticides
Mango	South-West					
	Oyo	Dieback	Moderate	20	10	Application of insecticides and use of resistant varieties
Cotton	North-East					
	Gombe	Aphid	Moderate	15	20	Application of insecticides and use of resistant varieties
	Zamfara	Leaf curl	Moderate	20		Seed dressing

6.0   FARM INPUT SITUATIONS

6.1   Seeds and seedlings

In the North-East zone, certified seeds, cuttings and seedlings were also procured and distributed. There was procurement and distribution of certified seeds and cuttings in Bauchi State. In the State, Federal government and the state government were the sources of the inputs. There was distribution of certified seeds and seedlings including mango, pawpaw and black currant in Borno State. The Federal government, state government and FADAMA project were the main sources. The seeds provided were accessible and affordable.

Certified seeds were mainly procured and distributed in the North-West (Jigawa, Kaduna, Kano, Katsina, Kebbi and Zamfara states). There was no procurement of cuttings and seedlings. Jigawa State procured and distributed rice while Kano State distributed groundnut, soybean and cowpea seeds. Maize and rice were distributed by the Katsina State Government while sorghum seeds were distributed by Kebbi State Government The seeds procured and distributed were accessible and affordable. State governments and other non-governmental organizations 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 distributed some certified seeds. Also, Anambra State procured and distributed rice and maize seeds, cassava cuttings, coconut and oil palm seedlings. Enugu State also distributed maize seeds and Cassava cuttings. Also, Imo state procured and distributed maize seeds, cassava cuttings, citrus and coconut seedlings. From the table, the inputs procured in the South-East zone were provided by the federal government, state governments and other non-governmental organizations. The inputs were accessible, and the prices were affordable in some of the states.

In the South-South zone, four (4) states (Akwa Ibom, Cross River Delta and Edo) procured and distributed certified seeds, seedlings and cuttings. The seeds procured and distributed include maize, rice, watermelon, cucumber, celosia, okra, pepper and tomatoes seeds while cassava cuttings were distributed. Also, oil palm, cocoa, budded sweet orange, budded grape, lemon, guava, grafted mangoes, shaddock, soursop, budded tangelo and avocado were procured and distributed. Most of the seeds, seedings and cuttings were sourced from the state and federal government and were accessible and affordable in most cases except in Akwa- Ibom and Cross River State where the seeds, cuttings and seedlings were expensive and not affordable.

In the Southwest zone, Ekiti, Lagos, Ogun, Ondo and Osun states procured and distributed certified seeds, cuttings and seedlings. The seeds, seedlings and cuttings procured and distributed in the South-West zone included maize, rice, vegetables, tomato, pepper, cassava, yam cashew, coconut and cocoa. Most of these inputs were provided by the federal government, state government and non-governmental organizations like FADAMA and N-CARES. The inputs were accessible 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)	Accessibility	Affordability	Source
North-Central							
Benue	Certified Seed	Rice		2 MT	Yes	Yes	FG
	Seedlings	Oil palm		8000	Yes	Yes	GIZ
		Bush Mango		8000	Yes	Yes	GIZ
Kwara	Certified Seed			300MT	Yes	Yes	FG
Nassarawa	Certified Seed	Rice	1.5 MT	1 MT	Yes	Yes	State Govt
		Maize	1.5 MT	1.5 MT	Yes	Yes	State Govt
Plateau	Certified Seeds	Rice	2000 MT	-	Yes	Yes	FG
Taraba	Certified Seeds	Rice	-	-	Yes	Yes	FG
North-East							
Bauchi	Certified Seed	-	-	-	Yes	Yes	FG
	Cuttings	-	-	-	Yes	Yes	State Govt
Borno	Certified Seed	-	-	4MT	Yes	Yes	FG
		-	-	1MT	Yes		State Govt, Fadama
	Seedlings	Mango		5MT	Yes	Yes	State Govt
		Pawpaw		5MT	Yes	Yes	State Govt
		Black Current		5MT	Yes	Yes	State Govt
North-West							
Jigawa	Certified Seed	Rice	1500MT	1500MT	Yes	Yes	State Govt
Kaduna	Certified seed			10MT	Yes	Yes	Others
Kano	Certified Seed	Groundnut		1.75MT	Yes	Yes	KSADP
		Soybeans		2.75MT	Yes	Yes	KSADP
		Cowpea		1.2 MT	Yes	Yes	KSADP
Katsina	Certified Seed	Maize		170 MT	Yes	Yes	
		Rice		170 MT	Yes	Yes	
Kebbi	Certified Seed	SOSAT	8 MT		Yes	Yes	State Govt
		Sorghum	15.5 MT		Yes	Yes	State Govt
Zamfara	Certified Seed				Yes	Yes	Others
South-East							
Abia	Certified Seeds			4.4 MT	Yes	Yes	FG, ADP
				4 MT	Yes	Yes	FG, ADP
Anambra	Certified Seeds	Rice	162 MT	162MT	Yes	Yes	FG, State Govt, Others
		Maize	82MT	82MT	Yes	Yes	FG, State Govt, Others
	Cuttings	Cassava	104000 Bundles	104000 Bundles	Yes	Yes	FG, State Govt, Others

	Seedlings	Coconut	1MT	1MT	Yes	Yes	State Govt
		Oil Palm	1MT	1MT	Yes	Yes	State Govt
Enugu	Certified Seed	Maize		440 bags	Yes	Yes	FG
	Cuttings	Cassava		2500 bundles	Yes	Yes	FG
	Certified seed	Maize	1MT	1MT	Yes	Yes	Others
		Cassava TME	5000 bundles	5000 bundles	Yes	Yes	Others
Imo	Certified seed	Maize	1MT	1MT	Yes	Yes	Others
	Cuttings	Cassava TME	5000 bundles	5000 budnles	Yes	Yes	Others
		Cassava Imo Best	10000 bundles	10000 bundles	Yes	Yes	Others
	Seedlings	Citrus					
		Coconut					
South-South							
Akwa Ibom	Certified Seeds	Maize	51.1MT	51.1MT	Yes	Yes	State Govt, Others
		Rice	22MT	22MT	No	No	FG, Others
	Cuttings	Cassava	84000 Bundles	84000 Bundles	No	No	State Govt, Others
	Seedlings	Oil palm (stands)	160000 stands	150000stands	No	No	State Govt, Others
		Cocoa (stands)	105000stands	105000stands	No	No	State Govt, Others
Cross River	Certified Seeds	Rice	200 bags	200 bags	Yes	No	FG
		Maize		5MT	Yes	No	
	Cuttings	Cassava					
	Seedlings	Oil palm					
Delta	Certified Seeds	Maize	7MT	7MT	Yes	Yes	State Govt
	Seedlings	Water Melon, Cucumber, Okra, Tomato, Pepper	0.0336MT	0.0336MT	Yes	Yes	State Govt
Edo	Certified Seeds	Maize	1260MT	1172MT	Yes	Yes	State Govt
		Water melon	5 cans	5 cans	Yes	Yes	State Govt
		Cucumber	5 cans	5 cans	Yes	Yes	State Govt
		Celosia	0.0045MT	0.004MT	Yes	Yes	State Govt
		Okra	0.005MT	0.004MT	Yes	Yes	State Govt
		Pepper	12 cups	10 cups	Yes	Yes	State Govt
		Tomatoes	6 cups	6 cups	Yes	Yes	State Govt
	Seedlings	Budded sweet orange	50	44	Yes	Yes	State Govt
		Budded grape	30	11	Yes	Yes	State Govt
		Lemon	30	30	Yes	Yes	State Govt
		Guava	20	7	Yes	Yes	State Govt
		Grafted mangoes	30	15	Yes	Yes	State Govt
		Shaddock	35	8	Yes	Yes	State Govt

		Soursop	20	20	Yes	Yes	State Govt
		Budded tangelo	35	35	Yes	Yes	State Govt
		Avocado	30	30	Yes	Yes	State Govt
South-West							
Ekiti	Certified Seeds	Maize	17.493 MT	17.493MT	Yes	Yes	FG, FADAMA, N-CARES
		Rice	20.265MT	20.265 MT	Yes	Yes	
		Tomato	7280gm	7280gm	Yes	Yes	FADAMA, N-CARES
		Pepper	1960gm	1960gm	Yes	Yes	FADAMA, N-CARES
	Cuttings	Yam	300000 yam setts	300000 yam setts	Yes	Yes	FG
		Cassava	12780 cuttings	12780 cuttings	Yes	Yes	State Govt
Lagos	Certified Seeds		38MT	38MT	Yes	No	FG, State Govt
	Cuttings		2800	2800	Yes	No	FG, State Govt
			2800	2800	Yes	No	FG, State Govt
	Seedlings	Coconut	30000	30000	Yes	No	State Govt
Ondo	Certified Seed	Rice		2MT			State Govt
		Maize		2MT			State Govt
Osun	Certified Seed	Rice	4540 MT	28MT	Yes	No	FG, State Govt
		Maize	18900MT	10MT	Yes	Yes	FG, State Govt
		Vegetable	0.396MT	0.002MT	No	No	State Govt
	Cuttings	Cassava	29100 bundles	30 Bundles	Yes	Yes	State Govt

6.2 Improved Seed Requirement -States and Zones

Table 6.2 shows the improved seed in total estimated requirement for states in the 6 agro-ecological zones. All the states in the North-Central zone planted improved seeds. The improved seeds reported for the 8 states in this zone were maize, millet, sesame, sorghum, soybean, rice, yam and cassava. Farmers' awareness of the different seed varieties in this zone was ranked from 20 to 80 percent.

In the North-East zone five (5) states (Adamawa, Bauchi, Borno, Gombe and Yobe) reported the cultivation of improved seeds. The improved seed required in these states were maize, millet, soybean, sorghum, cassava and rice. Farmers indicated their interest to plant different varieties of these seeds. The awareness level for improved seeds was ranked from 30 to 92 percent.

In the North-West zone (Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto and Zamfara) indicated their required improved seeds to cultivate in 2023. The improved seeds included (maize, millet, soyabean, sorghum, rice, wheat, groundnut, cowpea and tomatoes). The level of farmer's awareness of the different varieties of improved seeds was ranked from 5 to 98 percent. The lowest level of awareness (5%) was reported by farmers in Jigawa State on soybean TGS 1448-2E variety.

In the South-East zone, all the states indicated their interest and requirement to cultivate improved seeds in 2023. Major improved seeds required were maize, cassava and rice. The level of awareness for improved seeds ranges between 40 to 98 percent.

Six (6) states in the South-South zone (Akwa-Ibom, Bayelsa, Cross-river, Delta, Edo and Rivers) indicated interest to cultivate improved seed requirement for the farming season in 2023. Maize, rice, soybean and cassava were the major seeds required. The level of farmer's awareness for these seed varieties was ranked from 5 to 100 percent. Delta State had the least awareness level at 5% on cassava TME 419 variety and VIT A Enriched cassava variety with 10 percent awareness from Akwa Ibom State.

In the South-West, six (6) states (Ekiti, Lagos, Ogun, Osun, Oyo and Ondo) indicated interest to cultivate improved seeds in 2023. The major seeds required for this year's planting season were maize, cassava, rice, cotton, yam, groundnut, sorghum, millet and soybean. Farmers in these states had a high level of awareness for most of the improved seed varieties ranging from 65 to 100 percent. This shows that there is high level of awareness on the improved varieties across the south-west zone.

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	8KmmAZ27	60	2MT
	Rice	FARO 44	70	100MT
	Cassava	TME 419	70	800000 Bundles
	Soybean	Urban Super seed	60	70MT
	Yam	Discorea rotunda	70	400,000 yam seedlings
FCT	Maize	DRA SUPN 11	60	400MT
		HYBRID MAIZE		400 MT
	Rice	FARO 44	70	500 MT
		SIPI RICE FADAMA RICE		500 MT
	Cassava	TMS-35072	60	2000 bundles
	Soybean	TGX1448-Ze	60	200 MT
	Millet	SOEAT-88 (LCLC-MN-IJ)	60	300 MT
	Sorghum	SAMSORG HI-4	50	300 MT
State	Crops	Specify Variety name	Level of farmers' awareness in your state about the variety (%)	Total Estimated requirement for the state (MT)
		HYBRID		
Kogi	Maize	SAMMAZ 24	75%	
		SAMMAZ 19	70%	
		SAMMAZ 21	70%	
	Rice	FARO 44	80%	
		FARO 52	70%	
		NERICA 4	50%	
	Cassava	TME 419	80%	
		TMS 92/0057	60%	
		PRO-VITA	40%	
	Soybean	SAMSOY1	75%	
		SAMSOY2	65%	

		TGX 1465-ID	60%	
	Millet	SE 13 (SAMMIL6)	45%	
		MAIWA	50%	
		DAURO	60%	
	Sorghum	SAMSORG 14	70%	
		SAMSORG 44	70%	
		SAMSORG 40	65%	
		SAMSORG 41	65%	
Kwara	Maize	SAMMAZ 52		3.8MT
	Rice	Hybrid		3.225MT
	Soybean	Hybrid		0.894MT
	Cowpea	Hybrid SAMPEA		0.7MT
	Cassava	Hybrid		6341bundles
Nassarawa	Maize	SAMMAZ 17 & PM	80	4 MT
	Rice	FARO 44	80	5 MT
	Soybean	STG Y14-48	40	1 MT
Niger	Maize	SAMMAZ 50/52	50	800MT
	Rice	FARO 44	80	300MT
	Soybean	1448-2E	75	800MT
		TGS 1448, TGS 1451		50MT
	Sorghum	CSR-01		17MT
	Sesame	S. Sudan		15MT
Plateau	Maize	OBA SUPER OPEN POLLINATED	55	60 MT
	Rice	FARO NARICA	40	60 MT
	Soybean	HYBRID	30	30 MT
	Millet	HIGH YIELDING VARIETY	20	20MT
	Sorghum	RED, YELLOW AND WHITE	40	40MT
Taraba	Maize	SAMMAZ 15	50	70MT
	Rice	FARO 44 and 60	82	246MT
		FARO 52	60	
		CP	20	
	Cassava	TME 419	68	
		VIT A	20	
	Soybean	TGX 1448-2E	70	
		TGX 1445 and 148-1D	70	
		TGX 1443	70	97MT
	Sorghum	SAM SORG 47	24	
		SAM SORG 48		
		SAM SORG 49		
	Sesame	Improved Variety		20MT
North-East				
Adamawa	Maize	SAMMAZ 51		1MT
	Rice	FARO 44		150 MT
		FARO 52		100 MT
		FARO 61		90 MT
		FARO 59		29 MT
		GAWAL R1		200 MT
Bauchi	Maize	Hybrid Oba 98	70	150,000 MT
	Rice	Faro 44	80	200,000 MT

State	Crops	Specify Variety name	Level of farmers' awareness in your state about the variety (%)	Total Estimated requirement for the state (MT)
	Soybean	TGX 1448-1	60	120,000 MT
	Millet	SOSAT	65	125,000 MT
	Sorghum	ROI	30	70 MT
Borno	Maize	EVDT, TZE	80	10 MT
	Rice	FARO-44, 61	85	10 MT
	Cassava	-	-	-
	Soybean	TGX-1951	55	5 MT
	Millet	SOSAT, JIRANI	85	6 MT
	Sorghum	ICSV-III, SAMSORG-48	60	4 MT
Gombe	Maize	SAMMAZ 51, 27, 52,15, 18	80	260000 MT
	Rice	FARO 44	65	150000 MT
	Soybean	TGX 146-10	53	12500 MT
	Millet	SUPER SOSAT	92	285000 MT
	Sorghum	SAMSORG 57, 56	85	230000 MT
Yobe	Maize	SAMMAZ	75	20MT
	Rice	FARO 44, 45	95	250MT
	Millet	SUPER SOSET	70	30MT
	Sorghum	SAMSORG 45	75	40MT
North-West				
Jigawa	Maize	EVDT	80	250MT
	Rice	FARO 44	72	
		FARO 65	70	
	Soybean	TGS 1448-2E	5	
	Millet	SUPER SOSAT	80	
		SOSAT	90	
	Sorghum	KAURA	90	
Kaduna	Maize	HYBRID		6 MT
		OPV		10 MT
	Rice	UPLAND		30 MT
		LOWLAND		12 MT
	Soybean	TGX		12 MT
State	Crops	Specify Variety name	Level of farmers' awareness in your state about the variety (%)	Total Estimated requirement for the state (MT)
	Sorghum	SIC 5912		10 MT
Kano	Rice	FARO 44	85	14000MT
		FARO 66	60	8000MT
		FARO 55	60	6000MT
	Maize	SAMMAZ 49		2163.15MT
	Sorghum	SAMSORG 45,46 and ICSV 400		25760.96MT
		Kaura	85	16000 MT
	Millet	SOSAT (SUPER)	82	14000 MT
	Wheat	REYNA		2070MT
	Cowpea	SAMPEA 16,18,19 and 20		600.3MT
	Groundnut	SAMNUT 23		2175.58MT
	Soybean	TGX1448-2E		1255.5MT
		TGX 1959	70	7000 MT
	Tomato	CHIBLI		74.325MT

Katsina	Maize	SAMMAZ		
	Rice	FARO 44	80	
		FARO 45	80	
	Cassava	1982137	50%	
		IME-419		
		TMS-100-11206	50%	
	Millet	SOSAT	90	
		SUPER SOSAT	90	
Kebbi	Maize	SAMMAZ 15	60%	200MT
		SAMMAZ 40	50%	100MT
		SAMMAZ 27	45%	60MT
	Rice	FARO 44	98%	500MT
		FARO 52	70%	350MT
		FARO 61	55%	300MT
	Millet	SUPER SOSAT	90%	300MT
		SOSAT	95%	250MT
	Sorghum	SAMSORG 45	60%	250MT
		SAMSORG 47	50%	180MT
		SAMSORG 49	40%	150MT
Sokoto	Maize	OBA 98	80	
		KAI – KAI	70	
	Rice	FARO 44		
		FARO 59		
	Cassava	TMS 419	50	
	Millet	SOSAT	80	
		SUPER-SOSAT	80	
	Sorghum	SAMSORG 59	80	
		SAMSORG 40	80	
		ZABUWA	80	
		DERO	80	
Zamfara	Maize		70	30,000MT
	Rice		50	40,000MT
	Cassava		30	180,000MT
	Soybean		80	200,000MT
	Millet		75	50,000MT
	Sorghum		28	120,000MT
South-East				
Abia	Maize	YELLOW MAIZE	80	1MT
	Rice	FARO 44	80	150MT
	Cassava	TME 419	85	1MT
Anambra	Maize	OBA SUPER 2	98	830MT
		OBA SUPER 4	98	830MT
		OBA SUPER 6	98	830MT
	Rice	FARO 44	92	1620MT
		FARO 52	75	1620MT
	Cassava	TMS 0505	75	1000000 Bundle
		TME 419	70	2000000 Bundle
		Yellow Root	62	500000 Bundle
Ebonyi	Maize	OBA SUPER 2		80MT
		OBA SUPER 6		40MT
	Rice	FARO 44		150MT
		FARO 52		100MT
		FARO 57		80MT

	Cassava	TME 419		1,200,000 Bundles
		TMS-0505		1,000,000 Bundles
		TMS-0581		1,200,000 Bundles
Enugu	Maize	OBA SUPER 6,4,2	60	
		PRO VIT A	40	
	Rice	FARO 44	90%	
		FARO 31	60%	
		FARO 33	45%	
	Cassava	TME 419	90%	
		TMS30572	70%	
		PRO VIT A	80%	
Imo	Maize	SAMMAZ 52	80	5 MT
	Cassava	TME 419	90	20000 Bundles
		IMO BEST	95	50000 Bundles
		NR3032, 07404	80	20000 Bundles
South-South				
Akwa Ibom	Maize	SWANI-Y-SR	80	1,500 MT
	Rice	FARO 44,56	85	67 MT
	Cassava	TMS 693	97	32,000,000 Bundles
		TME 419	70	12,000,000 bundles
		VIT A ENRICHED	10	100,000 Bundles
Bayelsa	Maize	OBA SUPER 6	70	10MT
		Yellow Maize		
		Seed Co Sc65	90%	0.105MT
	Rice	FARO 44		
	Cassava	TME 419	100	240000 Bundles
Cross River	Maize	OBA 98	58	500MT
		SAMMAZ 50	72	1.5MT
	Rice	FARO 44	75	1.5MT
	Cassava	TME 419	85	1700 Bundles
		VITAMIN A	80	1500 Bundles
		TMS 01/1368	90	2000 Bundles
Delta	Maize	Composite	60	10 MT
		Hybrid	60	10 MT
	Rice	FARO 61	30	5 MT
		FARO 67	70	5 MT
	Cassava	TME 419	5	6000000 Bundle
Edo	Maize	LNTP AND	85	70.5MT
		SAMMAZ 52		
	Rice	FARO – 44	92	80MT
	Cassava	TME 419	92	7000000 Bundles
	Soybean	TGX 4142	25	27MT
Rivers	Maize	OBA 98	60	
	Rice	FARO 44	60	
	Cassava	TMS 419	85	
South-West				
Ekiti	Maize	DMR-WHITE	98	200MT
		DMR-YELLOW	98	200MT
	Rice	FARO 44,60	95	150MT
		FARO 58, 59	95	250MT
	Cassava	TME 419	100	1000000 Bundles
		TME 5018	100	1000000 Bundles
	Soybean	TGX536-02D	86	6MT

		M-98	86	6MT
Lagos	Maize	DMB-LSR-Y	85	45MT
		Oba super 1-6	95	58MT
		PVA		22MT
	Cassava	TMS 30572	80	4500 Bundles
		TMS 78/05/8	65	4500Bundles
		TMS 98/0505	65	4500Bundles
Ogun	Maize	OBA SUPER 4		
		OBA SUPER 6		
		SWAN		
Ondo	Maize	BR Premier and Swan Resistant to Army Worm	100	300MT
	Rice	FARO 44,45,47,48 etc. High yield	100	200MT
	Cassava	White Lion High yield and early maturing	100	500MT
	Soybean	Yellow soya bean High Yield	100	100MT
	Millet	Little Millet High in nutrition and dietary fiber	100	100MT
	Sorghum	Red Orange used for animal feed	100	100MT
Osun	Maize	Hybrid Maize	100	15-30MT
	Cassava	TME 419	100	1000000 Bundles
	Yam	White Yam	100	500000 Bundles
Oyo	Maize	Improved varieties and open pollinated		6212MT
	Cassava	TMS 419 & TMS 409		7291.177MT
	Yam	White yam and water yam		1126930MT
	Groundnut	Improved varieties		819.306MT
	Soybean	TGS 1448		0336MT
	Rice	FARO 44, FARO 58		1.548MT
	Cotton	Improved varieties		0.198MT

6.3   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, Benue State procured and distributed pesticides 400ltrs of herbicide, Kwara State also distributed 300 liters of herbicides, Nasarawa State also produced 100ltrs of herbicides and distributed 60liters while Plateau State procured 40 cartons of pesticides. The inputs were deemed to be accessible and affordable. Major sources of the inputs were the federal government and state government.

Borno State was the only state that procured and distributed agrochemicals in the North-East zone in 2023. It distributed 5000 cartons of herbicides and pesticides to farmers sourced through the FADAMA project.

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 accessible and affordable. Jigawa State procured 19750 litres and distributed 1500ltrs of pesticides and herbicides, Kano State distributed 812kg plus 175 sachets of fungicides and 2130 litres of

herbicides. Katsina State also distributed 170ltrs of insecticides. The major sources of the inputs were the state government and the KSADP.

In the South-East zone, two (2) states; Abia and Anambra States procured and distributed agro-chemicals. The quantity of pesticides/herbicides distributed by Abia State is 480ltrs while Anambra State procured 200000ltrs of Furadan and distributed 80000ltrs. Farmers reported that the quantity distributed was accessible and affordable. The federal government and state government were the main sources of the inputs.

Akwa Ibom and Cross River were the only states that procured and distributed agrochemicals in the South-South. Akwa Ibom State procured 4332 litres of pesticides and 6032ltrs of herbicides and distributed 4332 ltrs and 6032ltrs respectively. Cross River also procured 480ltrs of post and pre-emergence herbicides and distributed 480ltrs. It was reported by farmers that the quantity procured and distributed was inaccessible and unaffordable. Main sources of the inputs were the federal government, state government and other non-governmental organizations.

In the South-West zone, four (4) states (Ekiti, Lagos, Ogun and Osun) procured and distributed herbicides, pesticides, and insecticides. Ekiti State procured and distributed 18905.25 litres of herbicides and pesticides, Lagos state procured and distributed 2000ltrs of force-up and breed-up each. Ogun State also distributed 228.2ltrs of herbicides and pesticides while Osun State procured 11530 litres of herbicides and 6390 litres of insecticides. The inputs were deemed to be accessible but not affordable by the farmers. The state government, FADAMA and N-CARES were the major sources of these inputs.

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

State	Agrochemical Class	Quantity Procured (Litres)	Quantity Distributed (Litres)	Accessibility	Affordability	Sources
North-Central						
Benue	Herbicide Glyphosate		400ltrs	Yes	Yes	FG
Kwara			300	Yes	Yes	FG
Nassarawa	Glyspring & Other Herbicides	100lts	60ltrs	Yes	Yes	State Govt
Plateau	Pesticides	40 Cartons		Yes	Yes	FG
Borno	Pesticides/Herbicides		5000 carton	-	-	Fadama
North-West						
Jigawa	Pesticides/Herbicides	19750 ltrs	1500 ltrs	Yes	Yes	State Govt
Kano	Fungicides		812kg + 175 sachet			KSADP
	Herbicides		2130 ltrs			KSADP
Katsina	Insecticides		170 ltrs			
South-East						
Abia	Pesticides/Herbicides		480 ltrs	Yes	Yes	FG
State	Agrochemical Class	Quantity Procured (Litres)	Quantity Distributed (Litres)	Accessibility	Affordability	Sources
Anambra	Pesticides/Herbicides (Furadan)	200000 lts	80000ltrs	Yes	Yes	State Govt
South-South						
Akwa	Pesticides	4332 ltrs	4332 ltrs	No	No	FG, State

Ibom						Govt, Others
	Herbicides	6032 ltrs	6032ltrs	No	No	FG, State Govt, Others
Cross River	Post and Pre-emergence Herbicides	480 ltrs	480 ltrs	No	No	FG
South-West						
Ekiti	Herbicides/Pesticides	18905.25 ltrs	18905.25ltrs			State Govt, FADAMA, N-CARES
Lagos	Force up	2000ltrs	2000ltrs	Yes	No	State Govt
	Breed up	2000ltrs	2000ltrs	Yes	No	State Govt
Ogun	Herbicides/Pesticides		228.2lt	Yes		State Govt
Osun	Herbicides	11530ltrs		Yes	No	State Govt
	Insecticides	6390ltrs				State Govt

6.4   Fertilizer Situation

The result from 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 2023 and their sources. The report reveals that only 22 states were able to procure and distribute fertilizer to farmers. The South-East zone consisted of five (5) states (Akwa Ibom, Bayelsa, Cross Rivers, Delta and Rivers) that procured and distributed fertilizers. Four (4) states procured and distributed fertilizers in North-East, North West and South West. Also, only two (2) states (Benue and Niger states) procured and distributed fertilizers in the North Central Zone while only 3 states in the South-East zone procured and distributed fertilizers. The type of fertilizers procured and distributed across the zones were NPK, Urea, MOP and Liquid Super.

In the North-Central zone, Benue and Niger states were the only states that procured and distributed fertilizers in 2023. The types of fertilizer procured were NKP and Urea. Benue State procured 20 bags of NPK and distributed 10MT while Niger State procured and distributed 2910 MT of NPK and 90 MT of Urea. The source of the fertilizers was from the federal government in Benue and state government in Niger State.

In the North-East zone, Bauchi, Borno, Gombe and Yobe states procured and distributed fertilizer to farmers. Only NPK fertilizer was procured in the states. Bauchi State procured and distributed 135,000MT of NPK, Borno State distributed 6000MT, Gombe State procured and distributed 5000MT while Yobe State procured and distributed 1500MT of NPK. The fertilizer was procured and distributed majorly by the state government.

The fertilizer situation in North-West zone showed that Jigawa, Kano, Katsina, and Kebbi states procured and distributed fertilizer to farmers. The fertilizer distributed was majorly NPK and Urea. Jigawa State procured and distributed 150MT of NPK, procured 800MT of Urea and distributed 500MT. Also, Kano State procured and distributed 1150bags of NPK while Kebbi State procured and distributed 650MT. Katsina State with the least quantity distributed only 6.5MT of NPK. The federal government, state government, FMARD and KSADP were the main sources of the input.

Table 6.4 also indicated that the quantity and type of fertilizer procured and distributed by the states in the South-East zone were NPK and Urea. Abia, Anambra and Enugu were the only states that procured and distributed fertilizer to the farmers in 2023. Abia procured and distributed NPK 10MT, Anambra State procured and distributed NPK 600,000 bags and Urea 300,000 bags while Enugu State distributed 1.36MT of NPK to farmers. The main sources of the fertilizers were the federal government and state government.

Data from the South-South zone showed that Akwa Ibom, Bayelsa, Cross River, Delta and Rivers states procured and distributed fertilizer. The fertilizer procured were NPK, Urea, MOP and Liquid Super. Akwa Ibom procured and distributed NPK 29.5MT and Urea 10MT. Bayelsa State also procured 5800 bags of NPK and 4000 bags or Urea with none distributed yet, Rivers State distributed NPK 90 bags while Cross Rivers procured NPK 288.7MT and distributed 275MT. Also, Delta procured NPK 7050 bags, Urea 3600 bags, MOP 200 bags and Liquid Super 48 ltrs and distributed NPK 6575 bags, Urea 3600 bags, MOP 155 bags and Liquid Super 36 ltrs. The major sources of the inputs were the federal government, state government and other non-governmental organizations.

In the South-West zone, Ekiti, Lagos, Ondo and Osun states were the only states that procured and distributed fertilizer in the zone in 2023. The types of fertilizer procured and distributed were NPK and Urea. Ekiti State procured NPK 2637 bags and Urea 391MT and distributed NPK 131.85MT and Urea 19.55MT. Lagos State procured 160MT of NPK but distributed 17.15 MT of Urea to farmers while the NPK has not been distributed yet. Osun State procured and distributed NPK 7320MT and Urea 3660MT while Ondo State distributed 45MT of NPK to farmers. The federal government and state government were the major sources of the fertilizers procured and distributed.

Table 6.4 Fertilizer Situation (States and Zones)

State	Fertilizer Type	Quantity Procured (MT)	Quantity Distributed	Source
North-Central				
Benue	NPK	20 bags	10MT	FG
Niger	NPK	2910MT	2910MT	State Govt
	Urea	90MT	90MT	State Govt
North-East				
Bauchi	NPK	135,000MT	135,000MT	State Govt
Borno	NPK		6000MT	State Govt
Gombe	NPK	5000MT	5000MT	State Govt
Yobe	NPK	1500MT	1500MT	State Govt
North-West				
Jigawa	NPK	150 MT	150 MT	State Govt
	Urea	800MT	500MT	State Govt
Katsina	NPK		6.5MT	FG, FMARD
Kano	NPK	1150 bags	1150 bags	KSADP
Kebbi	NPK	650MT	650MT	State Govt
South-East				
Abia	NPK	10 MT	10MT	FG
Anambra	NPK	600000 bags	600000 bags	State Govt
	Urea	300000 bags	300000 bags	State Govt
Enugu	NPK		1.36 MT	FG
South-South				
Akwa Ibom	NPK	29.5MT	29.5MT	FG, Others
	Urea	10MT	10MT	Others
Bayelsa	NPK	5800 bags		State Govt
	Urea	4000 bags		State Govt
Cross Rivers	NPK	288.7MT	275MT	FG, State Govt.
Delta	NPK	7050 bags	6575 bags	State Govt
	Urea	3600 bags	3600 bags	State Govt
	MOP	200 bags	155 bags	State Govt
	Liquid Super	48 ltrs	36 ltrs	State Govt
Rivers	NPK		90 bags	FG
South-West				

Ekiti	NPK	2637 bags	131.85MT	FG, STATE Govt
	Urea	391 MT	19.55 MT	State Govt
Lagos	NPK	160MT	-	FG, Others
	Urea		17.15MT	
Ondo	NPK		45MT	FG
Osun	NPK	7320MT	7320MT	State Govt
	Urea	3660MT	3660MT	State Govt

6.5   Farm Equipment Procured and Distributed - States and Zones

The overall quantity and types of farm equipment procured and distributed to farmers in Nigeria in 2023 are shown on Table 6.5. There was Farm equipment procurement and distribution in 11 states across the zones (Benue, Nasarawa, Bauchi, Borno, Yobe, Katsina, Abia, Enugu, Delta, Lagos and Osun).   Most of the States procured and distributed tractors, tractor equipment units, agro-processing equipment, combined harvesters. No state procured or distributed work bulls.

In the North Central zone, Benue and Nasarawa were the only states that procured and distributed farm equipment. Benue State procured and distributed 55 different types of agro processing equipment (miller, scale, presser, mixer, dryer, destoner, parboiler and polisher), 5 transplanters and 2 direct seeders. Nasarawa State on the other hand procured and distributed 65 agro processing equipment (destoner, parboiler and polisher) and 8 other farm equipment.

 In the North-East zone, Bauchi, Borno and Yobe procured and distributed farm equipment. Th farm equipment procured and distributed were tractors and their implements. Bauchi state distributed 10 Dongfeng-GF Tractors and 30 tractor implements (plough, planter and sprayer). Borno State distributed 135 Famtrac-60 tractor and 135 YTO-80 Tractors amking a total of 270 tractors distributed. The state also distributed 540 tractor implements (plough and harrow) while Yobe State procured and distributed MF 375 tractors to 105 beneficiaries.

In the North-West zone, only Katsina State procured and distributed agro processing equipment. Katsina State distributed 5 agro processing equipment (mixer, dryer, destoner, parboiler and polisher).

Farm implement situation in South-East Zone showed that Abia and Enugu states procured and distributed tractors, combine harvester and agro-processing equipment. Abi State procured and distributed 2 agro processing equipment (mixer and dryer) while Enugu State distributed 2 combine harvesters, 34 Hand tractors and 30 agro processing equipment (polisher).

Delta State was the only state in the South-South zone that procured and distributed different types of farm equipment which includes tractors, tractor implements and agro-processing equipment. The state procured and distributed 2 tractors (Swarai and John Deere), 5 tractor implements (3 different types) and 5 agro processing equipment (5 different types) which were given to beneficiaries.

Table 6.5 further revealed that only Lagos and Osun states in the South-West zone that procured and distributed farm equipment. The farm equipment procured and distributed were tractor implements and agro processing equipment. Lagos state procured and distributed 5000 tractor implements (sprayer) and 285 agro processing equipment (110 scale, 25 destoner and 150 smoking kiln). Osun State procured 450 agro processing equipment (5 different types) and 1787 other equipment (motorized sprayer, pepper grinder and palm kernel grater).

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

State	Equipment	Equipment Name	Quantity Procured	Quantity Distributed	Accessibility Yes/No	Number of Beneficiaries
North-Central						
Benue	Agro Processing Equipment	Miller	7	7	Yes	7
		Scale	18	18	Yes	18
		Presser	3	3	Yes	3
		Mixer	6	6	Yes	6
		Dryer	3	3	Yes	3
		Destoner	7	7	Yes	7
		Parboiler	3	3	Yes	3
		Polisher	8	8	Yes	8
		Others (specify) 1 Trans planter	5	5	Yes	5
		Others (specify) 2 Direct seeders	10	10	Yes	10
		Others (specify) 3 Power Tiller			Yes	
Nassarawa	Agro Processing Equipment	Destoner	43	43	Yes	1000
		Parboiler	4	4	Yes	1000
		Polisher	18	18	Yes	1000
		Others	8	8	Yes	10000
North-East						
Bauchi	Tractor	Dongfeng-GF 35		10	Yes	-
	Tractor Implements	Plough		10	Yes	
		Planter		10	Yes	
		Sprayer		10	Yes	
Borno	Tractor	Farmtrac-60		135	Yes	46,000
		YTO-80		135	Yes	52,000
	Tractor Implements	Plough		270	Yes	46,000
		Harrow		270	Yes	52,000
Yobe	Tractor	MF 375			Yes	105
North-West						
Katsina	Agro Processing Equipment	Mixer		1	Yes	25
		Dryer		1	Yes	25
		Destoner		1	Yes	25
		Parboiler		1	Yes	25
		Polisher		1	Yes	25
South-East						
Abia	Agro-processing equipment	Mixer	1	1	Yes	6000
		Dryer	1	1	Yes	6000
		Power tiller				
	Tractor	Hand Tractor		34	Yes	
	Agro Processing Equipment	Polisher		30		8 Communities
South-South						
Delta	Tractor	Swarai	1	1	Yes	50
		John Deere	1	1	Yes	50
	Tractor	Plough	2	2	Yes	100

	Implements	Harrow	2	2	Yes	100
		Ridger	1	1	Yes	100
	Agro Processing Equipment	Presser	1	1	Yes	50
		Grinder	1	1	Yes	50
		Crusher	1	1	Yes	50
		Mixer	1	1	Yes	50
		Dryer	1	1	Yes	50
South-West						
Lagos	Tractor Implements	Sprayer	5000	5000	Yes	5000
	Agro-processing equipment	Scale	110	110	Yes	110
		Destoner	25	25	Yes	25
		Smoking Kiln	150	150	Yes	150
Osun	Agro Processing Equipment	Pop Corn Machine	230	230	Yes	230
		Water Pump	120	120		120
		Cassava Grater	46	46		46
		Smoking Kilm	40	40		40
		Palm Oil Digester	14	14		14
		Others (specify) 1 Sprayer(Motorized)	1160	1160		1160
		Others (specify) 2 Pepper Grinder	590	590		590
		Others (specify) 3 Palm Kernel Grater	37	37		37

7.0   AGRICULTURAL MECHANIZATION

Agricultural mechanization refers to the adoption and use of machinery and technology in various agricultural processes to replace or augment human and animal labour. It involves the application of mechanical, electrical, and electronic technology to perform tasks like planting, cultivating, harvesting, irrigation, and post-harvest handling of crops and livestock. The primary goals of agricultural mechanization are to increase efficiency, productivity, and sustainability in farming practices. Mechanization reduces the physical demands on farm workers and can mitigate labour shortages. Improved quality through consistent and precise performance, leading to better quality products. Sustainability through precision agriculture and modern equipment, which can help reduce resource wastage and minimize environmental impacts.

7.1   Government Tractor Availability and Functionality

North Central Zone

Information from Table 7.1 shows that Kwara State recorded highest number of functional and non-functional tractors in both 2022 and 2023 while FCT was reported to have the lowest number. There was no significant increase in the number of tractors in the region and no information was provided from other states in the zone.

North-East Zone

Borno State with 450 tractors in both 2022 and 2023 as presented in Table 7.2 below was reported to have the highest number of functional tractors in the zone, followed by Bauchi State with 278 functional tractors. Yobe State was reported to be the least with 10 functional tractors in 2023. Information for Adamawa State was not available as at the time of the survey, and up to when this report was put together.

North-West Zone

Table 7.3 below shows Government tractors availability and functionality in the North West Zone, Kebbi State with 50 tractors was reported to have the highest number of functional tractors in both 2022 and 2023. Zamfara State was reported to be the least because the tractors were auction by the past administration.

South-East Zone

A drastic reduction was reported for Ebonyi State the number of tractors recorded in 2022 has remarkably reduce from 67 to 20 tractors in 2023 (table 7.4). Enugu State with 36 tractors was reported to have the highest number of functional tractors while Abia and Anambra States were having the least.

South-South Zone

Bayelsa State was reported to have the highest number of functional tractors in the zone in 2023 as presented in Table 7.5, information on number of functional tractors for Akwa Ibom State for 2023 was not provided. There was a considerable decrease in the number of functional tractors in Delta State from 19 in 2022 to 7 in 2023. No information about the number of available tractors from other states in the zone.

South-West Zone

The State with the highest number of functional tractors in the zone as showed in Table 7.6 in 2023 was Lagos State with 27 tractors this was increase from 14 tractors in 2022 indicating that the government had procured additional tractors for farming operations in 2023. Ogun and Osun States were reported to have the least number of functional tractors. No information was provided from Ondo State.

Table 7.1: Government Tractors in the North-Central Zone

Name of Tractor	Capacity (HP)	Functional		Non-Functional		Hectares Cultivated	
		2022	2023	2022	2023	2022	2023
FCT							
Massey Ferguson 375	75HP	1	1	-	-	500	400
Kogi State							
Massey Ferguson	75HP	100	100	30	30	-	-
Kwara State							
Massey Ferguson 375	75HP	15	15	-	-	15,600	15,600
Zonal Total		116	116	30	30	16,100	16,000

Table 7.2: Government Tractors in the North-East Zone

Name of Tractor	Capacity (HP)	Functional		Non-Functional		Hectares cultivated	
		2022	2023	2022	2023	2022	2023
Bauchi State							
Ursus 5312	70 HP	0	0	4	4	-	-
Massey Ferguson 375e	70 HP	0	0	9	9	-	-
Massey Ferguson 375	70 HP	0	0	21	21	-	-
Massey Ferguson	75Hp	170	160	10	23	32,000	31,000
Steyer	75Hp	150	118	32	34	24,000	30,000
Total		320	278	76	91	56,000	61,000
Borno State							
Farm truck	60 Hp	315	315	-	-	25,300	34,000
YTO	80Hp	135	135	-	-	21,000	33,500
Total		450	450	-	-	46,300	67,500
Gombe State							
Massey Fergoson (MF) 375	75Hp	1	1	-	-	-	171
YPO	75Hp	10	10	-	-	-	171
GIGS	75Hp	2	2	-	-	-	171
Hiltstone	70Hp	9	9	-	-	-	171
Total		22	22	-	-	-	684
Yobe State							
Massy Ferguson 375	75 HP	-	10	-	10	-	528.75
Zonal Total		792	760	76	101	102,300	129,712.75

Table 7.3: Government Tractors in the North West Zone

Name of Tractor	Capacity (HP)	Functional		Non-Functional		Hectares cultivated	
		2022	2023	2022	2023	2022	2023
Kano State							
Massy Ferguson 375	60Hp	2	-	0	2	41	0
Massy Ferguson 375 E	60Hp	0	-	1	1	0	0
Ursus (Styer)	65Hp	2	-	0	2	50	0
Fiat 8066	65Hp	1	-	0	1	9	0
New Holland 312	50Hp	0	-	1	1	0	0
Total		5	-	2	7	100	0
Katsina State							
Massy Ferguson	70Hp	4	4	3	3	1500	1550
Mahindra	70Hp	1	1	-	-	2000	2000
Total		5	5	3	3	2500	3550
Kebbi State							
John Deere	-	50	50	-	-	-	-
Zamfara State							
HMZ Tractors	75Hp	2	-	-	-	100	-
Zonal Total		62	55	5	10	2,700	3,550

Table 7.4: Government Tractors in the South East Zone

Name of Tractor	Capacity (HP)	Functional		Non-Functional		Hectares cultivated	
		2022	2023	2022	2023	2022	2023
Abia State							
New Holland	75Hp	0	0	2	2	-	-
Anambra State							
Case IH	110Hp	2	2	-	-	45	30
Ebonyi State							
Massy Ferguson	75 Hp	13	13	-	-	400	-
John Deere	55 Hp	6	7	-	-	-	-
John Deere	75Hp	20	-	0	-	5000	-
John Deere	65Hp	10	-	0	-	4000	-
Origin	65Hp	10	-	0	-	4000	-
Origin	75Hp	6	-	1	-	3500	-
Origin	95Hp	2	-	1	-	2500	-
Total		67	20	2	-	19,400	
Enugu State							
New Holland	75Hp	2	2	-	-	-	-
Hand Tractor	-	34	34	-	-	-	-
Total		36	36	-	-	-	-
Imo State							
Swaraj	90Hp	4	3	6	2	-	30
Zonal total		109	61	10	4	19,445	60

Table 7.5: Government Tractors in the South South Zone

Name of Tractor	Capacity (HP)	Functional		Non-Functional		Hectares cultivated	
		2022	2023	2022	2023	2022	2023
Akwa Ibom State							
Eicher	75Hp	8	-	2	-	2800	-
John Deere 5075E	60Hp	2	-	-	-	300	-
Mahindra DI 506	70Hp	1	-	-	-	520	-
Massy Ferguson 4708	70Hp	1	-	1	-	-	-
Mulcher MM350/180	80Hp	1	-	-	-	430	-
Total		13	-	3	-	4,050	-
Bayelsa State							
Swaraj	75Hp	5	5	-	-	40	6
Bob Tractor Sl 100	100Hp	5	4		1	100	12
John Deere	75Hp	-	3	-	-	-	-
Total		10	12	-	1	140	18
Cross River State							
John Deere	65Hp	7	7	0	0	451	460
Delta State							
John Deere	75Hp	19	7	1	13	65	40
Zonal Total		49	26	4	14	4,706	518

Table 7.6: Government Tractors in the South West Zone

Name of Tractor	Capacity (HP)	Functional		Non-Functional		Hectares cultivated	
		2022	2023	2022	2023	2022	2023
Ekiti State							
Massy Ferguson 275	60Hp	-	5	-	-	6	-
Massy Ferguson 375	60Hp	1	1	-	-	-	-
New Holland	60Hp	-	2	-	-	-	-
Mahindra	60Hp	-	1	-	-	-	-
Eicher	45Hp	-	1	-	-	-	-
Total		1	10	10	-	6	-
Lagos State							
Origin	80hp,	-	16	-	-	5	76
Massy Ferguson	75hp	4	4	2	3	5	15.5
New Holand	55hp	3	1	2	2	7	5
Eicher	-	2	2	4	4	10.5	10
John Deere	-	-	-	3	3	-	-
Mahindra	-	3	3	-	-	24.2	23.5
New Holland	-	2	1	3	3	6.5	5.2
Total		14	27	14	15	58.2	135.2
Ogun State							
Massey Ferguson	75	1	1	-	-	75	45
New Holland	75	-	-	-	1	20	-
Ursus	75	1	1	-	-	10	-
Deutz-Fahr	75	1	1	14	13	40	10
Total		3	3	14	14	145	55
Osun State							
Massey Ferguson 375	70Hp	3	-	-	-	-	-
Masey Ferguson 435	75Hp	-	-	10	10	-	-
Total		3	-	10	10	-	-
Zonal total		21	40	24	39	209.2	190.2

7.2. Private Tractor Availability and Functionality

North-Central Zone

Information presented on Table 7.7 shows that Plateau State recorded the highest number of functional and non-functional tractors in both 2022 and 2023 while FCT was reported to have the lowest number. There was no information on private tractor availability from other states in the zone.

North-East Zone

Bauch State with 241 functional tractors as showed in Table 7.8 below was reported to be the highest in the zone, while Gombe State with 15 functional tractors was reported to be the least. Information from other States in the zone was not available as at the time of the survey.

North-West Zone

Tractors were considerably available in the North-West zone in 2023. The information from Table 7.9 showed that Katsina State recorded 180 functional tractors owned by private individuals while Kano State was reported to have 27 functional tractors. Private tractor service providers such as TOHFAN and TOAN were reported to be operational in Kaduna State. Information from other States in the zone was not provided.

South-South Zone

Information on private tractors in the South -South Zone is presented on Table 7.10, Cross River State reported 8 functional tractors owned by two different tractor service providers. There was no information from other States in the zone, similarly no information from South-East zone.

South-West Zone

The number of functional private tractors in the South East zone of the country was appreciable as presented on Table 7.11 below. Oyo State with 992 tractors was reported to have the highest number of private tractors while Ekiti and Ogun States were having the least number of private tractors. No information from other states in the zone.

Table 7.7: Private Tractors in the North-Central Zone

S/No	Name of LGA	No. of registered Tractor service providers	No. of registered Tractor service providers		Popular brand & Capacity
			Still operational	Non-Operational	
FCT					
1	Gwagwalada	3	3	-	New Holland TT5455(75Hp)
2	Kuje	4	-	4	John Deere 5503 (75Hp)
S/No	Name of LGA	No. of registered Tractor service providers	No. of registered Tractor service providers		Popular brand & Capacity
			Still operational	Non-Operational	
3	Kwali	3	-	3	Massy Ferguson 375 (95Hp) New Holland TT75 (75Hp)
Total		10	3	7	
Plateau State					
1.	17 LGAs	96	80	16	Deutz Fahr (72HP)
2.	17 LGAs	19	15	4	Mahindra (70HP)
3.	17 LGAs	52	38	14	Sonalika International (80HP)
4.	17 LGAs	20	16	4	Fiat (60 HP)
5.	17 LGAs	29	21	8	Massy Ferguson(75Hp)
Total		216	170	46	
Taraba State					
Jalingo		2	2	0	John Deere / New Holland (75HP)
Gassol		2	2	0	John Deere/ New Holland (75HP)
Karim Lamido		2	2	0	John Deere/ New Holland (75HP)
Wukari		2	2	0	John Deere/ New Holland (75HP)
		8	8	0	
Zonal Total		234	181	53	

Table 7.8: Private Tractors in the North East Zone

S/No	Name of LGA	No. of registered Tractor service providers	No. of registered Tractor service providers		Popular brand & Capacity
			Still operational	Non-Operational	
Bauchi State					
1	Bauchi	200	170	40	Massy Ferguson (75HP)
2	Toro	40	34	9	Steyer (75HP)
3	Alkaleri	25	20	5	_|
4	Ningi	20	17	3	_
Total		285	241	57	
Gombe State					
1	Gombe	-	15	-	John Deere (75HP) Mercy Ferguson (70Hp)
Zonal total		285	256	57	

Table 7.9: Private Tractors in the North West Zone

S/No	Name of LGA	No. of registered Tractor service providers	No. of registered Tractor service providers		Popular brand & Capacity
			Still operational	Non-Operational	
Kaduna State					
1	23 LGAs	AMBEL Agric. Eng. Services	Yes	-	John Deere tractor (60Hp)
2	23 LGAs	TOHFAN	Yes	-	Mahindra XMF (75Hp)
Kano State					
1	Kumbotso	1	1	-	John Deere
2	Kano municipal council	1	1	-	Massey Ferguson
3	Kura	1	1	-	Massey Ferguson
4	Garun Mallam	1	1	-	Massey Ferguson
5	Ungogo	2	1	1	Ford/Massy Ferguson
6	Gezawa	1	1	0	Case IH International
7	Tsanyawa	1	1	0	Fiat 780/ Massey Ferguson
8	Danbatta	2	2	0	Massey Ferguson/Ford
9	Bagwai	1	1	0	Massey Ferguson
10	Kiru	3	2	1	Massey Ferguson/Mahindra
11	Bunkure	2	2	0	Massey/ Ford/ Mahindra
12	Wudil	3	2	1	Massey/ Ford/ Mahindra

13	Ajingi	1	1	0	Mahindra
14	Gabasawa	1	1	0	Massey 375
15	Gwarzo	2	1	0	Massey 375
16	Sumaila	1	1	0	Massey 375
17	Albasu	3	3	0	Massey 375
18	Bichi	1	1	0	Massey 375
19	Nasarawa	1	1	0	Massey 375
20	Dawakin Tofa	2	2	0	Massey 375
		31	27	3	
Katsina State					
1	-	250	180	170	Mahindra and Massey Ferguson
Zonal Total		**281**	**207**	**173**	

Table 7.10: Private Tractors in the South-South Zone

S/No	Name of LGA	No. of registered Tractor service providers	No. of registered Tractor service providers		Popular brand & Capacity
			Still operational	Non-Operational	
Cross River State					
1	Ogoja	Ebrekor Enterprise	7	-	John Deere (75HP) Massy Ferguson (70HP)
2	Ogoja	Natbridge Nig	1		Massy Ferguson (75HP) John Deere (70HP)
Total			8	-	

Table 7.11: Private Tractors in the South-West Zone

S/No	Name of LGA	No. of registered Tractor service providers	No. of registered Tractor service providers		Popular brand & Capacity
			Still operational	Non-Operational	
Ekiti State					
1	Ekiti north	1	1	0	Mahindra tractor (75hp)
2	Ekiti south	1	1	0	Mahindra tractor (75hp)
3	Ekiti central	1	1	0	Mahindra tractor (75hp)
Total		3	3	0	
Ogun State					
1	Ewekoro	1	1	-	New Holland (75Hp)
2	Yewa North	1	1	-	Case IH tractor (75Hp)
Total		2	2		
Oyo State					
1	Afijio	2	170	-	Massy Ferguson 375 75 HP
2	Atisbo	1	40	-	Massy Ferguson 375 75 HP
3	Akinyele	1	4	-	Massy Ferguson 375 75 HP
4	Atiba	2	141	-	Massy Ferguson 375 75 HP
5	Ibarapa Central	3	100	-	Massy Ferguson 375 75 HP
6	Ibarapa East	4	135	-	Massy Ferguson 375 75 HP
7	Ibarapa North	2	80	-	Massy Ferguson 375 75 HP
8	Ido	1	5	-	Massy Ferguson 375 75 HP
9	Irepo	2	10	-	Massy Ferguson 375 75 HP
10	Iseyin	2	108	-	Massy Ferguson 375 75 HP
11	Kajola	2	25		Massy Ferguson 375 75 HP
12	Ogbomoso North	2	23	-	Massy Ferguson 375 75 HP
13	Ogbomoso South	1	8	-	Massy Ferguson 375 75 HP
14	Ogu Oluwa	1	17	-	Massy Ferguson 375 75 HP
15	Orire	1	11	-	Massy Ferguson 375 75 HP
16	Orelope	1	12	-	Massy Ferguson 375 75 HP
17	Oyo East	1	30	-	Massy Ferguson 375 75 HP
18	Oyo West	1	30	-	Massy Ferguson 375 75 HP
19	Itesiwaju	1	10	-	Massy Ferguson 375 75 HP
20	Surulere	1	18	-	Massy Ferguson 375 75 HP
21	Saki East	1	15	-	Massy Ferguson 375 75 HP
Total		33	992	-	
Zonal total		38	997		

7.4   Cost of Tillage Operations

Tillage is a common agricultural practice that involves preparing the soil for planting crops. It is an important step in crop cultivation, as it helps create a suitable seedbed by breaking up the soil, incorporating organic matter, and controlling weeds. Tillage operations can vary in intensity and purpose, and they can be broadly categorized into primary and secondary tillage.

The choice of tillage operation and its intensity can depend on various factors, including the type of crops being grown, soil conditions, climate, and the goals of the farmer or agricultural system. Farmers must carefully consider these factors to determine the most appropriate tillage practices for their specific circumstances, as excessive or improper tillage can lead to soil degradation, erosion, and environmental issues.

Tillage operations are mostly done with tractors that are attached with disc/mould board plough, harrower and ridger. The farm operation consider in the Agricultural performance survey of 2023 were ploughing, harrowing, ridging, processing, spraying, harvesting and haulage.

North-Central Zone

Nasarawa State recorded the highest cost of farm operations while Kogi State recorded the lowest cost of farm operations as showed on Table 7.12 below. The cost of ploughing ranges between N25,000 to N100,000, harrowing ranges between N25,000 to N80,000, ridging ranges between N20,000 to N80,000. However, the cost of other operations varies depending on the farm location and distance. Generally, there was increase in cost of farm operations in the year 2023 when compared to 2022, this could be attributed to the increase in the cost of fuel.

Table 7.12: Cost of tillage operation in the North Central Zone

Farm Operation	Government rate (₦/Ha)		Private rate (₦/Ha)	
	2022	2023	2022	2023
Benue State				
1. Ploughing of Fadama	-	-	35,000	45,000
2. Harrowing	-	-	30,000	40,000
FCT				
1. Ploughing of Fadama	35,000	40,000	35,000	40,000
2. Ploughing of Upland	30,000	35,000	30,000	35,000
3. Harrowing	20,000	25,000	20,000	25,000
4. Ridging	20,000	25,000	25,000	30,000
5. Haulage (per day)	1,000	1,500	1,000	1,500
6. Processing	1,000	2,000	1,000	2,000
7. Spraying	6,000	6,000	6,000	6,000
8. Harvesting/Ha/labour	2,000	2,000	2,000	2,000
Kogi State				
1. Ploughing of Fadama	10,000	10,000	20,000	25,000
2. Ploughing of Upland	10,000	10,000	20,000	25,000
3. Harrowing	10,000	10,000	20,000	25,000
4. Ridging	10,000	10,000	20,000	25,000
5. Haulage (per day)	1,000	1,000	2,000	2,500
Kwara State				
1. Ploughing of Fadama	25,000	25,000	45,000	50,000
2. Ploughing of Upland	29,000	25,000	45,000	50,000
3. Harrowing	25,000	25,000	45,000	50,000

4. Ridging	25,000	25,000	45,000	50,000
Nasarawa State				
1. Ploughing of Fadama	-	-	40,000	60,000
2. Harrowing	-	-	25,000	35,000
3. Ridging	-	-	30,000	40,000
4. Haulage (per day)	-	-	1,500	2,000
5. Processing	-	-	10,000	15,000
6. Spraying	-	-	4,000	7,000
7. Harvesting	-	-	50,000	70,000
Niger State				
1. Ploughing of Fadama	-	-	90,000	100,000
2. Ploughing of Upland	-	-	70,000	80,000
3. Harrowing	-	-	70,000	80,000
4. Ridging	-	-	70,000	80,000
5. Haulage (per day)	-	-	7,000	7,000
6. Processing	-	-	6,000	7,000

Farm Operation	Government rate (₦/Ha)		Private rate (₦/Ha)	
	2022	2023	2022	2023
Niger State Cont.				
7. Spraying	-	-	6,000	7,000
8. Harvesting	-	-	60,000	70,000
Plateau State				
1. Ploughing of Fadama	-	-	45,000	65,000
2. Ploughing of Upland	-	-	40,000	60,000
3. Harrowing	-	-	30,000	50,000
4. Ridging	-	-	30,000	50,000
Taraba State				
1. Ploughing of Fadama	25,000	40,000	45,000	75,000
2. Ploughing of Upland	25,000	40,000	40,000	70,000
3. Harrowing	15,000	30,000	35,000	60,000
4. Haulage (per day)	-	-	25000	40000

North-East Zone

Table 7.13 present information on the cost of tillage operations in the Northeast Zone, Yobe State was reported to have the highest cost of farm operations while Borno State recorded the least cost of farm operations this could be attributed to the fact that most of these operations are carried out by Government owned tractors usually at subsidize rates. The cost of ploughing ranges between N35,000 to N76,000, harrowing ranges between N30,000 to N80,000, ridging ranges between N37,000 to N51,000. Typically, there was increase in cost of farm operations in the year 2023 when compared to 2022, this could be attributed to the increase in the cost of fuel experienced in the region.

Table 7.13: Cost of tillage operation in the North-East Zone

Farm Operation	Government rate (₦/Ha)		Private rate (₦/Ha)	
	2022	2023	2022	2023
Bauchi State				
1. Ploughing of Fadama	30,000	30,000	37,500	51,000
2. Ploughing of Upland	30,000	30,000	37,500	51,000
3. Harrowing	30,000	30,000	35,000	50,000
4. Ridging	30,000	30,000	37,000	51,000
5. Haulage (per day)	30,000	30,000	10,000	10,000
6. Processing	30,000	30,000	10,000	10,000
7. Spraying (per spray)	500	500	1500	1,500
8. Harvesting (per bag)	800	800	2,400	2,400
Borno State				
1. Ploughing of Fadama	15,000	20,000	28,000	35,000
2. Harrowing	15,000	20,000	25,000	30,000
3. Harvesting	20,000	25,000	30,000	40,000
Gombe State				
1. Ploughing of Fadama	30,000	30,000	65,000	75,000
2. Harrowing	30,000	30,000	65,000	75,000
Yobe State				
1. Ploughing of Fadama	14,000	-	-	-
2. Ploughing of Upland	14,000	-	70000.	76,000
3. Harrowing	14,000	-	75,000	80,000

North-West Zone

Information on table 7.14 showed the cost of tillage operation in the North-West Zone, Kaduna State was reported to have the highest cost of farm operations while Zamfara State recorded the lowest cost of farm operations. Average cost of ploughing ranges between N35,000 to N65,000, harrowing ranges between N30,000 to N50,000, ridging ranges between N32,000 to N50,000. Other cost of operations varies depending on the farm location and distance. Generally, there was increase in cost of farm operations in the year 2023 when compared to 2022, this could be attributed to the increase in the cost of fuel that was experienced nation-wide.

Table 7.14: Cost of tillage operation in the North-West Zone

Farm Operation	Government rate (₦/Ha)		Private rate (₦/Ha)	
	2022	2023	2022	2023
Jigawa State				
1. Ploughing of Fadama	-	-	42,000	55,000
2. Ploughing of Upland	-	-	42,000	60,000
3. Harrowing	-	-	37,000	45,000
4. Ridging	-	-	25,000	40,000
5. Haulage (per day)	-	-	30,000	40,000
6. Processing (per tonne)	-	-	30,000	40,000
7. Spraying	-	-	3,550	4,000
8. Harvesting	-	-	20,000	30,000
Kaduna State				
1. Ploughing of Fadama	-	-	45,000	65,000
2. Ploughing of Upland	-	-	50,000	70,000
3. Harrowing	-	-	30,000	50,000
4. Ridging	-	-	25,000	35,000
5. Haulage (per day)	-	-	1,000/bag	1,500/bag
6. Processing (per bag)	-	-	2,000	2,500
7. Spraying	-	-	3,000	3,200
8. Harvesting	-	-	120,000	140,000
Kano State				
1. Ploughing of Fadama	37,500	62,500	37,500	62,000
2. Ploughing of Upland	25,000	62,000	25,000	62,000
3. Ridging	20,000	37,000	20,000	37,500
Katsina State				
1. Ploughing of Fadama	25,000	30,000	35,000	40,000
2. Ploughing of Upland	25,000	30,000	35,000	40,000
3. Harrowing	25,000	30,000	35,000	40,000
4. Ridging	25,000	30,000	35,000	40,000
5. Haulage (per day)	5,000	10,000	6,000	12,000
6. Processing	2,500	3,000	3,000	3,500
7. Spraying	5,000	10,000	5,000	10,000
8. Harvesting	25,000	30,000	35,000	40,000
Kebbi State				
1. Ploughing of Fadama	25,000	50,000	30,000	60,000
2. Ploughing of Upland	20,000	40,000	25,000	50,000
3. Harrowing	17,000	32,000	25,000	36,000
4. Ridging	25,000	50,000	25,000	50,000
Zamfara State				
1. Ploughing of Fadama	22,000	35,000	25,000	40,000
2. Ploughing of Upland	20,000	30,000	23,000	35,000
3. Harrowing	22,000	30,000	25,000	30,000
4. Ridging	22,000	27,000	25,000	32,000
5. Processing	-	-	2,500	3,000
6. Spraying	-	-	3,000	3,000
7. Harvesting	-	-	57,000	70,000

South-East Zone

Table 7.15 presents information on the cost of tillage operations in the South-East Zone, from the results it observed that Ebonyi State was reported to have the highest cost of farm operations while Anambra State was reported to have the least cost of tillage operation. Average cost of ploughing ranges between N35,000 to N100,000, harrowing ranges between N30,000 to N50,000, ridging ranges between N30,000 to N80,000. The zone typically experienced increase in cost of farm

operations in the year 2023 when compared to 2022, this could be attributed to the increase in the cost of fuel.

Table 7.15: Cost of tillage operation in the South-East Zone

Farm Operation	Government rate (₦/Ha)		Private rate (₦/Ha)	
	2022	2023	2022	2023
Abia State				
1. Ploughing of Fadama	30,000	30,000	-	-
Anambra State				
1. Ploughing of Fadama	15,000	15,000	25,000	35,000
2. Ploughing of Upland	15,000	15,000	25,000	35,000
3. Harrowing	15,000	15,000	20,000	30,000
4. Haulage (per day)	1,000/bag	1,500/bag	-	-
5. Spraying	10,000	15,000	-	-
Ebonyi State				
1. Ploughing of Fadama	-	35,000	70,000	100,000
2. Ploughing of Upland	-	30,000	60,000	100,000
3. Harrowing	-	30,000	50,000	50,000
4. Ridging	-	30,000	40,000	80,000
5. Haulage (per day)	-	-	5,000	7,000
6. Processing (per tonne)	-	-	30,000	50,000
7. Spraying (per Ha)	-	-	30,000	40,000
Enugu State				
1. Ploughing of Fadama	25,000	40,000	60,000	68,000
2. Ploughing of Upland	25,000	40,000	60,000	68,000
3. Harrowing	20,000	35,000	25,000	46,000
4. Ridging	20,000	25,000	25,000	46,000
Imo State				
1. Ploughing of Upland	20,000	25,000.00	30,000	40,000.00
2. Harrowing	20,000	25,000.00	30,000	40,000.00
3. Ridging	20,000	25,000.00	30,000	40,000.00
4. Haulage (per day)	2,000	2,500	3,000	3,500
5. Harvesting	18,000	20,000	30,000	35,000

South-South Zone

Delta State recorded the highest cost of farm operations while Akwa Ibom and Edo States recorded the lowest cost of farm operations as showed on Table 7.16 below. The cost of ploughing ranges between ₦60,000 to ₦92,000, harrowing ranges between ₦50,000 to ₦92,000, ridging ranges between ₦50,000 to ₦98,000. However, the cost of other operations varies depending on the farm location and distance. Generally, there was increase in cost of farm operations in the year 2023 when compared to 2022, this could be attributed to high inflation that is been experienced in the country.

Table 7.16: Cost of tillage operation in the South-South Zone

Farm Operation	Government rate (N/Ha)		Private rate (N/Ha)	
	2022	2023	2022	2023
Akwa Ibom State				
1. Ploughing of Fadama	35,000	-	45,000	60,000
2. Ploughing of Upland	35,000	-	45,000	60,000
3. Harrowing	35,000	-	45,000	50,000
4. Ridging	35,000	-	45,000	50,000
5. Haulage (per day)	35,000	-	45,000	55,000
6. Processing (per tonne)	5,000	-	10,000	15,000
7. Spraying	-	-	8,000	12,000
Farm Operation	Government rate (N/Ha)	Private rate (N/Ha)		
	2022	2023	2022	2023
Cross River State				
1. Ploughing of Fadama	65,000	70,000	71,000	85,000
2. Ploughing of Upland	52,000	63,000	59,000	70,000
3. Harrowing	55,000	60,000	64,000	70,000
4. Ridging	86,000	90,000	40,000	98,000
5. Processing (per tonne)	25,000	30,000	32,000	35,000
6. Spraying	5,500	6,000	7,300	10,000
Delta State				
1. Ploughing of Upland	72,000	72,000.00	77,000	92,000.00
2. Harrowing	72,000	72,000.00	75,000	92,000.00
3. Ridging	72,000	72,000.00	75,000	92,000.00
4. Spraying	7,000	7,000	5,000	9,000
5. Others (Slashing)	35,000	72,000	35,000	92,000
Edo State				
1. Ploughing of Upland	30,000.00	30,000.00	40,000.00	60,000
2. Harrowing	20,000.00	20,000.00	30,000.00	50,000
3. Spraying	15,000.00	15,000.00	-	17,000
4. Harvesting	55,000.00	55,000.00	-	85,000
5. Others(planting)	20,000.00	20,000.00	-	25,000
6. Others (Broadcasting)	15,000.00	15,000.00	-	15,000

South-West Zone

Information on Table 7.17 showed the cost of tillage operation in the South-West Zone, Ogun State was reported to have the highest cost of farm operations while Osun State recorded the least cost of farm operations. Average cost of ploughing ranges between ₦15,000 to N55,000, harrowing ranges between ₦11,000 to ₦45,000, ridging ranges between ₦15,000 to ₦45,000. Other cost of operations varies depending on the farm location and distance. Generally, private cost of tillage operation is higher than that of Government similarly there was increase in cost of farm operations

in the year 2023 when compared to 2022, this could be attributed to the increase in the cost of fuel the country is facing.

Table 7.17: Cost of tillage operation in the South-West Zone

Farm Operation	Government rate (N/Ha)		Private rate (N/Ha)	
	2022	2023	2022	2023
Ekiti State				
1. Ploughing of Fadama	18,000	30,000	25,000	40,000
2. Ploughing of Upland	15,000	-	30,000	40,000
3. Harrowing	12,000	-	25,000	30,000
4. Ridging	12,000	-	25,000	30,000
5. Haulage (per day)	10,000	-	25,000	30,000
6. Spraying	-	-	7,000	10,000
7. Harvesting	-	-	5,000	7,500
Lagos State				
1. Ploughing of Fadama	20,000	40,000	30,000	45,000
2. Ploughing of Upland	20,000	40,000	30,000	45,000
3. Harrowing	20,000	40,000	30,000	45,000
4. Ridging	20,000	40,000	30,000	45,000
Ogun State				
1. Ploughing of Fadama	15,000	35,000	40,000	55,000
2. Ploughing of Upland	15,000	35,000	40,000	55,000
3. Harrowing	11,500	25,000	30,000	40,000
4. Ridging	11,500	25,000	30,000	40,000
5. Haulage (per day)	20,000	-	-	-
Farm Operation	Government rate (N/Ha)		Private rate (N/Ha)	
	2022	2023	2022	2023
6. Processing	2022	2023	2022	2023
7. Spraying	11,500	20,000	20,000	25,000
Osun State				
1. Ploughing of Fadama	13,000	15,000	30,000	37,500
2. Ploughing of Upland	13,000	15,000	13,000	15 ,000
3. Harrowing	9000	11,000	9000	11,000
4. Ridging	13,000	15,000	13,000	15,000
5. Spraying	8000	10,000	8000	10,000
6. Harvesting	14,000	14,000	18,000	18,000
Oyo State				
1. Ploughing of Fadama	-	-	15,000	25,000
2. Ploughing of Upland	-	-	15,000	25,000
3. Harrowing	-	-	15,000	25,000
4. Ridging	-	-	15,000	25,000

7.5 Animal Traction Situation in Nigeria

Animal traction refers to the use of animals, typically draft animals like horses, oxen, mules, or donkeys, to perform various tasks in agriculture and transportation. It is a traditional and widespread

practice in many parts of the world, especially in rural and developing areas where mechanized equipment may be less accessible or affordable.

Overall, animal traction plays a significant role in the livelihoods of many rural communities worldwide, helping them to cultivate crops, transport goods, and sustain their traditional farming practices. Efforts are made to improve the welfare of the animals involved and to promote sustainable and responsible animal traction practices.

Information on Table 7.18 showed animal traction situation in Nigeria, Kebbi State which had the highest number of draft animals had decrease from 255,000 in 2022 to 231,000 in 2023 representing a 10% decrease change this was reported to be due to high cost of feed and other rearing materials. Similarly, the number had also decrease for Zamfara State from 30,000 in 2022 to 15,000 in 2023 representing 100% decrease this was reported to be due to cattle rustling. However, use of draft animals was reported to increase in Plateau State by 32% due to the lack of mechanized farm implement, it increased in Taraba State by 49% because of high cost of tractor hiring which made some farmers to resolve to patronizing animal traction services in the State. The use of draft animals was also reported to increase in Bauchi State by 7% because of high cost of mechanized farming. There was no information from any State in South-East, South-South and South-West Zone.

Table 7.18: Animal Traction Situation in Nigeria

Local Government Areas	Number in 2022	Number in 2023	Percentage change
Plateau State			
Kanke	51	62	17.74
Kanam	62	102	39.22
Langtang North	70	110	36.36
Mikang	48	71	32.39
Shendam	35	40	12.50
Langtang South	50	74	32.43
Wase	74	115	35.65
Total	390	574	
Taraba State			
Karim Lamido	102	210	51.43
Wukari	100	150	33.33
Ardo Kola	82	170	51.76
Gassol	100	220	54.55
Jalingo	94	190	50.53
Zing	64	130	50.77
Yoro	82	172	52.33
Total	624	1242	
Bauchi State			
Bauchi	3,000	5,000	40
Local Government Areas	Number in 2022	Number in 2023	Percentage change
Bauchi			
Misau	5,000	3,500	-42.86
Alkaleri	4,000	4,000	0
Gamawa	5,000	6,000	16.67

Katagum	5,000	6,000	16.67
Dambam	4,000	5,000	20
Darazo	5,000	4,000	-25
Total	31,000	33,500	
Kebbi State			
Argungu	40,000	35,000	-14.29
Arewa	40,000	38,000	-5.26
Birnin Kebbi	35,000	30,000	-16.66
Augie	32,000	30,000	-6.67
Kalgo	35,000	31,000	-12.90
Bunza	35,000	33,000	-6.06
Aleiro	38,000	34,000	-11.76
Total	255,000	231,000	
Zamfara			
All LGA,s	30,000	15,000	-100

7.6   Animal Traction Charges

North Central Zone

Information on animal traction charges is presented on Table 7.19 below, from the results Taraba State was reported to have the highest cost of ploughing at N30,000, Kwara and Niger States were having the same rate of ploughing. For ridging Niger and Taraba States recorded the same rate at N30,000 while for haulage Taraba State was reported to have the highest rate at N18,000 and Niger State was reported to have the lowest rate at N15,000. Information from other zones was not provided. Generally, the animal traction charges have increase in 2023 when compared with 2022, this could be attribute to high rate of inflation.

Table 7.19: Animal Traction Charges in North Central Zone

States	Ploughing (₦/Ha)			Ridging (₦/Ha)			Haulage (per day) (₦/Ha)		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
FCT	-	-	-	15,000	20,000	25	-	-	-
Kwara	18,000	25,000	28	18,000	25,000	28	-	-	-
Niger	15,000	25,000	40	17,000	30,000	43.3	13,000	15,000	13.3
Taraba	20,000	30,000	33.33	25,000	30,000	16.7	8000	18000	55.6
Average	17,666.67	26,666.67	33.78	25000	35000	37.67	15,000	16,500	34.45

North-East Zone

Table 7.20 presents information on animal traction charges in North-East zone of the country from the results Bauchi State was reported to have the highest cost of ploughing at N25,000, similarly Borno State was reported to have the least rate of ploughing at N12,000. For ridging operation Adamawa was reported to have the highest rate whereas Borno and Yobe States recorded the same rate at N15,000 while for haulage the rate increases from N8,000 to N12,000 in Bauchi State. Overall, the animal traction charges in the zone have increased in 2023 when compared with 2022, this could be attribute to banditry and cattle rustling which cause shortage of these animals. Information from other zones was not provided.

Table 7.20: Animal Traction Charges in North-East Zone

States	Ploughing (₦/Ha)			Ridging (₦/Ha)			Haulage (per day) (₦/Ha)		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Adamawa	-	-	-	25,000	35,000	28.6	-	-	-
Bauchi	15,000	25,000	40	12,000	20,000	40	8,000	12,000	33.3
Borno	6,000	12000	50	8000	15000	46.7	-	-	-
Gombe	21,400	22,500	4.9	-	-	-	-	-	-
Yobe	10,000	15,000	33.3	10,000	15,000	33.3	-	-	-
Average	17466.67	24833.33	42.73	18333.33	28333.33	49.53	8,000	12,000	33.3

Northwest Zone

Zamfara State was reported to have the highest cost of ploughing operation at the rate of N35,000 while Jigawa State was reported to have the least rate at N15,000 (Table 7.21). Similarly, for ridging Kebbi and Zamfara State were reported to have the same rate at N30,000 whereas Kaduna State was reported to have the least rate at N17,000. For haulage Kano State was reported to have the highest rate at N7,200 while Jigawa State was reported to have the lowest rate at N2,000. Typically, the animal traction charges have increase in 2023 when compared with 2022, this could be attribute to high rate of inflation. Information was not provided from South-East, South- South and South-East Zones.

Table 7.21: Animal Traction Charges in North-West Zone

States	Ploughing (₦/Ha)			Ridging (₦/Ha)			Haulage (per day) (₦/Ha)		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Jigawa	7,000	15,000	53.3	10,000	20,000	50	1000	2,000	50
Kaduna	12,000	17,000	29.4	12,000	17,000	29.4	-	-	-
Kano	16,000	20,000	20	15,000	18,000	16.7	1000	7,200	86.1
Kebbi	-	-	-	20,000	30,000	33.3	-	-	-
Zamfara	25,000	35000	28.57	20,000	30,000	33.3	-	-	-
Average	20000	29000	43.76	25666.67	38333.33	54.23	1000	4,600	68.05

7.7 Farm machineries/equipment situation in Nigeria

Table 7.22 present information on farm machineries/equipment procured and distributed in 2022 and 2023 and the channel of distribution. The results showed that significant quantity of sprayers was procured and distributed in Nasarawa, Ekiti and Ogun States. Borno and Bayelsa States were reported to have procured and distributed 270 and 12 tractors respectively. Processing equipment such as smoking kiln, rice thresher, maize sheller, cassava grater with hydraulic press, sealing machine, milling machine and mower were also reported to be procured and distributed by Akwa Ibom and Ogun States. Other farm machinery/equipment procured and distributed by Ekiti and

Ogun States include solar dryer, irrigation water pump, power tiller, mechanical weeder and hydraulic planter. The states listed in Table 7.22 were the only states that provided information on farm machinery and equipment situation in the country.

Overall, based on the information provided the situation of farm machinery and equipment in the country can be said to be in a very poor state. Therefore, there is urgent need for both Federal and State Governments to venture in to farm machinery and equipment procurement and distribution to boost agricultural production.

Table 7.22: Farm machineries/equipment procured and distributed.

Types of Machineries/Equipment provided	Specification/brand	Quantity Procured by Government		Quantity distributed by Government		Channel of dist. e.g. State
		2022	2023	2022	2023	
Nasarawa State						
Sprayers	CP15	29,000	33,000	-	-	-
Borno State						
Tractor	farm truck and YTO	300	270	120	270	LGA
Akwa Ibom						
Processing equipment	Smoking kilns	34	-	34		State
Bayelsa State						
Processing equipment	Nig. Made	4	-	-	4	State
Tractor	John Deere	12	-	-	6	State
Edo State						
Other	Solar dryer	1	1	1	1	FG/PD
Ekiti State						
Sprayers	-		1,250	-	-	-
Others (specify)	Irrigation Water Pumps	-	1,250	-	-	-
	Power Tiller	6	-	-	-	-
Ogun State						
Processing equipment	Rice thresher	1	-	1	-	
	Milling machine and mower	1	-	1	-	
	Maize Sheller	-	2	-	2	
Sprayers	Knapsack sprayer	2	86	2	86	
	Motorized sprayer	-	3	-	3	
	Cassava grater with hydraulic press	-	2	-	2	
	Pumping machine	2	35	2	35	
	Mechanical weeder	1	1	1	1	
	Hydraulic planter	2	-	2	-	
Others	Sealing machine	-	2	-	-	

8.0   POSTHARVEST LOSSES

Post-harvest loss is the loss of food across the food processing and supply chain for both crop and animal until its consumption. Post-harvest loss is a measurable reduction in foodstuffs and may affect either the quality or quantity of agricultural produce. Post-harvest loss varies greatly among commodities, production areas and seasons. The losses can broadly be categorized as weight loss due to spoilage, quality loss, nutritional loss, seed viability loss and commercial loss. These losses may occur from several causes such as harvesting, handling operations such as drying, processing, transportation and lack of appropriate storage facility. It is estimated that about one-third of food produced globally is lost or wasted, representing a loss of 1.3 billion tons of food per year. Agricultural post-harvest loss could be classified into crop, and livestock loss which are captured in the 2023 APS in order to monitor the loss trend.

8.1   Crop Post-Harvest Loss

Table 8.1 shows the crop post-harvest loss in the North-Central. Crops loss was reported for beans, maize, cowpea, rice, tomatoes and sesame. The loss was caused by pests/diseases, mechanical damage, water absorption and theft. The loss occurred at various stages which include harvesting, storage, vegetative stage, seedling, transportation and processing usually on the farm, home and at the market. The estimated loss incurred was between 20 to 70%. Niger State had the highest estimated crop loss of 70% on rice while Taraba State recorded the lowest estimated crop loss between 20, 25 to 40% on sesame, maize and tomatoes. The loss could be curtailed by proper drying, proper storage practices, the use of improved variety, adopting smart agricultural practices and responsive security at the farm.

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

State	Crop with significant losses this year	Major harvest loss type	Activity stage of loss	Place of occurrence	Estimated % loss	Suggestion on loss reduction
FCT	Beans	Pest/Disease, (damage of the grains caused by weevils) & poor drying	Harvesting & storage	Farm & Home	30	Cowpea should be properly dried before storage
Kwara	Maize	Pest/Disease	Storage	Home	40	Control storage pest
	Cowpea	Pest/Disease	Vegetative stage	Farm	45	Control field pest

Table 8.1: Crop post-harvest loss in the North-Central Zone (Cont.)

State	Crop with significant losses this year	Major harvest loss type	Activity stage of loss	Place of occurrence	Estimated % loss	Suggestion on loss reduction
Niger	Rice	-	Seedling	Home	70	Adopt Smart Agricultural Practices
Taraba	Tomato	Pest/Disease, mechanical damage & water absorption	Transport & storage	Farm & market	40	Improved varieties
	Maize	Pest/Disease & theft	Harvesting	Farm	25	Provision of watchman
	Sesame	Pest/Disease, mechanical damage & theft	Harvesting & processing	Farm & home	20	Improved variety and Provision of security

Table 8.2 shows the crop post-harvest loss in the North-East zone. Crops loss was reported for maize, rice, sorghum, groundnut, millet cowpea and soybean. The loss was caused by pest /diseases, mechanical damage, theft, and accident. The loss occurred at various stages which include production/growing, maturity, drying, harvesting, storage and processing usually on the farm and at home. The estimated loss incurred was between 5 to 35%. Borno State had the highest estimated crop loss between 15 to 30% on maize, groundnut and millet, while Gombe State recorded the lowest estimated crop loss between 5 to 35% on maize, rice, sesame and millet. The loss could be curtailed by proper pest and disease control, provision of processing facilities and provision of adequate security in the farm.

Table 8.2: Crop post-harvest loss in the North-East Zone

State	Crop with significant losses this year	Major harvest loss type	Activity stage of loss	Place of occurrence	Estimated % loss	Suggestion on loss reduction
Adamawa	Maize	Pest/Disease	Production/ growing stage	Farm	25	Chemical control
	Rice	Pest/Disease	Production /growing stage	Farm	10	Chemical control
	Sorghum	Pest/Disease	Production /growing stage	Farm	15	Chemical control
Borno	Maize	Theft	Maturity	Farm	20	Proper Security
	Groundnut	Theft	Maturity	Farm	30	Adequate Security
	Millet	Bird	Maturity	Farm	15	Spraying
Bauchi	Rice	Pest/Disease, mechanical damage, theft & accident	Maturity & Drying	Farm & home	15	Use of machinery
	Maize	Pest/Disease, mechanical damage & theft	Drying	Home	10	-
	Sorghum	Pest/Disease, mechanical damage, theft & accident	Harvesting	Farm	10	-
	Cowpea	Pest/Disease, mechanical damage & theft	Harvesting & storage	Farm & home	20	-
	Soybean	Mechanical damage & theft	Harvesting	Farm	20	-

Table 8.2: Crop post-harvest loss in the North-East Zone (Cont.)

State	Crop with significant losses this year	Major harvest loss type	Activity stage of loss	Place of occurrence	Estimated % loss	Suggestion on loss reduction
Gombe	Maize	Theft	Maturity	Farm	5	Maximum Security
	Rice	Mechanical damage	Processing (threshing)	Farm	15	Good transport system
	Sesame	Theft	Maturity	Farm	35	Security should be installed
	Millet	Bird & Pest	Maturity	Farm	20	Quelea bird should be control

Table 8.3 shows the crop post-harvest loss in the North-West zone. Crops loss was reported for only Zamfara State on rice, maize, groundnut and cowpea. The loss was caused by pest/diseases at the maturity stage and was reported to occur on the farm.

Table 8.3: Crop post-harvest loss in the North-West Zone

State	Crop with significant losses this year	Major harvest loss type	Activity stage of loss	Place of occurrence	Estimated % loss	Suggestion on loss reduction
Zamfara	Rice	Shattering	Maturity	Farm	-	Early harvesting
	Maize	Rust	Maturity	Farm	-	Early harvesting
	Groundnut	Rust	Maturity	Farm	-	Avoid waterlogging area
	Cowpea	Brunched	Maturity	Farm	-	Use proper storage

Table 8.4 shows the crop post-harvest loss in the South-East zone. Crops loss was reported for maize, cassava, yam, cocoyam and rice. The loss was caused by pests/diseases, theft, poor drying and flood. The loss occurred at various stages which include harvesting, storage, maturing stage and drying stage on the farm and at home. The estimated loss incurred was between 25 to 85%. Anambra State had the highest estimated crop loss between 80 to 85% on maize and cocoyam while Abia State recorded the lowest estimated crop loss between 25 to 45% on maize, cassava, yam and cocoyam. The loss could be curtailed by early planting, use of resistant variety and proper storage in an open shelve/bans/silos.

Table 8:4: Crop post-harvest loss in the South-East Zone

State	Crop with significant losses this year	Major harvest loss type	Activity stage of loss	Place of occurrence	Estimated % loss	Suggestion on loss reduction
Abia	Maize	Pest/Disease	Harvesting & storage	Home	45	Early planting & use of a resistant variety
	Cassava	Pest/Disease & theft	Harvesting & storage	Home	30	Early planting & use of a resistant variety
	Yam	Pest/Disease & poor drying	Harvesting & storage	Farm & home	30	Early planting & use of a resistant variety
	Cocoyam	Pest/Disease & poor drying	-	Farm & home	25	Early planting & use of a resistant variety
Anambra	Maize	Pest/Disease	Storage	Farm	80	Resistant varieties
	Cocoyam	Pest/Disease	Storage	Farm	85	More research should be conducted on how to process farm produce

Table 8:4: Crop post-harvest loss in the South-East Zone (Cont.)

State	Crop with significant losses this year	Major harvest loss type	Activity stage of loss	Place of occurrence	Estimated % loss	Suggestion on loss reduction
Ebonyi	Yam	Pest & flood	Harvesting & Storage	Farm & Home	45	Store in open shelves or barns with free-air
	Rice	Pest & flood	Harvesting & Processing	Farm & Home	60	Use threshing machines
	Maize	Pest & poor drying	Harvesting & Drying	Farm & Home	50	Use of pesticides and silo
	Cassava	Pest/Disease & fire	Maturing stage and Harvesting	farm	50	Use of pesticides & process into other food types

Table 8.5 presents crop post-harvest losses in the South-South zone. Crops loss was reported for maize, rice, cassava, cucumber, plantain and sweet potato. The loss was caused by pests/ diseases, mechanical damage, theft, leaf rotting, erosion and accidents. The loss occurred during harvesting, drying, storage, sales, processing and transportation mostly on the farm, at 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 fall armyworm attack just one month after harvest, while Bayelsa State recorded the lowest estimated crop loss between 5 to 10% on cassava, rice, plantain, yam and sweet potato. These losses could be reduced by effective and timely use of pesticides, provision of security where possible, treatment of seeds before planting, procurement of seeds from accredited agro-dealers, proper handling and storage.

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

State	Crop with significant losses this year	Major harvest loss type	Activity stage of loss	Place of occurrence	Estimated % loss	Suggestion on loss reduction
Akwa Ibom	Maize	Pest	Storage and sales	Stores and market	30	Effective and timely use of pesticides
	Rice	Pest	Storage and sales	Stores and market	10	Effective and timely use of pesticides
	Cassava	Theft	Processing and sales	Market and stores	25	Provision of security where possible
	Fluted pumpkin	Leaf rotting	Marketing	Market	15	Use more of organic fertilizer than inorganic
	Cucumber	Pest/ Diseases	During sales	Market	20	Use of organic fertilizer than inorganic
Bayelsa	Cassava	Pest/Disease, mechanical damage & theft	Harvesting, drying, transport & processing	Farm	3-10	Proper handling
	Yam	Pest/Disease, theft & fire	Harvesting, transport & processing	Farm	5-10	Proper handling
	Rice	Pest/Disease,	Harvesting,	Farm	5-10	Proper

		theft & fire	transport & processing			handling
	Plantain	Pest/Disease, mechanical damage, theft & erosion	Harvesting, drying, transport & processing	Farm	10	Pests and disease control
	Sweet potato	Mechanical damage, theft & accident	drying, transport & processing	Farm	6	
Rivers	Maize	Cob	One month after planting	Farm	70	Treat seeds before planting Procure seeds from accredited Agro-dealers

Table 8.6 presents crop post-harvest loss in the South-West zone. Crops loss was reported for maize, cassava, vegetables, tomatoes, rice, okra and cocoa. The loss was caused by pests/ diseases, mechanical damage, water absorption, glut and poor drying. The loss occurred during the flowing, fruiting, vegetative stage, harvesting, drying, storage, processing and transportation mostly on the farm, at home and at the market. The estimated loss was between 15 to 92%. Lagos State recorded the highest estimated crop loss between 80 to 92% on maize, cassava and vegetables, while Ondo State recorded the lowest estimated crop loss of 20% on maize, cassava and rice. The loss could be reduced by good agricultural practices, timely planting, control of pests and diseases, good post-harvest handling operation and value addition.

Table 8.6: Crop post-harvest loss in the South-West Zone

State	Crop with significant losses this year	Major harvest loss type	Activity stage of loss	Place of occurrence	Estimated % loss	Suggestion on loss reduction
Lagos	Maize	-	Flowering/ Harvesting	Farm	92	Good Agricultural Practices (GAP)
	Cassava	-	Harvesting	Farm	80	Good Agricultural Practices (GAP)
	Vegetables	-	Harvesting	Farm	80	Good Agricultural Practices (GAP)
Ogun	Tomato	Pest/Disease & Mechanical damage	Transport	Farm	-	
Ondo	Maize	Rain/Erosion	Drying	Farm	20	Govt. should purchase it
	Cassava	Water absorption	Harvesting	Farm	20	Govt. should purchase it
	Rice	Rain/Erosion/flood	Harvesting	Farm	20	Govt. should purchase it
Osun	Maize	Pest/Disease	Storage	Farm	40	Reduction in cost of pesticides
	Yam	Pest infestation	Storage	Farm	40	Reduction in cost of pesticides

Table 8.6: Crop post-harvest loss in the South-West Zone (Cont.)

State	Crop with significant losses this year	Major harvest loss type	Activity stage of loss	Place of occurrence	Estimated % loss	Suggestion on loss reduction
	Cassava	Rotting	Transportation	Market	40	Construction of access roads to farm
	Okra	Rotting	Sales	Market	30	Economic stability
Oyo	Maize	Pest/Disease & mechanical damages	Harvesting & processing	Farm & Market	20	Good post-harvest handling
	Cassava	Glut, poor drying & mechanical damages	Harvesting, transport and processing	Farm & Market	15	
	Tomato	Glut	Transport	Home & Market	40	Value addition
Ekiti	Tomato	Insect/pest attack	During Fruiting	Farm	20	Good Agricultural Practices (GAP)
	Maize	Drought, pest /disease (fall armyworms)	Vegetative stage	Farm	45	Timely planting & control of fall armyworms with insecticides
	Cocoa	Insect/Disease attack	Fruiting stage	Farm	15	Timely spraying against mirids and black pod disease

8.2.   Livestock Post-Harvest Loss

Livestock postharvest losses were captured in this section to evaluate the postharvest losses incurred in livestock products. Products considered were milk, eggs, sheep (mutton), goat (chevon), cow (beef), broilers and layers.

Information in Table 8.7 shows the post-harvest loss for livestock in the North-Central zone. The commodities affected were milk, eggs, sheep, goats, cows, broilers and layers due to problems of spoilage, glut, disease outbreak, theft and communal conflict. The estimated post-harvest loss was between 5 to 60%. plateau State recorded the highest estimated loss of 40-60% for milk, egg, sheep, goat, cow, broilers and layers due to lack of timely vaccination and insecurity However, suggestions to minimize post-harvest loss in livestock include prompt vaccinations against diseases, proper treatment of diseases and provision of security on the farms.

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

State	Livestock/Products with significant losses this year	Major harvest loss type	Activity stage of loss	Estimated % loss	Suggestion on loss reduction
Kogi	Milk	Spoilage/contamination	Harvesting	-	Better storage conditions
	Eggs	Theft	Harvesting	-	Adequate security
	Sheep (mutton)	Accident	Transportation	-	-
	Goat (chevon)	Theft	Production	-	-
	Cow (beef)	Communal conflict	Transportation	-	-
	Broiler	Glut	Harvesting	-	-
	Layer	Pest/Disease	laying period	-	-
Kwara	Broiler	Disease	Transport	50	Vaccination and proper treatment
Niger	Milk	Disease	Transportation	10	Treatment with antibiotics
	Eggs	Glut/ Theft	-	20	Value addition and security
	Sheep (mutton)	Theft	-	5	-
	Goat (chevon	Theft	-	5	-
	Broiler	Diseases	-	10	-
	Layer	Diseases	-	5	-

Table 8.7: Livestock post-harvest loss in North-Central Zone(cont.)

State	Livestock/Products with significant losses this year	Major harvest loss type	Activity stage of loss	Estimated % loss	Suggestion on loss reduction
Plateau	Milk	Communal conflict	Storage	50	Provision of Security
	Eggs	Glut	Storage	50	Empower the farmers
	Sheep (mutton)	Communal conflict & theft	-	40	Money should be in circulation and secure farmers
	Goat (chevon)	Communal conflict	-	60	Security and money should be in circulation
	Cow (beef)	Communal conflict	-	60	Money should be in circulation
	Broiler (Meat)	Glut & theft	-	50	Money should be in circulation
	Layer (Meat)	Glut, theft & pest/disease	-	50	Money should be in circulation

Table 8.8 presents the livestock post-harvest loss in the North-East zone. The commodities affected were milk, eggs, sheep, goats, cows, broilers and layers; this occurred due to disease, reptiles, spillage, theft, glut, spoilage, mechanical damage, communal conflict and accident. The estimated post-harvest loss was between 5 to 50%. Bauchi State recorded the least estimated loss of 5% for milk due to spoilage, spillage and theft, while Borno State recorded the highest estimated loss of 50% on sheep, goats, and cows due to theft during grazing. The loss could be reduced by the provision of prompt vaccination, good treatment, a good market and provision of adequate security.

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

State	Livestock/Products with significant losses this year	Major harvest loss type	Activity stage of loss	Estimated % loss	Suggestion on loss reduction
Adamawa	Milk	Disease	Production or milking stage	40	Vaccinate/treatment
	Eggs	Disease	Lambing stage	40-50	Vaccinate/treatment
	Sheep (mutton)	Disease	Lambing stage	20-30	Vaccinate/treatment
	Goat (chevon)	Disease	Kidding	10-20	Treatment
	Cow (beef)	Disease	Production stage	10	Vaccinate/treatment
	Broiler	Disease	Growth stage	10-20	Treatment/vaccinate
	Layer	Disease	Layer stage	10	Vaccinate
Bauchi	Milk	Spoilage, spillage & theft	Harvesting & transportation	5	Marketing
	Eggs	Reptile, mechanical damage & theft	Harvesting & transportation	7	Marketing
	Sheep (mutton)	Pest/Disease, mechanical damage & theft	Harvesting & Storage	10	Vaccination and Marketing
	Goat (chevon)	Pest/Disease, mechanical damage & theft	Harvesting & Storage	10	Vaccination and Marketing
	Cow (beef)	Pest/Disease, communal conflict & theft	Grazing & processing	10	Vaccination and Marketing
	Broiler	Pest/Disease, mechanical damage & glut	Storage & transportation	10	Vaccination and Marketing
	Layer	Pest/Disease & theft	Maturity & transportation	10	Vaccination and Marketing
Borno	Sheep (mutton)	theft	grazing time	50	Provision of adequate security
	Goat (chevon)	Theft	grazing time	50	Provision of adequate security
	Cow (beef)	Theft	grazing time	50	Provision of adequate security

Table 8.8: Livestock post-harvest loss in North-East Zone(cont.)

State	Livestock/Products with significant losses this year	Major harvest loss type	Activity stage of loss	Estimated % loss	Suggestion on loss reduction
Gombe	Milk	Accident	Transportation	30	Milk should be in plastic or jerrican
	Egg	Disease	Farm	50	The bird should be vaccinated
	Sheep (mutton)	Theft	During grazing	15	Feed should be provided on farm

Table 8.9 indicates the livestock post-harvest loss in the South-East zone. This occurred due to cracking, disease, theft, communal conflict and accident. The commodities affected were milk, eggs, sheep, goat, cows, broilers and layers. The estimated post-harvest loss was between 5 to 70%. Abia State recorded the least estimated loss of 5% on eggs, broilers and layers due to cracking and disease while Ebonyi State recorded the highest estimated loss of 70% on broilers due to disease outbreaks and theft. Prompt vaccination, resistance breeding and adequate security could help reduce the loss.

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

State	Livestock/Products with significant losses this year	Major harvest loss type	Activity stage of loss	Estimated % loss	Suggestion on loss reduction
Abia	Egg	Cracking	Transportation	5	Road rehabilitation and good storage facility
	Broiler (Meat)	Disease	Growing stage	10	Use of vaccines and disease resistant bred and culling
	Layer (Meat)	Disease	Growing stage	10	Use of vaccines and disease resistant bred and culling

Table 8.9: Livestock post-harvest loss in South-East Zone (Cont.)

State	Livestock/Products with significant losses this year	Major harvest loss type	Activity stage of loss	Estimated % loss	Suggestion on loss reduction
Ebonyi	Milk	Theft & accident	Storage/processing	50	Security & good storage
	Eggs	Theft/rot/accident	Transportation/storage	50	Security & good storage
	Sheep (mutton)	Theft/Disease	Home/farm	30	Security & use of vaccines
	Goat (chevon)	Theft & disease	Home & farm	30	Security & use of vaccines
	Cow (beef)	Communal conflict & theft	Home & farm	50	Security & use of vaccines
	Broiler (Meat)	Disease & theft	Home & farm	70	Security & use of vaccines
	Layer (Meat)	Disease & theft	Home & farm	40	Security & use of vaccines

Results in Table 8.10 illustrate the livestock post-harvest loss in the South-South zone. This occurred due to glut, disease, theft, flood, accident and communal conflict. The commodities affected were milk, eggs, broilers, layers, sheep, goats and cows. The estimated post-harvest loss was between 2 to 50%. Akwa Ibom State recorded the lowest estimated loss of 2% on sheep, goat, cow and layer similarly, Rivers State recorded the lowest estimated loss of 50% on broiler due to disease outbreak. The loss could be minimized by good management, prompt vaccination, proper handling practices and a good transportation network.

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

State	Livestock/Products with significant losses this year	Major harvest loss type	Activity stage of loss	Estimated % loss	Suggestion on loss reduction
Akwa Ibom	Eggs	Glut	Transportation	5	Timely disposal
	Sheep (mutton)	Diseases	Transportation/storage	2	Vaccination
	Goat (chevon)	Diseases	Transportation/storage	2	Vaccination
	Cow (beef)	Diseases	Transportation/storage	2	Vaccination
	Broiler (meat)	Diseases	Transportation	5	Vaccination

Table 8.10: Livestock post-harvest loss in South-South Zone (Cont.)

State	Livestock/Products with significant losses this year	Major harvest loss type	Activity stage of loss	Estimated % loss	Suggestion on loss reduction
	Layer (Meat)	Diseases	Transportation	2	Vaccination
Bayelsa	Eggs	Pest/Disease, theft, accident & flood	Harvesting, transportation & storage	10	Careful handling
	Broiler (Meat)	Pest/Disease, theft, accident & flood	Harvesting, transportation, threshing & storage	10	Pests and disease
	Layer (Meat)	Pest/Disease, theft, accident & flood	Harvesting, transportation, threshing & storage	10	Control measures and careful handling
Rivers	Milk	Theft	Transportation	10	Security
	Eggs	Accident	Storage	15	Drive safely
	Sheep (mutton)	Theft	Transportation	14	Security
	Goat (chevon)	Glut	Processing	28	See veterinary doctor
	Cow (beef)	Communal conflict	Transportation	31	Audio conflict
	Broiler (Meat)	Pest/Disease	Growing stage	50	See veterinary doctor
	Layer (Meat)	Pest/Disease	Processing	41	See veterinary doctor

Table 8.11 presents livestock post-harvest loss in the South-West zone. The commodities affected were eggs, broilers, layers, sheep, goats and cows. However, the estimated post-harvest loss was between 10 to 75%. This occurred due to disease, glut and rotting in the market, communal conflict, theft and accident. Lagos State was reported to have the highest estimated loss of 42 to 75% on eggs, broilers and layers due to disease outbreaks. Similarly, Ekiti State recorded the lowest estimated loss of 12% on broiler and layers due to lack of vaccination and disease outbreak. To curtail the loss, the following measures could be taken; the government should buy from producers when there is a glut in the market, prompt vaccination, conflict resolution, convert egg to powder.

Table 8.11: Livestock post-harvest loss in South-West Zone

State	Livestock/Products with significant losses this year	Major harvest loss type	Activity stage of loss	Estimated % loss	Suggestion on loss reduction
Lagos	Eggs	Glut	-	70	Need for off-takers
	Broiler (Meat)	Pest/ Diseases	Rearing	75	GAP
	Layer (Meat)	Pest/ Diseases	Rearing	70	GAP
Ogun	Milk	Pest/Disease	Storage		Processing plant
	Eggs	Pest/Disease, theft, accident & glut	Transportation, storage	42	Egg processing plant
	Sheep (mutton)	Pest/Disease, theft	Transportation, storage	-	Provision of infrastructure to store vaccines. Biosecurity awareness
	Goat (chevon)	Pest/Disease, theft	Transportation, storage	28	Provision of infrastructure to store vaccines. Biosecurity awareness
	Cow (beef)	Pest/Disease, communal conflict	Transportation, storage	15	Provision of infrastructure to store Vaccines. Biosecurity awareness
	Broiler (Meat)	Pest/Disease, glut	Transportation, storage	15	Off-taking at glut period
	Layer (Meat)	Pest/Disease	Transportation, storage	15	Subsidise cost of drugs

Table 8.11: Livestock post-harvest loss in South-West Zone (Cont.)

State	Livestock/Products with significant losses this year	Major harvest loss type	Activity stage of loss	Estimated % loss	Suggestion on loss reduction
Ondo	Milk	Not produced	-	-	
	Eggs	Glut	Harvesting	20	Buyback by Govt.
	Sheep (mutton)	Disease	Growing stage	10	Subsidizing cot of drugs &Vaccine
	Goat (chevon)	Disease & theft	Harvesting	10	Subsidizing cot of drugs &Vaccine
	Broiler (Meat)	Disease & glut	Harvesting &Transportation	20	Subsidizing cot of drugs &Vaccine Regular
	Layer (Meat)	Disease	At all stages	10	Supply of electricity to the cold room, Govt. subsidizing
Osun	Eggs	Glut	Storage	60	Campaign for industrial use of egg
	Broiler (Meat)	Rotting	Storage	40	Stability in power supply
Ekiti	Broiler (Meat)	Newcastle, gumboro, bird flu, coccidiosis	Management state	12	Vaccine
	Layer (Meat)	Newcastle, gumboro, bird flu, coccidiosis	Management state	12	Vaccine

8.3   Agro-Processing Plant

This section captures the processing plants available in different states during the 2023 Agricultural Performance Survey (APS). Such data were captured to determine the quantity of agricultural produce that was processed during this 2023 APS. Prominent among the agro-processing information collected were the type of crops processed, operating capacity and the functionality of the processing plants.

Table 8.12 presents the agro-processing plants available in the North-Central zone, the commodities processed include maize, sorghum, cassava, rice and poultry. The operating capacity of the processing plants was between 10 to 120 metric tons; this implies that some of the processing plants are small-scale. The processing plants are mostly functional.

Table 8.12: Agro-processing plant in North-Central Zone

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
FCT						
1.	Adelabu	AMAC	Private	Maize and Sorghum		Functional
2.	Joyce	AMAC	Private	Rice		Functional
Kogi						
1.	Cassava processing	Lokoja	Govt.	Cassava	10 tonnes /day	Non-Functional
2.	Rice Processing	Lokoja	Govt.	Rice	90 tonnes /wk	Non-Functional
3.	Rice processing	Lokoja	Private	Rice	120 tonnes /wk	Non-Functional
4.	Ageva	Okene	Private	Cassava	15 tonnes /day	
Kwara						
1.	Anuoluwa Ogele	Asa	Private	Cassava	5 Tonnes /day	Functional
2.	Owolani Onijo		Private	Cassava	3 Tonnes /day	Functional
Nasarawa						
1.	RIPMAP	Lafia	Partnership	Rice	1.5 ton/hr	Functional
2.	KUMAZY	Keffi	Partnership	Rice	3 ton/hr	Functional
3.	B/SIDI IP	Lafia	Partnership	Rice	0.75 ton/hr	Functional
4.	OLAM IRM	Doma	Partnership	Rice	105,000 ton/hr	Functional
5.	BEGUWA NIG. LTD	Nasarawa	Partnership	Rice	300 kg/hr	Functional
6.	GEM PARBOILING CENTRE	Lafia	Partnership	Rice	700 kg/hr	Functional

Table 8.12: Agro-processing plant in North-Central Zone (Cont.)

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
Niger						
1.	Jafahad Farms	Pago, Paiko	Private	Rice	15 bags	Functional
2.	Kutigi Rice Mill	Kutigi/ Minna	Private	Poultry	25 bags	Functional
PLATEAU						
1.	Timtali	J/North	Private	Rice Mill		Functional
Taraba						
1.	A/Gonzaki	A. Kola	Private	Rice		Functional
2.	Al-Urmma	Jalingo	Private	Rice		Functional
3.	Tik Four	Wukari	Private	Rice		Functional
4.	Ulen	Wukari	Private	Cassava		Functional
5.	Tita Kuru	Jalingo	Private	Cassava		Functional

Table 8.13 depicts the agro-processing plants in the North-East zone. The common crop processed in the Northeast zone was observed to be rice. The operating capacity of the major rice processing plants in Bauchi State ranges between 300 – 8000 Mt. Other crops processed within the zones are maize, sorghum, poultry feed, cattle and small ruminant feeds with operating capacity between 0.5 to 50 metric tons. This implies that most of these processing plants are small-scale. Also, a meat processing company in Bauchi State reported to have an operating capacity of 250 metric tons and is functional providing regular services to the community.

Table 8.13: Agro-processing plant in the North-East Zone

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
Adamawa						
1.	Farm Centre	Fufare	Private	Rice		Functional
2.	Gidan Gona	Yola North	Private	Rice		Functional
Bauchi						
1.	Zungur Rice	Bauchi	Private	Rice	300	Functional
2.	Mustapha Katagum	Katagum	Private	Rice	500-8000	Functional

Table 8.13: Agro-processing plant in the North-East Zone

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
3.	Burga farm	Tafawa Balewa	Private	Rice	1000	Functional
4.	Bauchi meat Company	Bauchi	Government	Cattle & small ruminant	250	Functional
5.	Galbokki Ventures	Bauchi	Private	Rice	10	Functional
6.	Al-Bint Food Ventures	Bauchi	Private	Soy, Maize, Rice, and Sorghum	1.0	Functional
7.	Chime Food	Bauchi	Private	Soy, Maize, Rice, Sorghum and Fonio	0.5	Functional
8.	Flourish Food	Bauchi	Private	Soy, Maize, Rice, and Sorghum	1.5	Functional
9.	Sauki Food	Bauchi	Private	Poultry feed	2.0	Functional
10.	Green Tech	Bauchi	Private	Soy, Maize, Rice, and Sorghum	1.0	Functional
11.	Datoyi Place	Bauchi	Private	Soy, Maize, Rice, and Sorghum	0.5	Functional
12.	Kainuwa Rice	Azare	Private	Rice	50	Functional
13.	Goria Farm	Shira	Private	Rice	32	Functional
14.	Sama Gold Rice	Bauchi	Private	Rice		Functional
15.	Kawuri	Azare	Private	Rice		Functional
16.	Women multi-purpose	Dass	Private	Rice		Functional

Table 8.14 shows the agro-processing plants in the North-West zone. The commodities processed were rice, soya beans and cotton. The operating capacity of the processing plants was between 5 to 50 metric tons; this implies that some of the processing plants are small-scale. Most of the processing plants were functional. Kebbi State had the highest number of processing plants which processed mainly rice, while Jigawa, Kaduna and Kano States had the least number of processing plants.

Table 8.14: Agro-processing plant in the North-West Zone

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
JIGAWA						
1.	Dan Mode Rice Mill		Private	Rice		Functional
Kaduna						
1.	Falke Oil	Igabi	Private	Soy bean		Functional
Kano						
1.	Kaduna seed processing complex	Garun Malam	Government			Non-functional
Kebbi						
1.	WACOT	Argungu	Private	Rice	50MT/Ha	Functional
2.	LABANA	B/Kebbi	Private	Rice	16MT/Ha	Functional
3.	Lolo Rice	Dandi	Private	Rice	8MT/Ha	Functional
4.	Sajo Rice	B/Kebbi	Private	Rice	5MT/Ha	Functional
Zamfara						
1.	Bazamfare Rice mill	Gusau	Govt. & Private	Rice		Functional
2.	Tanla Rice Mill	Gusau	Private	Rice		Functional
3.	Cotton ginnery	Gusau	Private	Cotton		Functional

Table 8.15 shows the agro-processing plants available in the South-East zone. The commodities processed were rice and poultry meat Operating capacity of the processing plants was between 10,000 to 120,000 metric tons, this implies that some of the processing plants were small-scale. Almost all the processing plants were functional, Ebonyi State had the highest number of small-scale processing plants which processed mainly rice, while Anambra State had the least number of processing plants which mainly processed Rice.

Table 8.15: Agro-processing plant in the South-East Zone

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
Anambra						
1.	Cosghars	Igbahiam	Private	Rice	120,000	Functional
2.	Lynden Farm	Igbabiam	Private	Rice	110,000	Functional
Ebonyi						
1.	Abakaliki Rice Mill	Abakaliki	Government & Private	Rice		Functional
2.	Ikwo Rice Mill	Ikwo	Government	Rice		Functional
3.	Iboko Rice Mill	Izzi	Government	Rice		Functional
4.	Edda Rice Mill	Edda	Government	Rice		Functional
5.	Akeze Rice Mill	Ivo	Private	Rice		Functional
6.	Ngbo Rice Mill	Ohaukwu	Private	Rice		Functional
7.	Ezzillo Rice MILL	Ishielu	Private	Rice		Functional
Enugu						
1.	Okunerere	Uzo-Uwani	Private	Rice	43000	Functional
2.	Tara agro	Uzo-Uwani	Private	Rice	40000	Functional
3.	Omace	Uzo-Uwani	Private	Rice	20000	Functional
4.	Ogbukor	Nkanu East	Private	Rice	50000	Functional
5.	Meat world	Nkanu East	Private	Poultry	10000	Functional
6.	Isaac lucy	Nkanu East	Private	Poultry	20000	Functional

Table 8.16 presents the agro-processing plants available in the South-South zone. The commodities processed were cassava, rice, poultry and feed mills. The 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 Cross River States had the least number of processing plants which mainly processed poultry and feed mill.

Table 8.16: Agro-processing plant in the South-South Zone

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
Akwa Ibom						
1.	Cassava processing factory	Afia Nsit, Nsit Ibom	Govt.	Garri, starch, flour	10MT	Non-Functional
2.	Cassava processing factory	Ikot Ekang, Abak	Govt.	Garri, starch, flour	5MT	Non-Functional
3.	Cassava processing factory	Ikot Ekpene Udo, Eket	Govt.	Garri, starch, flour	5MT	Non-Functional
4.	Cassava processing factory	NungUdoe, IbesikpoAsutan	Govt.	Garri, starch, flour	5MT	Non-Functional
5.	Cassava processing factory	OdoroIkpe, Ini	Govt.	Garri, starch, flour	5MT	Non-Functional
6.	Rice processing mill	MbiabetIkpe, Ini	Govt.	Rice	200MT	Functional
Bayelsa						
1.	OTUOKE	OGBIA	Govt.	RICE	3 TONS	Functional
2.	AMASSOMA	SILGA	Govt.	RICE	3 TONS	Functional
3.	OFONI	SILGA	Govt.	RICE	3 TONs	Functional
4.	KOKOKOSI	SILGA	Govt.	RICE	7.5 TONs	Functional
5.	YENAGOA	YELGA	Govt.	RICE	3TONS	Functional
6.	YENAGOA	YELGA	Private	RICE		Functional
Cross River						
1.	Top Feed	Calabar Municipal	Private	Poultry & Feed Mill		Functional
Delta						
1.	Darda	Oshimili North	Govt.	Cassava Starch	2 tons/day	Non-functional
2.	Job Creation	Oshimili South	Govt.	Garri	3.5 tons	Functional
3.	Ebu Processing Centre	Oshimih North	Govt.	Garri	1.5 tons	Functional
4.	Obior Rice	Aniocha North	Govt.	Rice	12 tons	Functional

Table 8.16: Agro-processing plant in the South-South Zone (Cont.)

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
Edo						
1.	Agrotek	Ugboha	Private		40,000 MT/Year	Functional
2.	Pemo	Avielle	Private		30,000 MT/Year	Functional
3.	Inotech Food	Benin	Private		1 ton/day	Functional
4.	Santa Maria Foods	Benin	Private		1 ton/day	Functional
5.	Idaewor Farmers	Fugar	Private		1 ton/day	
6.	Amidai Farms	Iruekpe	Private		1 ton/day	Functional
7.	Lentus Food	Ugo-orhionmwon	Private		1 ton/day	Functional
8.	Emesomi Garri Proc.	Uzarie	Private		1 ton/day	Functional
9.	Della Food	Benin	Private		1 ton/day	Functional
10.	Madam Edna	Igueben	Private		1 ton/day	Functional
11.	Bokesh Farms	Igarra	Private		1 ton/day	Functional
12.	Believe Farms	Owan, Benin-Akure Rd.	Private		1 ton/day	Functional
13.	Imafidon	Owan, Benin Akure Rd.	Private		1 ton/day	Functional
14.	Nosak Farms	Okhiri	Private		4 ton/day	Functional
15.		Off Benin-Abraka Rd	Private			
16.	Paul Friday	Ibillo. Akoko Edo LGA	Private		1 ton/day	Functional
17.	Idele Farms	Ebelle, Igueben LGA	Private		1 ton/day	Functional
18.	Madam Osagie	Igueka, Benin-Abuja Rd.	Private		1 ton/day	Functional
19.	Alufah Friday Paul	Ibillo	Private		1 ton/day	
20.	EgberanIfidon	Afuze	Private		1 ton/day	Functional
21.	Mrs Mary Edna Ainangbe	Uromi Agbor Rd.	Private		1 ton/day	Functional

Table 8.16: Agro-processing plant in the South-South Zone (Cont.)

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
22.	ShedrackIrib	Ekpoma	Private		1 ton/day	
23.	Ekuoja Agro Complex		Private		1 ton/day	
24.	Dr. Lambert Ahiobare Daniel	Benin	Private		1 ton/day	
25.	Akhelumele Fredric	Irrua	Private		1 ton/day	
26.	Mrs. EkiOshodi	Benin	Private		1 ton/day	
27.	Believe Syituoyor	Benin Akure Rd	Private		1 ton/day	
28.	Ikalea Felix	Ekonoukhuo Qtrs, Irrua	Private		1 ton/day	Functional
29.	Dr. Asemota Farms	Benin-Abuja Rd.	Private		1 ton/day	Functional
30.	Osaretin	Ekpan-Ewoimi	Private		1 ton/day	Functional
31.	Joseph Iddah	Sabongida-Ora	Private		1 ton/day	Functional
32.	Helder Henry Ikhile	Sabongida-Ora	Private		1 ton/day	Functional
33.	De-Ladder Establisment	Ugbowo	Private		1 ton/day	Functional
34.	Elahor Farms	Ekewan Barracks	Private		1 ton/day	Functional
35.	Bokesh Farms	Igarra	Private		1 ton/day	Functional

Table 8.17 presents the agro-processing plants available in the South-West zone. The commodities processed were feed mills, cassava, rice, fish, oil palm and cocoa. A few of the processing plants were not functional. Ekiti State had the highest number of processing plants, majority of which were small-scale processing mainly cassava, rice and oil palm. Osun States had the least number of processing plants which mainly processed cassava.

Table 8.17: Agro-processing plant in the South-West Zone

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
Ogun						
1.	AVMF	Abeokuta South	Private	Feed Mill	10,000	Functional
2.	Covenant	Abeokuta South	Private	Feed Mill		Functional
3.	PCP	Odogbolu	Private	Cassava		Functional
4.	Harvest Feed	Obafemi	Private	Cassava		Functional
5.	Awowow	Owode Ewekoro	Private	Fish		Functional
6.	Microsoft rice	Yewa North	Private	Rice		Non-Functional
Ondo						
1.	Cocoa Processing Industry	Ileoluji/Oke Igbo	Govt. & Private	Cocoa		Functional
2.	Johnvet Food Nig. LTD	Idanre	Govt. & Private	Cocoa		Functional
3.	Cadbury Nig. Plc	Ondo East	Govt. & Private	Cocoa		Functional
4.	Johnvet Nig. LTD	Akure South	Private	Cocoa		Functional
5.	Matna Food	Akure North	Private	Cassava		Functional
Osun						
1.	Bismanko Garri	Iwo	Private	Cassava		Functional
2.	CATO	Ayedire	Private	Cassava		Functional
Ekiti						
1.	Cassava processing plant	Gbonyin	Private	Cassava		Functional
2.	Cassava processing plant	Ado	Private	Cassava		Functional
3.	Cassava processing plant	Oye	Private	Cassava		Functional

Table 8.17: Agro-processing plant in the South-West Zone (Cont.)

S/N	Name of Processing Centre	Location (LGA)	Ownership	Crop/livestock processed	Operating Capacity	Functionality
4.	Cassava processing plant	Ikole	Private	Cassava		Functional
5.	Cassava processing plant	Ekiti East	Private	Cassava		Functional
6.	Rice Processing plant	Ijero	Private	Rice		Functional
7.	Rice Processing plant	Ado	Private	Rice		Functional
8.	Rice Processing plant	Irepodun/Ifelodun	Private	Rice		Functional
9.	Rice Processing plant	Oye	Private	Rice		Functional
10	Rice Processing plant	Gbonyin	Private	Rice		Functional
11.	Oil Palm processing plant	Oye	Private	Oil Palm		Functional
12.	Oil Palm processing plant	Gbonyin	Private	Oil Palm		Functional
13.	Oil Palm processing plant	Ikole	Private	Oil Palm		Functional
14	Livestock Poultry	Ado	Private	Broiler		Functional

9.0   FARMER'S ASSESSMENT OF CROP PERFORMANCE

It is a well-known fact that agriculture provides employment and source of livelihood for the teeming male and female gender of the Nigeria population. The result of farmers' assessment across the entire federation for the 2023 wet cropping season shows that 74.44% of the farmers surveyed are males while 25.56% are females as shown in Figure 9.1. It indicates about 2.4% increase in number of surveyed male farmers and a corresponding 2.4% decrease in the number of female farmers compared to what was reported for the 2022 wet cropping season (72% males, 28% females)
respectively.
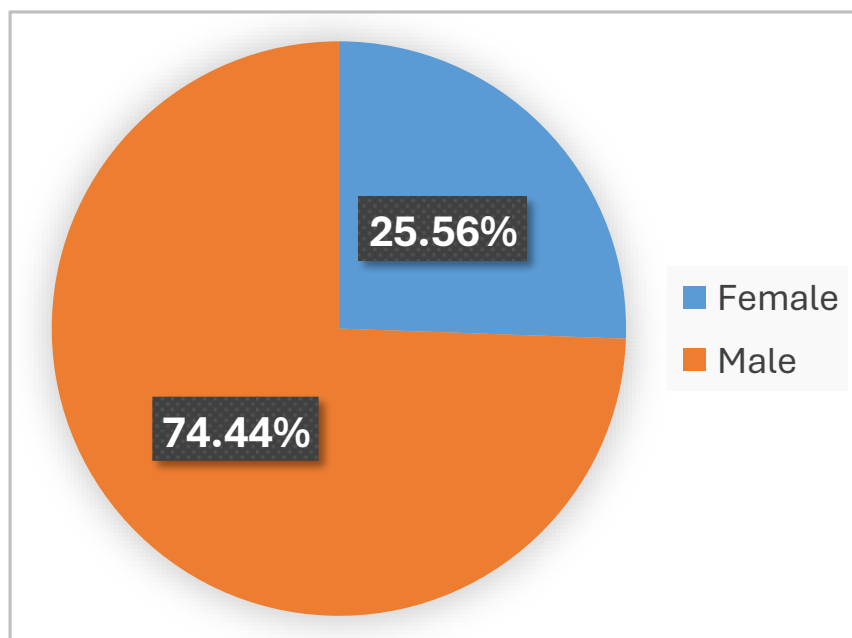
Figure 9.1: Farmers' distribution by gender

Age has been proven to influence the head of the family's level of activity and production, as well as the rate at which households embrace new technologies and the techniques used to increase household productivity and standard of living. Figure 2 indicates that most of the farmers interviewed for the 2023 farmers assessment of crop performance happen to be within their productive age of 30-49 years at 56.93%, with the least of 2.56% having an age of 70≥ years.
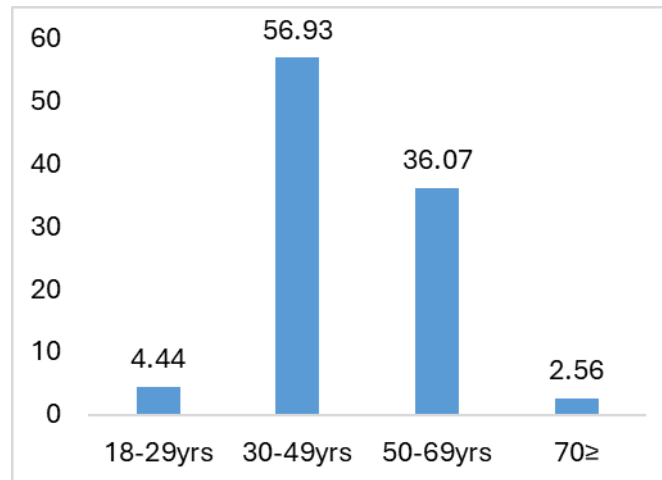
Figure 9.2: Farmers' Distribution of Farmers by Age Category

The agricultural sector continues to encounter numerous difficulties that have an impact on its production notwithstanding its economic importance to Nigeria. The crop sub-sector is the most active in the 2023 production season, with about 96.03% of the households surveyed confirming that they have planted one crop or the other during the 2023 wet season, and livestock production comes in a distant second with about 34.08% of households who had kept livestock. This indicates a rise in agricultural and livestock production of around 4% and 5%, respectively, compared to the production season of 2022 that stands at 92% for crop production and 29% for livestock.
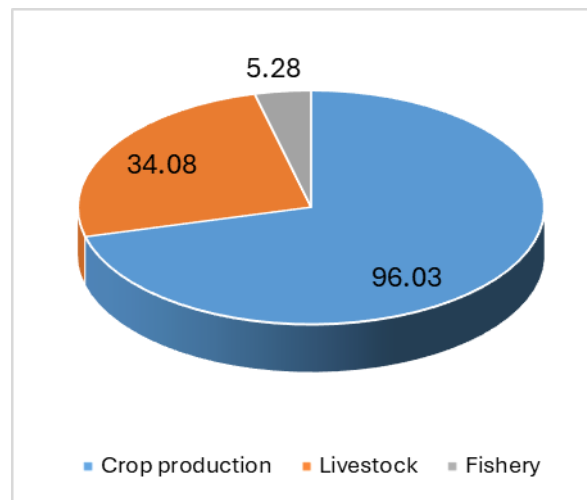
Figure 9.3: Type of agricultural production engaged in 2023

During the wet season of 2023, farmers in the various states of the federation grew a wide variety of crops, although cassava, rice, and maize were the three most widely grown crops. What is noteworthy in this situation is that cassava, which was cultivated during the 2023 wet season by roughly 24.67% of the farmers surveyed, was found out to have overtaken rice and maize as the nation's most widely grown crop in 2023, even in the traditionally cereal-producing Northern states.

During the wet season of 2023, it was also observed that maize and rice go head-to-head in terms of cultivation, with 19.44% and 19.13%, respectively.
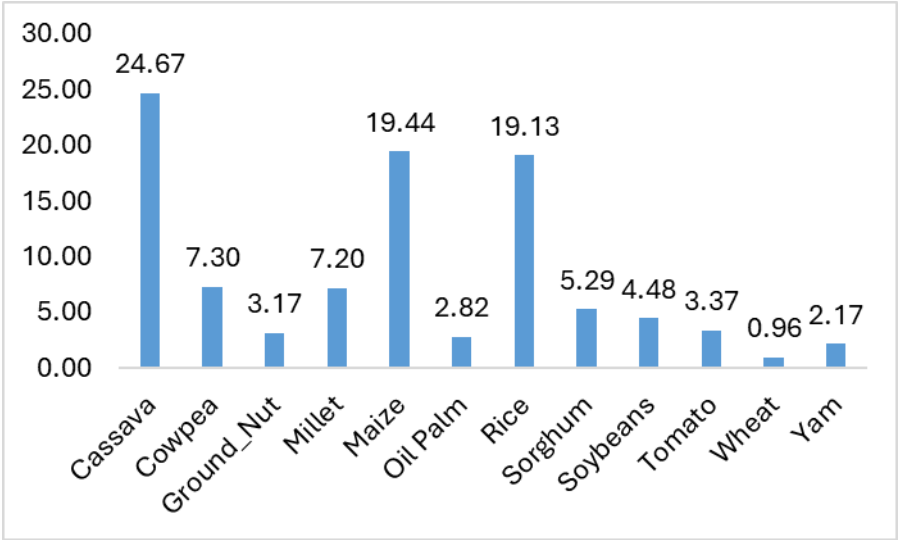

Figure 9.4: Major crops grown in 2023

Farm input such as fertilizers, seeds, and herbicides are some of the major inputs utilized by farmers during the 2023 wet season. But the most used input happens to be seed, which accounts for about 82.33% of all the inputs used by farmers.
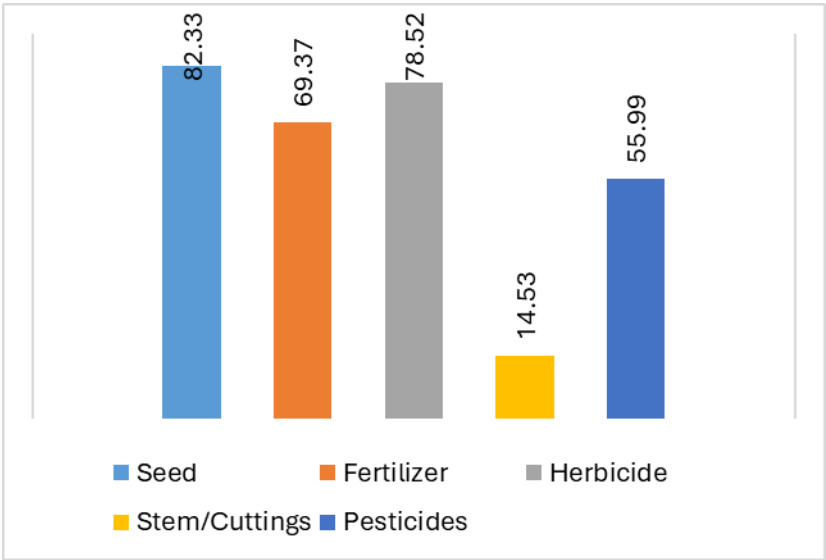

Figure 9.5: Input used for crop production in 2023

Improved and certified seeds are a major determinant of crop yield. However, it was observed that during the 2023 wet season, even though majority of the farmers interviewed (74.34%) responded that they are aware of certified seed; out of which 64.09% confirmed to have planted certified seeds during the 2023 production season. This indicated that the authorities concerned have tried farmers' sensitization to the use of improved certified seed but more needs to be done. Also, ensure its timely availability and affordability if the country is to address its food security problem.
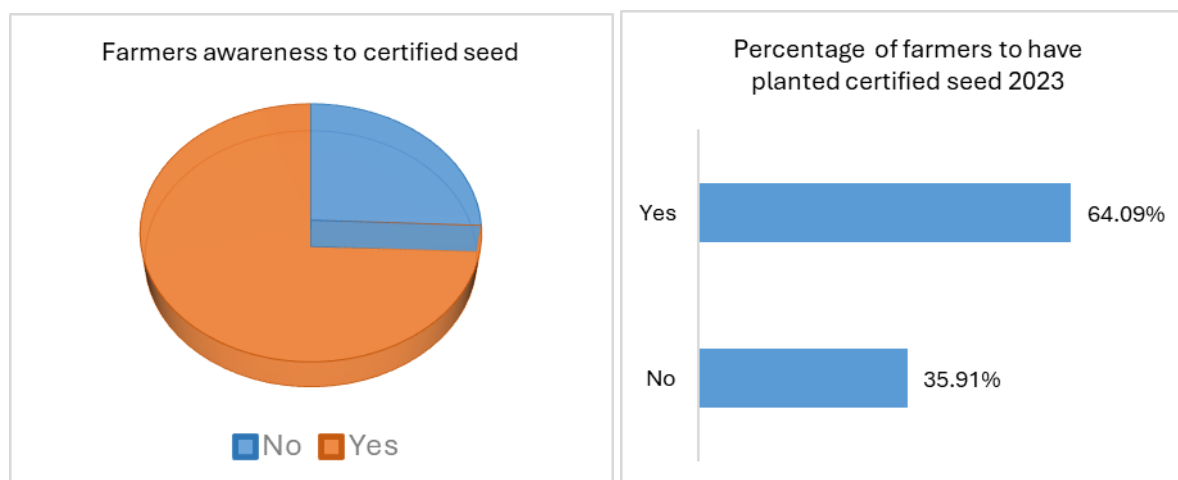
Fig 9.6: Awareness and use of certified seeds 2023

About 18.71% of the farmers surveyed asserted that farm inputs were mainly purchased from the open markets within and outside the communities (Figure 9.7). Only a small fraction of about 9.78% received government input in 2023. This shows an increase of about 3.78% of farmers who have received inputs from government sources when compared to the 2022 wet season (6%), which can be attributed to an increase in the present government commitment to meeting some of its promises made to the Nigerian farmers.
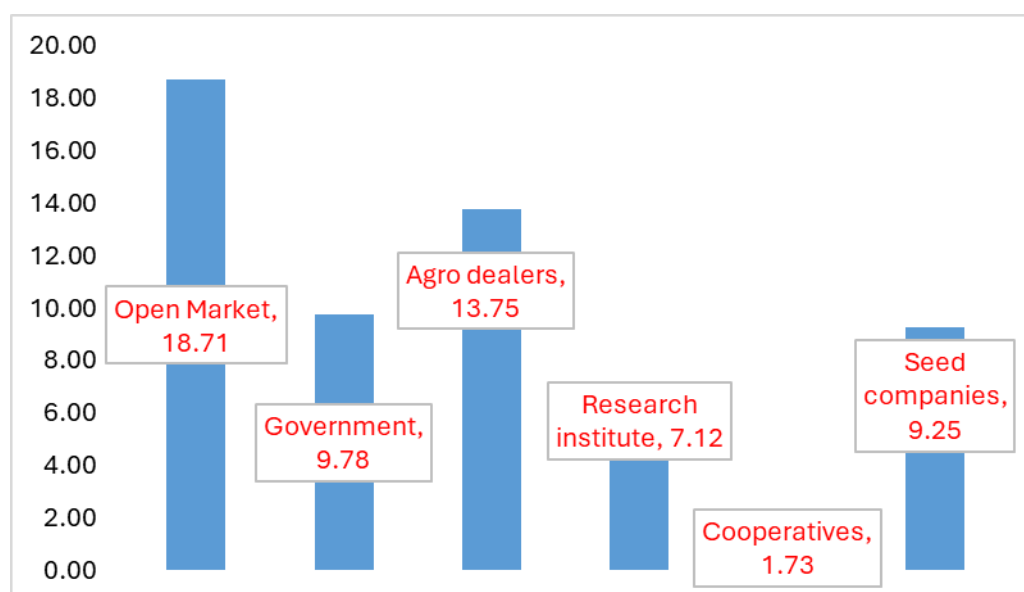

Figure 9.7: Source of certified seeds

With all the efforts and commitments by both government and other stakeholders across the agricultural domain, the use of primitive, simple farm tools are still the predominant practice by most farmers across the nation. Result from the data collected for the 2023 agricultural performance survey indicated that about 58% of all the farmers surveyed made used of simple hand tools such as hoes, cutlass, sickles, etc. in carrying out most farm operations (Figure 9.8).
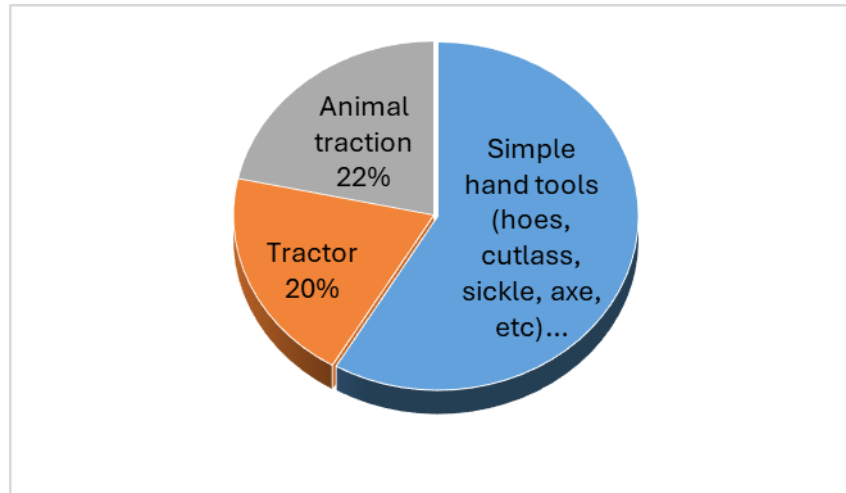
Fig 9.8: Used of farm equipment in 2023 production season

Low usage of modern agricultural machinery to carry out farm operations across the nation are due to the non-affordability of the machinery as confirmed by about 52.72% of the farmers interviewed during the 2023 wet season agricultural performance survey. Another major factor or constraint to the use of modern agricultural machinery by Nigerian farmers is the non-availability and accessibility of the equipment (47.28%) in most of the farmers' immediate environments (Figure 9.9).
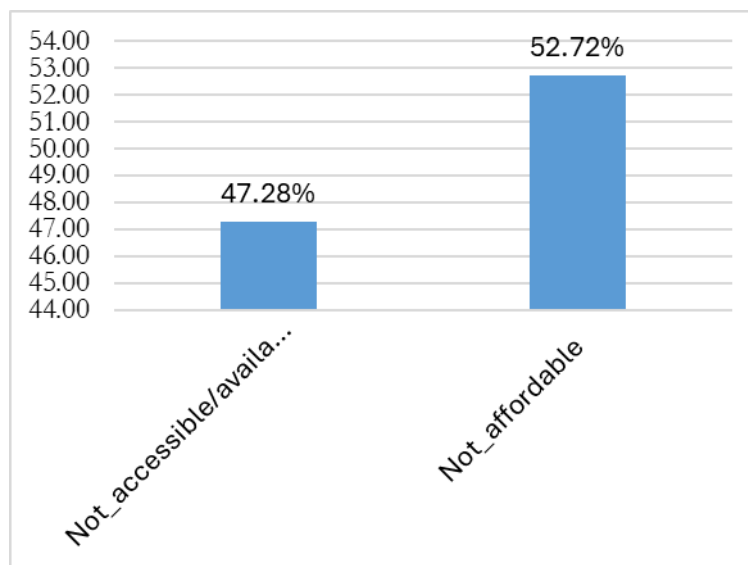

Figure 9: Constraints to using tractors for the 2023 production season

The proportion of farmers who receive extension information is still low in Nigeria. In the survey across 36 States and FCT, 85% of sampled farmers accessed extension services in 2023, which is about a 7% decrease as compared to the number in 2022 (92%). The proportions of farmers receiving extension advice from the three most important sources are friends & family/co-farmers (44.55%), radio (25.82%), while the market stands at 11.27%. A significant decrease in 2023 (2.56%) was observed under extension agents as a source of extension information for the farmers when compared to 2022 data (64%). This implies that the once important agricultural source of

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information is gradually dying, and it might soon go extinct if the government and other relevant authorities fail to what is needed to revive the aged long institution.
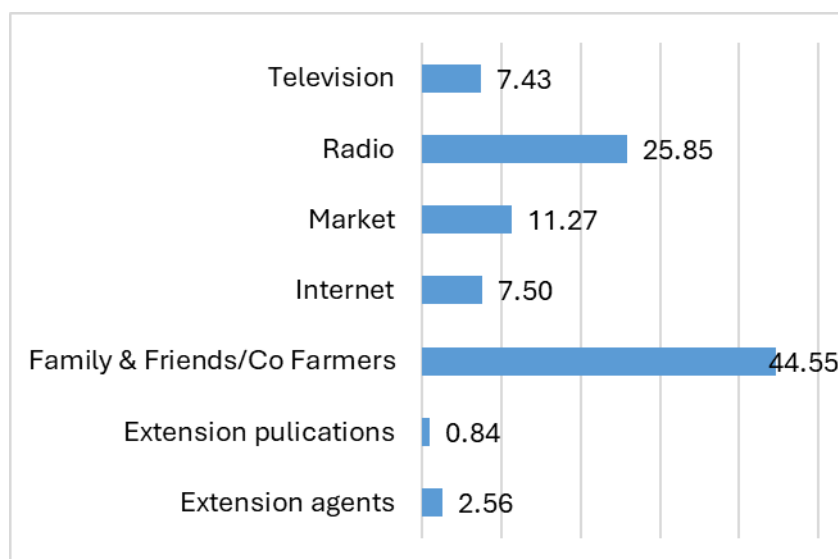

Figure 9.10: Source of agricultural information

The recent declaration of the state of emergency on food insecurity by the present government did not go un-noticed by the farmers, as data have shown that over 46.21% of the farmers interviewed for the 2023 wet season of agricultural performance across the 36 states and FCT seems to be aware of the government plans (Figure 9.11). However, from the date of the announcements till date, only a fraction of what was announced, the government can make some efforts, as results shows that only 13.12% of the farmers surveyed benefitted in the areas of fertilizer, with the least being credit on wheat cultivation that stands at 0.42% (Figure 9.12).
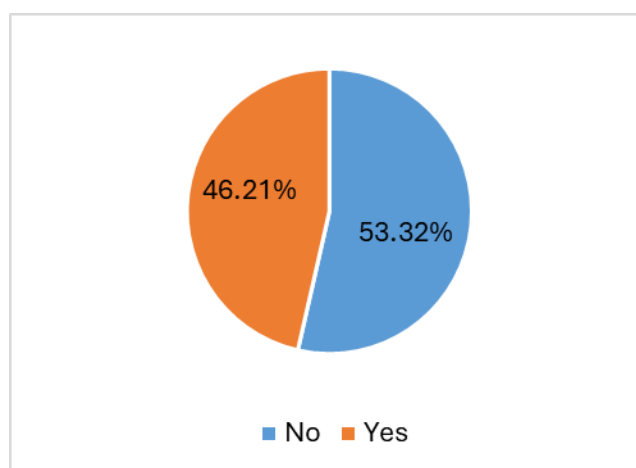

Figure 9.11: Farmers' awareness of the state of emergency on food insecurity that was declared by the current govt.
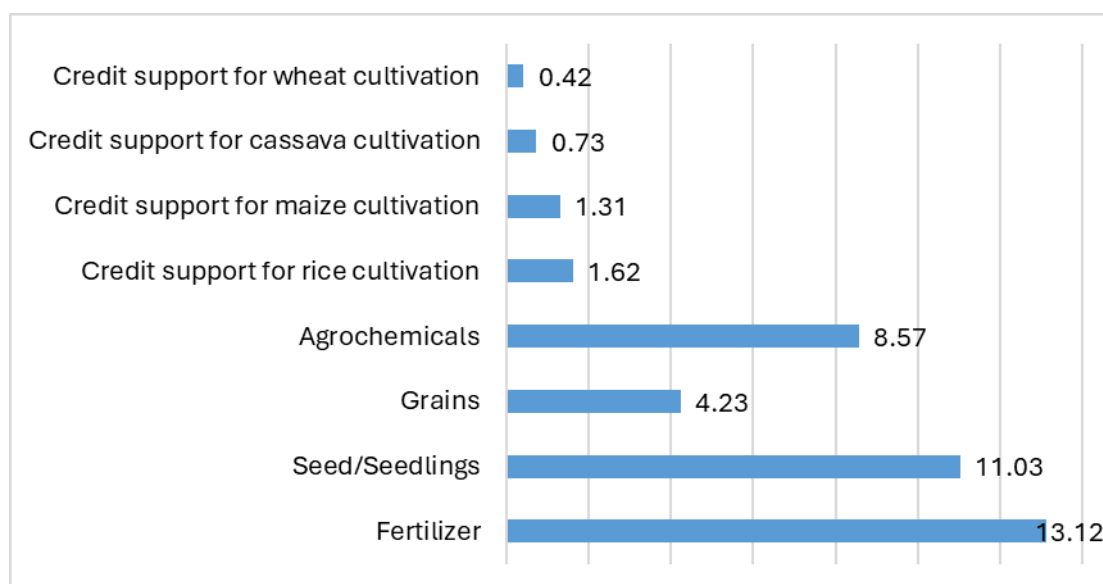
Figure 9.12: Areas benefitted by farmers from the recent federal government intervention

10.0   COST OF PRODUCTION FOR MAJOR CROPS IN NIGERIA

The production costs of major crops per hectare in various states were adequately captured by the 2023 agricultural performance survey. The various crops were grouped into different crop classes. The corresponding production cost data are shown hierarchically from state to zone, to region and finally, to the national level. The regional data were pool of state data, and the national data were pool of the zonal or regional data. In situations of deficit data, the flow stopped at the stop of data and discussions were limited to the available data. In 2023, production cost data were inclusive. A comparison was made between year 2022 and 2023 production cost data to evaluate the percentage of change in cost of production. There was increase in production costs for all crops across all states of the country; this means a positive change. As much as it was desired, no negative change recorded between production costs for 2022 and 2023. 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 and farm operations. 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 costs of major cereals and legumes are presented in this section. The presentation captures the zonal data reflecting corresponding states of each zone. 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 and national level, the production cost of major crops are presented as follows.

10.1.1   Cost of production for cereals and legumes in North-Central Zone and states
In the North-Central zone, 4 cereal crops (maize, millet, rice, sorghum) and 3 legume crops (cowpea groundnut, soybean) were reported (Table 10.1a and b). For all the crops, the production cost differed from each state for 2022 and 2023. There was a rise in production cost in year 2023 over those of year 2022 (a positive percentage change). Among the cereal crops, the highest change (90%) was reported for maize in FCT. For the legumes, the highest change (118%) was recorded for cowpea in Niger. The zonal production cost was highest for soybean among the legumes and maize among the cereals in 2023. The rise in prices of farm inputs like fertilizer and agrochemicals was evident this year; this may be the reason for the alarming increase in cost of production.

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-East zone are on Table 10.2a and b. The production cost differed in various states even for the same crop in 2022 and 2023. The change in production cost in 2022 and 2023 were positive for all cases. These differences could be attributed to differences in farm labor and operation costs. For zonal production, the cereals and legumes that have highest cost of production in 2023 are rice (₦325,110) and soybean (₦259,150). This report is like those in the North-Central zone. The results indicate there are similar agricultural practices in both zones.

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

State	Maize Cost of Production (N) For Year		%Change	Millet Cost of Production (N) For Year		%Change	Rice Cost of Production (N) For Year		%Change	Sorghum Cost of Production (N) For Year		%Change
	2022	2023		2022	2023		2022	2023		2022	2023	
Benue	370,000	491,000	33	-	-	-	450,000	480,000	7	290,000	370,000	28
FCT	200,000	380,000	90	130,000	190,000	46	250,000	400,000	60	150,000	200,000	33
Kogi	380,800	600,000	58	-	-	-	480,000	700,000	46	350,000	400,000	14
Kwara	290,000	464,000	59	290,000	-	-	320,000	490,000	53	362,000	430,000	19
Nasarawa	250,100	338,000	35	150,100	-	-	280,400	472,000	68	195,500	-	-
Niger	400,000	700,000	75	-	-	-	250,000	-	-	400,000	700,000	75
Plateau	320,000	380,800	19	110,000	120,000	9	200,000	260,000	30	-	104,000	-
Taraba	270,000	400,000	48	-	-	-	250,000	370,000	48	250,000	-	-
Zonal Mean	288,863	469,225	52	170,025	155,000	28	310,050	453,143	45	249,500	367,333	34

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

State	Cowpea Cost of Production (N) For Year		%Change	Groundnut Cost of Production (N) For Year		%Change	Soyabean Cost of Production (N) For Year		%Change
	2022	2023		2022	2023		2022	2023	
Benue	-	-	-	350,000	390,000	11	380,000	415,000	9
FCT	150,000	200,000	33	150,000	200,000	33	-	-	-
Kogi	400,000	500,000	25	400,000	500,000	25	-	-	-
Kwara	240,000	364,000	52	-	-	-	585,000	830,700	42
Nasarawa	145,000	165,000	14	130,000	179,000	38	150,000	182,000	21
Niger	220,000	480,000	118	-	-	-	300,000	525,000	75
Plateau	104,000	115,000	11	-	-	-	110,000	120,000	9
Taraba	290,000	360,000	24	320,000	400,000	25	250,000	300,000	20
Zonal Mean	221,286	312,000	40	270,000	333,800	26	295,833	395,450	29

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

State	Rice			Sorghum			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
	2022	2023		2022	2023		2022	2023		2022	2023	
Adamawa	260,000	300,000	15	172,000	190,000	10	235,000	245,000	4	-	-	-
Bauchi	357,000	375,000	5	220,000	300,000	36	280,000	360,000	29	281,600	295,680	5
Bornu	280,250	315,550	13	155,000	220,900	43	279,500	305,250	9	180,000	250,350	39
Gombe	260,000	300,000	15	150,000	-	-	300,000	360,000	-	170,000	200,000	18
Yobe	285,000	335,000	18	-	-	-	274,000	314,000	-	-	-	-
Zonal Mean	292,333	325,110	13	174,250	236,967	30	273,625	316,850	14	192,467	248,677	21

Table 10.2b: Cost of production for cereals and legumes in North-East 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
	2022	2023		2022	2023		2022	2023	
Adamawa	165,000	180,000	9	236,000	250,000	6	340,000	360,000	6
Bauchi	194,250	203,962.00	5	-			254,900	267,450	5
Bornu	85,000	140,800	66	215,000	250,250	16	-	-	-
Gombe	-	-	-	-	-	-	120,000	150,000	25
Yobe	180,000	235,000	31	-	-	-	-	-	-
Zonal Mean	156,063	164,941	28	225,500	250,125	11	238,300	259,150	12

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 northern zones (Table 10.3a and b). It is safe to admit that this set of cereals and legumes are the major crops produced in Northern Nigeria. There was no reduction in production cost for these crops in 2023 when compared with the 2022 production cost, the percentage change was positive. The zonal mean production cost was the highest for maize (₦336,500) and soybean (₦237,000) 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 also be a reason for the rise in production cost over other legumes.

10.1.4 Regional production cost for cereals and legumes (Northern region)

The production cost distribution of cereals and legumes in the northern region is shown in Table 10.4. 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 region, it shows that changes were highest for groundnut, followed by that for soybean and millet. There was an increase in the cost of production in 2023. This could be interpreted as a high cost of production for 2023.

10.1.5 Cost of production for cereals and legumes in South-East Zone and states

In the 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. As opposed to 2022 where Abia State produced cowpeas, no state produced cowpeas. Only Ebonyi State produced groundnut in the zone. The zone also experiences increase in cost of production in 2023 like the other regions previously seen. There was no state with negative percentage change in crop production. The zonal mean production cost was the highest rice (₦452,000).

10.1.6 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, and soybeans. While many states produced cowpeas, only Edo State produced soybeans (Table 10.6). All the states produced maize and rice except Delta State. All the states experienced increased production costs. The zonal production costs for rice and soybean were ₦570,000 and ₦420,000 respectively.

10.1.7 Cost of production for cereals and legumes in South-West Zone and states

The cereals and the legumes crop reported for South-West zone are also reported for this zone (Table 10.7). The cost of production increased in all states and for all the crops in 2023. The zonal mean production costs for rice were higher among the cereals (₦473,000); although, the rate of increment was higher in maize (38%). For legumes, soybeans have a higher production cost (₦335,000).

10.1.8 Regional production cost comparison for cereals and legumes (Southern region)

The cost of production for cereals and legumes in the entire southern region is shown in Table 10.8. Rice has the highest production cost among cereals, and soybeans have the highest production cost among legumes. The percentage change factor is highest for maize and groundnut.

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

State	Rice Cost of Production (N) For Year		%Change	Sorghum Cost of Production (N) For Year		%Change	Maize Cost of Production (N) For Year		%Change	Millet Cost of Production (N) For Year		%Change
	2022	2023		2022	2023		2022	2023		2022	2023	
Jigawa	280,000	400,000	43	210,000	316,000	50	-	-	-	240,000	-	-
Kaduna	250,000	285,000	14	220,000	245,000	11	320,000	350,000	9	-	-	-
Kano	286,000	324,000	13	140,000	200,000	43	240,000	307,000	28	240,000	260,000	8
Katsina	-	-	-	235,000	280,000	19	385,000	415,000	8	225,000	285,000	27
Kebbi	250,000	300,000	20	210,000	250,000	19	200,000	250,000	25	200,000	250,000	25
Sokoto	300,000	330,000	10	268,000	300,000	12	280,000	297,000	6	243,000	280,000	15
Zamfara	180,000	280,000	56	200,000	300,000	50	350,000	400,000	14	150,000	250,000	67
Zonal Mean	249,000	319,833	26	192,500	270,143	29	320,000	336,500	15	210,000	265,000	28

Table 10.3b: Cost of production for cereals and legumes in North-West Zone and states (Cont'd)

State	Cowpea Cost of Production (N) For Year		%Change	Groundnut Cost of Production (N) For Year		%Change	Soyabean Cost of Production (N) For Year		%Change
	2022	2023		2022	2023		2022	2023	
Jigawa	210,000	265,500	26	250,000	295,000	18	-	-	-
Kaduna	220,000	250,000	14	200,000	235,000	18	250,000	280,000	12
Kano	120,000	170,000	42	120,000	170,000	42	180,000	200,000	11
Katsina	250,000	255,000	2	230,000	250,000	9	-	-	-
Kebbi	180,000	200,000	11	180,000	200,000	11	230,000	260,000	13
Sokoto	220,000	270,000	23	220000	265,000	20	200,000	235000	18
Zamfara	132,000	180,000	36	180,400	200,000	11	160,000	210,000	31
Mean	190,286	227,214	22	197,200	230,714	18	204,000	237,000	17

Table 10.4: Regional production cost for cereals and legumes (Northern Region)

Crop			Mean Cost of Production (₦)			Northern Region Mean Production Cost (₦)
			North-Central zone	North-East zone	North-West zone	
Maize	Cost of Production (N) For Year	2022	288,863	273,625	320,000	294,163
		2023	469,225	316,850	336,500	374,192
		% Change	52	14	15	27
Millet	Cost of Production (N) For Year	2022	170,025	192,467	210,000	190,831
		2023	155,000	248,677	265,000	222,892
		% Change	28	21	28	17
Cowpea	Cost of Production (N) For Year	2022	221,286	156,063	190,286	189,212
		2023	312,000	164,941	227,214	234,718
		%Change	40	28	22	24
Groundnut	Cost of Production (N) For Year	2022	270,000	225,500	197,200	230,900
		2023	333,800	250,125	230,714	271,546
		%Change	26	11	18	18
Rice	Cost of Production (N) For Year	2022	310,050	292,333	249,000	283,794
		2023	453,143	325,110	319,833	366,029
		%Change	45	13	26	29
Sorghum	Cost of Production (N) For Year	2022	249,500	174,250	192,500	205,417
		2023	367,333	236,967	270,143	291,481
		%Change	34	30	29	42
Soybean	Cost of Production (N) For Year	2022	295,833	238,300	204,000	246,044
		2023	395,450	259,150	237,000	297,200
		%Change	29	12	17	21

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

State	Cowpea Cost of Production (₦) For Year 2022	2023	%Change	Groundnut Cost of Production (N) For Year 2022	2023	%Change	Maize Cost of Production (N) For Year 2022	2023	%Change	Rice Cost of Production (N) For Year 2022	2023	%Change
Abia	145,000	-	-	-	-	-	160,000	250,000	56	240,000	250,000	4
Anambra	-	-	-	-	-	-	150,000	230,000	53	220,000	330,000	50
Ebonyi	-		-	200,000	300,000	50	250,000	350,000	40	700,000	970,000	39
Enugu	-	-	-	-	-	-	278,000	375,000	35	220,000	350,000	59
Imo	-	-	-	-	-	-	285,000	305,000	7	330,000	360,000	9
Zonal Mean	145,000	-		200,000	300,000	50	224,600	302,000	38	342,000	452,000	32

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

State	Cowpea Cost of Production (₦) For Year 2022	2023	%Change	Maize Cost of Production (₦) For Year 2022	2023	%Change	Rice Cost of Production (₦) For Year 2022	2023	%Change	Soybean Cost of Production (N) For Year 2022	2023	%Change
Akwa Ibom	-	-	-	296,000	420,000	42	315,000	470,000	49	-	-	-
Bayelsa	390,000	435,000	12	380,000	450,000	18	600,000	670,000	12	-	-	-
Cross river	-			460,000	520,000	13	650,450	700,000	8	-	-	-
Delta	150,000	206,000	37	220,000	259,750	18	-	-	-	-	-	-
Edo	370,000	460,000	24	373,450	450,000	20	380,000	540,000	42	320,149	420,000	31
Rivers	-	-	-	350,000	450,000	29	350,000	470,000	34	-	-	-
Zonal Mean	303,333	367,000	24	346,575	424,958	23	459,090	570,000	29	320,149	420,000	31

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 (N) For Year		%Change	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change
	2,022	2,023		2,022	2,023		2,022	2023		2,022	2023	
Ekiti	275,000	320,000	16	350,000	450,000	29	340,000	380,000	12	380,000	-	-
Lagos	-	-	-	420,000	550,000	31	550,000	570,000	4	-	-	-
Ogun	280,000	-	-	303,000	458,000	51	472,800	615,000	30	-	-	-
Ondo	250,000	305,000	22	270,000	350,000	30	270,000	350,000	30	250,000	310,000	24
Osun	-	-	-	220,000	391,000	78	-	-	-	-	-	-
Oyo	253,000	280,000	11	372,000	400,000	8	325,000	450,000	38	323,000	360,000	11
Zonal Mean	269,333	301,667	16	322,500	441,600	38	411,560	473,000	23	317,667	335,000	18

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

Crops			Mean Cost of Production (N)			Southern Region Mean Production Cost (N)
			South-East zone	South-South zone	South-West zone	
Cowpea	Cost of Production (N) For Year	2022	145,000	303,333	269,333	239,222
		2023	-	367,000	301,667	334,334
		%Change	-	24	20	22
Groundnut	Cost of Production (N) For Year	2022	200,000			200,000
		2023	300,000	-	-	300,000
		%Change	50			50
Maize	Cost of Production (N) For Year	2022	224,600	346,575	322,500	297,892
		2023	302,000	424,958	441,600	389,519
		%Change	38	23	38	33
Rice	Cost of Production (N) For Year	2022	342,000	459,090	411,560	404,217
		2023	452,000	570,000	473,000	498,333
		%Change	32	29	23	28
Soybean	Cost of Production (N) For Year	2022	-	320,149	317,667	318,908
		2023	-	420,000	335,000	377,500
		%Change	-	31	18	25

10.1.9   National production cost for cereals and legumes

The production cost data at the national level is shown on Table 10.9. The crops with complete entry, having both the southern and northern regions reported were emphasized. Otherwise, such crops were retained in appropriate part of the country. These results indicate that rice and maize were produced in every zone; as such both regions of the country in 2023. They also mean that rice has the highest cost of production among the cereals. The legumes produced in all part of Nigeria were cowpea, groundnut, and soybean in 2023. Among these, soybean has the highest cost of production. This result clearly indicates that irrespective of the zone or region of Nigeria where rice was farmed in 2023, the production was the highest for cereals while soybean was highest for legumes production.

The cost of production in 2023 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. Groundnut had the highest increase in cost as indicated in the highest percentage change of about 38%, it was followed by cowpea and maize (Table 10.9). Invariably, the selling price of agricultural produce may increase in 2023/2024.

Table 10.9: National mean production cost for cereals and legumes

Crop			Mean Cost of Production (₦)		
			Northern Region	Southern Region	National Mean Production Cost (₦)
Cowpea	Cost of Production (N) For Year	2022	189,212	239,222	214,217
		2023	234,718	334,334	284,526
		%Change	24	40	32
Groundnut	Cost of Production (N) For Year	2022	216,508	200,000	208,254
		2023	271,546	300,000	285,773
		%Change	25	50	38
Maize	Cost of Production (N) For Year	2022	294,163	297,892	296,027
		2023	374,192	389,519	381,856
		%Change	27	31	29
Millet	Cost of Production (N) For Year	2022	190,831		
		2023	222,892	-	
		%Change	17		
Rice	Cost of Production (N) For Year	2022	283,794	404,217	344,006
		2023	366,029	498,333	432,181
		%Change	29	22	26
Sorghum	Cost of Production (N) For Year	2022	205,417	-	-
		2023	291,481		
		%Change	42		
Soybean	Cost of Production (N) For Year	2022	255,406	318,908	287,157
		2023	297,200	377,500	337,350
		%Change	16	18	17

10.2   Cost of Production for Tuber Crops

Root and tuber crops are principal components of the nation's agricultural production. There are numerous and various types produced in different parts of Nigeria. The production costs for major tuber crops per hectare in 2023 are presented in this section. There are no reported production data for the north-east and north-west zones in 2023. 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 2023: they are cassava, Irish potato, sweet potato and yam (Table 10.10). Irish potato was cultivated only in Plateau State and this was due to its typical climatic requirement which is highly favorable in the state. The production cost for tuber crops increased in 2023 in this zone. In the zone, the highest cost of production was recorded for yam. Comparatively, yam requires more production activities; this 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		%	Cost of Production (₦) For Year		%	Cost of Production (₦) For Year		%	Cost of Production (₦) For Year		%
	2022	2023	Change	2022	2023	Change	2022	2023	Change	2022	2023	Change
Benue	400,000	560,000	40	-	-	-	-	-	-	720,000	810,000	13
FCT	320,000	380,000	19	-	-	-	-	-	-	720,000	850,000	18
Kogi	320,000	450,000	41	-	-	-	-	-	-	450,000	550,000	22
Kwara	250,000	500,000	100	-	-	-	260,000	390,000	50	550,000	650,000	18
Nasarawa	210,000	265,000	26	-	-	-	150,500	322,000	114	1,300,000	1,360,000	5
Niger	-	-	-	-	-	-	-	-	-	630,000	1,250,000	98
Plateau	320,000	370,000	16	1,030,100	1,150,000	11	-	-	-	815,000	905,000	11
Taraba	250,000	300,000	20	-	-	-	-	-	-	670,000	740,000	10
Mean	295,714	403,571	37	1,030,100	1,150,000	11	205,250	356,000	82	809,167	889,375	24

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

Four types of tuber crops were cultivated in this zone in 2023. 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 2023. The cost of production generally increased in 2023. For all the crops and across the states; the highest cost of tuber production in this zone was found in Abia for yam (₦1,050,000). The mean production value for 2023 for yam was (₦938,000).

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

Four tuber crops were cultivated in this zone in 2023. Among them, cassava and yam were cultivated in all the states while cocoyam was cultivated in only one state, (Edo) (Table 10.12). The cost of production increased for all crops in 2023. The mean zonal production cost was higher for yam than the other tuber crops in this zone in 2023.

10.2.4   Cost of production for tuber crops in South-West Zone and States

Three tuber crops were the major cultivation in this region but two (cassava and yam) were prevalent (Table 10.13). Cocoyam only produced by Ekiti State. Production cost increased for all the crops across the states in 2023. In this zone, the mean production cost for yam was the highest just as observed in the previous zones.

10.2.5   Zonal production cost comparison for tuber crops (Southern Region)

Overview of production cost for tuber crops shows yam has the highest production cost across the zones in 2022 and 2023. The production cost increased in 2023 for all tuber crops across the zones. The percentage change in production cost for yam was the highest across the 3 zones in 2023.

Yam has the highest production cost, followed by cassava, cocoyam and sweet potato. For the two years in consideration, cost of production is remarkably high for all the crops except sweet potato. The corresponding level of cost change was also the highest for cocoyam. The production cost and the percentage changes are shown on Table 10.14.

Table 10.11: Cost of production for tuber in South-East 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		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Abia	350,000	450,000	29	420,000	-	-	-	-	-	950,000	1,050,000	11
Anambra	268,000	355,000	32	300,000	350,000	17	-	-	-	880,000	900,000	2
Ebonyi	350,000	410,000	17	340,000	400,000	18	175,000	300,000	71	850,000	950,000	12
Enugu	300,000	350,000	17	320,000	390,000	22	-	-	-	830,000	890,000	7
Imo	540,000	590,000	9	-	-	-	-	-	-	870,000	900,000	3
Zonal Mean	361,600	431,000	21	345,000	380,000	19	175,000	300,000	20	876,000	938,000	7

Table 10.12: Cost of production for tuber in South-South Zone and states

State	Cassava			Cocoyam			Yam			Sweet potato		
	Cost of Production (₦) For Year		%Change	Cost of Production (₦) For Year		%Change	Cost of Production (₦) For Year		%Change	Cost of Production (₦) For Year		%Change
	2022	2023		2022	2023		2022	2023		2022	2023	
Akwa Ibom	325,000	450,000	38	385,000	-	-	950,000	980,000	3	-	-	-
Bayelsa	480,000	550,000	15	-	-	-	900,000	975,000	8	-	-	-
Cross river	680,400	790,000	16	-	-	-	721,300	740,000	3	391,650	450,500	15
Delta	280,000	390,000	39	-	-	-	710,000	850,000	20	108,350	118,950	10
Edo	366,459	573,550	57	465,450	579,500	25	1,637,567	2,100,300	28	-	-	-
Rivers	520,000	780,000	50	-	-	-	1,150,000	1,350,000	17	-	-	-
Mean	441,977	588,925	36	425,225	579,500	25	1,011,478	1,165,833	13	205,250	284,725	12

Table 10.13: Cost of production for tuber crops in South-West Zone and states

State	Cassava Cost of Production (₦) For Year			Cocoyam Cost of Production (₦) For Year			Sweet potato Cost of Production (₦) For Year			Yam Cost of Production (₦) For Year		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Ekiti	320,000	340,000	6	420,000	500,000	19	-	-	-	1,100,000	1,450,000	32
Lagos	400,000	450000	13	-	-	-	-	-	-	880,000	900,000	2
Ogun	352,400	490,000	39	467,000		-	250,000		-	1,050,000	-	-
Ondo	285,000	350,000	23	-	-	-	-	-	-	720,000	770,000	7
Osun	200,000			-	-	-	-	-	-	780,000	-	-
Oyo	313,000	350,000	12	-	-	-	-	-	-	720,000	765,000	6
Zonal Mean	311,733	396,000	18	443,500	500,000	19	250,000		-	875,000	971,250	12

Table 10.14: 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	2022	361,600	441,977	311,733	371,770
		2023	431,000	588,925	396,000	471,775
		%Change	21	33	18	24
Cocoyam	Cost of Production (N) For Year	2022	330,000	385,000	443,500	386,167
		2023	380,000	579,500	500,000	486,500
		%Change	19	25	19	21
Sweet Potato	Cost of Production (N) For Year	2022	175,000	-	250,000	212,500
		2023	300,000	284,752	-	292,376
		%Change	20	12	-	16
Yam	Cost of Production (N) For Year	2022	876,000	1,011,478	875,000	920,493
		2023	938,000	1,165,833	971,250	1,025,026
		%Change	7	13	12	11

10.3   Cost of Production for Fruit and Vegetable Crops

Large scale production of fruits and vegetables take place in some states in Nigeria. There was no reported data for north-central, north-east, North-West and south-east zones in 20223. Their costs of production are presented as follows:

10.3.1   Cost of production for fruit and vegetables in South-South Zone and states.

Six fruit and vegetable crops were cultivated in south-south states. They were banana/plantain, okra, pepper, tomato, garden egg and pumpkin. Banana/plantain was produced in almost all the states in this zone, garden egg and pumpkin were reported only in Cross River State. The other 3 crops were produced in few states. The cost of producing these crops in 2022 and 2023 are on Tables 10.15a and b. The cost of production for all the crops increased in 2023 leading to a positive percentage change. Increase in the price of inputs in 2023 might be responsible for this observation. The change in cost of production for banana/plantain was highest (40%) in Edo State. The zonal mean production cost in 2023 was highest for banana/plantain (₦726,250). Banana and plantain are long-term crop with higher establishment; this peculiarity may justify its relatively high cost of production.

Table 10.15a: Cost of production for fruit and vegetables (banana/plantain, okra and pepper) in South-South Zone and states

State	Banana/Plantain			Okra			Pepper		
	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change
	2022	2023		2022	2023		2022	2023	
Akwa Ibom	500,500	650,000	30	-	-	-	-	-	-
Bayelsa	640,000	685,000	7	-	-	-	-	-	-
Cross river	-	-	-	-	-	-	293,700	385,000	31
Delta	-	-	-	125,000	129,250	3	110,000	137,600	25
Edo	550,000	770,000	40	310,000	400,000	29	-	-	-
Rivers	705,000	800,000	13	-	-	-	-	-	-
Zonal Mean	598,875	726,250	23	217,500	264,625	16	110,000	261,300	28

Table 10.15b: Cost of production for fruit and vegetables (tomatoes, garden egg and pumpkin) in South-South Zone and states

State	Tomato			Garden Egg			Pumpkin		
	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year			Cost of Production (N) For Year		
	2022	2023		2022	2023	%Change	2022	2023	%Change
Cross river	-	-	-	200,000	300,000	50	225,000	295,000	31
Delta	160,000	185,000	16	-	-	-	-	-	-
Zonal Mean	160,000	185,000	16	200,000	300,000	50	225,000	295,000	31

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 and b) in 2023. The six crops were not produced in large quantity. The crops are banana/plantain, cucumber, pepper, tomato, leafy vegetables and watermelon. Most crops were reported only in few states each. In terms of yearly production cost, the south-west zone experienced higher production cost in 2023 for all the crops. The mean production cost was the highest for banana/plantain (₦1,346,900) in 2023.

Table 10.16a: Cost of production for fruit and vegetables in South-West Zone and states

State	Banana/Plantain			Cucumber			Leafy vegetables		
	Cost of Production (N) For Year			Cost of Production (N) For Year			Cost of Production (N) For Year		
	2022	2023	%Change	2022	2023	%Change	2022	2023	%Change
Ekiti	440,000	-	-	-	-	-	-		-
Lagos	-	-	-	-	-	-	270,000	300000	10
Ogun	761,700	1,346,900	44	-	-	-	-		-
Ondo	-	-	-	100,000	150,000	33	-		-
Zonal Mean	600,850	1,346,600	44	100,000	150,000	33	270,000	300,000	10

Table 10.16b: Cost of production for fruit and vegetables in South-West Zone and states (Cont'd)

State	Pepper			Tomato			Water Mellon		
	Cost of Production (N) For Year			Cost of Production (N) For Year			Cost of Production (N) For Year		
	2022	2023	%Change	2022	2023	%Change	2022	2023	%Change
Lagos	280000	295000	5	280000	295000	5	-	-	-
Ondo	150,000	210,000	40	300,000	380,000	27	150,000	170,000	13
Oyo	-	-	-	335,000	375,000	12	-	-	-
Zonal Mean	215,000	252,500	23	305,000	350,000	15	150,000	170,000	13

10.3.3   Production cost for fruit and vegetable crops (Southern region)

Banana was the most expensive to produce among the reported fruits and vegetables crops in this zone in 2023. For these crops, the regional production cost for 2022 and 2023 were different. The yearly production cost and the changes are shown together on Table 10.17.

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

| Crops | Cost of production Year | Mean Production Cost (N) | | |
		south-south zone	South-West zone	Southern Region Mean Production Cost (N)
Banana/Plantain	2022	598,875	600,850	599,863
	2023	726,250	1,346,600	1,036,425
	%Change	23	77	50
Garden Egg	2022	200,000	-	200,000
	2023	300,000	-	300,000
	%Change	50	-	50
Okra	2022	217,500	250,000	233,750
	2023	264,625	-	264,625
	%Change	16	-	16
Pumpkin	2022	225,000	-	225,000
	2023	295,000	-	295,000
	%Change	31	-	31
Pepper	2022	110,000	215,000	162,500
	2023	261,300	252,500	256,900
	%Change	28	23	26

Table 10.17: Regional production cost for fruit and vegetable crops (Southern region) (Cont'd)

| Crops | Cost of production (Year) | Mean Production Cost (N) | | |
		south-south zone	South-West zone	Southern Region Mean Production Cost (N)
Tomato	2022	160,000	305,000	232,500
	2023	185,000	350,000	267,500
	%Change	16	15	16
Cucumber	2022	-	100,000	100,000
	2023	-	150,000	150,000
	%Change	-	33	33
Leafy vegetables	2022	-	270,000	270,000
	2023	-	300,000	300,000
	%Change	-	10	10
Watermelon	2022	-	150,000	150,000
	2023	-	170,000	170,000
	%Change	-	13	13

10.4   Cost of Production for Tree Crops

Output of tree crops are of immense contribution to total agricultural production in Nigeria. There are no data in north-central, north-east, north-west south-south and south-east zones for 2023. The costs of production are reported and

relative changes in cost between year 2022 and 2023 were observed. No report for regional production cost for tree crops in 2023.

10.4.1   Cost of production for tree crops in South-West Zone and states.
In the South-West zone, only Ekiti State reported cocoa production. Cocoa and citrus are representative tree crops in this zone; but no reports on citrus production in this zone in 2023. Oil palm is a major tree crop in the south-south zone; but there was no report for 2023. Comparing production costs of years 2022 and 2023, there was an increase in the cost of cocoa production (64%) in Ekiti State. The price increase in agricultural inputs might have caused the increased cost of production.

Table 10.18: Cost of production for tree crops in South-South and South-West Zone and states

South-South				South-West						
	Oil palm				Cocoa			Citrus		
State	Cost of Production (N) For Year		%Change	State	Cost of Production (N) For Year		%Change	Cost of Production (N) For Year		%Change
	2022	2023			2022	2023		2022	2023	
Akwa Ibom	550,000	-	-	Ekiti	330,000	540,000	64	420,000	-	-
Cross River	-	-	-	Ogun	-	-	-	317,500	-	-
Zonal Mean	550,000	-	-	Mean	330,000	540,000	64	368,750	-	-

10.5   Cost of Production of oil and aromatic crops
It is important to state that not much information was available on some of the crops placed together in this subheading. Oil crops remain 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 2022 and 2023 are presented below. The regional production cost was not computed due lack of data.

10.5.1 Cost of production of oil crops in North-Central Zone and states
Melon and Benniseed (oil crops) were cultivated in few north-central states (Table 10.19). The production cost of these crops increased in 2023.

10.5.2   Cost of production of oil and aromatic crop in North-West Zone and states
Benniseed and ginger were the oil and aromatic crops, respectively cultivated in this zone in 2023. The production cost of ginger and benniseed increased in 2023. Benniseed was the only oil crop reported in the North-East and North-West zones.

Table 10.19: Cost of production of oil in North-Central and North-East Zones and states

North Central						
State	Melon			Benniseed (Sesame)		
	Cost of Production (N) For Year			Cost of Production (N) For Year		
	2022	2023	%Change	2022	2023	%Change
Benue	350,000		-	-	-	-
Kwara	-	-	-	400,000	650,000	63
Nasarawa	160,000	179,000	12	145,000	179,000	-
Zonal Mean	255,000	179,000	12	272,500	414,500	63

Table 10.20: Cost of production of oil in North-East and North-West Zones and states

North-East				North-West						
State	Benniseed (Sesame)			State	Benniseed (Sesame)			Ginger		
	Cost of Production (N) For Year				Cost of Production (N) For Year			Cost of Production (N) For Year		
	2022	2023	%Change		2022	2023	%Change	2022	2023	%Change
Bauchi	260,500	273,325	5	Kaduna	-	-	-	650,000	825,000	27
Gombe	200,000	237,500	19	Kano	-	-	-	-	-	-
Yobe	-	-	-	Katsina	300,000	320,000	7	-	-	-
Mean	260,500	-	-	Mean	-	-	-	-	-	-
Zonal Mean	240,333	255,413	12	-	300,000	320,000	7	650,000	825,000	27

11.0   FOOD COMMODITY PRICES

This section shows the situation of food commodity prices in the country for 2023, comparing them to 2022 in January and July. To make comparison easier, the prices were organized into tables according to the six (6) zones of the country, and percentage change was calculated to show the price differences.

11.1   Prices of Maize, Millet and Sorghum

In 2023, Nigeria experienced a substantial rise in the prices of nearly all food items when compared to the previous year. Data collected from across the country consistently indicated a continuous increase in cereal prices throughout 2023, in contrast to those in 2022. While Nigeria often witnesses seasonal price fluctuations, the surge during this year was particularly unsettling for both farmers and consumers.

The demand for agricultural commodities remained unresponsive to price changes, resulting in a constant demand for four essential food items (Maize, Millet and Sorghum) by households. This consistent demand contributed to a significant rise in prices. Comparing market prices for these crops between January 2022/2023 and July 2022/2023, it becomes evident that, following a seasonal pattern, national average cereal prices continued to surge across all six zones (Table 11.1 to 11.6).

Major markets in the country experienced significant increases in the price of maize across all the six zones. In the North-central zone, Taraba recorded the highest price increase of 192.68% in July, while Yobe recorded the highest price increase of 142.86% in the North-east zone. In July, Sokoto recorded the highest change of price of 177.78% in the North-west zone, while Ebonyi, Akwa Ibom and Ekiti recorded the highest increase in price of 86.67%, 33.33% and 87% in the South-east, South-south and South-west zone respectively. Generally, the North-central zone recorded the highest maize mean price of 826 ₦/Kg and highest percentage mean price change of 266.96% in July, whereas the Northwest zone recorded the lowest mean price of 588.57 ₦/Kg and South-South zone recorded the lowest percentage mean price change of 32.53%.

Millet recorded an increase in price in all the producing zones, where in July, Nasarawa recorded the highest increase in price of 165.62% in the North-central zone. In the North-east zone, Bauchi recorded the highest increase in price of 101.47%, while Jigawa recorded the highest increase in price of 128.57% in the Northwest zone. Furthermore, there was a significant increase in price of Sorghum across all the producing zones. In July 2023, Taraba, Yobe and Sokoto recorded the highest change in price of 219.15%, 135% and 155.06% in the North-central, North-East and North-west zone respectively.

Table 11.1. Prices (₦/Kg) of Maize, Millet and Sorghum in North-Central

States	Sorghum						Millet						Maize					
	January Price			July Price			January Price			July Price			January Price			July Price		
	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C
Benue	NA	NA	NA	550	700	27.27	NA	NA	NA	NA	NA	NA	NA	NA	NA	600	750	25
FCT	333	500	50.15	335	950	183.58	333	500	50.15	317	666	110.09	292	416	42.47	317	780	146.06
Kogi	400	NA	NA	417	NA	NA	187	NA	NA	161.5	NA	NA	308	321	4.22	285	NA	NA
Kwara	308	300	-2.60	286	800	179.72	262	300	14.50	214	240	12.15	285	320	12.28	NA	NA	NA
Nasarawa	300	450	50	350	1100	214.29	350	450	28.57	320	850	165.62	350	450	28.57	300	1300	333.33
Niger	193	312	61.66	290	330	13.79	205	350	70.73	301	390	29.57	204	301	47.55	NA	NA	NA
Plateau	250	400	60	300	600	100	180	400	122.22	250	600	140	250	500	100	300	700	133.33
Taraba	250	300	20	235	750	219.15	300	300	0	280	600	114.29	300	300	0	205	600	192.68

Table 11.2. Prices (₦/Kg) of Maize, Millet and Sorghum in North-East

States	Sorghum						Millet						Maize					
	January Price			July Price			January Price			July Price			January Price			July Price		
	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C
Adamawa	500	1,200	140	700	1,400	100	300	500	66.67	450	700	55.56	450	700	55.56	500	950	90
Bauchi	203	200	-1.48	215	388	80.47	201	188	-6.47	204	411	101.47	225	218	-3.11	204	396	94.11
Borno	800	1,400	75	1,000	2,000	100	NA	1,500	NA	NA	2,200	NA	NA	NA	NA	NA	NA	NA
Gombe	250	300	20	300	500	66.67	250	300	20	300	600	100	300	300	0	350	700	100
Yobe	190	190	0	200	470	135	230	220	-4.34	250	480	92	200	210	5	210	510	142.86

Note – **NA-** *Not available,* **%C-** Percentage change.

Table 11.3. Prices (₦/Kg) of Maize, Millet and Sorghum in North-West

States	Sorghum						Millet						Maize					
	January Price			July Price			January Price			July Price			January Price			July Price		
	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C
Jigawa	300	400	33.33	350	900	157.14	450	300	-33.33	350	800	128.57	400	600	50	500	700	40
Kaduna	230	460	100	216	480	122.22	260	450	73.08	256	460	79.69	210	400	90.48	184	450	144.57
Kano	NA	280	NA	NA	320	NA	NA	360	NA	NA	380	NA	NA	320	NA	NA	360	NA
Katsina	300	400	33.33	400	520	30	340	360	5.88	360	380	5.56	400	500	25	400	600	50
Kebbi	400	800	100	450	800	77.78	400	500	25	450	800	77.78	400	500	25	450	850	88.89
Sokoto	253	207	-18.18	247	630	155.06	254	200	-21.25	286	620	116.78	250	188	-24.80	216	600	177.78
Zamfara	233	260	11.59	222	440	98.19	268	360	34.32	304	520	71.05	240	400	66.67	222	560	152.25

Table 11.4. Prices (₦/Kg) of Maize, Millet and Sorghum in South-East

States	Sorghum						Millet						Maize					
	January Price			July Price			January Price			July Price			January Price			July Price		
	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C
Abia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	570	500	-12.28	750	1200	60
Anambra	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	360	460	27.78	360	640	77.78
Ebonyi	1,100	1,300	18.18	1,200	1,400	16.67	NA	NA	NA	NA	NA	NA	240	400	66.67	300	560	86.67
Imo	900	1,300	44.44	1,200	1,500	25	600	700	16.67	650	750	15.38	600	800	33.33	550	750	36.36

Note – **NA-** *Not available,* **%C-** Percentage change.

Table 11.5. Prices (₦/Kg) of Maize, Millet and Sorghum in South-South

States	Sorghum						Millet						Maize					
	January Price			July Price			January Price			July Price			January Price			July Price		
	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C
Akwa Ibom	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	520	650	25	600	800	33.33
Bayelsa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	400	300	-25	500	850	70
Cross River	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	195	455	133.33	510	553	8.43
Delta	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	370	410	10.81	375	485.5	29.47
Edo	900	1,300	44.44	1,200	1,800	50	900	1,200	33.33	1,100	1,600	45.45	700	850	21.43	700	850	21.43

Table 11.6. Prices (₦/Kg) of Maize, Millet and Sorghum in South-West

States	Sorghum						Millet						Maize					
	January Price			July Price			January Price			July Price			January Price			July Price		
	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C
Ekiti	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	800	800	0	800	1,500	87.5
Lagos	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	320	400.5	25.16	380.5	502	31.93
Ogun	NA	NA	NA	NA	NA	NA	357	450	26.05	392	500	27.55	250	400	60	418	450	7.66
Ondo	500	600	20	600	700	16.67	500	467	-6.6	500	600	20	NA	NA	NA	NA	NA	NA
Osun	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	450	NA

Note – NA- *Not available*, %C- Percentage change.

11.2 Prices of Benniseed, Milled Rice and Paddy Rice

Tables 11.7 to 11.12 illustrate the comparative market price fluctuations for milled and paddy rice from January 2022/2023 to July 2022/2023. In general, there was a consistent rise in rice prices from January 2022/2023 to July 2022/2023, although there were a few instances of price decreases in certain states. Notably, between January 2022 to January 2023, Kogi and Taraba witnessed reductions in market prices, with milled rice prices declining by -1.6% and -31.25%, respectively.

In July 2023, the South-south zone experienced the highest average cost for milled rice at 1,208.6 ₦/Kg, while the North-Central zone had the lowest average price at 877.18 ₦/Kg. Additionally, the North-East zone had the highest percentage average price at 78.72%, while the South-East zone had the lowest percentage average price at 52.78%. In terms of paddy rice prices, all states experienced an increase in the cost of this commodity. The Federal Capital Territory (FCT) recorded the most significant price change percentage, with a substantial 181.39% rise from July 2022 to July 2023. Conversely, Kaduna had the lowest percentage change during the same period, with a slide increase of 3.12%.

Table 11.7: Prices (₦/Kg) of Milled Rice and Paddy Rice in North-Central

States	Milled Rice						Paddy Rice					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Benue	NA	NA	NA	320	400	25	NA	NA	NA	600	750	25
FCT	667	1,000	49.92	1000	1,300	30	333	400	20.12	231	650	181.39
Kogi	625	615	-1.6	607	769	26.69	NA	NA	NA	NA	NA	NA
Kwara	673	1,100	63.45	533	1,000	87.61	244	410	68.03	380	500	31.58
Nasarawa	450	750	66.67	550	1,100	100	350	350	0	450	800	77.78
Niger	450	590	31.11	590	598.5	1.44	215	330	53.49	220	352	60
Plateau	450	540	20	530	850	60.38	NA	NA	NA	NA	NA	NA
Taraba	800	550	-31.25	480	1,000	108.33	NA	NA	NA	NA	NA	NA

Table 11.8: Prices (₦/Kg) of Milled Rice and Paddy Rice in North-East

States	Milled Rice						Paddy Rice					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Adamawa	400	1,200	200	600	1,300	116.67	NA	NA	NA	NA	NA	NA
Bauchi	428	546	27.57	446	666	49.32	214	270	26.17	221	338	52.94
Gombe	500	800	60	600	1200	100	250	350	40	300	500	66.67
Yobe	450	600	33.33	450	670	48.89	NA	NA	NA	NA	NA	NA

Table 11.9. Prices (₦/Kg) of Milled Rice and Paddy Rice in North-West

States	Milled Rice						Paddy Rice					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Jigawa	500	900	80	800	1,200	50	250	500	100	300	700	133.33
Kaduna	440	800	81.81	520	846	62.69	350	410	17.14	416	429	3.12
Kano	NA	620	NA	NA	660	NA	NA	600	NA	NA	600	NA
Katsina	NA	NA	NA	NA	NA	NA	240	250	4.17	250	337	34.80
Kebbi	700	900	28.57	750	1,200	60	400	600	50	500	700	40
Sokoto	387.5	477	23.09	423	800	89.12	NA	NA	NA	NA	NA	NA
Zamfara	446	520	16.59	393	880	123.91	227	400	76.21	277	600	116.60

Table 11.10. Prices (₦/Kg) of Milled Rice and Paddy Rice in South-East

States	Milled Rice						Paddy Rice					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Abia	750	900	20	900	1,400	55.56	NA	NA	NA	NA	NA	NA
Imo	900	1,500	66.67	1,200	1,800	50	500	700	40	550	750	36.36

Table 11.11. Prices (₦/Kg) of Milled Rice and Paddy Rice in South-South

States	Milled Rice						Paddy Rice					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Akwa Ibom	900	1,200	33.33	1,000	1,600	60	550	800	45.45	700	1200	71.42
Bayelsa	600	625	4.167	600	1,475	145.83	NA	NA	NA	NA	NA	NA
Cross River	450	720	60	610	720	18.03	223	432	93.72	229	434	89.51
Delta	810	952	17.53	850	1,048	23.29	NA	NA	NA	NA	NA	NA
Edo	900	1,000	11.11	1,000	1,200	20	350	560	60	450	650	44.44

Table 11.12. Prices (₦/Kg) of Milled Rice and Paddy Rice in South-West

States	Milled Rice						Paddy Rice					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Ekiti	1,200	1,200	0	1,100	1,400	27.27	800	1,000	25	800	1,000	25
Lagos	500	1,000	100	640	1,500	134.38	NA	NA	NA	NA	NA	NA
Ogun	571	1,000	75.13	NA	1,300	NA	180	650	261.11	NA	780	NA
Ondo	900	950	5.55	900	1,300	44.44	NA	NA	NA	NA	NA	NA
Osun	NA	NA	NA	NA	2,000	NA	NA	NA	NA	NA	NA	NA

11.3 Prices of Cowpea and Ginger

The market prices of some legumes like cowpea and ginger for both January 2022/2023 and July 2022/2023 were calculated and compared in Tables 11.13 through 11.18. Just like what was observed with cereals, similar outcomes emerged, indicating a significant price increase across all zones in 2023.

Global cowpea production is roughly 8.9 million tons annually, with Africa contributing to over 95% of this total. Nigeria, being the largest producer and consumer worldwide, plays a significant role in this. However, despite these favourable aspects, there was a substantial price surge in cowpea, notably in July 2023, when compared to the price observed in 2022. Two states, Yobe and Bauchi recorded price percentage change reduction of -25% and -11.05% in January 2022 and July 2023, respectively. Between July 2022 to July 2023, Nasarawa (85%), Adamawa (33.33%), Katsina (133.33%) Anambra (108.33%), Bayelsa (250%) and Ogun (80.18%), recorded the most significant percentage price change in the North-Central, North-East, North-West, South-East, South-South and South-West zones accordingly.

Nigeria contributes nearly 523,000 tons to global ginger production, holding a 14% share, and it is expected to continue growing steadily at a rate of 6% annually. Ginger cultivation is primarily concentrated in the northern region of the country, particularly in the southern areas of Kaduna State. While there was a general trend of rising ginger prices in various states, a notable number of states witnessed a decline in ginger prices from January 2022 to January 2023. Specifically, Kaduna and Ondo recorded percentage price decreases of -19.58% and -28.57% during the period from July 2022 to July 2023.

Table 11.13. Prices (₦/Kg) of Cowpea and Ginger in North-Central

States	Cowpea						Ginger					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Benue	NA	NA	NA	550	700	27.27	NA	NA	NA	NA	NA	NA
FCT	667	850	27.43	833	900	8.04	1,600	1,200	-25	NA	1,800	NA
Kogi	687.5	750	9.09	750	812.5	8.33	NA	NA	NA	NA	NA	NA
Kwara	297	420	41.41	667	1,000	49.92	NA	NA	NA	NA	NA	NA
Nasarawa	650	850	30.77	700	1,300	85.71	1,300	1,050	-19.23	400	1,500	275
Niger	438	601	37.21	591	620	4.90	NA	NA	NA	NA	NA	NA
Plateau	450	520	15.55	500	850	70	NA	NA	NA	NA	NA	NA
Taraba	500	500	0	600	1,000	66.67	NA	NA	NA	NA	NA	NA

Table 11.14. Prices (₦/Kg) of Cowpea and Ginger in North-East

States	Cowpea						Ginger					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Adamawa	700	1,100	57.14	900	1,200	33.33	NA	NA	NA	NA	NA	NA
Bauchi	201	334	66.17	579	515	-11.05	571	1,202	110.50	942	1,082	14.86
Gombe	450	500	11.11	700	750	7.14	1,000	800	-20	1,200	1,200	0
Yobe	400	300	-25	400	480	20	NA	NA	NA	NA	NA	NA

Table 11.15. Prices (₦/Kg) of Cowpea and Ginger in North-West

States	Cowpea						Ginger					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Jigawa	450	500	11.11	400	900	125	NA	NA	NA	NA	NA	NA
Kaduna	400	650	62.5	600	654	9	1,200	NA	NA	1,833	1,474	-19.58
Kano	NA	480	NA	NA	570	NA	NA	909	NA	NA	909	NA
Katsina	230	400	73.91	240	560	133.33	NA	NA	NA	NA	NA	NA
Kebbi	500	600	20	550	900	63.63	NA	NA	NA	NA	NA	NA
Sokoto	467	342	-26.77	246	530	115.44	614	345	-43.81	326	400	22.67
Zamfara	520	320	-38.46	560	720	28.57	1,200	1,400	16.67	1,500	1,600	6.67

Table 11.16. Prices (₦/Kg) of Cowpea and Ginger in South-East

States	Cowpea						Ginger					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Abia	200	320	60	260	430	65.38	NA	NA	NA	NA	NA	NA
Anambra	200	600	200	240	500	108.33	NA	NA	NA	NA	NA	NA
Ebonyi	220	260	18.18	240	280	16.67	NA	NA	NA	NA	NA	NA
Imo	300	600	100	400	600	50	400	600	50	500	800	60

Table 11.17. Prices (₦/Kg) of Cowpea and Ginger in South-South

States	Cowpea						Ginger					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Akwa Ibom	550	750	36.36	650	900	38.46	NA	NA	NA	NA	NA	NA
Bayelsa	450	525	16.67	500	1,750	250	NA	NA	NA	NA	NA	NA
Cross River	450	500	11.11	450	560	24.44	NA	NA	NA	NA	NA	NA
Delta	720	720	0	720	857	19.02	NA	NA	NA	NA	NA	NA
Edo	1,000	1,300	30	1,200	1,400	16.67	1,800	2,400	33.33	2,000	2,600	30

Table 11.18. Prices (₦/Kg) of Cowpea and Ginger in South-West

States	Cowpea						Ginger					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Ekiti	850	900	5.88	850	900	5.88	NA	NA	NA	NA	NA	NA
Ogun	533	1,150	115.76	666	1,200	80.18	NA	NA	NA	NA	NA	NA
Ondo	800	800	0	850	1,000	17.64	700	600	-14.28	700	500	-28.57
Osun	NA	NA	NA	NA	1,300	NA	NA	NA	NA	NA	NA	NA

11.4 Prices of Beef and Goat meat

Market prices for beef and goat meat were examined for both January 2022/2023 and July 2022/2023. When comparing July 2022 and July 2023, it was evident that the prices of these commodities experienced a significant increase in all states and the Federal Capital Territory (FCT), as indicated in Table 11.19 through 11.24.

The highest increase in price for beef in the North-Central was 55%, in the North-East, it was 25%, while in the North-West it was 150%. The highest increase in price in the South-East was 41.67%, in the South-South, 50% and 166.67% were recorded in the South-West. The highest percentage price for beef was recorded in the South-West zone while the lowest was recorded in the North-East zone.

Compared to July 2022, in July 2023, the prices of goat meat increased as high as 150% and 100% in Jigawa and Taraba State respectively. For Bayelsa and Taraba, the prices remained constant.

Table 11.19. Prices (₦/Kg) of Beef and Goat meat in North-Central

| States | Beef | | | | | | Goat Meat | | | | | |
| | January Price | | | July Price | | | January Price | | | July Price | | |
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Benue	NA	NA	NA	2,000	2,500	25	NA	NA	NA	2,500	3,000	20
FCT	2,400	2,800	16.67	2,500	3,500	40	2,400	2,800	16.67	2,200	3,500	59.09
Kogi	2,500	2,100	-16	2,000	2,400	20	NA	NA	NA	NA	NA	NA
Kwara	1,800	2,400	33.33	2,000	3,100	55	1,800	2,500	38.89	2,000	3,600	80
Nasarawa	2,500	2,800	12	2,700	3,000	11.11	2,000	2,500	25	2,500	3,000	20
Niger	1,462	1,570	7.39	1,565	1,593	1.79	1,282	1,649	28.62	1,461	1,501	2.73
Plateau	2,200	3,400	54.54	2,400	3,600	50	2,000	3,400	70	2,200	3,500	59.09
Taraba	1,500	2,000	33.33	2,000	2,600	30	1,000	1,800	80	1,500	3,000	100

Table 11.20. Prices (₦/Kg) of Beef and Goat meat in North-East

| States | Beef | | | | | | Goat Meat | | | | | |
| | January Price | | | July Price | | | January Price | | | July Price | | |
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Adamawa	1,800	2,300	27.78	2,000	2,500	25	NA	NA	NA	NA	NA	NA
Bauchi	2,109	NA	NA	2,348	2,469	5.13	1,880	2,382	26.70	2,080	2,346	12.78
Gombe	2,000	2,000	0	2,500	2,200	-12	1,300	1,800	38.46	1,500	2,000	33.33
Yobe	1,800	1,900	5.56	2,000	2,200	10	2,000	2,100	5	2,000	2,500	25

Table 11.21. Prices (₦/Kg) of Beef and Goat meat in North-West

States	Beef						Goat Meat					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Jigawa	1,000	2,000	100	1,200	3,000	150	1,000	2,000	100	1,200	3,000	150
Kaduna	2,200	2,500	13.63	2,500	2,500	0	2,500	NA	NA	2,500	NA	NA
Kano	NA	3,000	NA	NA	4,000	NA	NA	3,500	NA	NA	4,000	NA
Katsina	1,000	1,500	50	1,200	1,500	25	1,000	1,200	20	1,000	1,500	50
Kebbi	1,500	2,000	33.33	1,600	2,500	56.25	2,000	2,500	25	2,300	2,500	8.69
Sokoto	NA	NA	NA	NA	NA	NA	754	937	24.27	993	1,000	0.70
Zamfara	1,400	2,000	42.85	2,400	2,600	8.33	1,000	1,400	40	1,100	1,800	63.63

Table 11.22. Prices (₦/Kg) of Beef and Goat meat in South-East

States	Beef						Goat Meat					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Abia	3,400	3,200	-5.88	3,700	4,600	24.32	3,700	4,000	8.10	4,500	7,000	55.56
Anambra	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ebonyi	2,500	3,500	40	2,500	3,500	40	2,000	3,500	75	3,000	3500	16.67
Enugu	5,000	8,000	60	6,000	8,500	41.67	NA	NA	NA	NA	NA	NA
Imo	3,000	3,500	16.67	3,200	3,600	12.5	3,200	3,700	15.62	3,300	4,000	21.21

Table 11.23. Prices (₦/Kg) of Beef and Goat meat in South-South

States	Beef						Goat Meat					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Akwa Ibom	1,200	1,800	50	2,000	2,500	25	1,800	2,000	11.11	2,100	2,700	28.57
Bayelsa	2,000	2,000	0	2,000	3,000	50	2,000	2,000	0	2,100	2,100	0
Cross River	2,679	3,750	39.98	2,687	3,357	24.93	3,068	4,520	47.32	2,264	4,441	96.15
Delta	3,000	3,600	20	3,000	4,100	36.67	2,500	3,600	44	3,000	4,100	36.67
Edo	2,000	2,800	40	2,500	3,500	40	2,200	3,500	59.09	3,000	4,000	33.33

Table 11.24. Prices (₦/Kg) of Beef and Goat meat in South-West

States	Beef						Goat Meat					
	January Price			July Price			January Price			July Price		
	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change	2022	2023	% Change
Ekiti	2,500	2,500	0	2,500	3,000	20	2,700	3,000	11.11	2,700	3,500	29.62
Lagos	3,200	4,000	25	3,600	4,500	25	NA	NA	NA	NA	NA	NA
Ogun	2,000	2,000	0	2,500	3,000	20	3,000	2,500	-16.67	3,500	3,500	0
Ondo	1,300	4,000	207.69	1,500	4,000	166.67	1,100	1,100	0	NA	NA	NA
Osun	NA	NA	NA	NA	3,500	NA	NA	NA	NA	NA	3,700	NA

11.5   Prices of Dry, Fresh and Frozen Fish

Tables 11.25 to 11.30 show the market prices of fresh, dry and frozen fish. To analyze price fluctuations, we calculated the percentage change in prices between January 2022/2023 and July 2022/2023 for these commodities. In general, commodity prices increased across all the zones in the country, with only a few states experiencing price decreases.

The highest increase in the price for fresh fish was recorded in Edo State (133.33%) and in Abia State at 130.77%. Gombe and Niger experienced price decreases of -6.67% and -2.55% accordingly. The highest percentage mean price variation for fresh fish was recorded in the Southeast, while the lowest mean increase was recorded in the North-East zone in 2023.

Similarly in 2023, the price of dry fish increased across all six (6) zones of the country, where Bauchi (122.61%) and Anambra (100%) recorded the highest increase in the price of dry fish, while Ondo State recorded no change in the price with a percentage price change of 0%. The price of frozen fish followed a similar pattern of price increase across the six (6) zones of the country. Nasarawa, Bayelsa and Abia recorded high price increases of 233.33%, 154.54% and 130.77% respectively. However, Bauchi (-11.11%), Gombe (-7.69%) and Ondo recorded decreases in the price of frozen fish in 2023.

Table 11.25. Prices (₦/Kg) of Dry, Fresh and Frozen Fish in North-Central

States	Fresh Fish						Dry Fish						Frozen Fish					
	January Price			July Price			January Price			July Price			January Price			July Price		
	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C
Benue	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,000	2,500	25
FCT	1,600	1,800	12.5	NA	2,000	NA	3,500	2,500	-28.57	NA	4,000	NA	1,700	2,000	17.64	2,200	2,500	13.63
Kogi	2,333	1,500	-35.70	1,143	1,800	57.48	4,218	5,000	18.53	3750	NA	NA	NA	NA	NA	NA	NA	NA
Kwara	2,000	2,500	25	1,500	1,900	26.67	2,500	3,000	20	3000	4,000	33.33	1,400	2,000	42.85	1,400	2,800	100
Nasarawa	1,200	1,300	8.33	1,300	1,500	15.38	3,000	2,500	-16.67	2500	3,000	20	950	1,000	5.26	450	1,500	233.33
Niger	1,760	1,716	-2.5	1,840	1,793	-2.55	1,671	1,786	6.88	1710	1,799	5.20	NA	NA	NA	NA	NA	NA
Plateau	1,500	2,200	46.67	2,000	2,500	25	2,400	3,000	25	2900	3,200	10.34	1,200	1,800	50	1,500	2,000	33.33
Taraba	1,500	2,000	33.33	2,300	3,000	30.43	NA	2,500	NA	NA	3,500	NA	NA	2,000	NA	NA	2,500	NA

Table 11.26. Prices (₦/Kg) of Dry, Fresh and Frozen Fish in North-East

States	Fresh Fish						Dry Fish						Frozen Fish					
	January Price			July Price			January Price			July Price			January Price			July Price		
	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C
Bauchi	1,174	872.2	-25.70	1,340	NA	NA	1,250	1,550	24	1,273.5	2,835	122.61	1,775	1,570	-11.54	1,800	1,600	-11.11
Gombe	1,300	1,100	-15.38	1,500	1,400	-6.67	1,600	1,000	-37.5	1,900	2,000	5.26	900	900	0	1,300	1,200	-7.69
Yobe	1,200	1,600	33.33	1,500	2,000	33.33	NA	NA	NA	NA	NA	NA	1,300	1,800	38.46	1,600	2,200	37.5

Note – NA- *Not available,* %C- Percentage change.

Table 11.27. Prices (₦/Kg) of Dry, Fresh and Frozen Fish in Nort-West

States	Fresh Fish						Dry Fish						Frozen Fish					
	January Price			July Price			January Price			July Price			January Price			July Price		
	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C
Jigawa	1,500	2,500	66.67	2,000	3,000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kaduna	2,000	NA	NA	1,400	NA	NA	1,600	NA	NA	2,000	NA	NA	NA	NA	NA	NA	NA	NA
Kano	1,200	1,400	16.67	1,300	1,500	15.38	2,000	2,800	40	2,500	3,000	20	1,000	1300	30	1,200	1,300	8.33
Katsina	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000	1300	30	1,000	1,400	40
Kebbi	1,500	2,000	33.33	2,000	2,500	25	1,600	2,000	25	1,700	2,500	47.05	1,500	2200	46.67	2,000	2,500	25
Sokoto	NA	1,808	NA	1,015	2,000	97.04	653	276	-57.73	1,974	3,500	77.30	884	2975	236.53	2,417	3,000	24.12
Zamfara	1,000	1,300	30	1,200	1,500	25	1,300	1,400	7.69	1,400	1,500	7.14	1,000	1200	20	1,100	1,300	18.18

Table 11.28. Prices (₦/Kg) of Dry, Fresh and Frozen Fish in South-East

States	Fresh Fish						Dry Fish						Frozen Fish					
	January Price			July Price			January Price			July Price			January Price			July Price		
	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C
Abia	1,700	2,800	64.70	1,950	4,500	130.77	3,030	3,666	20.99	3,300	5,000	51.51	800	2,000	150	1,950	4,500	130.77
Anambra	2,000	2,500	25	2,000	3,000	50	2,800	4,500	60.71	3,000	6,000	100	NA	NA	NA	NA	NA	NA
Ebonyi	2,500	4,000	60	3,000	4,000	33.33	5,000	6,000	20	5,500	8,000	45.45	2,500	4,000	60	3,000	4,000	33.33
Enugu	NA	NA	NA	NA	NA	NA	2,000	3,000	50	2,500	4,500	80	1,000	1,800	80	1,500	2,000	33.33
Imo	1,000	1,200	20	1,100	1,500	36.36	2,100	2,300	9.52	2,200	2,500	13.63	1,400	1,600	14.29	1,500	1,700	13.33

Note – **NA-** *Not available,* **%C-** Percentage change.

Table 11.29. Prices (₦/Kg) of Dry, Fresh and Frozen Fish in South-South

States	Fresh Fish						Dry Fish						Frozen Fish					
	January Price			July Price			January Price			July Price			January Price			July Price		
	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C
Akwa Ibom	2,200	3,000	36.36	2,500	3,500	40	2,500	2,800	12	2,800	3,200	14.28	800	1,000	25	1,000	1,500	50
Bayelsa	1,000	2,000	100	1,200	1,850	54.17	900	1,750	94.44	1,100	1,700	54.54	800	875	9.37	550	1,400	154.54
Cross River	2,920	5,230	79.10	3,584	4,274	19.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta	1,950	2,550	30.77	2,400	2,650	10.41	2,100	2,850	35.71	2,650	2,950	11.32	1,050	1,300	23.80	1,200	1,550	29.16
Edo	1,000	9,000	800	1,500	3,500	133.33	4,600	7,500	63.04	7,500	9,600	28	1,800	2,400	33.33	2,000	3,000	50

Table 11.30. Prices (₦/Kg) of Dry, Fresh and Frozen Fish in South-West

States	Fresh Fish						Dry Fish						Frozen Fish					
	January Price			July Price			January Price			July Price			January Price			July Price		
	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C	2022	2023	% C
Ekiti	1,800	2,000	11.11	2,000	3,000	50	2,500	3,000	20	2,500	3,000	20	2,200	2,500	13.63	2,500	3,200	28
Lagos	1,500	2,500	66.67	2,000	3,000	50	3,500	4,500	28.57	4,000	5,000	25	1,800	2,500	38.89	2,200	3,000	36.36
Ogun	1,200	1,500	25	1,500	1,800	20	1,600	2,500	56.25	2,000	3,000	50	1,666	1,700	2.04	1,923	2,000	4.00
Ondo	1,500	1,500	0	1,500	1,500	0	1,500	1,500	0	1,500	1,500	0	1,200	1,000	-16.67	1,200	1,000	-16.67
Osun	NA	NA	NA	NA	1,800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,500	NA

Note – **NA-** *Not available,* **%C-** Percentage change.

11.6 Prices of Egg

Tables 11.31 to 11.36 present data on market price of eggs in January 2022/2023 and July 2022/2023. Notably, all states and the FCT witnessed significant price increases in this commodity during 2023. The price of eggs saw significant increases across various zones in 2023. Particularly, Ondo State in the Southwest zone witnessed the highest increase at 180%, followed by Edo in the South-South zone at 108.33%. Imo State experienced a substantial 61.90% increase in the Southeast zone, while Taraba recorded a 53.33% increase in the North Central zone. Kano recorded the highest increase in price of 40% in the Northwest zone and Yobe (27.78%) had the highest increase in the Northeast zone. The result indicates that the Southwest zone had the highest percentage mean price variation for eggs, while the North East had the lowest in 2023.

Table 11.31. Prices (₦/crate) of Egg in North-Central

| States | Egg | | | | | |
| | January Price | | | July Price | | |
	2022	2023	% Change	2022	2023	% Change
Benue	NA	NA	NA	1,900	2,200	15.78
FCT	1,500	1,800	20	1,800	2,000	11.11
Kogi	1,750	2,100	20	1,850	2,250	21.62
Kwara	1,800	2,800	55.55	2,000	3,000	50
Nasarawa	1,800	2,000	11.11	1,900	2,200	15.79
Niger	NA	NA	NA	NA	NA	NA
Plateau	NA	NA	NA	NA	NA	NA
Taraba	1,200	2,000	66.67	1,500	2,300	53.33

Table 11.32. Prices (₦/crate) of Egg in North-East

| States | Egg | | | | | |
| | January Price | | | July Price | | |
	2022	2023	% Change	2022	2023	% Change
Adamawa	1,600	2,000	25	1,800	2,200	22.22
Bauchi	1,830	2,475	35.24	1,875	2,200	17.33
Borno	NA	NA	NA	NA	NA	NA
Gombe	1,600	1,900	18.75	1,900	2,000	5.26
Yobe	1,700	2,000	17.64	1,800	2,300	27.78

Table 11.33. Prices (₦/crate) of Egg in North-West

States	Egg					
	January Price			July Price		
	2022	2023	% Change	2022	2023	% Change
Jigawa	650	1,500	130.76	1,700	2,100	23.53
Kaduna	1,500	NA	NA	1,800	NA	NA
Kano	1,500	1,700	13.33	1,500	2,100	40
Katsina	1,900	2,000	5.26	1,900	2,000	5.26
Kebbi	1,500	2,000	33.33	2,000	2,500	25
Sokoto	897	900	0.33	NA	1,300	NA
Zamfara	1000	1,100	10	1,000	1,200	20

Table 11.34. Prices (₦/crate) of Egg in South-East

States	Egg					
	January Price			July Price		
	2022	2023	% Change	2022	2023	% Change
Abia	1,500	1,700	13.33	1,900	2,500	31.58
Anambra	1,500	2,500	66.67	2,000	3,000	50
Ebonyi	1,900	2,300	21.05	1,950	2,600	33.33
Imo	2,000	2,300	15	2,100	3,400	61.90

Table 11.35. Prices (₦/crate) of Egg in South-South

States	Egg					
	January Price			July Price		
	2022	2023	% Change	2022	2023	% Change
Akwa Ibom	1,300	1,800	38.46	1,500	2,200	46.67
Cross River	1,550	3,100	100	1,800	2,800	55.55
Delta	1,800	2,400	33.33	2,100	2,450	16.67
Edo	900	1,800	100	1,200	2,500	108.33
Rivers	2,600	2,700	3.84	2,750	2,800	1.81

Table 11.36. Prices (₦/crate) of Egg in South-West

States	Egg					
	January Price			July Price		
	2022	2023	% Change	2022	2023	% Change
Ekiti	2,100	2,200	4.76	2,100	2,500	19.04
Lagos	1,200	2,200	83.33	1,500	2,500	66.67
Ogun	1,600	2,000	25	1,900	2,200	15.79
Ondo	2,000	2,800	40	1,000	2,800	180
Osun	NA	NA	NA	NA	2,200	NA

12.0   LAND AREA AND CROP PRODUCTION ESTIMATES

12.1   Rice

Table 12.1, Figures 12.1 and 12.2 present the results of land area cultivated and production forecast for rice in 2002 and 2023. The estimated production for 2022 was 8.6 million MT compared with 2023 production which was almost 9 million: a percentage increase of 3.58%. Likewise, land area dedicated for rice production in 2022 and 2023 was 4,445,382.90 ha and 4,509,840.95 hectares, respectively: indicating a marginal increase of 1.43 %.

Table 12.1: Land Area and Production Estimates for Rice

Rice						
State	**Land Area (Ha)**		**Production (MT)**		**Yield (MT/Ha)**	
	2022	**2023**	**2022**	**2023**	**2022**	**2023**
Benue	267,417.72	271,295.27	522,378.82	541,754.60	1.95	2.00
FCT	204,678.04	207,645.87	419,681.53	435,248.13	2.05	2.10
Kogi	284,167.00	288,287.43	528,158.87	547,749.05	1.86	1.90
Kwara	215,108.85	218,227.93	448,700.38	465,343.33	2.09	2.13
Nassarawa	191,489.55	194,266.15	437,416.92	453,641.35	2.28	2.34
Niger	274,307.08	278,284.54	666,455.38	691,175.17	2.43	2.48
Plateau	135,958.55	137,929.94	258,956.43	268,561.50	1.90	1.95
North Central	*1,573,126.78*	*1,595,937.12*	*3,281,748.32*	*3,403,473.13*		
Adamawa	180,942.62	183,566.29	292,362.19	303,206.33	1.62	1.65
Borno	162,364.56	164,718.84	266,969.46	276,871.75	1.64	1.68
Bauchi	123,273.21	125,060.67	199,683.67	207,090.23	1.62	1.66
Gombe	177,362.48	179,934.23	233,178.36	241,827.29	1.31	1.34
Taraba	208,829.08	211,857.10	417,833.89	433,331.95	2.00	2.05
Yobe	91,245.40	92,568.46	170,635.18	176,964.29	1.87	1.91
North East	*944,017.34*	*957,705.59*	*1,580,662.77*	*1,639,291.84*		
Jigawa	130,056.14	131,941.95	202,993.62	210,522.95	1.56	1.60
Kaduna	162,558.08	164,915.17	376,049.51	389,997.73	2.31	2.36
Kano	132,833.17	134,759.25	452,632.80	469,421.60	3.41	3.48
Katsina	132,388.07	134,307.70	213,437.25	221,353.94	1.61	1.65
Kebbi	230,822.80	234,169.73	375,239.32	389,157.49	1.63	1.66
Sokoto	83,098.14	84,303.06	170,160.92	176,472.44	2.05	2.09
Zamfara	102,817.99	104,308.85	200,316.02	207,746.03	1.95	1.99
North West	*974,574.39*	*988,705.72*	*1,990,829.43*	*2,064,672.19*		
Abia	60,446.45	61,322.92	59,677.85	61,891.39	0.99	1.01
Anambra	46,038.77	46,706.33	100,414.90	104,139.44	2.18	2.23
Ebonyi	64,036.27	64,964.80	147,208.66	152,668.84	2.30	2.35
Enugu	57,204.96	58,034.43	93,874.05	97,355.98	1.64	1.68
Imo	49,425.40	50,142.07	85,821.49	89,004.74	1.74	1.78
South East	*277,151.85*	*281,170.55*	*486,996.96*	*505,060.39*		
Akwa Ibom	12,569.22	12,751.48	24,651.70	25,566.06	1.96	2.00

Bayelsa	48,119.13	48,816.85	94,486.64	97,991.29	1.96	2.01

Table 12.1: Land Area and Production Estimates for Rice (cont.)

| Rice						
State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Delta	78,105.29	79,237.81	164,874.89	170,990.34	2.11	2.16
Edo	32,550.32	33,022.30	52,741.78	54,698.05	1.62	1.66
C/Rivers	60,581.91	61,460.35	140,440.56	145,649.71	2.32	2.37
Rivers	43,145.62	43,771.24	80,219.29	83,194.73	1.86	1.90
South South	*275,071.49*	*279,060.03*	*557,414.85*	*578,090.18*		
Ekiti	85,604.25	86,845.51	147,337.11	152,802.05	1.72	1.76
Ogun	65,584.44	66,535.42	98,448.70	102,100.30	1.50	1.53
Ondo	52,802.35	53,567.98	116,500.26	120,821.42	2.21	2.26
Osun	73,896.19	74,967.69	124,414.49	129,029.20	1.68	1.72
Oyo	67,655.12	68,636.12	110,137.25	114,222.41	1.63	1.66
Lagos	55,898.69	56,709.22	89,348.81	92,662.89	1.60	1.63
South West	*401,441.05*	*407,261.94*	*686,186.61*	*711,638.27*		
National	**4,445,382.90**	**4,509,840.95**	**8,583,838.96**	**8,902,225.99**		
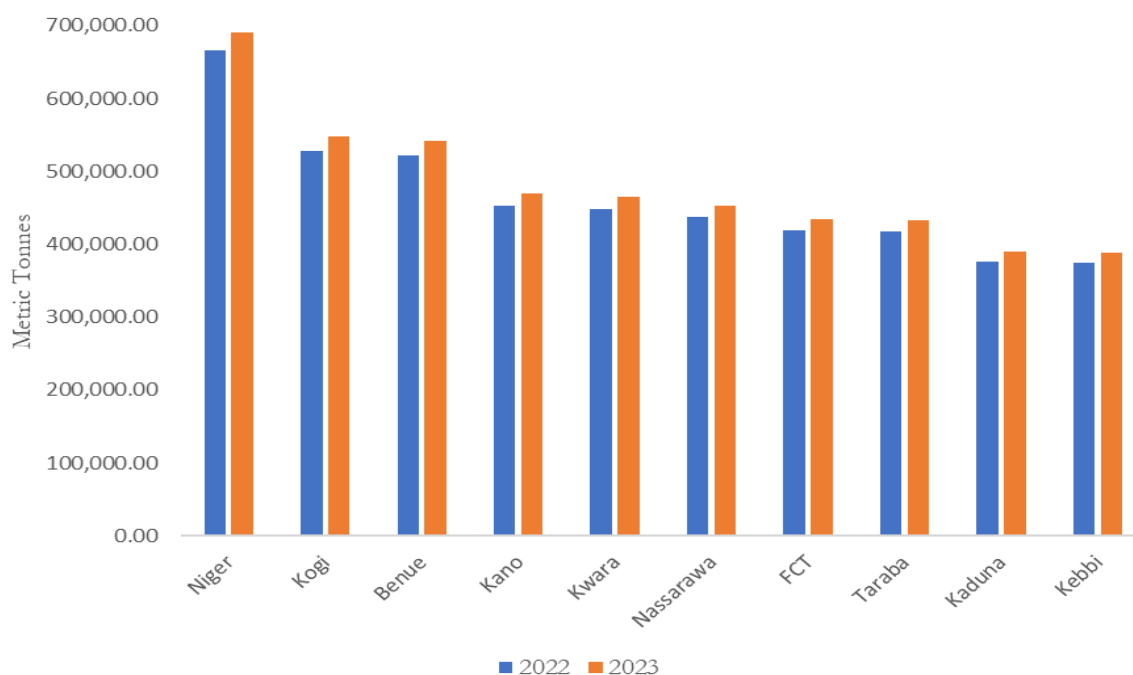
Figure 12.1: Production estimates of the top 10 Rice-producing States in 2022 and 2023
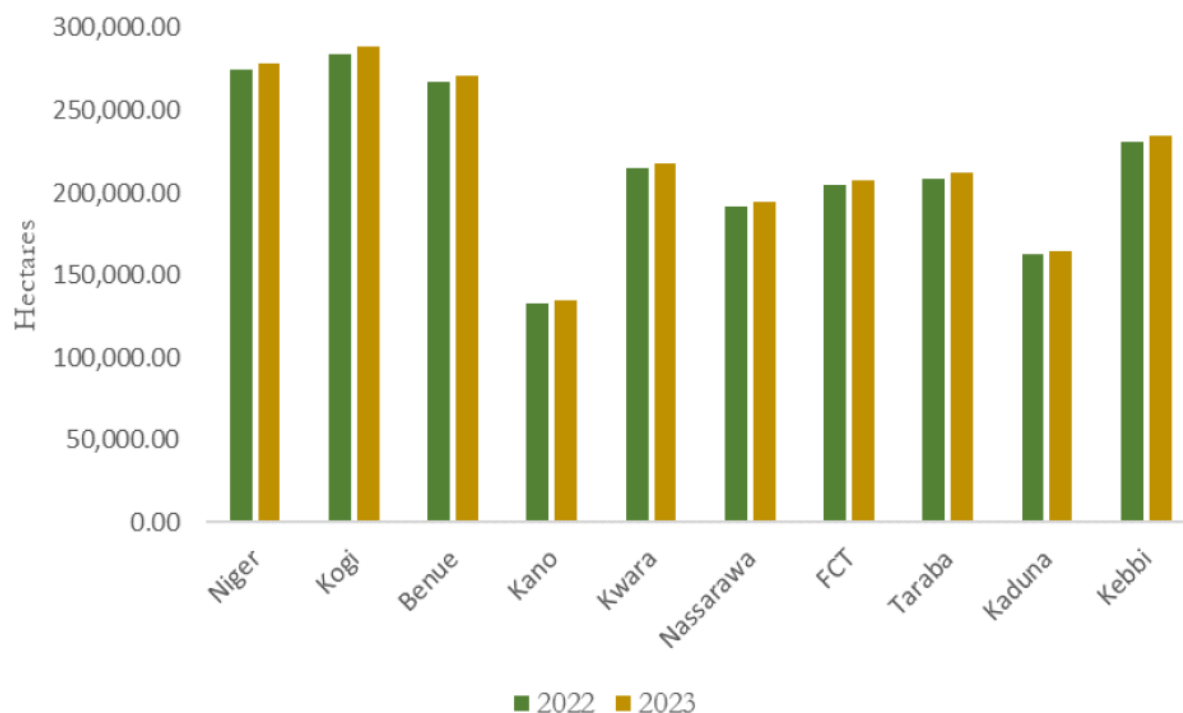
Figure 12.2: Land area cultivated by the top 10 Rice-producing States in 2022 and 2023

12.2   Maize

The estimated total production in 2023 was slightly above 11 million MT as against almost 13 million MT in 2022, signifying a decrease of 17.2% (Table 12.2 and Figure 12.3). The total land area cultivated for maize in 2023 was 5.1 million hectares (Figure 12.4) lower than 6 million hectares cultivated in 2022, that is, a decrease of 19.5%. Among the ten top-most states for maize production in 2023, Kaduna State recorded the highest with an estimated output of 1 million MT.

Table 12.2: Land Area Cultivated and Production Estimates for Maize

Maize						
State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Benue	156,755.33	131,147.78	388,518.34	331,630.05	2.48	2.53
FCT	186,348.09	155,906.26	462,514.10	394,791.07	2.48	2.53
Kogi	164,292.94	137,454.04	439,091.36	374,797.98	2.67	2.73
Kwara	162,755.78	136,167.99	340,528.50	290,667.06	2.09	2.13
Nasarawa	115,310.94	96,473.75	319,714.23	272,900.49	2.77	2.83
Niger	209,364.92	175,163.07	719,593.88	614,228.28	3.44	3.51
Plateau	294,054.15	246,017.46	659,664.65	563,074.11	2.24	2.29
North Central	1,288,882.15	1,078,330.36	3,329,625.05	2,842,089.02		
Adamawa	198,568.61	166,130.45	450,092.15	384,187.99	2.27	2.31
Borno	310,600.48	259,860.79	582,104.02	496,870.20	1.87	1.91
Bauchi	417,037.25	348,910.05	637,764.78	544,380.90	1.53	1.56

| Maize (cont.)						
State	**Land Area (Ha)**		Production (MT)		Yield (MT/Ha)	
Gombe	372,641.54	311,766.82	657,973.33	561,630.44	1.77	1.80
Taraba	142,158.55	118,935.53	304,843.01	260,206.77	2.14	2.19
Yobe	373,511.01	312,494.25	621,821.06	530,771.72	1.66	1.70
Northeast	1,814,517.44	1,518,097.87	3,254,598.35	2,778,048.01		
Jigawa	176,018.59	147,264.19	340,537.44	290,674.69	1.93	1.97
Kaduna	368,259.47	308,100.60	1,004,340.05	857,280.86	2.73	2.78
Kano	126,568.00	105,891.85	370,558.52	316,299.97	2.93	2.99
Katsina	161,058.38	134,747.88	356,696.91	304,468.03	2.21	2.26
Kebbi	164,181.06	137,360.44	346,561.99	295,817.10	2.11	2.15
Sokoto	114,178.52	95,526.31	263,400.94	224,832.80	2.31	2.35
Zamfara	168,825.05	141,245.79	254,027.99	216,832.27	1.50	1.54
Northwest	1,279,089.07	1,070,137.08	2,936,123.83	2,506,205.71		
Abia	74,082.23	61,980.16	100,064.10	85,412.35	1.35	1.38
Anambra	52,674.62	44,069.70	111,874.68	95,493.57	2.12	2.17
Ebonyi	94,786.75	79,302.38	165,019.24	140,856.51	1.74	1.78
Enugu	92,531.55	77,415.60	192,628.73	164,423.32	2.08	2.12
Imo	56,931.71	47,631.35	134,395.21	114,716.57	2.36	2.41
Southeast	371,006.87	310,399.18	703,981.97	600,902.32		
Akwa Ibom	77,949.03	65,215.28	94,665.90	80,804.57	1.21	1.24
Bayelsa	56,389.72	47,177.89	89,525.34	76,416.71	1.59	1.62
Delta	57,337.86	47,971.15	113,959.26	97,272.92	1.99	2.03
Edo	74,527.01	62,352.28	168,203.47	143,574.50	2.26	2.30
C/Rivers	103,005.26	86,178.32	166,280.65	141,933.23	1.61	1.65
Rivers	59,577.71	49,845.09	134,533.29	114,834.42	2.26	2.30
South South	428,786.59	358,740.02	767,167.91	654,836.34		
Ekiti	153,947.09	128,798.29	301,831.00	257,635.79	1.96	2.00
Ogun	127,383.97	106,574.53	288,260.78	246,052.57	2.26	2.31
Ondo	150,094.14	125,574.76	398,186.62	339,882.66	2.65	2.71
Osun	167,232.00	139,912.98	391,918.79	334,532.59	2.34	2.39
Oyo	161,100.75	134,783.33	326,590.35	278,769.78	2.03	2.07
Lagos	153,963.95	128,812.40	250,637.79	213,938.47	1.63	1.66
Southwest	913,721.90	764,456.29	1,957,425.33	1,670,811.87		
National	6,096,004.01	5,100,160.80	12,948,922.44	11,052,893.28		
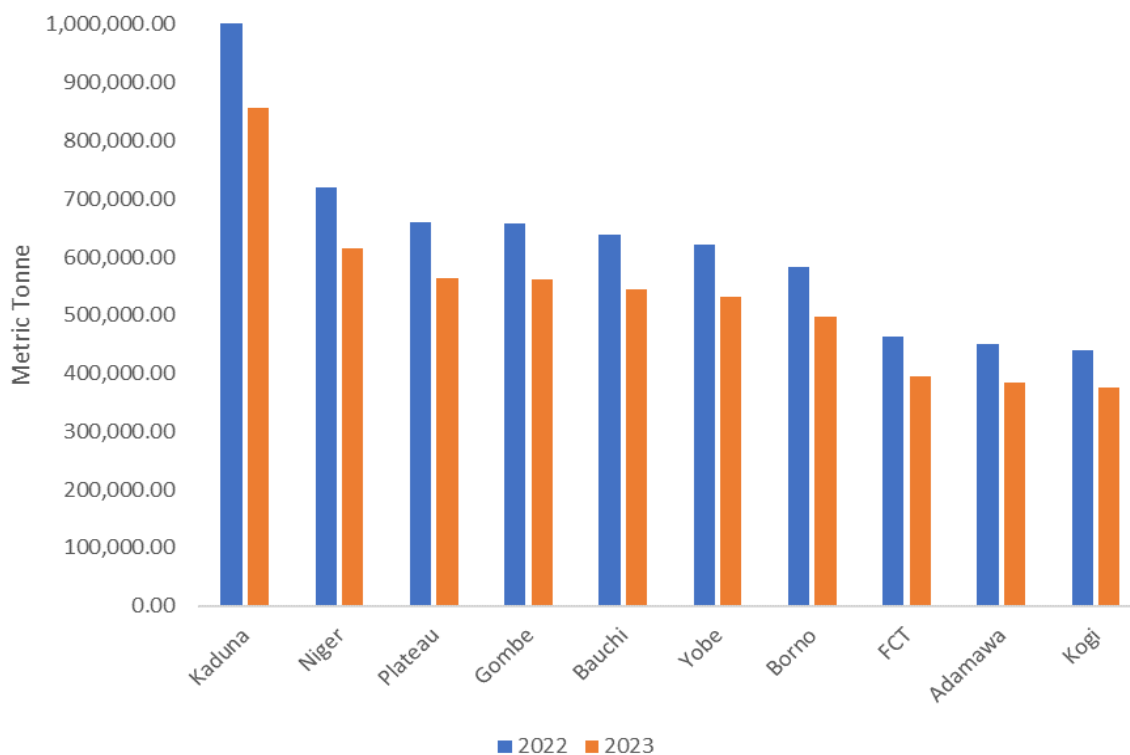
Figure 12.3: Production estimates of top 10 Maize producing States in 2022 and 2023
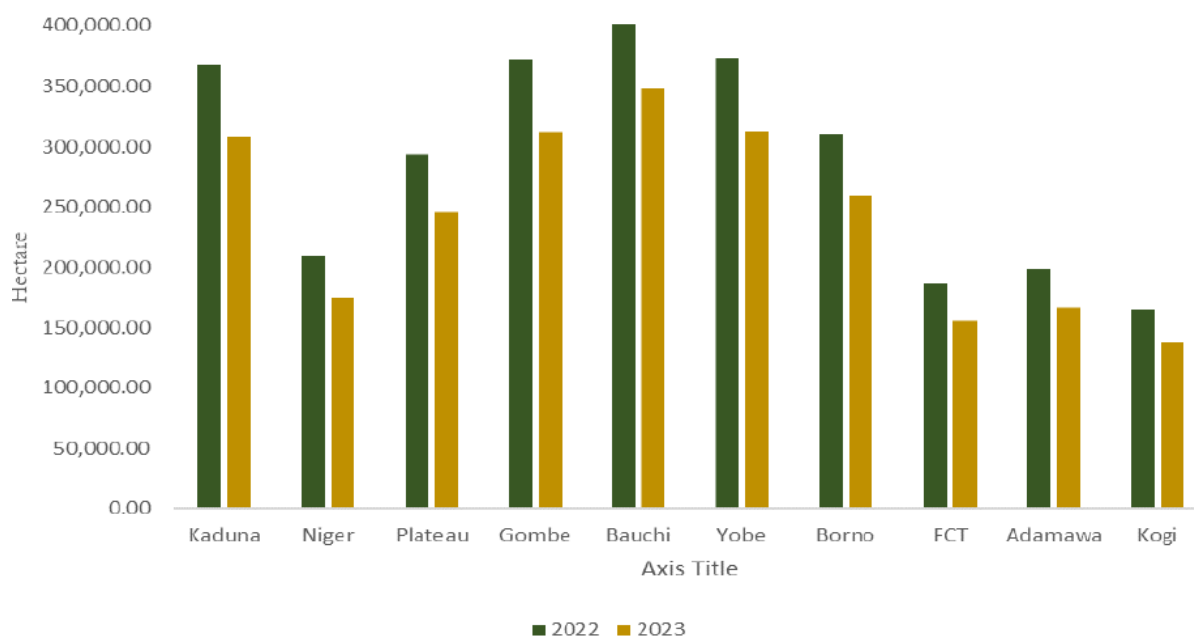
Figure 12.4: Land area cultivated by the top 10 Maize-producing States in 2022 and 2023

12.3   Sorghum

Result of land area cultivated and production forecast for Sorghum is presented in Table 12.3, Figures 12.5 and 12.6. The national sorghum production estimate was 6,806,372.50 MT in 2022 and 6,401,599.74 MT in 2023, indicating a decrease in production by 6.32%. The total cultivated land area for sorghum in 2022 was 5,768,970.00ha as against 5,235,092.54 ha in 2023 with a marginal decrease of 1.22%. Production figures and land area cultivated were only provided by Imo State and Oyo State among the southern states. Sorghum is mainly produced in the northern states.

Table: 12.3: Land Area and Production Estimates for Sorghum

| Sorghum						
State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Benue	190,230.87	172,626.34	211,035.86	198,485.62	1.11	1.15
FCT	107,671.90	97,707.63	137,845.46	129,647.84	1.28	1.33
Kogi	99,482.74	90,276.31	133,404.28	125,470.77	1.34	1.39
Kwara	108,980.81	98,895.40	161,017.40	151,441.75	1.48	1.53
Nasarawa	431,510.26	391,577.03	531,870.44	500,240.28	1.23	1.28
Niger	88,528.12	80,335.47	170,057.75	159,944.47	1.92	1.99
Plateau	195,279.34	177,207.61	324,315.24	305,028.32	1.66	1.72
Northcentral	*1,221,684.03*	*1,108,625.80*	*1,669,546.44*	*1,570,259.05*		
Adamawa	265,832.01	241,231.13	297,612.58	279,913.66	1.12	1.16
Borno	346,369.60	314,315.53	360,124.79	338,708.28	1.04	1.08
Bauchi	421,450.89	382,448.58	466,476.91	438,735.68	1.11	1.15
Gombe	318,731.28	289,234.95	346,208.15	325,619.26	1.09	1.13
Taraba	319,080.95	289,552.26	347,909.47	327,219.40	1.09	1.13
Yobe	240,112.66	217,891.92	277,403.43	260,906.34	1.16	1.20
Northeast	*1,911,577.39*	*1,734,674.39*	*2,095,735.32*	*1,971,102.63*		
Jigawa	297,741.72	270,187.82	353,122.75	332,122.66	1.19	1.23
Kaduna	418,004.94	379,321.53	467,342.39	439,549.69	1.12	1.16
Kano	578,185.81	524,678.79	631,992.07	594,407.71	1.09	1.13
Katsina	295,185.39	267,868.06	312,042.42	293,485.36	1.06	1.10
Kebbi	340,344.43	308,847.96	415,728.75	391,005.50	1.22	1.27
Sokoto	264,206.35	239,755.92	388,232.69	365,144.62	1.47	1.52
Zamfara	373,760.70	339,171.79	387,177.49	364,152.17	1.04	1.07
Northwest	*2,567,429.34*	*2,329,831.87*	*2,955,638.56*	*2,779,867.70*		
Imo	14,716.68	13,354.76	14,679.76	13,806.75	1.00	1.03
Southeast	*14,716.68*	*13,354.76*	*14,679.76*	*13,806.75*		
Oyo	53,558.44	48,601.98	70,771.37	66,562.62	1.32	1.37
Southwest	*53,558.44*	*48,601.98*	*70,771.37*	*66,562.62*		
National	**5,768,965.88**	**5,235,088.80**	**6,806,371.44**	**6,401,598.75**		
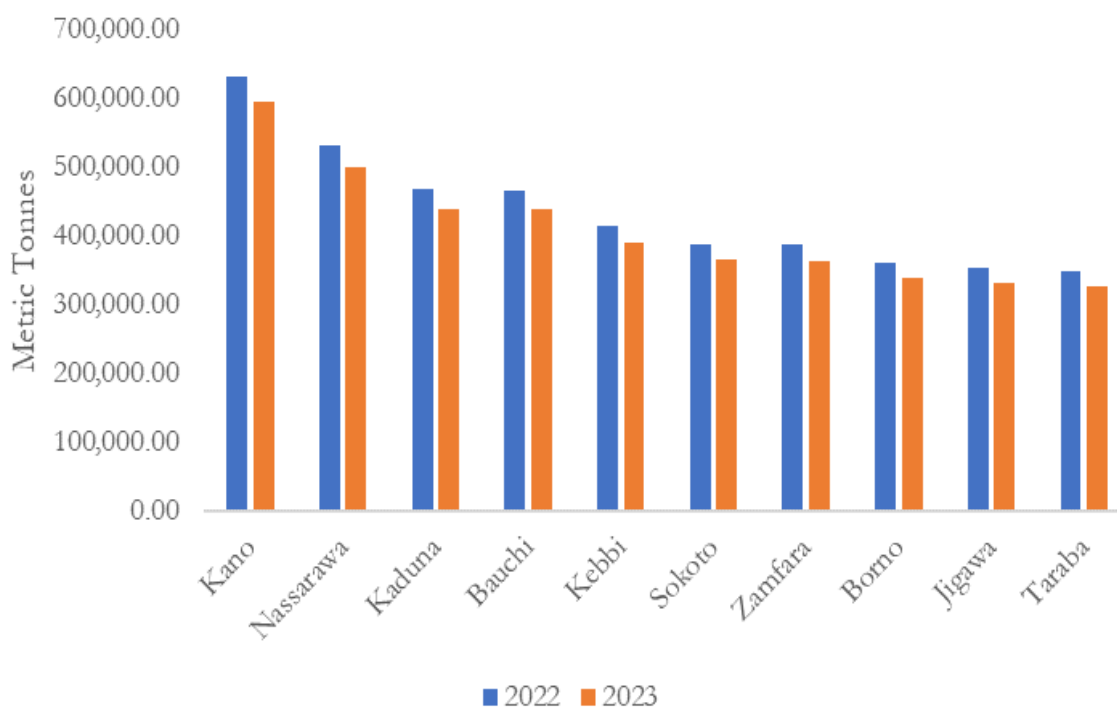
Figure 12.5: Production estimates of the top 10 Sorghum-producing States in 2022 and 2023
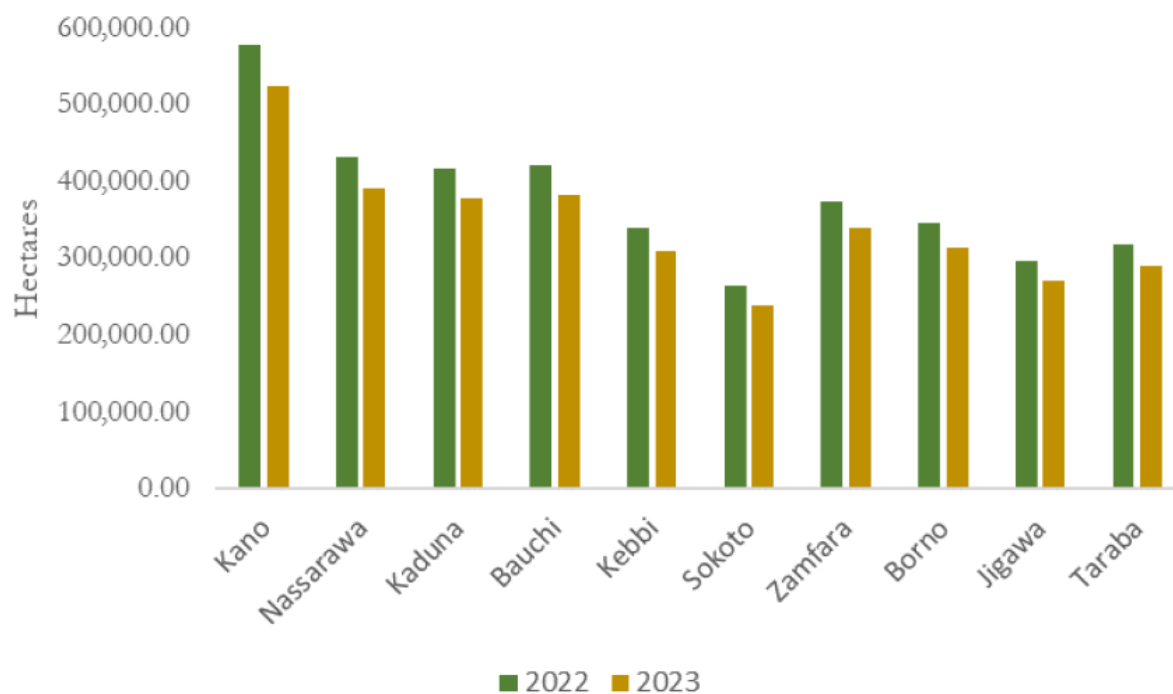
Figure 12.6: Land area cultivated by the top 10 Sorghum-producing States in 2022 and 2023

12.4 Millet

The total estimated output in 2022 was 1,941,220.00 MT and 1,549,047.50 MT in 2023, indicating a production decrease of 25.32% (Table 12.4, Figures 12.7 and 12.8). The estimated total land area cultivated for millet in 2022 was 2,020,000.00 hectares and 1,542,876.00 hectares in 2023. This means a 23.62% decrease was recorded across the states. Estimated production for 2023 showed that Yobe State recorded the highest production of 250,444 MT. For the estimated land cultivated for millet in 2023, Yobe had the highest, more than 150,000 hectares. Millet production is limited to the northern states. No production was recorded in the Southern part of the country.

Table 12.4: Land Area and Production Estimates for Millet

| Millet						
State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Benue	146,806.93	112,131.14	91,829.68	73,277.91	0.63	0.65
FCT	49,882.00	38,099.87	52,965.65	42,265.33	1.06	1.11
Kogi	44,473.91	33,969.17	34,525.67	27,550.67	0.78	0.81
Kwara	39,833.01	30,424.45	31,641.36	25,249.05	0.79	0.83
Nasarawa	28,906.34	22,078.66	32,376.30	25,835.52	1.12	1.17
Niger	109,278.92	83,467.24	115,313.27	92,017.25	1.06	1.10
Plateau	93,757.27	71,611.80	75,069.09	59,903.35	0.80	0.84
Northcentral	*512,938.38*	*391,782.33*	*433,721.03*	*346,099.09*		
Adamawa	154,454.01	117,971.97	170,658.40	136,181.35	1.10	1.15
Borno	112,534.09	85,953.54	80,923.71	64,575.20	0.72	0.75
Bauchi	105,438.94	80,534.26	78,029.56	62,265.74	0.74	0.77
Gombe	142,876.03	109,128.71	124,826.09	99,608.26	0.87	0.91
Taraba	131,427.90	100,384.63	91,199.55	72,775.08	0.69	0.72
Yobe	235,951.87	180,220.04	250,444.21	199,848.54	1.06	1.11
Northeast	*882,682.84*	*674,193.15*	*796,081.52*	*635,254.16*		
Jigawa	107,400.69	82,032.64	67,309.21	53,711.16	0.63	0.65
Kaduna	77,369.04	59,094.48	48,123.01	38,401.02	0.62	0.65
Kano	60,445.02	46,167.90	91,078.57	72,678.54	1.51	1.57
Katsina	137,994.94	105,400.54	144,884.26	115,614.20	1.05	1.10
Kebbi	102,435.74	78,240.41	76,101.42	60,727.13	0.74	0.78
Sokoto	89,609.81	68,443.98	195,219.01	155,780.14	2.18	2.28
Zamfara	49,122.52	37,519.78	88,698.74	70,779.49	1.81	1.89
Northwest	*624,377.76*	*476,899.74*	*711,414.23*	*567,691.67*		
National	**2,019,998.98**	**1,542,875.22**	**1,941,216.78**	**1,549,044.93**		
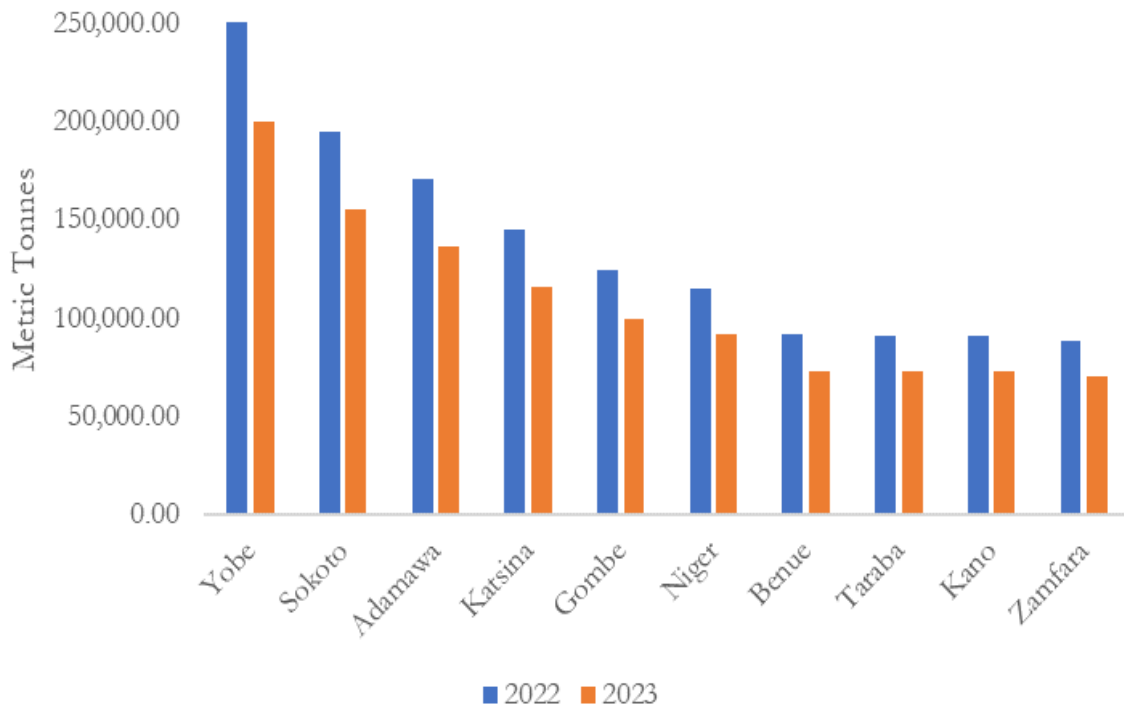
Figure 12.7: Production Estimate of the top 10 Millet-producing States in 2022 and 2023
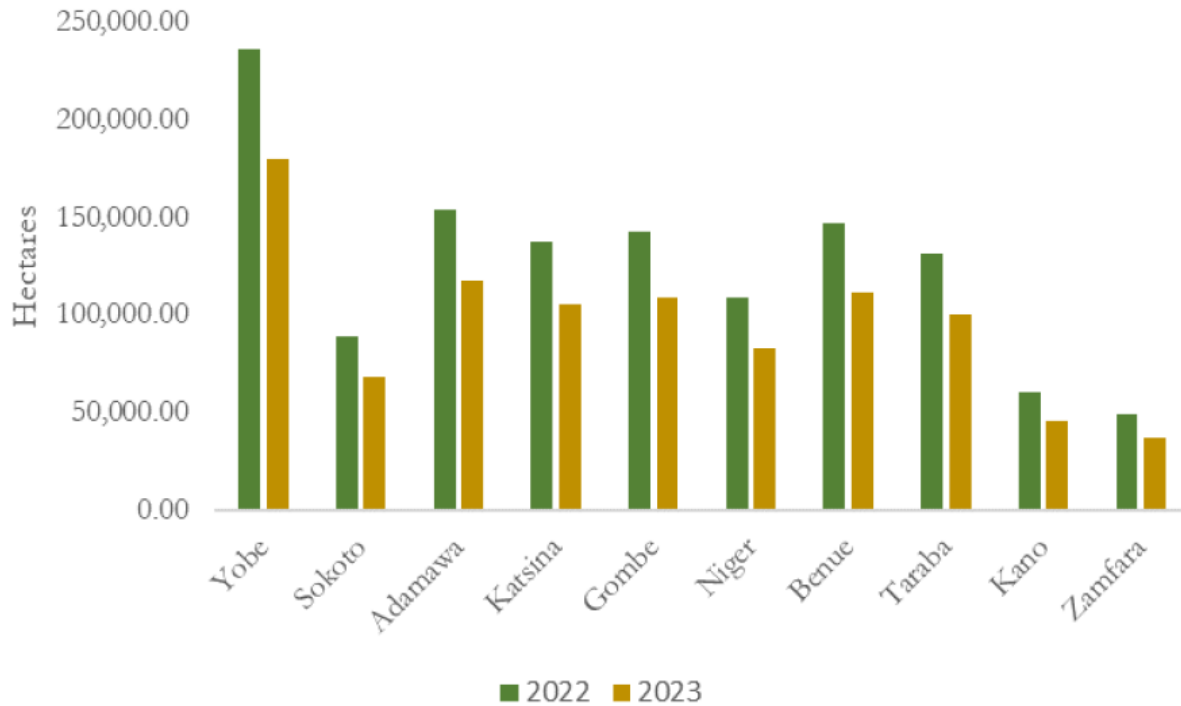
Figure 12.8: Land area cultivated by the top 10 Millet-producing States in 2022 and 2023

12.5 Cowpea

The national estimated production for cowpea in 2022 was 3,687,759.04 MT but in 2023, 3,924,970.23 MT was recorded with a 6.04 percent increase in production (Table 12.5.1, Figure 12.5.1 and 12.5.2). The estimated national aggregate land area for cowpea production in 2022 was 4,778,634.47 hectares as compared with 4,817,580.34 hectares in 2023. This implies a slight increment in land area by about 0.81 percent. Gombe State was the highest producer with almost 300,000MT. For the estimated land cultivated for cowpeas in 2023, Kogi State recorded the highest with more than 300,000 hectares.

Table 12.5: Land Area and Production Estimates for Cowpea

Cowpea						
State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Benue	107,919.95	108,799.49	119,187.57	126,854.19	1.10	1.17
FCT	134,845.88	135,944.87	104,119.23	110,816.59	0.77	0.82
Kogi	350,157.14	353,010.92	147,161.41	156,627.41	0.42	0.44
Kwara	226,062.88	227,905.29	179,056.48	190,574.10	0.79	0.84
Nasarawa	69,167.29	69,731.00	77,643.22	82,637.54	1.12	1.19
Niger	80,194.15	80,847.73	112,034.74	119,241.26	1.40	1.47
Plateau	164,592.52	165,933.95	92,125.09	98,050.93	0.56	0.59
North Central	*1,132,939.80*	*1,142,173.26*	*831,327.75*	*884,802.03*		
Adamawa	187,493.11	189,021.18	190,732.10	203,000.74	1.02	1.07
Borno	195,449.94	197,042.85	151,634.33	161,388.05	0.78	0.82
Bauchi	210,758.92	212,476.60	164,395.52	174,970.08	0.78	0.82
Gombe	320,198.30	322,807.92	273,098.92	290,665.72	0.85	0.90
Taraba	251,415.58	253,464.62	225,502.04	240,007.22	0.90	0.95
Yobe	108,083.21	108,964.09	209,813.72	223,309.77	1.94	2.05
North East	*1,273,399.06*	*1,283,777.26*	*1,215,176.63*	*1,293,341.58*		
Jigawa	108,861.07	109,748.29	166,903.40	177,639.28	1.53	1.62
Kaduna	166,584.47	167,942.13	131,870.90	140,353.36	0.79	0.84
Kano	184,292.78	185,794.76	146,570.74	155,998.75	0.80	0.84
Katsina	107,050.86	107,923.33	92,766.14	98,733.22	0.87	0.91
Kebbi	98,775.86	99,580.88	75,864.24	80,744.12	0.77	0.81
Sokoto	128,030.74	129,074.19	92,955.64	98,934.91	0.73	0.77
Zamfara	109,929.53	110,825.46	59,892.27	63,744.78	0.54	0.58
North West	*903,525.31*	*910,889.04*	*766,823.33*	*816,148.43*		
Abia	39,795.67	40,120.00	41,602.46	44,278.50	1.05	1.10
Anambra	128,614.71	129,662.92	50,091.85	53,313.96	0.39	0.41
Ebonyi	63,511.32	64,028.93	34,761.48	36,997.47	0.55	0.58
Enugu	111,897.07	112,809.03	74,135.32	78,903.99	0.66	0.70
Imo	96,219.48	97,003.67	55,553.26	59,126.67	0.58	0.61
South East	*440,038.24*	*443,624.55*	*256,144.37*	*272,620.59*		
Akwa Ibom	28,008.80	28,237.07	36,830.62	39,199.71	1.31	1.39

Cowpea (cont.)

| State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Bayelsa	29,593.62	29,834.81	24,449.48	26,022.16	0.83	0.87
Delta	22,830.20	23,016.26	19,834.51	21,110.34	0.87	0.92
Edo	51,230.01	51,647.54	37,584.15	40,001.71	0.73	0.77
C/Rivers	5,244.09	5,286.83	4,871.82	5,185.19	0.93	0.98
Rivers	89,631.98	90,362.48	39,594.46	42,141.33	0.44	0.47
South South	*226,538.69*	*228,384.98*	*163,165.03*	*173,660.45*		
Ekiti	162,716.33	164,042.47	86,065.96	91,602.06	0.53	0.56
Ogun	81,945.07	82,612.93	46,409.41	49,394.64	0.57	0.60
Ondo	134,590.59	135,687.50	99,797.58	106,216.96	0.74	0.78
Osun	194,469.93	196,054.86	76,836.71	81,779.15	0.40	0.42
Oyo	116,606.82	117,557.17	92,386.01	98,328.64	0.79	0.84
Lagos	111,863.24	112,774.92	53,630.21	57,079.91	0.48	0.51
South West	*802,191.97*	*808,729.84*	*455,125.88*	*484,401.36*		
National	**4,778,633.08**	**4,817,578.94**	**3,687,762.99**	**3,924,974.44**		
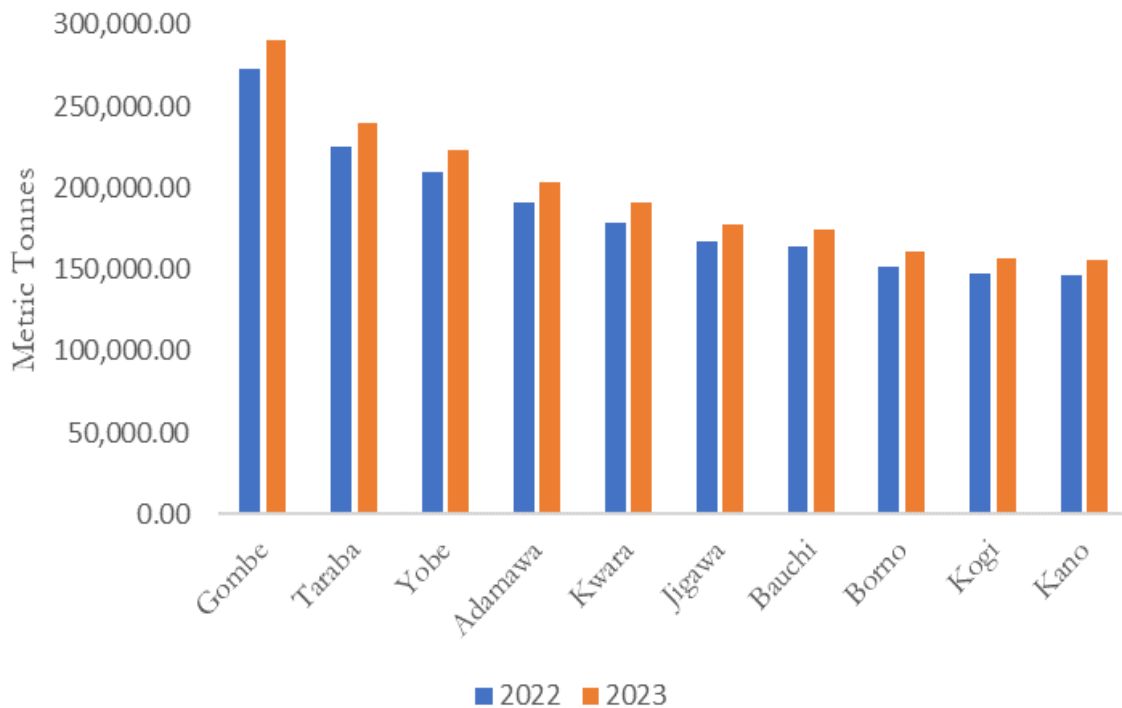
Figure 12.9: Production Estimate of the top 10 Cowpea-producing States in 2022 and 2023

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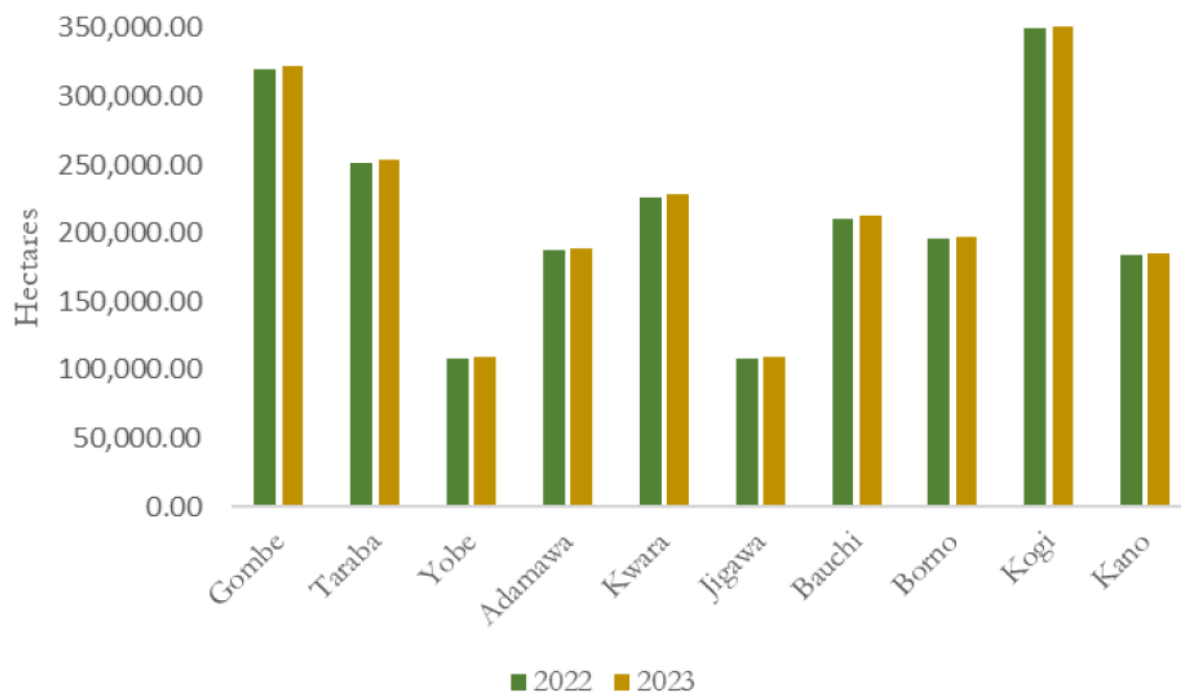
Figure 12.10: Land area cultivated by the top 10 Cowpea-producing States in 2022 and 2023

12.6   Soybean

Result of cultivated land area and production forecast for soybean is presented in Table 12.6 and Figures 12.11 and 12.12. From 2022 to 2023, the soybean production found to increase with increase in culitivated area, leading to increase the production by 1.32% with overall production of 933,461.88 MT and 945,870.1**0** MT in 2022 and 2023. As it was in production, the land area culitivated increased by 1.67% with estimated value of 967,055.13 Ha in 2022 and 983,136.89 Ha in 2023. As expected, Benue state, a Northern central state found to have the highest production estimate in both years (200,321.97 MT in 2022 and 202,665.67 MT) with 1.17% percentage increase, against the percentage increase of 3.12% per land area of 79,860.55 Ha and 82,351.47 Ha devoted in 2022 and 2023

Table 12.6: Land Area and Production Estimates for Soybean

| Soyabean						
State	Land Area (Ha)		Production (MT)		Yield	
	2022	2023	2022	2023	2022	2023
Benue	79,860.55	82,351.47	200,321.97	202,665.67	2.51	2.46
FCT	50,387.47	49,589.96	29,348.92	28,692.91	0.58	0.58
Kogi	47,014.93	48,153.15	39,653.80	40,204.54	0.84	0.83
Kwara	56,607.77	61,268.70	52,211.37	55,005.40	0.92	0.90
Nasarawa	29,820.37	31,008.05	24,244.41	24,800.07	0.81	0.80
Niger	105,590.66	100,353.66	56,692.79	53,818.71	0.54	0.54
Plateau	38,070.36	37,530.20	25,442.66	24,849.70	0.67	0.66
Adamawa	51,529.66	54,682.70	44,766.29	43,904.50	0.87	0.80
Bauchi	33,393.57	34,559.66	22,782.56	22,444.17	0.68	0.65
Borno	22,380.71	23,313.24	16,120.34	17,058.65	0.72	0.73
Gombe	58,575.73	61,851.66	49,806.89	52,017.75	0.85	0.84
Taraba	43,024.99	41,956.33	59,025.36	59,265.99	1.37	1.41
Jigawa	35,577.61	37,123.77	29,388.86	30,551.46	0.83	0.82
Kaduna	84,383.00	87,412.96	88,126.65	92,538.85	1.04	1.06
Kano	54,385.13	56,121.25	63,410.93	66,057.21	1.17	1.18
Katsina	47,354.50	45,126.14	34,285.68	34,031.94	0.72	0.75
Kebbi	37,321.77	38,541.12	34,637.16	35,049.41	0.93	0.91
Sokoto	34,728.69	36,251.24	30,794.80	31,895.21	0.89	0.88
Ekiti	21,192.22	22,034.77	7,221.40	7,213.42	0.34	0.33
Oyo	35,855.44	33,906.86	25,179.04	23,804.54	0.70	0.70
National	967,055.13	983,136.89	933,461.88	945,870.10	0.97	0.96
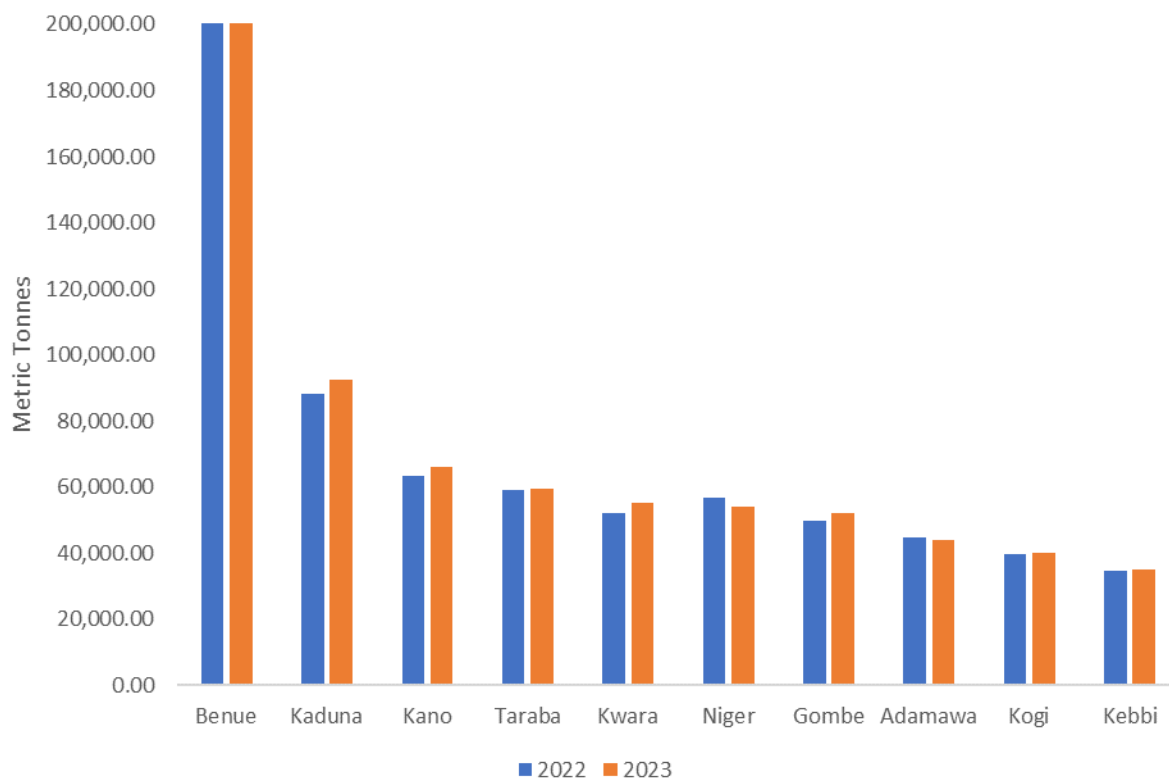
Figure 12.11: Production Estimate of the top 10 Soybean-producing States in 2022 and 2023
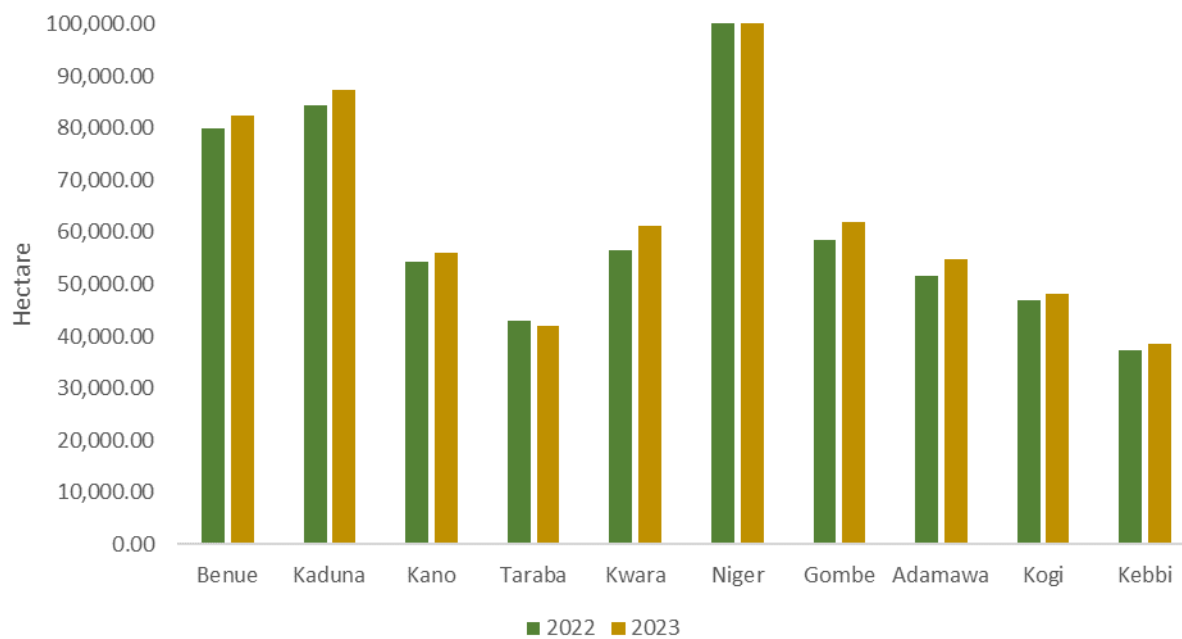
Figure 12.12: Land area cultivated by the top 10 Soybean-producing States in 2022 and 2023

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12.7   Groundnut

The total production estimates for Groundnut in 2023 was 4,965,228,25 MT which is 4.97% increase compared with 4,718,253.53 MT estimated for 2022 (Table 12.7, Figure 12.13 and 12.14). The total cultivated land area for Groundnut in Nigeria was 4,426,876.22 in 2023 indicating a marginal increase of 1.19% from 4,374,383 hectares of the cultivated area of land in 2022. Bauchi State ranks as the highest producer in 2023 with slightly more than 600,000 MT and highest land area cultivated, with almost 500,000 hectares as in 2022.

Table 12.7: Land Area and Production Estimates for Groundnut

| Groundnut						
State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Adamawa	71,331.08	72,187.05	144,584.68	152,152.89	2.03	2.11
Bauchi	496,642.92	502,602.63	589,627.50	620,491.27	1.19	1.23
Bayelsa	30,555.11	30,921.77	27,720.87	29,171.91	0.91	0.94
Benue	326,613.70	330,533.07	298,310.52	313,925.45	0.91	0.95
Borno	192,823.16	195,137.04	210,147.79	221,147.88	1.09	1.13
C/Rivers	16,453.67	16,651.11	20,088.55	21,140.07	1.22	1.27
Ebonyi	6,304.45	6,380.11	5,881.19	6,189.03	0.93	0.97
Edo	11,880.55	12,023.12	7,158.75	7,533.47	0.60	0.63
Enugu	5,970.13	6,041.77	7,334.96	7,718.91	1.23	1.28
FCT	216,190.24	218,784.52	151,126.67	159,037.32	0.70	0.73
Gombe	143,880.06	145,606.62	149,012.09	156,812.05	1.04	1.08
Imo	10,734.29	10,863.10	8,623.54	9,074.93	0.80	0.84
Jigawa	182,112.75	184,298.10	264,785.56	278,645.63	1.45	1.51
Kaduna	247,115.49	250,080.88	310,227.09	326,465.77	1.26	1.31
Kano	260,381.11	263,505.69	164,309.78	172,910.50	0.63	0.66
Katsina	165,706.84	167,695.32	144,298.33	151,851.55	0.87	0.91
Kebbi	177,324.71	179,452.61	205,665.32	216,430.77	1.16	1.21
Kogi	161,372.53	163,309.00	187,515.14	197,330.53	1.16	1.21
Kwara	231,820.03	234,601.87	278,023.73	292,576.75	1.20	1.25
Nasarawa	112,596.59	113,947.75	231,128.43	243,226.74	2.05	2.13
Niger	257,396.05	260,484.80	301,526.45	317,309.71	1.17	1.22
Ogun	22,698.42	22,970.80	42,776.27	45,015.37	1.88	1.96
Osun	47,880.42	48,454.98	58,910.99	61,994.65	1.23	1.28
Oyo	58,363.96	59,064.33	64,858.25	68,253.23	1.11	1.16
Plateau	175,772.48	177,881.75	229,079.93	241,071.01	1.30	1.36
Sokoto	234,876.73	237,695.25	110,310.80	116,084.96	0.47	0.49
Taraba	262,864.69	266,019.06	262,626.92	276,374.00	1.00	1.04
Yobe	55,235.61	55,898.44	66,091.76	69,551.30	1.20	1.24
Zamfara	191,450.03	193,747.43	176,512.69	185,752.16	0.92	0.96
National	4,374,347.80	4,426,839.97	4,718,264.54	4,965,239.84		
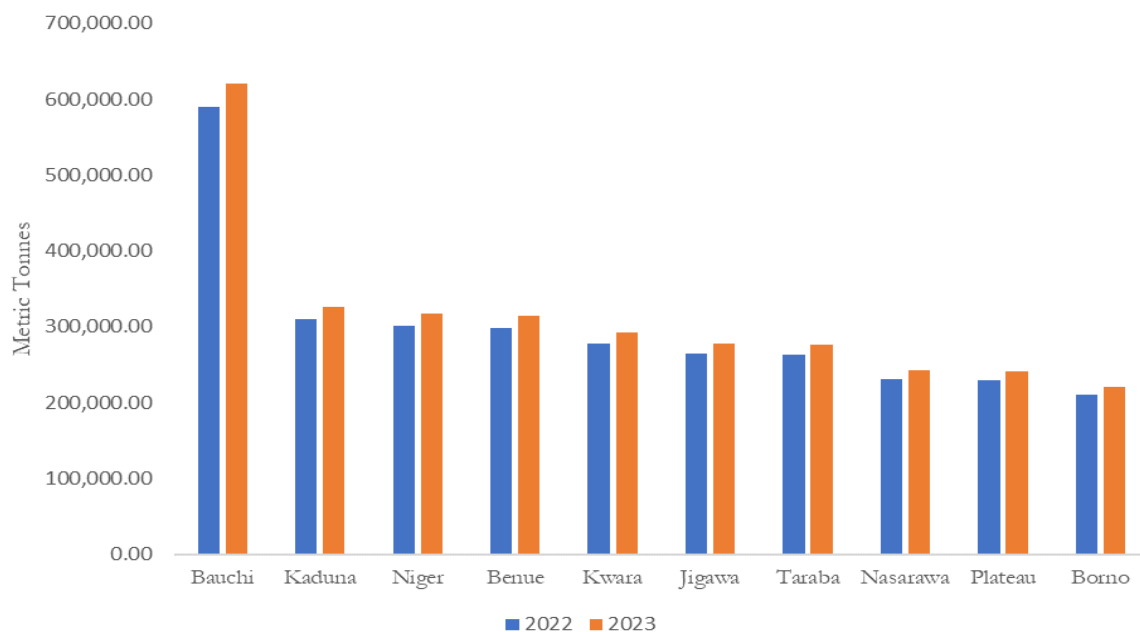
Figure 12.13: Production estimates of the top 10 Groundnut-producing States in 2022 and 2023
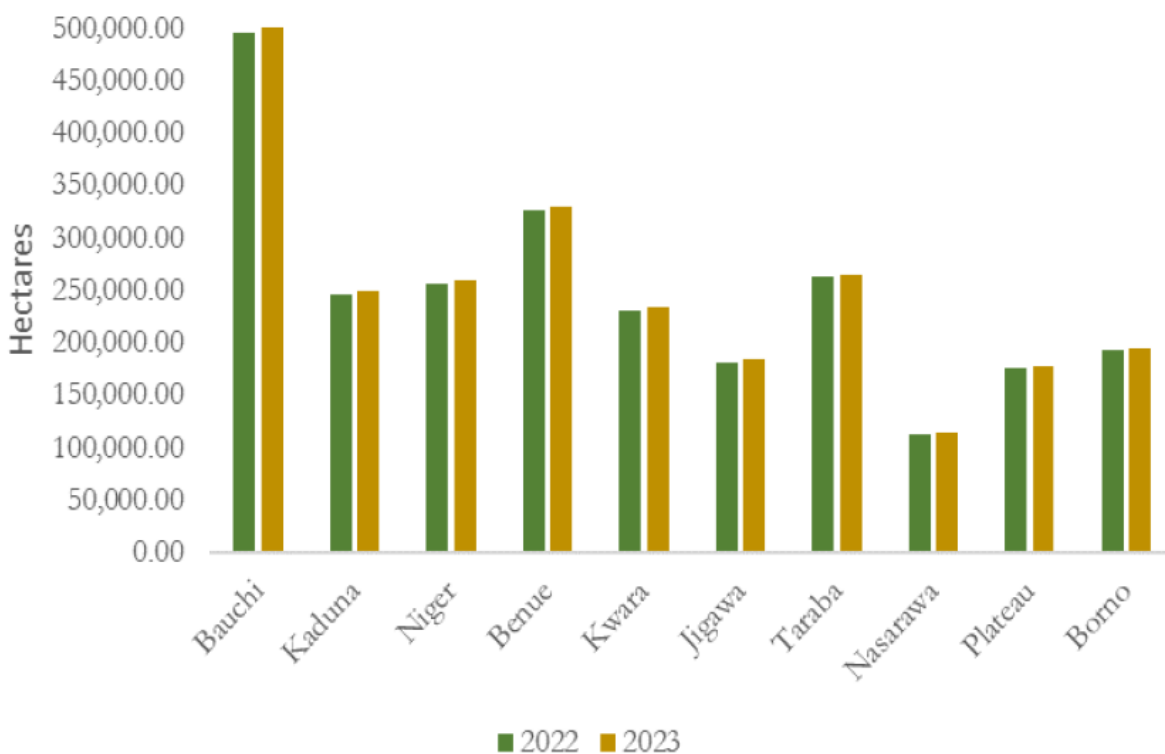
Figure 12.14: Land area cultivated by the top 10 Groundnut-producing States in 2022 and 2023

12.8   Benniseed

The result on land area cultivated and production forecast is presented in Table 12.8, Figures 12.15 and 12.16. The production estimate for 2023 is 453,244 MT more than the 482,914 MT for 2022, indicating 6.14% increase with Benue State as the highest producer in 2023 with an estimated 80,000 MT. Benniseed also recorded an increase of 1.48% in national land area cultivated for production. The estimated land area cultivated was 523,477 hectares in 2022 and 531,356 hectares in 2023.

Tabl2 12.8: Land Area and Production Estimates for Benniseed

Benniseed						
State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Adamawa	10,171.10	10,324.17	14,905.57	15,881.30	1.47	1.54
Bauchi	13,585.55	13,790.01	8,386.80	8,935.81	0.62	0.65
Benue	73,443.87	74,549.20	78,659.24	83,808.31	1.07	1.12
Borno	10,996.11	11,161.60	6,859.82	7,308.86	0.62	0.65
FCT	53,047.48	53,845.84	46,018.91	49,031.33	0.87	0.91
Gombe	23,636.21	23,991.93	8,882.88	9,464.36	0.38	0.39
Jigawa	12,104.15	12,286.31	18,959.45	20,200.55	1.57	1.64
Kano	14,296.14	14,511.30	18,145.57	19,333.39	1.27	1.33
Katsina	32,331.92	32,818.52	14,114.95	15,038.92	0.44	0.46
Kebbi	6,865.04	6,968.36	6,100.20	6,499.52	0.89	0.93
Kogi	55,414.11	56,248.09	54,646.00	58,223.16	0.99	1.04
Kwara	23,298.98	23,649.63	13,215.81	14,080.92	0.57	0.60
Nasarawa	38,636.92	39,218.40	51,134.70	54,482.01	1.32	1.39
Niger	45,983.71	46,675.77	21,602.61	23,016.73	0.47	0.49
Plateau	40,323.07	40,929.93	29,857.64	31,812.14	0.74	0.78
Sokoto	18,734.33	19,016.28	12,595.71	13,420.23	0.67	0.71
Taraba	37,811.91	38,380.98	40,616.32	43,275.08	1.07	1.13
Yobe	10,267.45	10,421.97	2,612.16	2,783.15	0.25	0.27
Zamfara	2,529.22	2,567.29	5,929.67	6,317.83	2.34	2.46
National	523,477.25	531,355.58	453,244.00	482,913.61		
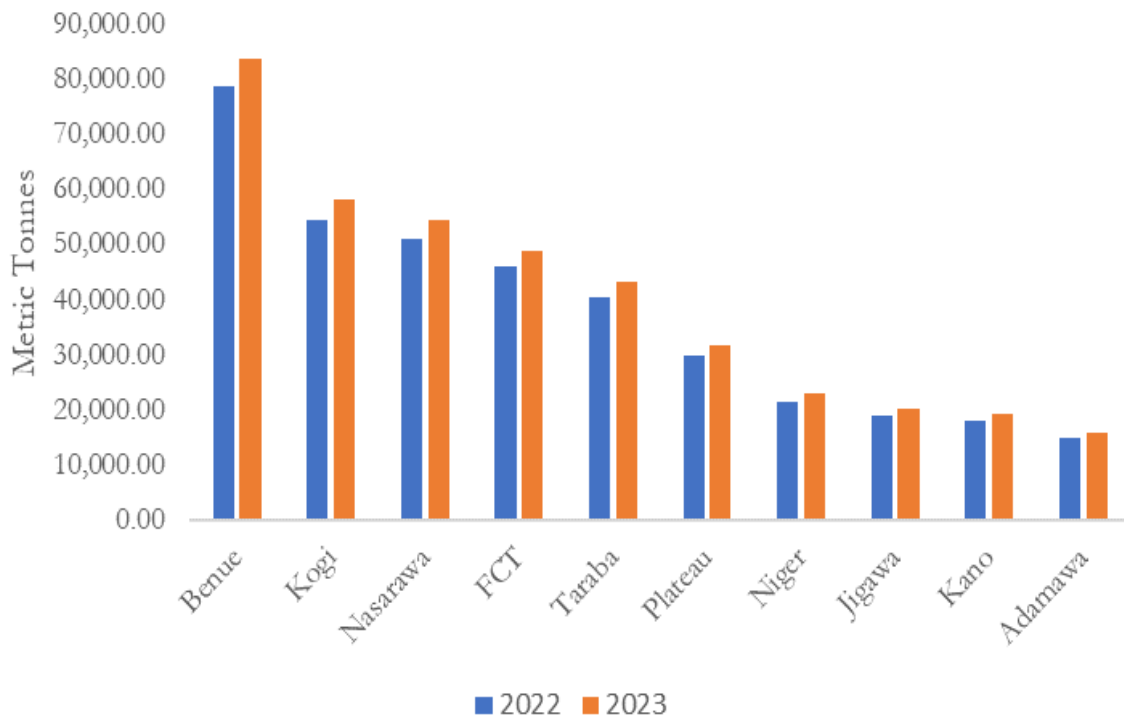
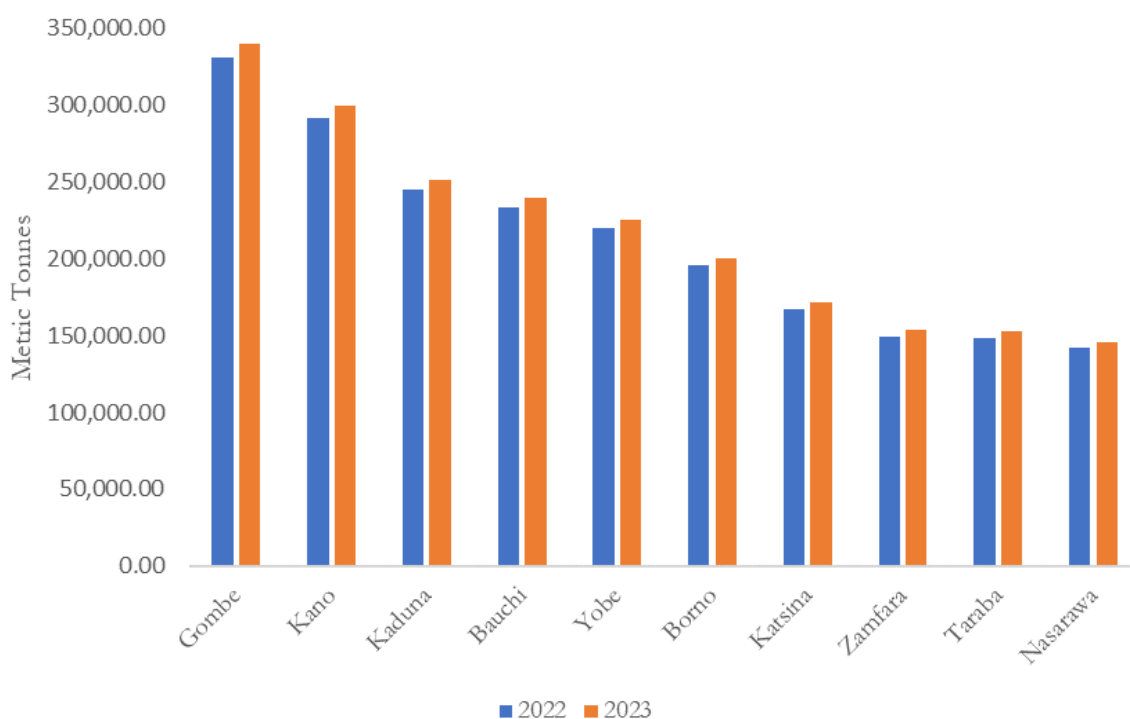**Figure 12.15: Production estimates of the top 10 Benniseed-producing States in 2022 and 2023**
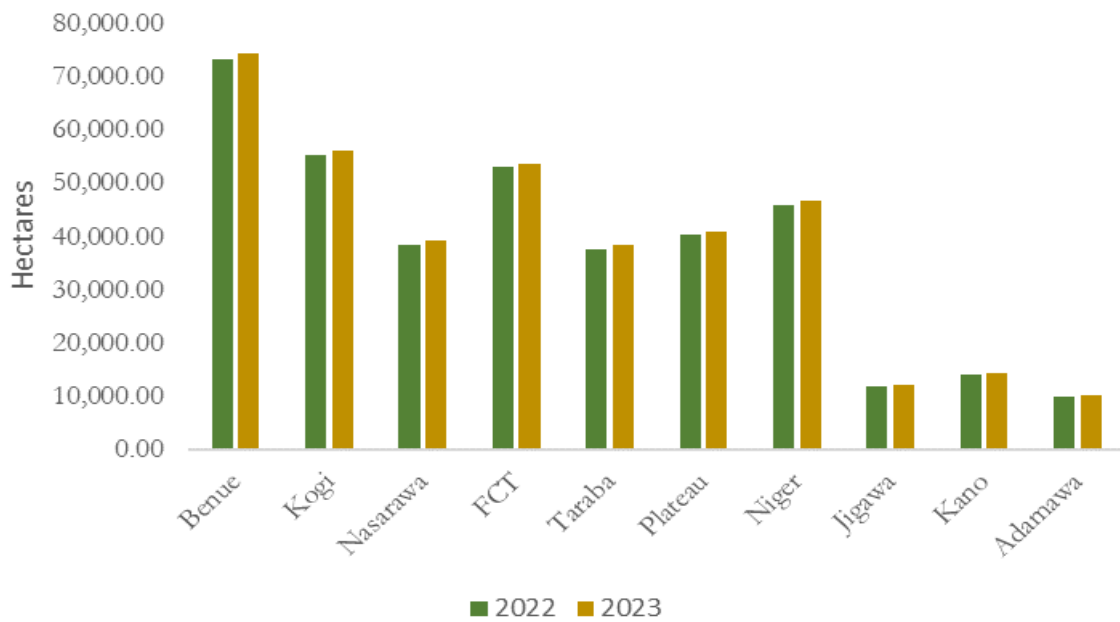
Figure 12. 16: Land area cultivated by the top 10 Benniseed-producing States in 2022 and 2023

12.9 Tomato

The national tomato production estimates for 2023 is 3,784,207 MT indicating a 2.54% increase over the output recorded in 2022 (Table 12.9, Figures 12.17 and 12.18). The land area dedicated also increased from 871,155 hectares in 2022 to 884,832 ha in 2023. These results implied a 1.55% increase. Gombe State was the highest producer of tomato in 2023 with 350,000 MT while Kano State had the largest land cultivated at slightly more than 45,000 ha.

Table 12.9: Land Area and Production Estimates for Tomato

Tomato						
State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Benue	16,681.31	16,943.21	95,163.94	97,639.72	5.70	5.76
FCT	28,840.91	29,293.71	82,032.77	84,166.93	2.84	2.87
Kogi	27,375.66	27,805.45	88,795.82	91,105.92	3.24	3.28
Kwara	27,846.39	28,283.58	70,925.58	72,770.78	2.55	2.57
Nasarawa	43,234.84	43,913.63	142,233.74	145,934.09	3.29	3.32
Niger	19,558.78	19,865.85	142,048.62	145,744.15	7.26	7.34
Plateau	32,255.40	32,761.81	79,194.27	81,254.58	2.46	2.48
Taraba	26,586.67	27,004.08	148,651.23	152,518.53	5.59	5.65
North Central	*222,379.96*	*225,871.32*	*849,045.97*	*871,134.69*		
Adamawa	20,221.78	20,539.27	110,035.23	112,897.90	5.44	5.50
Bauchi	26,188.87	26,600.03	233,497.82	239,572.49	8.92	9.01
Borno	13,876.79	14,094.65	195,609.96	200,698.94	14.10	14.24
Gombe	16,064.72	16,316.93	331,241.10	339,858.64	20.62	20.83
Yobe	14,818.26	15,050.91	219,922.37	225,643.85	14.84	14.99
North East	*91,170.41*	*92,601.79*	*1,090,306.49*	*1,118,671.82*		
Jigawa	26,719.28	27,138.77	123,425.57	126,636.60	4.62	4.67
Kaduna	30,995.69	31,482.32	244,802.48	251,171.24	7.90	7.98
Kano	46,762.05	47,496.21	291,859.94	299,452.95	6.24	6.30
Katsina	37,048.96	37,630.63	167,397.70	171,752.71	4.52	4.56
Kebbi	38,872.24	39,482.53	52,796.18	54,169.72	1.36	1.37
Sokoto	15,335.41	15,576.17	89,733.76	92,068.26	5.85	5.91
Zamfara	24,498.19	24,882.82	149,613.85	153,506.20	6.11	6.17
North West	*220,231.81*	*223,689.45*	*1,119,629.47*	*1,148,757.67*		
Abia	20,639.48	20,963.52	23,004.23	23,602.70	1.11	1.13
Anambra	14,075.69	14,296.68	27,842.02	28,566.36	1.98	2.00
Ebonyi	32,083.02	32,586.72	62,447.09	64,071.71	1.95	1.97
Enugu	24,690.47	25,078.11	22,856.13	23,450.75	0.93	0.94
Imo	7,545.05	7,663.50	18,043.01	18,512.42	2.39	2.42
South East	*99,033.70*	*100,588.53*	*154,192.48*	*158,203.95*		

Table 12.9: Land Area and Production Estimates for Tomato (cont.)

| State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Cross River	13,048.02	13,252.88	80,613.52	82,710.75	6.18	6.24
Delta	14,234.81	14,458.30	33,247.52	34,112.49	2.34	2.36
Edo	33,946.08	34,479.03	40,479.54	41,532.65	1.19	1.20
South South	*61,228.91*	*62,190.21*	*154,340.58*	*158,355.89*		
Ekiti	22,568.84	22,923.17	25,484.83	26,147.84	1.13	1.14
Lagos	18,597.41	18,889.39	30,717.55	31,516.70	1.65	1.67
Ogun	8,718.57	8,855.45	63,816.98	65,477.24	7.32	7.39
Ondo	14,122.10	14,343.82	38,517.27	39,519.33	2.73	2.76
Osun	20,374.28	20,694.15	19,511.63	20,019.24	0.96	0.97
Oyo	23,788.77	24,162.26	40,257.39	41,304.73	1.69	1.71
South West	*108,169.97*	*109,868.24*	*218,305.66*	*223,985.08*		
National Total	**802,214.77**	**814,809.54**	**3,585,820.65**	**3,679,109.10**		

Figure 12.17: Production estimates of the top 10 Tomato-producing States in 2022 and 2023
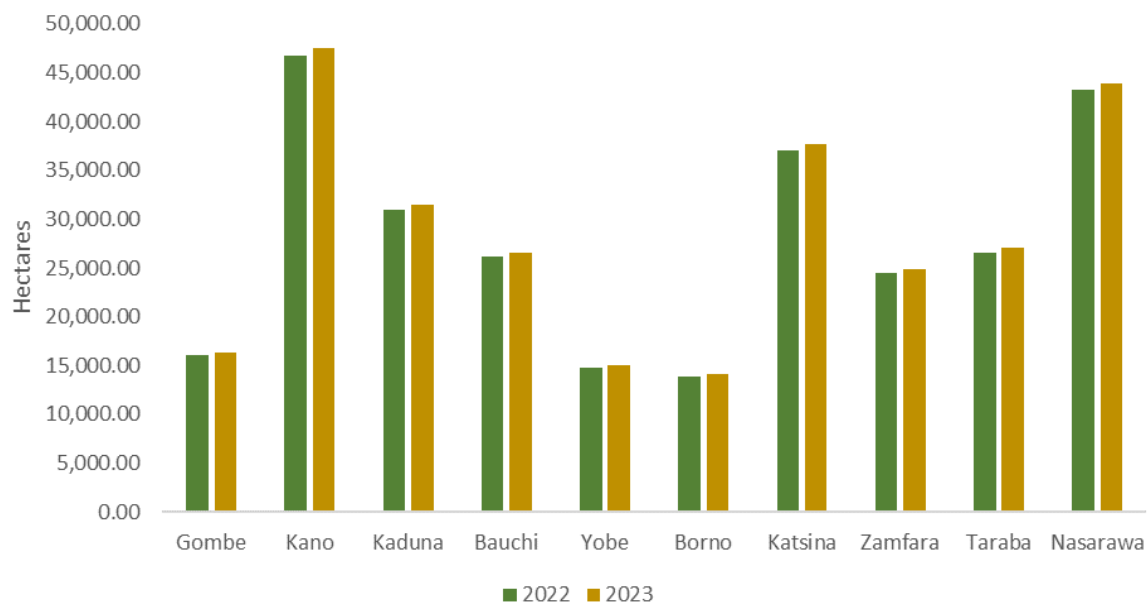
Figure 12.18: Land area cultivated by the top 10 Tomato-producing States in 2022 and 2023

12.10   Onion

Result of land area against production estimate for Onion in 2022 and 2023 is presented in Table 12.10, Figures 12.19 and 12.20. Form the table, Onion production decreased by 3.29%, as well as the cultivated land area by 0.8%, keeping the production as 1,412,923.21 MT in 2022 and 1,366,482.33 MT in 2023 with corresponding land area cultivated of 541,928.88 Ha in 2022 and 537,319.16 in 2023.   Although Yobe State had the largest cultivated land area for Onion production both in 2022 (51,557.64 Ha) and 2023 (52,032.21 Ha), Sokoto State had the highest production of 123,668.84MT in 2022 and 117,568.75MT in 2023.

Table 12.10: Land Area and Production Estimates for Onion

| Onion						
State	**Land Area (Ha)**		**Production (MT)**		**Yield**	
	2022	**2023**	**2022**	**2023**	**2022**	**2023**
Benue	26,615.85	27,221.85	46,361.36	43,555.42	1.74	1.60
Plateau	40,347.00	41,818.95	53,510.18	55,169.03	1.33	1.32
Taraba	29,700.66	35,274.42	88,271.57	77,399.19	2.97	2.19
Adamawa	29,766.49	16,035.91	91,730.37	62,374.29	3.08	3.89
Bauchi	46,102.80	47,378.60	89,736.02	92,251.80	1.95	1.95
Borno	18,330.14	18,763.36	67,865.63	67,904.19	3.70	3.62
Gombe	45,594.93	41,848.59	90,256.28	91,625.58	1.98	2.19
Yobe	51,557.64	52,032.21	96,316.40	97,427.41	1.87	1.87
Jigawa	31,252.47	32,474.03	79,696.84	79,341.95	2.55	2.44
Kaduna	31,854.38	32,634.84	106,779.50	108,323.78	3.35	3.32
Kano	48,999.50	49,283.29	123,187.11	126,572.68	2.51	2.57
Katsina	36,556.83	36,603.91	113,899.42	120,709.90	3.12	3.30
Kebbi	44,165.39	45,333.48	121,250.57	121,938.50	2.75	2.69
Sokoto	30,424.84	31,395.33	123,668.84	117,568.75	4.06	3.74
Zamfara	22,571.75	19,691.82	105,324.69	91,628.96	4.67	4.65
Lagos	8,088.21	9,528.58	15,068.41	12,690.89	1.86	1.33
National	**541,928.88**	**537,319.16**	**1,412,923.21**	**1,366,482.33**	**2.61**	**2.54**
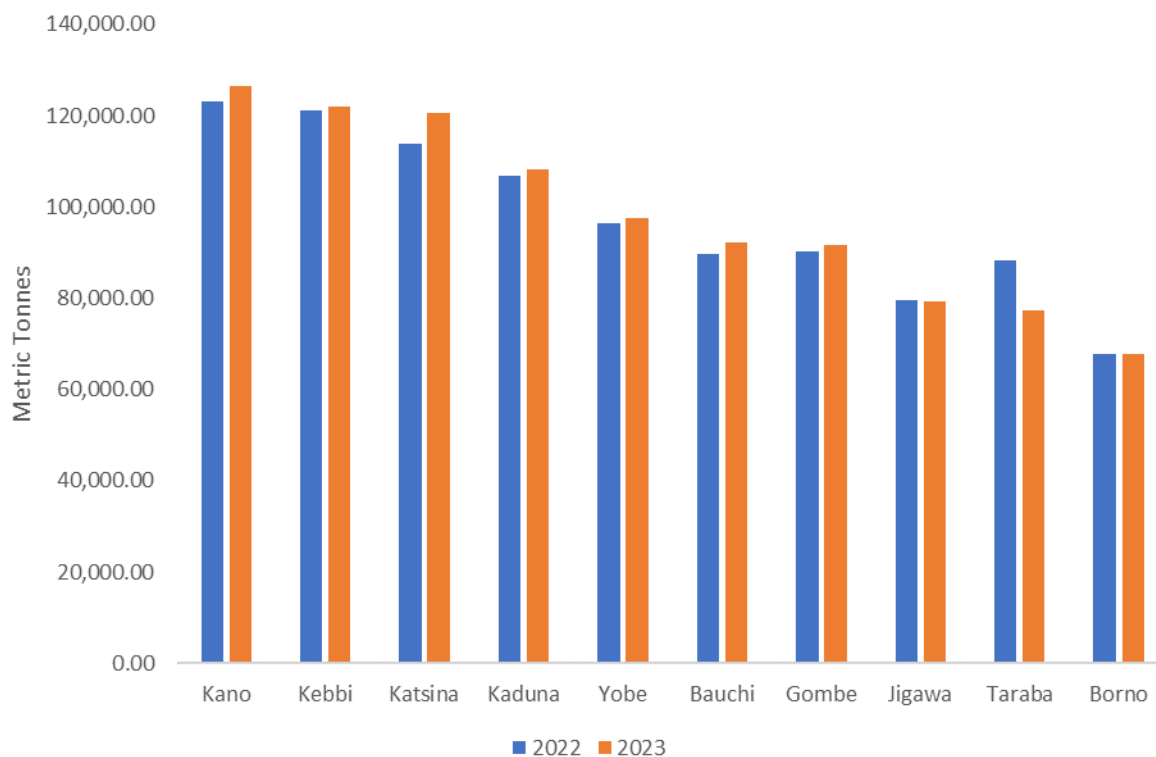
Figure 12.19: Production Estimate of the top 10 Onion-producing States in 2022 and 2023
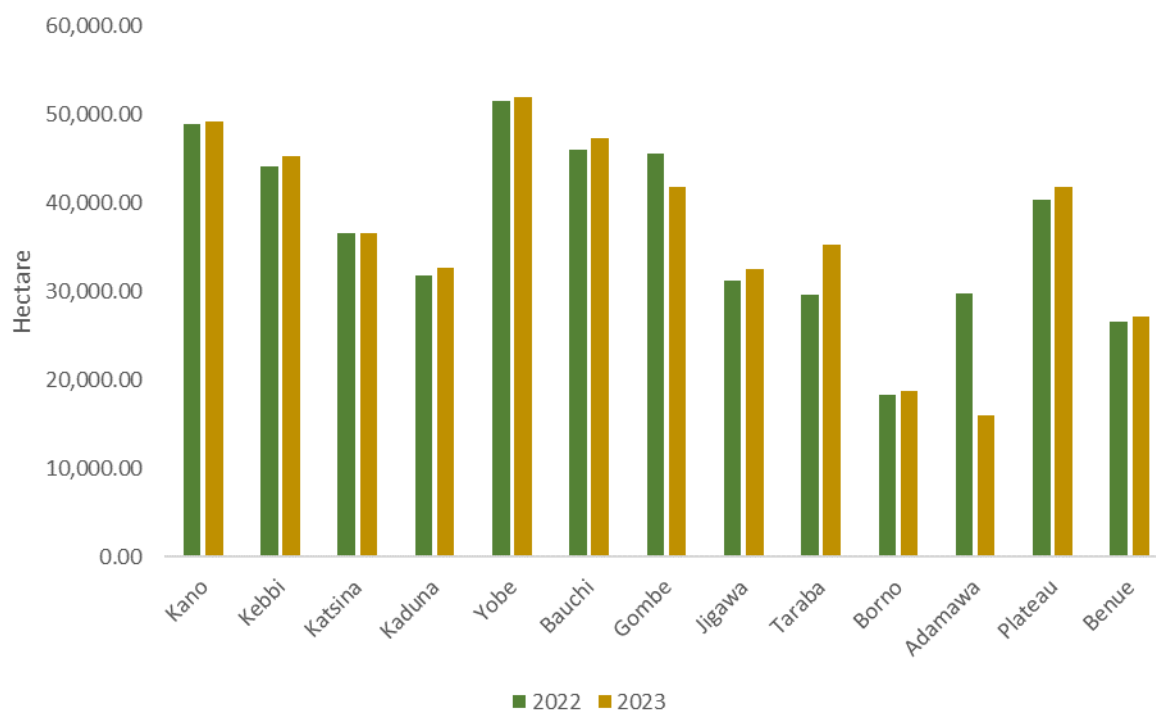
Figure 12.20: Land area cultivated by the top 10 Onion-producing States in 2022 and 2023

12.11 Okra

Results of production estimate and land area cultivated for Okra are presented in Table 12.11 and Figures 12.21 and 12.22. The production estimate was 1,751,065.79 MT in 2022 and 1,707,615.69 MT in 2023, while the land area cultivated was 1,534,020.75 Ha in 2022 and 1,521,300.84 Ha in 2023, indicating a decrease in production by 2.48% and land area by 0.83% respectively. Cross River State had the highest Okra production with an increase of 0.68%, that is, 142,935.01 MT in 2022 and 143,906.88 MT in 2023.

Table 12.11: Land Area and Production Estimates for Okra

Okra						
State	Land Area (Ha)		Production (MT)		Yield	
	2022	2023	2022	2023	2022	2023
Benue	37,608.51	37,830.03	56,276.37	56,717.67	1.50	1.50
FCT	85,097.13	94,662.49	64,297.37	71,440.29	0.76	0.75
Kogi	48,950.12	48,356.79	97,744.74	99,373.65	2.00	2.06
Kwara	11,561.84	12,754.46	94,470.66	99,479.75	8.17	7.80
Nasarawa	26,557.19	26,881.43	31,337.63	31,041.90	1.18	1.15
Niger	5,856.00	4,886.96	18,111.93	15,847.94	3.09	3.24
Plateau	32,683.47	33,222.76	52,046.93	52,046.93	1.59	1.57
Taraba	25,235.84	26,508.15	50,116.32	50,326.18	1.99	1.90
Adamawa	34,074.89	34,874.00	20,569.98	21,571.87	0.60	0.62
Bauchi	30,030.75	33,729.78	25,953.80	27,020.97	0.86	0.80
Borno	34,945.78	35,443.27	29,247.79	29,529.11	0.84	0.83
Gombe	35,085.93	35,542.25	26,730.03	26,950.77	0.76	0.76
Yobe	22,132.66	22,602.92	48,514.11	52,335.98	2.19	2.32
Jigawa	21,281.79	22,124.74	29,237.84	31,803.32	1.37	1.44
Kaduna	22,953.50	25,661.82	53,509.82	55,825.05	2.33	2.18
Kano	49,140.32	49,311.08	29,078.61	32,063.28	0.59	0.65
Katsina	17,768.19	18,840.23	18,131.84	18,455.98	1.02	0.98
Kebbi	35,145.99	33,928.39	33,954.90	32,857.10	0.97	0.97
Sokoto	14,765.12	14,151.10	20,490.37	19,090.35	1.39	1.35
Zamfara	19,129.59	16,885.28	38,482.88	32,930.59	2.01	1.95
Abia	23,464.03	24,303.88	24,928.79	25,139.54	1.06	1.03
Anambra	26,877.52	27,565.37	20,480.42	20,907.09	0.76	0.76
Ebonyi	17,407.82	16,605.71	18,768.74	18,199.41	1.08	1.10
Enugu	28,258.94	29,329.03	23,386.29	23,356.47	0.83	0.80
Imo	85,467.51	90,155.87	32,402.45	33,546.07	0.38	0.37
Akwa Ibom	129,792.90	122,570.63	109,696.62	100,330.72	0.85	0.82
Bayelsa	103,015.48	87,383.15	82,170.46	65,522.12	0.80	0.75
Cross River	149,783.37	155,176.11	142,935.01	143,906.88	0.95	0.93
Delta	36,217.08	29,452.33	85,036.53	66,596.75	2.35	2.26
Edo	44,835.91	53,795.88	95,097.61	96,235.60	2.12	1.79
Rivers	131,084.22	113,468.26	97,784.54	75,620.25	0.75	0.67
Ekiti	23,023.57	22,371.87	13,026.66	12,538.16	0.57	0.56

Table 12.11: Land Area and Production Estimates for Okra (cont.)

| State	Land Area (Ha)		Production (MT)		Yield	
	2022	2023	2022	2023	2022	2023
Lagos	8,178.37	7,507.56	60,187.35	60,327.00	7.36	8.04
Ogun	14,294.64	14,344.86	38,890.90	41,367.89	2.72	2.88
Ondo	42,873.90	43,115.50	13,802.89	14,536.52	0.32	0.34
Osun	51,813.05	48,027.29	17,246.14	15,855.47	0.33	0.33
Oyo	7,627.81	7,929.59	36,920.48	36,920.48	4.84	4.66
National	1,534,020.75	1,521,300.84	1,751,065.79	1,707,615.69	1.14	1.12
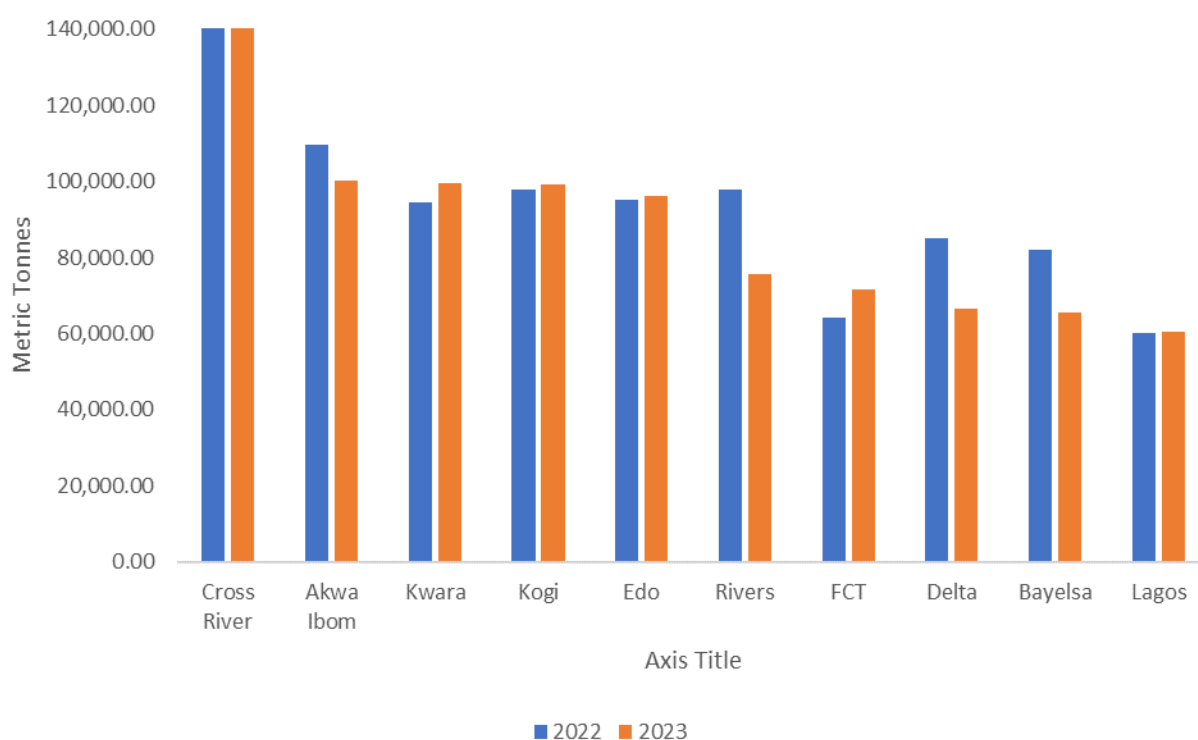
Figure 12.21: Production Estimate of the top 10 Okra-producing States in 2022 and 2023
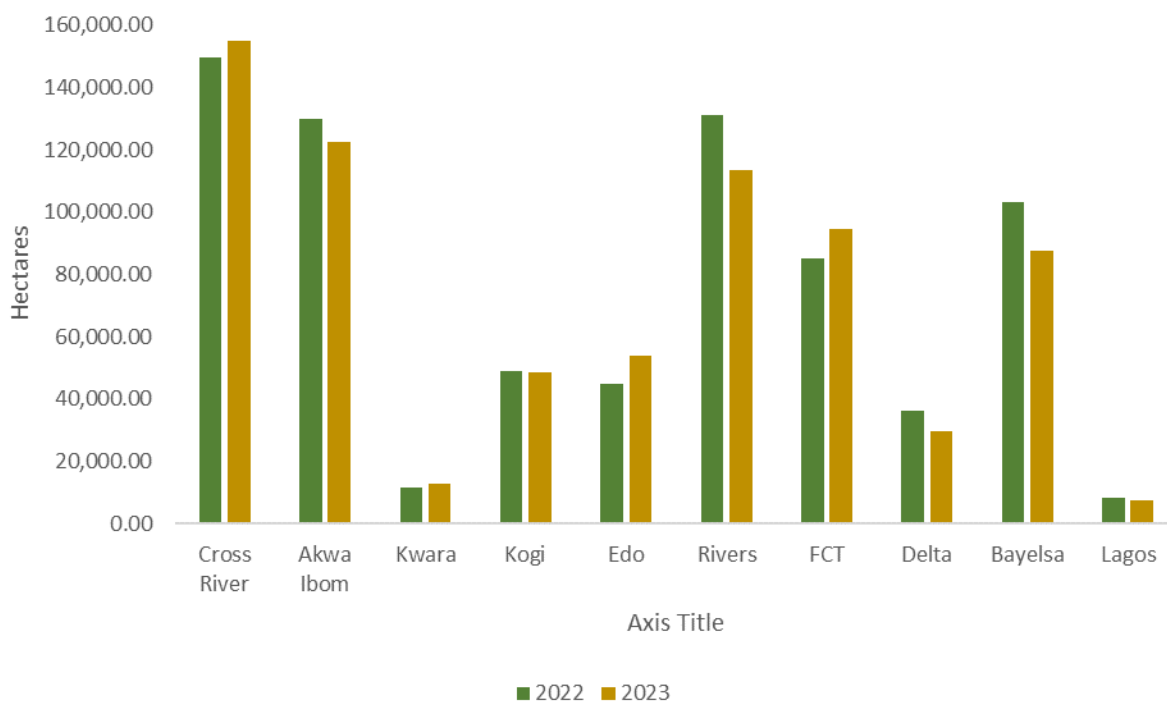
Figure 12.22: Land area cultivated by the top 10 Okra-producing states in 2022 and 2023

12.12   Yam

Land area dedicated for Yam cultivation increased by 1.77% from 6,114,658 hectare in 2022 to 6,224,722ha in 2023 as presented in Table 12.12, Figures 12.23 and 12.24. Production increased from 52,190,928 MT in 2022 to 53,398,028 MT in 2023 reflecting a 2.26% increase. Niger State produced the highest volume of Yam in 2023 (5,000,000 MT).

Table 12.12: Land Area and Production Estimates for Yam

Yam						
State	**Land Area (Ha)**		**Production (MT)**		**Yield (MT/Ha)**	
	2022	**2023**	**2022**	**2023**	**2022**	**2023**
Abia	308,059.02	313,604.08	2,058,431.62	2,106,040.13	6.68	6.72
Akwa Ibom	244,567.77	248,969.99	2,175,556.70	2,225,874.15	8.90	8.94
Anambra	132,713.67	135,102.52	742,593.05	759,768.14	5.60	5.62
Bayelsa	273,808.00	278,736.55	1,060,115.48	1,084,634.40	3.87	3.89
Benue	172,599.82	175,706.61	2,710,511.34	2,773,201.50	15.70	15.78
C/Rivers	272,255.14	277,155.73	2,544,325.53	2,603,172.05	9.35	9.39
Delta	131,184.83	133,546.15	1,180,135.32	1,207,430.12	9.00	9.04
Ebonyi	283,221.23	288,319.21	2,667,607.19	2,729,305.03	9.42	9.47
Edo	372,822.97	379,533.78	2,899,604.95	2,966,668.56	7.78	7.82
Ekiti	187,247.95	190,618.41	1,468,192.95	1,502,150.10	7.84	7.88
Enugu	222,755.66	226,765.26	2,962,088.34	3,030,597.11	13.30	13.36
FCT	601,237.77	612,060.05	2,505,584.15	2,563,534.65	4.17	4.19

Table 12.12: Land Area and Production Estimates for Yam (cont.)

| State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Imo	80,412.64	81,860.07	285,913.67	292,526.44	3.56	3.57
Kaduna	161,009.38	163,907.55	2,274,270.46	2,326,871.00	14.13	14.20
Kebbi	124,933.36	127,182.16	811,474.94	830,243.17	6.50	6.53
Kogi	156,526.89	159,344.38	1,474,399.57	1,508,500.28	9.42	9.47
Kwara	206,026.37	209,734.85	1,850,693.10	1,893,496.92	8.98	9.03
Nasarawa	190,145.56	193,568.18	3,727,330.58	3,813,538.28	19.60	19.70
Niger	293,971.19	299,262.68	4,934,611.55	5,048,741.89	16.79	16.87
Ogun	135,491.22	137,930.06	869,995.77	890,117.50	6.42	6.45
Ondo	199,406.70	202,996.02	1,917,781.41	1,962,136.89	9.62	9.67
Osun	176,738.11	179,919.40	2,124,293.62	2,173,425.43	12.02	12.08
Oyo	301,263.24	306,685.98	1,381,758.97	1,413,717.04	4.59	4.61
Plateau	110,117.13	112,099.24	1,456,780.76	1,490,473.96	13.23	13.30
Rivers	497,348.10	506,300.36	1,151,004.21	1,177,625.25	2.31	2.33
Taraba	278,786.77	283,804.93	2,955,865.03	3,024,229.86	10.60	10.66
National	**6,114,650.48**	**6,224,714.18**	**52,190,920.25**	**53,398,019.83**		
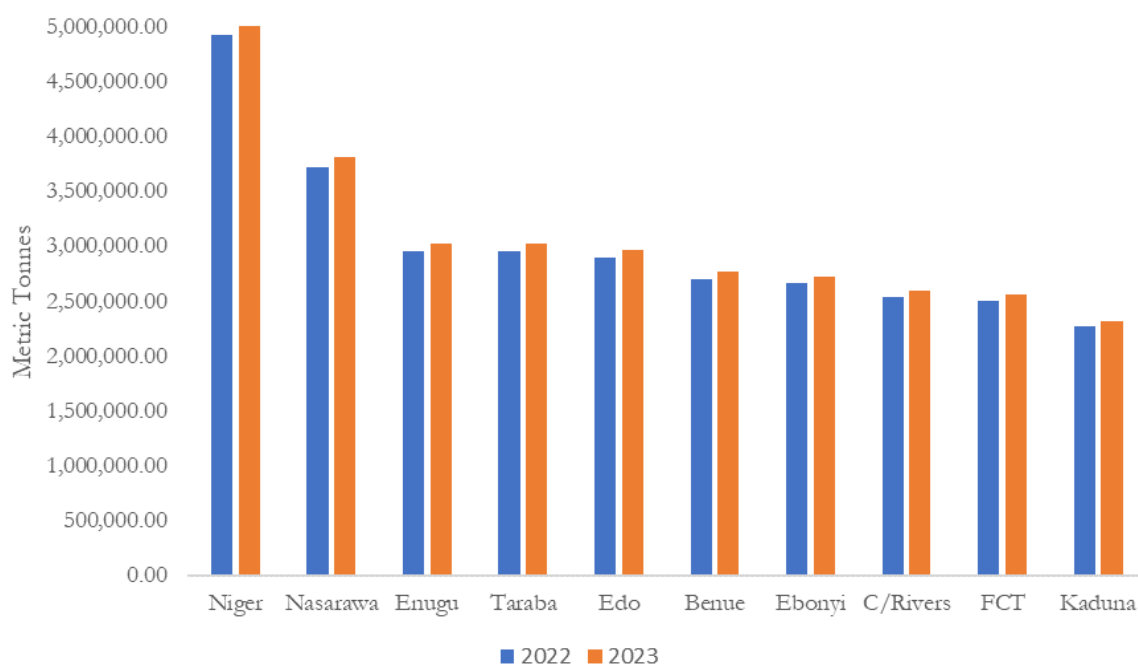
Figure 12.23: Production estimates of the top 10 Yam-producing States in 2022 and 2023
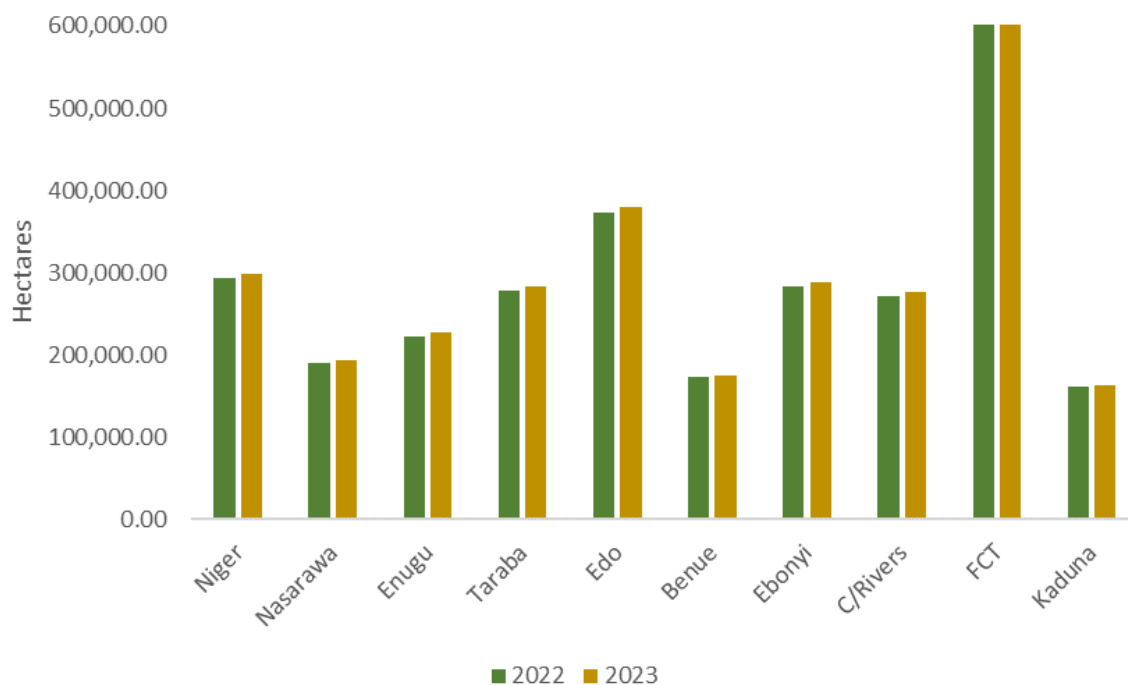
Figure 12.24: Land area cultivated by the top 10 Yam-producing states in 2022 and 2023

12.13   Cassava

Total Cassava production as presented in Table 12.13, Figures 12.25 and 12.26 showed an increase of 2.24% from 61,657,582 MT in 2022 to 63,068,548 MT in 2023. Benue State produced the highest volume (4,000,000 MT). A total of 9,153,856 hectares of land was committed to Cassava production in 2023, compared with 9,005,269 hectares cultivated in 2022, that is, an increase of 1.65%.

Table 12.13: Land Area and Production Estimates for Cassava

Cassava						
State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Benue	404,933.89	411,615.30	4,018,283.99	4,110,238.00	9.92	9.99
FCT	345,123.94	350,818.48	1,957,246.01	2,002,035.43	5.67	5.71
Kogi	357,234.37	363,128.74	3,798,751.39	3,885,681.64	10.63	10.70
Kwara	378,260.87	384,502.17	1,595,244.36	1,631,749.77	4.22	4.24
Nasarawa	284,459.01	289,152.59	1,924,769.31	1,968,815.54	6.77	6.81
Niger	339,411.64	345,011.94	1,807,134.11	1,848,488.39	5.32	5.36
Plateau	300,853.67	305,817.75	1,153,175.86	1,179,565.02	3.83	3.86
Taraba	187,002.42	190,087.96	1,558,924.71	1,594,598.99	8.34	8.39
North-Central	*2,597,279.82*	*2,640,134.94*	*17,813,529.75*	*18,221,172.78*		
Bauchi	129,231.22	131,363.54	533,438.16	545,645.30	4.13	4.15
Gombe	117,975.75	119,922.35	815,039.25	833,690.53	6.91	6.95
Yobe	173,755.16	176,622.12	532,017.23	544,191.86	3.06	3.08
North-East	*420,962.14*	*427,908.01*	*1,880,494.64*	*1,923,527.70*		
Jigawa	115,608.16	117,515.69	1,126,049.14	1,151,817.54	9.74	9.80
Kaduna	186,767.54	189,849.20	2,120,070.87	2,168,586.35	11.35	11.42
Katsina	153,348.75	155,879.00	417,051.65	426,595.42	2.72	2.74
Kebbi	127,117.30	129,214.73	671,472.21	686,838.11	5.28	5.32
Sokoto	81,296.82	82,638.22	347,792.42	355,751.27	4.28	4.30
Zamfara	107,641.01	109,417.09	240,179.04	245,675.27	2.23	2.25
North-West	*771,779.57*	*784,513.94*	*4,922,615.33*	*5,035,263.97*		
Abia	249,856.43	253,979.06	2,009,281.93	2,055,262.14	8.04	8.09
Anambra	250,683.21	254,819.48	2,365,309.25	2,419,436.75	9.44	9.49
Ebonyi	797,945.26	811,111.35	28,666.04	29,322.03	0.04	0.04
Enugu	229,684.89	233,474.69	2,352,477.88	2,406,311.75	10.24	10.31
Imo	309,901.26	315,014.64	3,687,542.64	3,771,928.00	11.90	11.97
South-East	*1,838,071.05*	*1,868,399.22*	*10,443,277.76*	*10,682,260.68*		
Akwa Ibom	286,197.13	290,919.38	2,145,593.66	2,194,693.21	7.50	7.54
Bayelsa	354,528.55	360,378.27	1,574,350.34	1,610,377.61	4.44	4.47
Cross River	407,573.95	414,298.92	2,739,657.86	2,802,351.92	6.72	6.76
Delta	227,909.20	231,669.70	1,969,474.56	2,014,543.82	8.64	8.70

Table 12.13: Land Area and Production Estimates for Cassava (cont.)

State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Edo	291,702.73	296,515.82	1,604,060.54	1,640,767.70	5.50	5.53
Rivers	599,067.28	608,951.89	3,508,021.95	3,588,299.17	5.86	5.89
South-South	*2,166,978.84*	*2,202,733.99*	*13,541,158.90*	*13,851,033.43*		
Ekiti	231,949.14	235,776.30	1,984,964.78	2,030,388.51	8.56	8.61
Lagos	242,772.43	246,778.18	1,546,599.28	1,581,991.50	6.37	6.41
Ogun	160,197.86	162,841.13	1,882,916.67	1,926,005.15	11.75	11.83
Ondo	212,482.25	215,988.21	3,652,837.68	3,736,428.85	17.19	17.30
Osun	179,119.83	182,075.31	2,032,447.28	2,078,957.60	11.35	11.42
Oyo	183,667.12	186,697.62	1,956,750.84	2,001,528.93	10.65	10.72
South-West	*1,210,188.63*	*1,230,156.74*	*13,056,516.53*	*13,355,300.55*		
National	**9,005,260.04**	**9,153,846.83**	**61,657,592.91**	**63,068,559.09**		
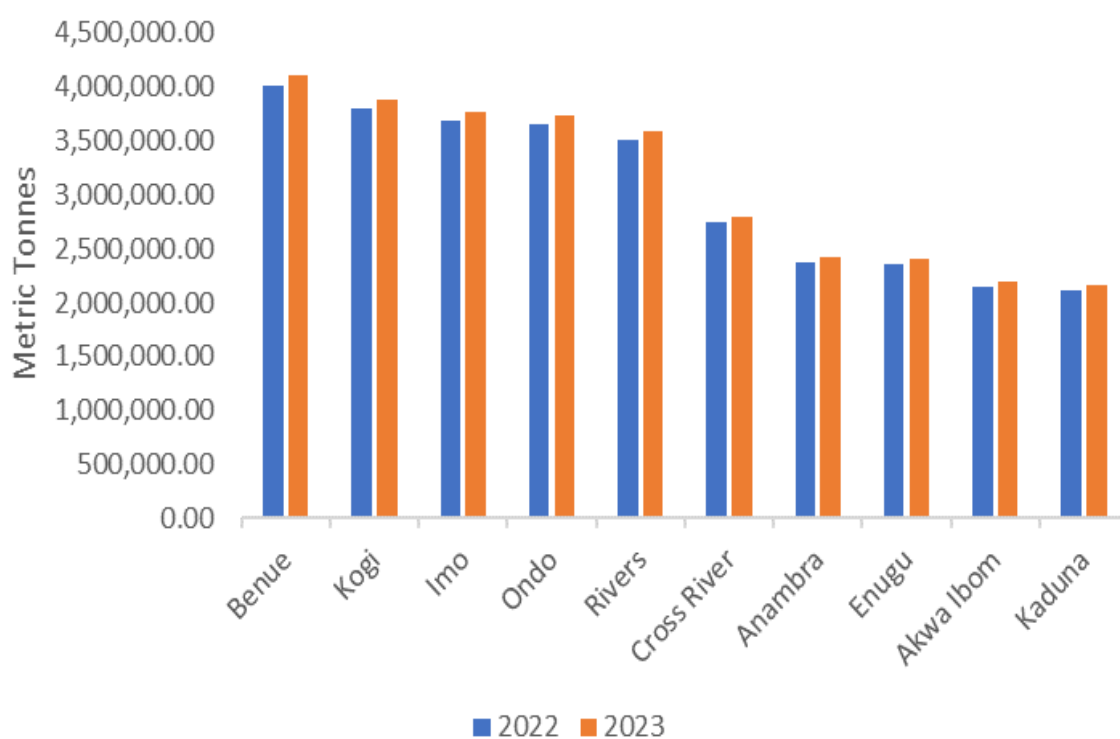
Figure 12.25: Production estimates of the top 10 Cassava-producing States in 2022 and 2023
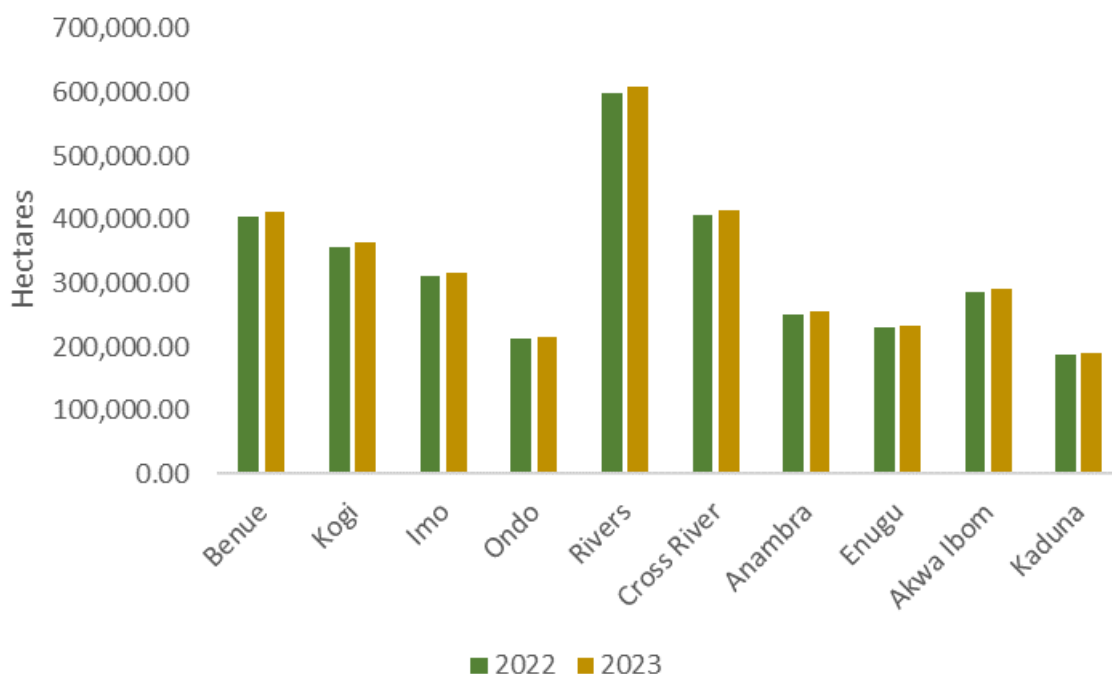
Figure 12.26: **Land area cultivated by the top 10 Cassava-producing States in 2022 and 2023**

12.14   Cocoyam

The national production estimate for Cocoyam in 2022 was 3,211,616.32 MT and 3,213,120.65 MT in 2023 **as** presented in Table 12.13, Figures 12.27 and 12.28. The result showed marginal percentage increase (0.4%), with same yield in 2022 and 2023. The total production estimate followed same trend in marginal increase with the cultivated land area, with 817,205.17 Ha devoted in 2022 and 821,880.00 Ha in 2023, that is, 0.005% increase. Bayelsa State is top in Cocoyam production with estimated 270,521.46 MT in 2022 and 270,648.17 MT in 2023.

Table 12.14: Land Area and Production Estimates for Cocoyam

Cocoyam						
State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Abia	30,961.99	31,139.11	160,723.82	160,799.11	5.19	5.16
Akwa Ibom	28,169.78	28,330.93	151,942.22	152,013.39	5.39	5.37
Anambra	75,400.89	75,832.22	262,493.35	262,616.31	3.48	3.46
Bayelsa	61,073.94	61,423.31	270,521.46	270,648.17	4.43	4.41
Benue	17,102.28	17,200.11	50,180.58	50,204.09	2.93	2.92
Borno	3,068.05	3,085.60	7,191.76	7,195.13	2.34	2.33
Cross River	20,125.29	20,240.42	171,162.33	171,242.50	8.50	8.46
Delta	23,350.97	23,484.55	81,598.67	81,636.89	3.49	3.48
Ebonyi	74,224.34	74,648.94	133,826.72	133,889.40	1.80	1.79
Edo	35,184.08	35,385.35	128,145.90	128,205.92	3.64	3.62

Table 12.14: Land Area and Production Estimates for Cocoyam (cont.)

State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Ekiti	25,388.83	25,534.07	189,640.78	189,729.60	7.47	7.43
Enugu	45,851.89	46,114.19	207,274.99	207,372.08	4.52	4.50
FCT	8,680.62	8,730.27	29,567.88	29,581.73	3.41	3.39
Imo	66,061.63	66,439.54	241,071.93	241,184.85	3.65	3.63
Kogi	12,210.28	12,280.13	84,462.75	84,502.32	6.92	6.88
Kwara	33,585.32	33,777.44	61,865.71	61,894.69	1.84	1.83
Lagos	26,255.77	26,405.97	58,457.22	58,484.60	2.23	2.21
Nasarawa	17,006.58	17,103.86	81,791.98	81,830.29	4.81	4.78
Niger	15,362.78	15,450.66	106,045.93	106,095.60	6.90	6.87
Ogun	18,126.84	18,230.53	119,080.25	119,136.03	6.57	6.53
Ondo	20,463.06	20,580.12	198,465.77	198,558.74	9.70	9.65
Osun	26,914.41	27,068.38	138,963.12	139,028.22	5.16	5.14
Oyo	29,211.23	29,378.33	51,790.15	51,814.40	1.77	1.76
Plateau	10,904.25	10,966.63	37,169.92	37,187.33	3.41	3.39
Rivers	20,975.34	21,095.33	108,468.16	108,518.97	5.17	5.14
Taraba	71,544.72	71,953.99	79,712.96	79,750.29	1.11	1.11
National Total	**817,205.17**	**821,880.00**	**3,211,616.32**	**3,213,120.65**	**3.93**	**3.91**
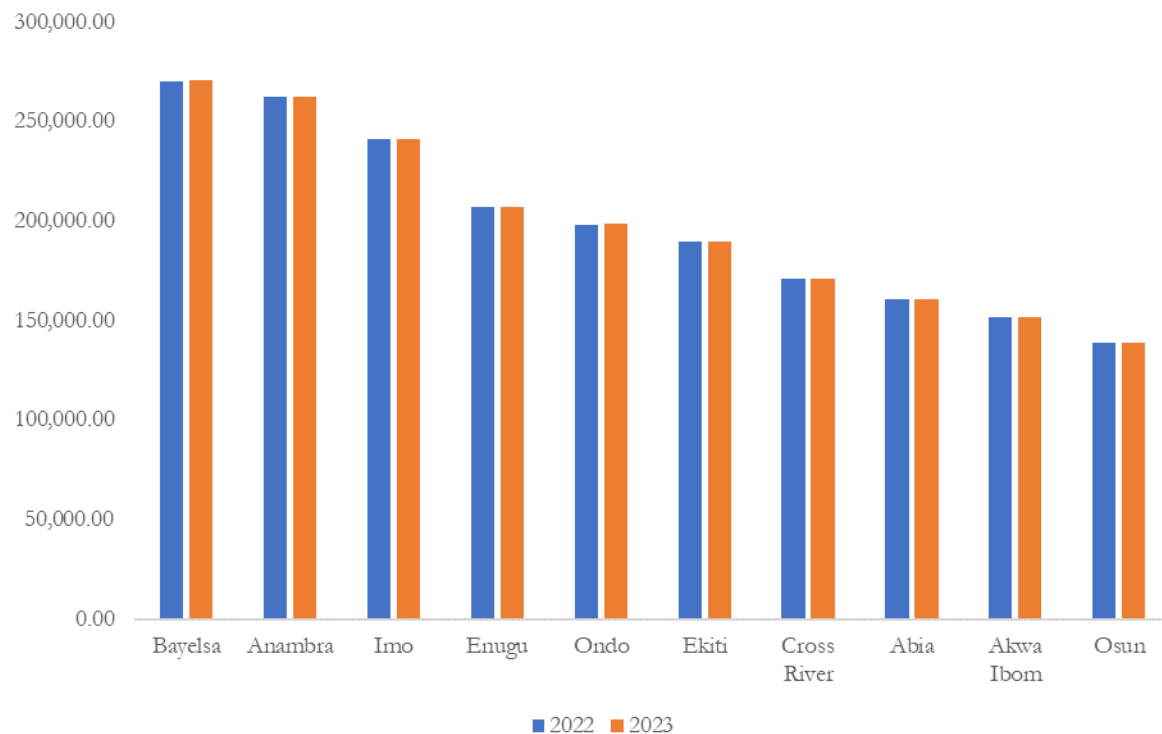
Figure 12.27: Production estimates of the 10 Cocoyam-producing States in 2022 and 2023
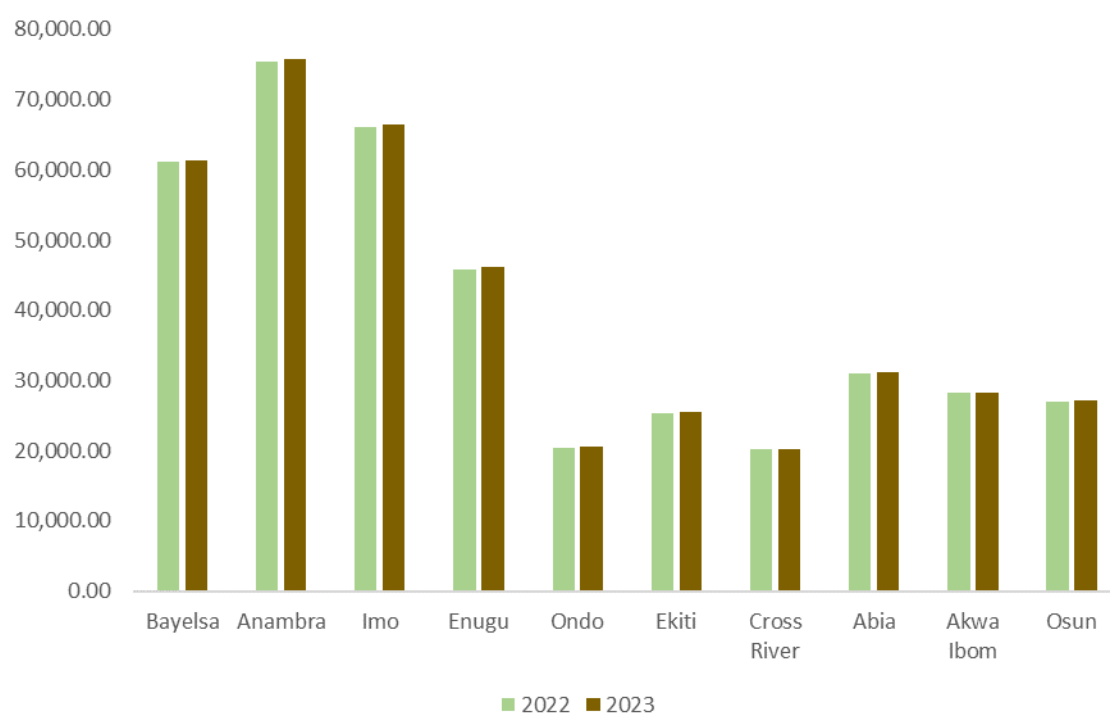
Figure 12.28: Production estimates of the Cocoyam-producing States in 2022 and 2023

12.15 Plantain/Banana

As shown in Table 12.15 and Figures 12.29 and 12.30, the national production estimate of Plantain/Banana is matched with Land Area estimate. When production estimate increase by 3.52% with 3,141,990.13 MT and 3,252,884.69 MT value in 2022 and 2023, the land area estimates increased by 1.18% with a value of 498,554.00 Ha and 504,378.83 Ha in 2022 and 2023 respectively. Ebonyi State had the highest Plantain/Banana production in 2022 **(**977,801.75 MT) and 2023 (1,101,144.55 MT) with percentage increase of 12.61%.

Table 12.15: Land Area and Production Estimates for Plantain/Banana

Plantain/Banana						
State	**Land Area (Ha)**		**Production (MT)**		**Yield**	
	2022	**2023**	**2022**	**2023**	**2022**	**2023**
Kwara	135,572.69	138,055.46	167,341.62	170,413.38	1.23	1.23
Abia	18,869.76	20,274.95	57,550.76	57,745.36	3.05	2.85
Ebonyi	50,649.42	41,831.10	977,801.75	1,101,144.55	19.31	26.32
Imo	46,473.79	54,827.39	198,619.66	231,833.71	4.27	4.23
Akwa Ibom	52,489.69	53,998.46	812,238.60	789,516.54	15.47	14.62
Bayelsa	81,672.43	88,659.31	225,276.13	247,608.72	2.76	2.79
Edo	104,773.87	97,223.78	694,223.85	644,197.46	6.63	6.63
Lagos	8,052.34	9,508.38	8,937.76	10,424.98	1.11	1.10
National	**498,554.00**	**504,378.83**	**3,141,990.13**	**3,252,884.69**	**6.30**	**6.45**
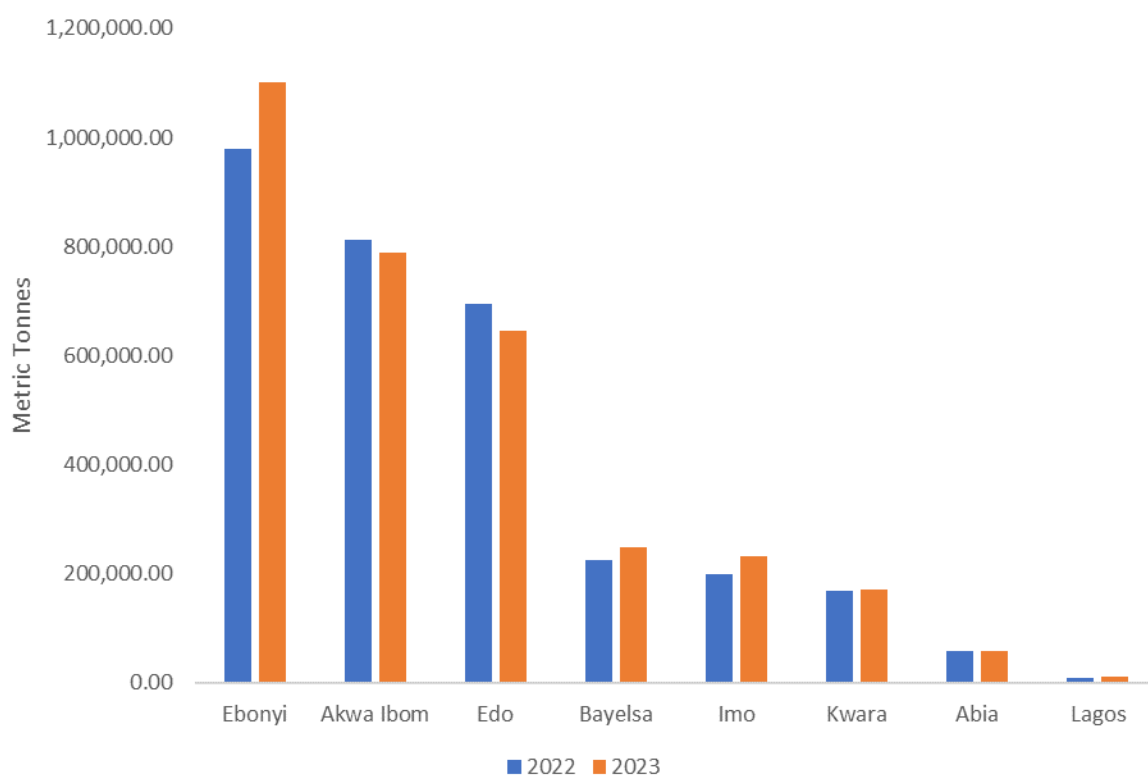
Figure 12.29: Production estimates of 8 major Plantain/Banana-producing States in 2022 and 2023
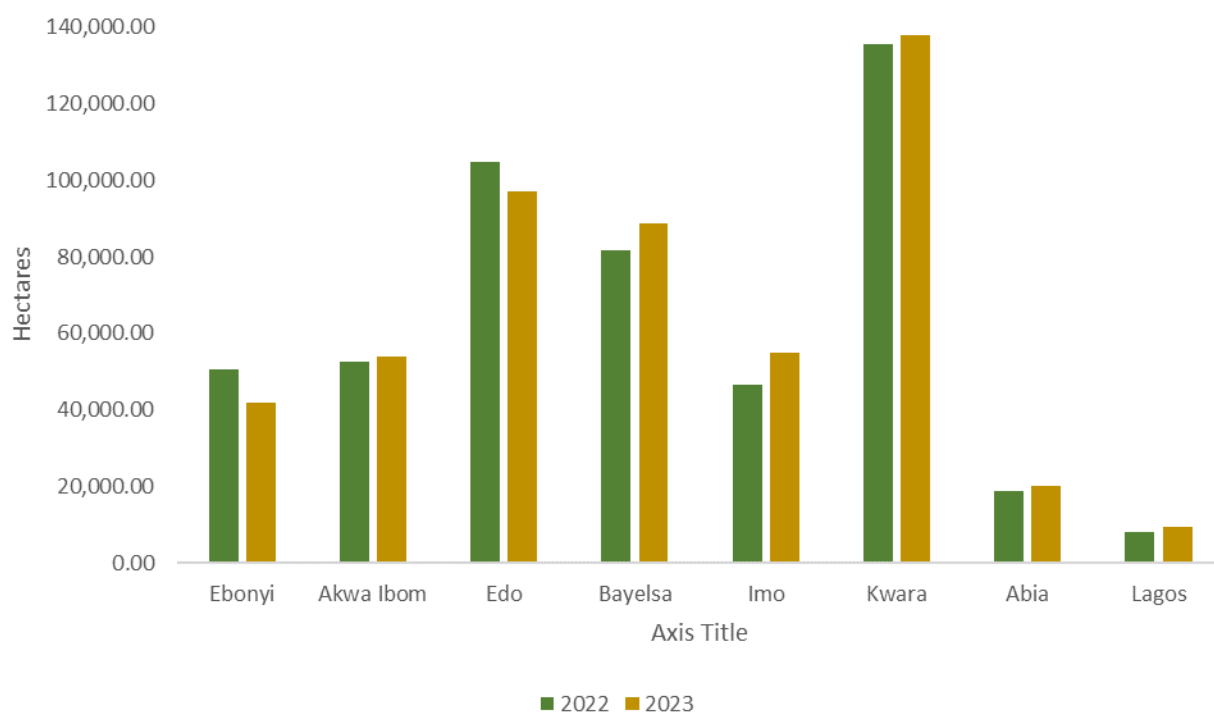

Figure 12.15.2:   Land area cultivated by the 8 major Plantain/Banana-producing states in 2022 and 2023

12.16   Cotton

The national estimate for cotton production was 279,350.70 MT in 2022 and 298,691.36 MT in 2023 (Table 12.16, Figures 12.31 and 12.32), indicating an increase in production by 6.48%. The total estimated land under cotton production was 382,868.45 hectares in 2023 as against 378,965.11 hectares in 2023, that is, an increase of 1.02%. Katsina State was the highest cotton producer in 2023, with 45,000MT. However in 2023, Bauchi State had the largest cultivated land for cotton, with 70,000 hectares, slightly above 2022 hecterage.

Table 12.16: **Land Area and Production Estimates for Cotton**

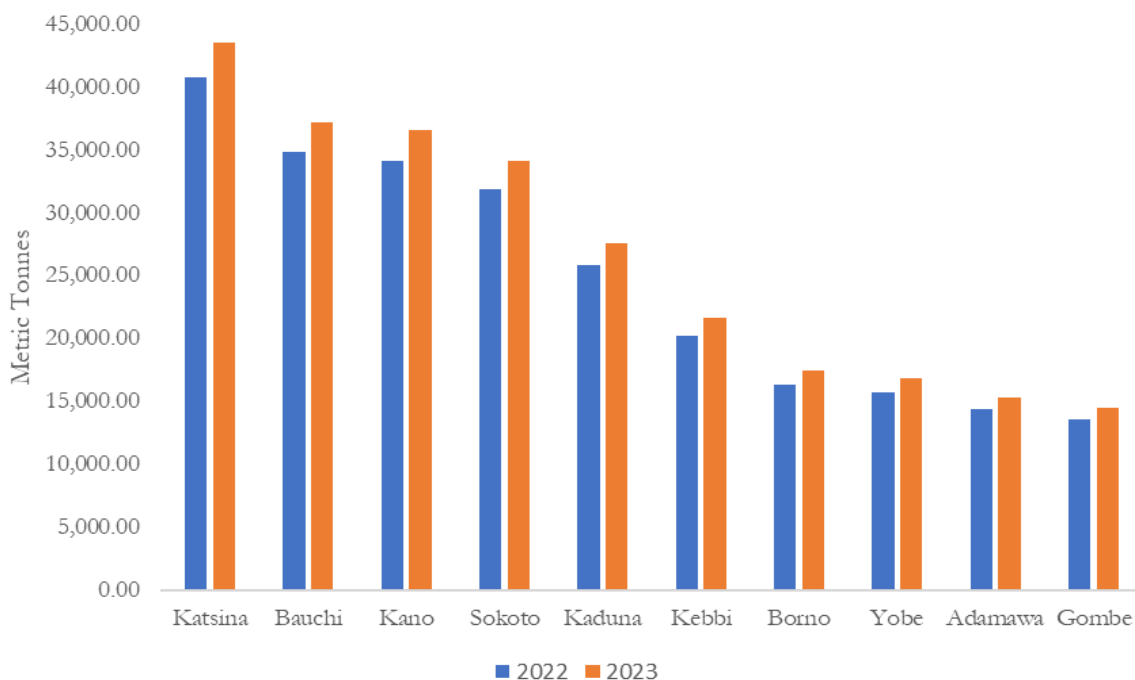| Cotton						
State	**Land Area (Ha)**		**Production (MT)**		**Yield (MT/Ha)**	
	2022	**2023**	**2022**	**2023**	**2022**	**2023**
Plateau	7,302.11	7,377.32	7,737.63	8,273.34	1.06	1.12
Taraba	16,897.87	17,071.92	5,712.50	6,108.00	0.34	0.36
North-Central	*24,199.98*	*24,449.24*	*13,450.13*	*14,381.34*		
Adamawa	18,898.25	19,092.90	14,386.61	15,382.66	0.76	0.81
Bauchi	73,224.12	73,978.33	34,825.19	37,236.29	0.48	0.50
Borno	34,675.61	35,032.77	16,364.91	17,497.93	0.47	0.50
Gombe	24,929.44	25,186.21	13,602.31	14,544.06	0.55	0.58
Yobe	24,861.76	25,117.84	15,779.62	16,872.11	0.63	0.67
North-East	*176,589.18*	*178,408.05*	*94,958.64*	*101,533.03*		
Jigawa	27,110.30	27,389.53	9,446.70	10,100.73	0.35	0.37
Kaduna	6,956.18	7,027.83	25,858.44	27,648.73	3.72	3.93
Kano	37,563.37	37,950.27	34,193.07	36,560.40	0.91	0.96
Katsina	41,594.19	42,022.61	40,771.81	43,594.62	0.98	1.04
Kebbi	29,426.52	29,729.61	20,298.11	21,703.44	0.69	0.73
Sokoto	28,629.38	28,924.26	31,922.12	34,132.22	1.12	1.18
Zamfara	5,015.97	5,067.63	5,513.50	5,895.22	1.10	1.16
North-West	*176,295.90*	*178,111.74*	*168,003.74*	*179,635.37*		
Oyo	1,895.09	1,914.61	2,914.78	3,116.58	1.54	1.63
South-West	*1,895.09*	*1,914.61*	*2,914.78*	*3,116.58*		
National	**378,980.15**	**382,883.65**	**279,327.29**	**298,666.33**		

Figure 12.31: Production estimates of the top 10 Cotton-producing States in 2022 and 2023
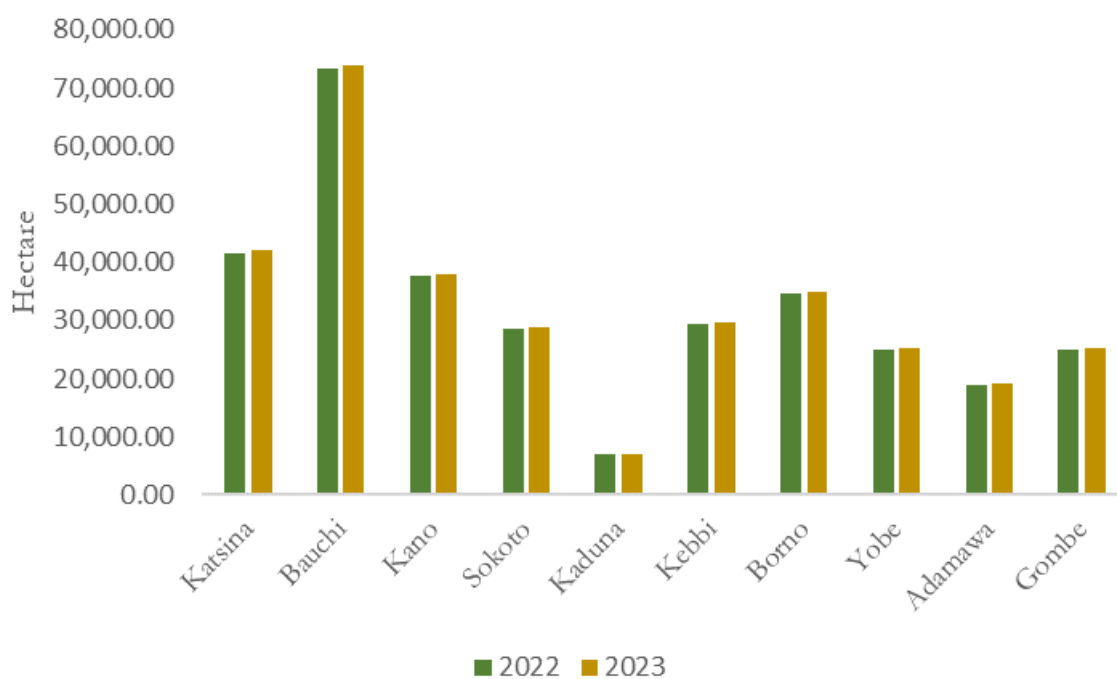

Figure 12.32: Land area cultivated by the top 10 Cotton-producing states in 2022 and 2023

12.17   Ginger

Table 2.12 and Figures 12.33 and 12.34 present the result of land area cultivated and production forecast for Ginger. The national estimated output decreased by 46.93%, that is, from 744,810 MT in 2022 to 395,249.53 MT in 2023. The national land area dedicated to ginger production increased from 87,930 hectares in 2022 to 89,082 hectares in 2023. These results indicated a 1.3% increase in land cultivated in 2023. Kaduna State was still the highest producer (213,277.26 MT) and largest cultivated land of about 40,000 hectares among the four Ginger producing States in 2023. According to the Ginger Farmers Association the high loss in Ginger production was due to strange disease occurrence resulting in economic loss estimated at about 10 billion naira.

Table 12.17: Land Area and Production Estimates for Ginger

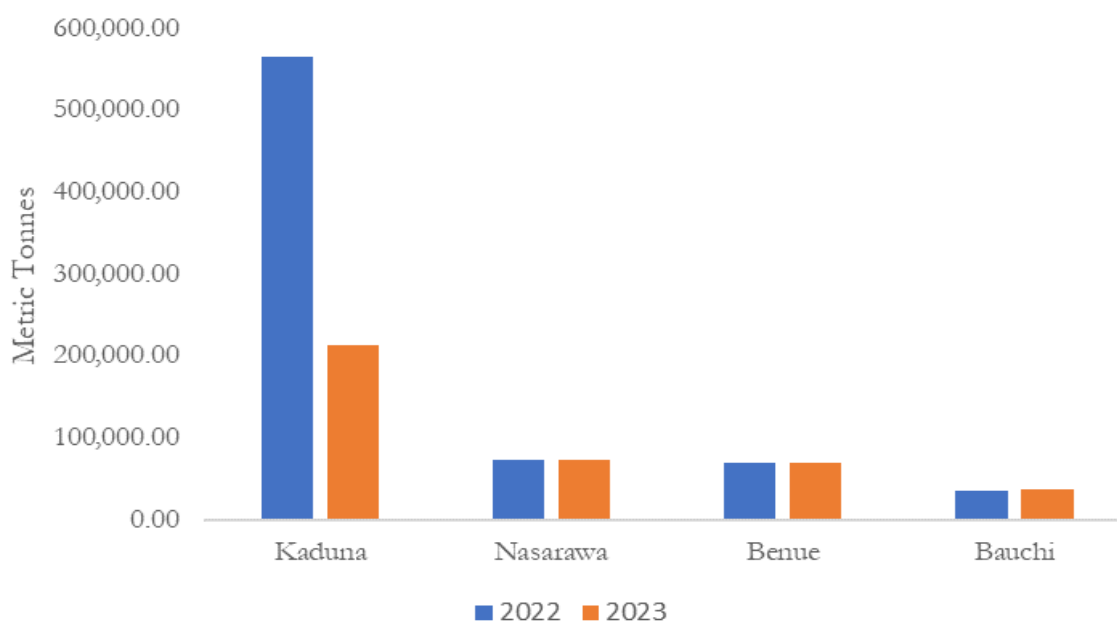| Ginger						
State	Land Area (Ha)		Production (MT)		Yield (MT/Ha)	
	2022	2023	2022	2023	2022	2023
Benue	8,424.64	8,535.00	69,397.97	70,663.99	8.24	8.28
Nasarawa	29,063.24	29,443.96	72,843.34	74,172.21	2.51	2.52
Bauchi	10,292.86	10,427.70	36,470.73	37,136.07	3.54	3.56
Kaduna	40,149.21	40,675.17	566,097.72	213,277.26	14.10	5.24
National	**87,929.95**	**89,081.83**	**744,809.76**	**395,249.53**		

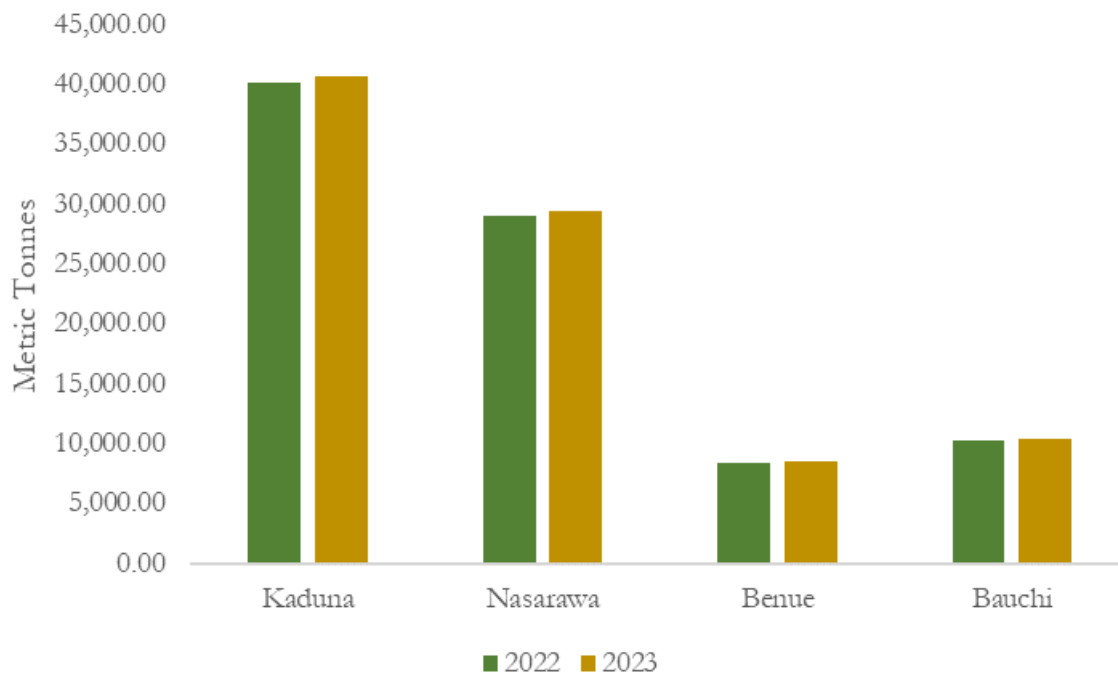**Figure 12.33: Production estimates of the 4 Ginger-producing States in 2022 and 2023**

Figure 12.34: Land area cultivated by the 4 Ginger-producing States in 2022 and 2023

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. Even with its vast animal population, Nigeria reaps only about 10% of its agricultural GDP. In the same vein, agriculture has suffered a shortfall in its contribution to nominal GDP from 23% in the year 2022 to 21.07% of GDP in the second quarter of 2023 as stated by National Bureau of Statistics. Nigeria livestock industry is faced with numerous challenges which immensely have impact on livestock productivity. Among these numerous challenges are insufficient animal husbandry inputs, inadequate technical support for animal health and underutilization of reproductive biotechnologies techniques. These have hindered full exploitation of the abundant livestock resources available in Nigeria. Also, urbanization has made   pastureland unavailable as cities and farmlands 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 and high cost of feed are also enormous limiting factors 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.

Table 13.1a: Livestock population in Nigeria in 2022 and 2023

State	Cattle		Sheep		Goat		Pig		Chicken		Guinea fowl	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Kogi	9,542,007	10,019,107	4,514,261	4,649,689	6,438,114	6,631,257	72,544	74,720	26,017,383	31,220,860	2,679,604	3,215,525
Kwara	5,500,000	5,775,000	453,830	467,445	2,296,920	2,365,827	15,000	15,450	7,395,073	8,874,088	993,765	1,192,518
Nasarawa	1,852,682	1,945,316	1,164,484	1,199,418	2,072,170	2,134,335	345,046	355,398	10,691,196	12,829,436	1,744,421	2,093,305
Niger	2,827,763	2,969,151	1,825,301	1,880,060	2,352,017	2,422,578	40,802	42,026	27,994,902	33,593,882	6,042,240	7,250,688
Benue	170,053	178,555	928,667	956,527	6,949,589	7,158,077	2,452,274	2,525,842	8,814,595	10,577,514	180,258	216,309
Plateau	1,009,258	1,059,721	2,709,956	2,791,255	4,868,451	5,014,504	1,919,514	1,977,100	24,074,248	28,889,098	919,122	1,102,946
FCT Abuja	42,359	44,477	222,757	229,440	1,178,460	1,213,814	33,258	34,256	6,803,397	8,164,077	58,573	70,288
North-Central	20,944,122	21,991,328	11,819,255	12,173,833	26,155,721	26,940,393	4,878,439	5,024,792	111,790,795	134,148,954	2,617,983	15,141,580
Gombe	1,300,000	1,365,000	1,400,000	1,442,000	3,018,000	3,108,540	121,847	125,502	12,230,008	14,676,010	3,096,161	3,715,393
Borno	2,395,416	2,515,186	2,944,965	3,033,314	3,091,843	3,184,598		-	4,914,404	5,897,285	117,042	140,450
Adamawa	1,583,968	1,663,166	1,826,865	1,881,671	2,119,646	2,183,235	788,740	812,402	1,142,160	1,370,592	452,317	542,780
Bauchi	751,042	788,594	275,322	283,581	490,151	504,856		-	14,991,007	17,989,209	2,629,120	3,154,944
Taraba	6,157,044	6,464,896	3,379,504	3,480,889	4,069,726	4,191,818	3,465,188	3,569,144	19,571,101	23,485,321	1,898,295	2,277,953
Yobe	1,399,573	1,469,552	1,603,226	1,651,323	2,491,833	2,566,588	72,326	74,496	25,170,122	30,204,147	8,865,073	10,638,088
North-East	13,587,042	14,266,394	11,429,883	11,772,779	15,281,199	15,739,635	4,448,101	4,581,544	78,018,802	93,622,563	17,058,007	20,469,608
Jigawa	3,100,605	3,255,635	6,046,893	6,228,300	7,011,869	7,222,225		-	19,785,482	23,742,579	3,792,570	4,551,084
Kaduna	925,130	971,386	1,902,890	1,959,977	2,358,872	2,429,638	766,627	789,626	22,130,856	26,557,028	915,156	1,098,188
Kano	3,844,173	4,036,382	4,472,026	4,606,187	4,912,741	5,060,123		-	36,317,899	43,581,479	7,056,415	8,467,698
Katsina	2,795,410	2,935,181	4,469,620	4,603,709	7,201,341	7,417,381			24,727,510	29,673,012	5,524,244	6,629,092
Kebbi	1,297,171	1,362,030	2,402,672	2,474,752	3,514,715	3,620,157	108,385	111,637	19,790,573	23,748,688	7,897,059	9,476,471
Zamfara	4,271,779	4,485,368	8,109,762	8,353,055	8,109,190	8,352,466			30,313,047	36,375,656	15,254,544	18,305,453
Sokoto	554,573	582,302	1,458,511	1,502,266	1,338,742	1,378,905			15,307,969	18,369,563	5,202,145	6,242,575
North-West	16,788,841	17,628,283	28,862,374	29,728,245	34,447,470	35,480,894	875,012	901,263	168,373,337	202,048,005	45,642,133	54,770,560

Table13.1a: Livestock Population in Nigeria for 2022 and 2023 (Cont'd)

State	Cattle		Sheep		Goat		Pig		Chicken		Guinea fowl	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Abia			241,944	249,202	560,850	577,675	452,005	465,565	3,807,276	4,568,731	461,275	553,530
Anambra	112,119	117,725	174,846	180,092	583,398	600,900	88,490	91,144	11,736,052	14,083,262		-
Ebonyi	18,712	19,647	241,966	249,225	1,275,134	1,313,388		-	18,142,486	21,770,984		-
Enugu	3,275	3,439	177,552	182,879	1,788,234	1,841,881	90,496	93,211	16,022,354	19,226,825	98,200	117,840
Imo		-	327,646	337,475	1,917,328	1,974,848	358,429	369,182	27,499,157	32,998,988	113,019	135,623
South-East	134,106	140,811	1,163,954	1,198,873	6,124,944	6,308,692	989,420	1,019,102	77,207,325	92,648,790	672,494	806,993
Akwa-Ibom	47,884	50,278	1,076,095	1,108,378	2,605,494	2,683,659	2,059,590	2,121,378	8,909,958	10,691,950	920,250	1,104,300
Bayelsa		-		-		-		-	.			-
Cross River		-	147,261	151,679	284,863	293,409	46,027	47,408	7,570,855	9,085,026		-
Delta	296,554	311,382	254,941	262,589	2,388,564	2,460,221	43,610	44,919	6,255,469	7,506,563		-
Edo	2,527,594	2,653,974	691,104	711,837	1,536,806	1,582,910	119,728	123,320	12,765,780	15,318,936	15,751	18,901
Rivers	3,778	3,967	35,956	37,035	2,267,836	2,335,871	17,484	18,009	7,685,432	9,222,518		-
South-South	2,875,810	3,019,601	2,205,357	2,271,517	9,083,563	9,356,070	2,286,440	2,355,033	43,187,495	51,824,994	936,001	1,123,202
Lagos	2,203,050	2,313,203	1,220,650	1,257,270	1,310,200	1,349,506	16,753	17,255	16,019,261	19,223,113	783,000	939,600
Ogun	1,251,296	1,313,861	639,920	659,118	3,559,156	3,665,931	1,058,092	1,089,835	21,697,824	26,037,389	177,141	212,569
Ondo	47,552	49,930	180,362	185,773	2,954,080	3,042,702	1,054,932	1,086,580	3,855,240	4,626,288		-
Osun		-	740,653	762,873	4,758,730	4,901,492	215,300	221,759	8,199,649	9,839,579		-
Oyo	113,469	119,142	993,000	1,022,790	3,846,963	3,962,372	336,279	346,367	33,707,660	40,449,192	532,350	638,820
Ekiti	830,954	872,502	1,029,036	1,059,907	1,233,768	1,270,781	489,705	504,396	335,783	402,939	1,774	2,128
South-West	4,446,321	4,668,637	4,803,621	4,947,730	17,662,896	18,192,783	3,171,060	3,266,192	83,815,416	100,578,500	1,494,264	1,793,117
National	58,776,242	61,715,054	60284445	62092978	108755793	112,018,466	16648471	17147925	562393170.7	674871804	78420883	94105059

Table13.1b: Livestock Population in Nigeria for 2022 and 2023

State	Duck 2022	Duck 2023	Turkey 2022	Turkey 2023	Pigeon 2022	Pigeon 2023	Donkey 2022	Donkey 2023	Rabbit 2022	Rabbit 2023	Camel 2022	Camel 2023	Horse 2022	Horse 2023
Kogi	3,965,906	4,759,088	419,083	460,992	193,389	212,728	621	646		-			67	70
Kwara	-	-		-				-	3,800	3,914				
Nasarawa	2,224,424	2,669,308	460,024	506,026	97,473	107,220	3,116	3,241	33,340	34,340				
Niger	1,584,605	1,901,526		-	431,939	475,133		-	323,943	333,661	4,286	4,457		
Benue	652,581	783,097	20,337	22,370	161,944	178,139		-	74,476	76,711				
Plateau	631,873	758,248	258,961	284,857		-		-	60,418	62,230				
Fct Abuja	280,781	336,937	46,754	51,429	793	872		-		-				
North-Central	9,340,170	11,208,204	1,205,159	1,325,675	885,538	974,092	3,737	3,886	495,977	510,856	4,286	4,457	67	70
Gombe	2,916,527	3,499,832			827,460	910,206	18,665	19,411		-			5,316	5,529
Borno	124,653	149,583		-	36,010	39,611	188,354	195,888		-			21,146	21,992
Adamawa	210,330	252,396	24,232	26,656	645	710		-	48,559	50,015				
Bauchi	2,770,754	3,324,905		-		-	1,899	1,975		-	12,418	12,915		
Taraba	2,169,700	2,603,639	482,518	530,770	153,397	168,737	349,682	363,669	56,256	57,944		-	50,001	52,001
Yobe	4,680,369	5,616,442	64,169	70,586	332,449	365,694	1,447	1,505		-	657	683		
North-East	12,872,332	15,446,799	570,920	628,012	,349,962	,484,958	560,047	582,449	104,815	107,959	13,075	13,598	76,463	79,521
Jigawa	1,528,206	1,833,847	119,361	131,297	709,590	780,549	32,944	34,262		-	16,844	17,518	16,874	17,549
Kaduna	2,532,147	3,038,577		-	86,558	95,214		-		-				
Kano	4,174,785	5,009,742	900,950	991,045	1,091,888	1,201,076	178,202	185,330		-	167,904	174,620	81,658	84,924
Katsina	235,594	282,713		-	298,302	328,132	114,340	118,914		-	12,558	13,060		
Kebbi					10,408	11,449	108,616	112,961			66,168	68,814	5,502	5,722
Zamfara					735,335	808,868	434,675	452,063	68,678	70,738	7,372	7,667	9,068	9,431
Sokoto	558,719	670,463	29,309	32,240	612,110	673,321	201,395	209,451			79,095	82,259		
North-West	16,020,646	19,224,775	1,049,620	1,154,582	3,544,190	3,898,609	1,070,174	1,112,981	68,678	70,738	349,940	363,938	113,102	117,626

Table13.1b: Livestock Population in Nigeria for 2022 and 2023 (Cont'd)

State	Duck		Turkey		Pigeon		Donkey		Rabbit		Camel		Horse	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Abia	136,788	164,146	20,261	22,287					40,440	41,653				
Anambra	-	-	443,526	487,879		-				-				
Ebonyi	-	-		-		-			5,876	6,053				
Enugu	-	-	329,641	362,605		-				-				
Imo	138,938	166,725	148,217	163,039		-			39,040	40,211				
South-East	275,726	330,871	941,645	1,035,810	-	-			85,356	87,917				
Akwa-Ibom	739,446	887,335	88,941	97,836		-			4,398,984	4,530,954				
Cross River	460,346	552,415		-		-				-				
Delta	-	-	22,525	24,778		-			4,432,771	4,565,754				
Edo	593,769	712,523	228,232	251,055		-			85,557	88,123				
Rivers	-	-	6,302	6,932		-			20,655	21,274				
South-South	1,793,561	2,152,273	346,000	380,600	-	-			8,937,966	9,206,105				
Lagos	382,364	458,837	545,500	600,050	18,200	20,020	480	499	1,100,000	1,133,000	1,350	1,404	582	605
Ogun	1,094,665	1,313,598	316,340	347,974		-		-	59,606	61,395			292	304
Ondo	132,387	158,864	27,779	30,557		-		-	234,595	241,633				
Osun	-	-	14,448	15,893		-		-		-				
Oyo	1,775,553	2,130,663							24,262	24,990				
Ekiti	4,052	4,862	197	217	2,370	2,607			78,344	80,694				
South-West	3,389,020	4,066,824	904,264	994,690	20,570	22,627	480	499	1,496,808	1,541,712	1,350	1,404	874	909
National	43691455	52429746	5017608	5519368	5800260	6380286	1634437	1699815	11189599	11525287	368651.6	383397.6	190505.4	198125.6

Source: Federal Department of Animal Production and Husbandry Services, FMAFS, Abuja
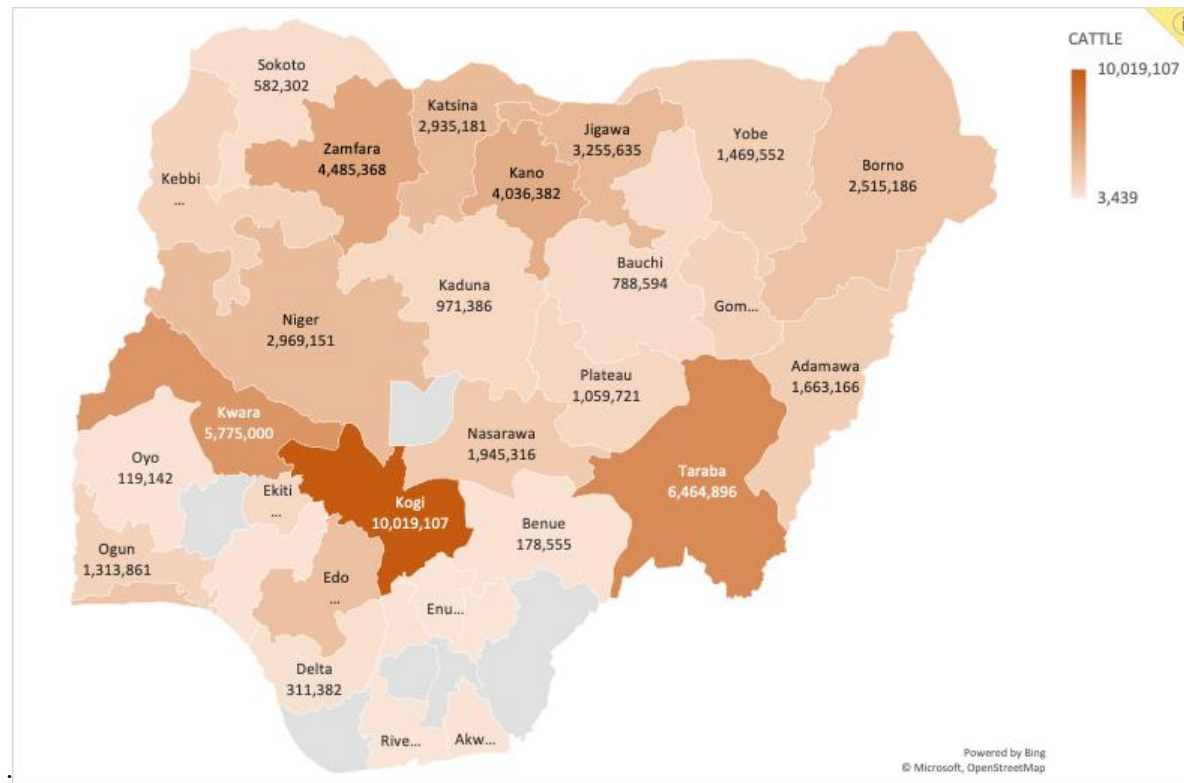
Figure 13.1: Twenty-one States in Nigeria with the most of population of sheep in 2023 account for 98.88% of the stocks
Source: Federal Department of Animal Production and Husbandry Services, FMAFS, Abuja
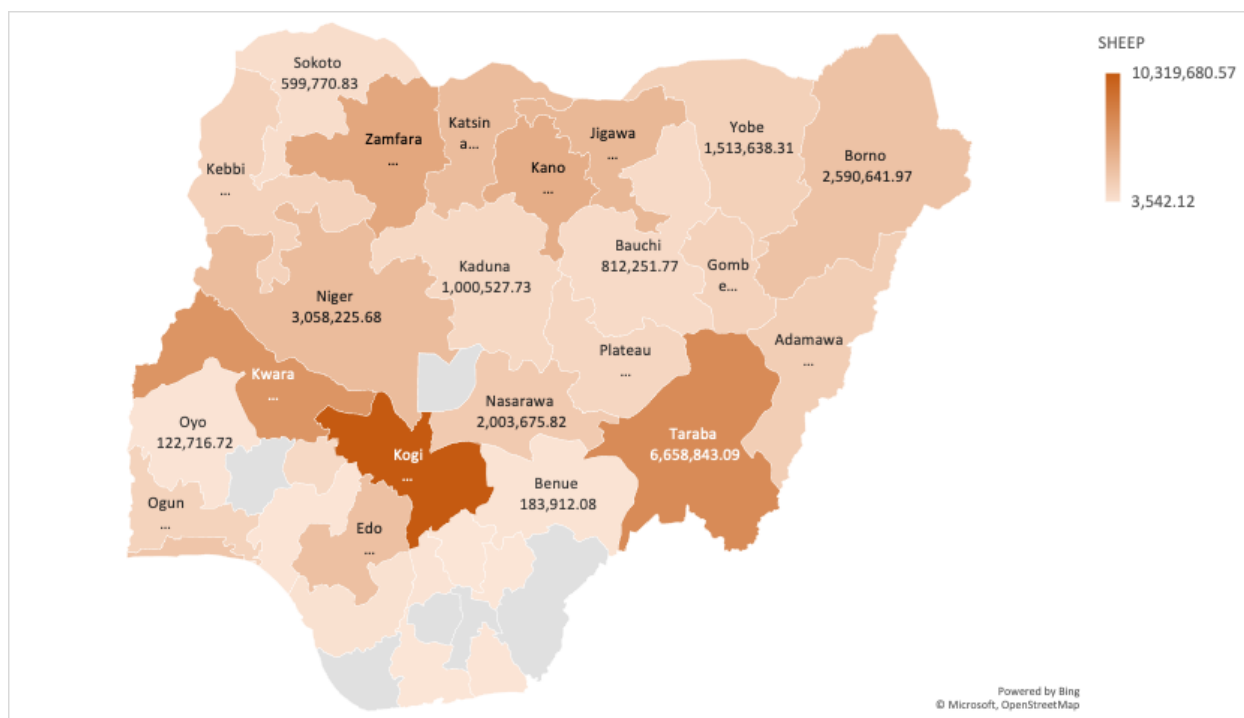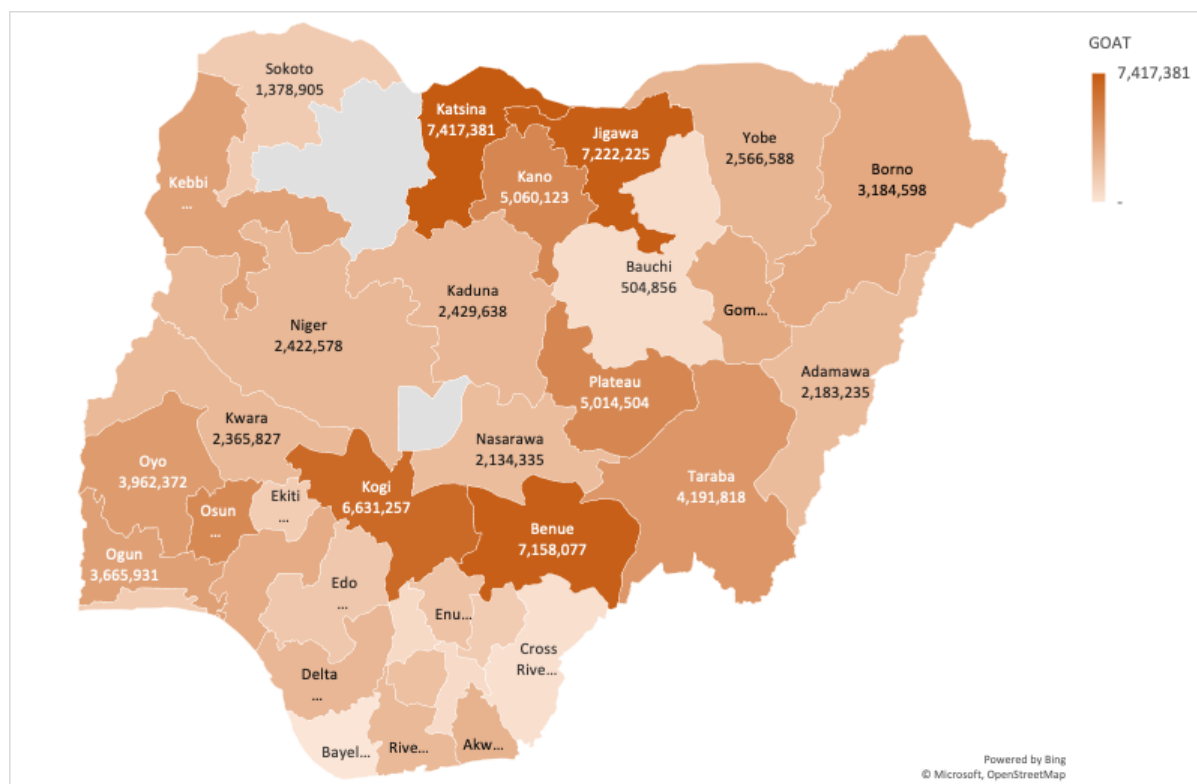
Figure 13.2: Twenty States in Nigeria with the most of population of sheep in 2023 account for 98.88% of the stocks
Source: Federal Department of Animal Production and Husbandry Services, FMAFS, Abuja

Figure 13.3: Thirty-One States in Nigeria that have above one million goats in 2023 account for 97.93% of the stocks
Source: Federal Department of Animal Production and Husbandry Services, FMAFS, Abuja
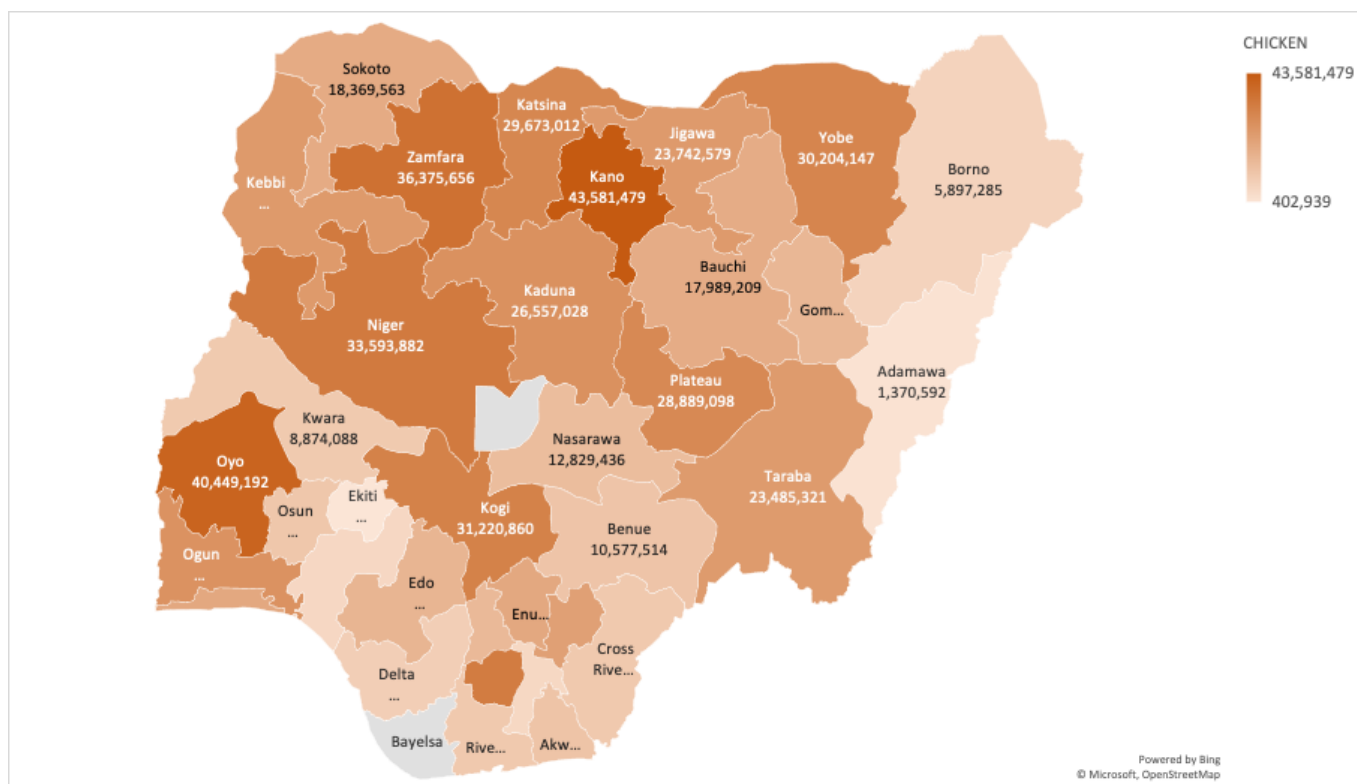
Figure 13.4: Thirty-three States and FCT Abuja have above one million chicken population in 2023
Source: Federal Department of Animal Production and Husbandry Services, FMAFS, Abuja
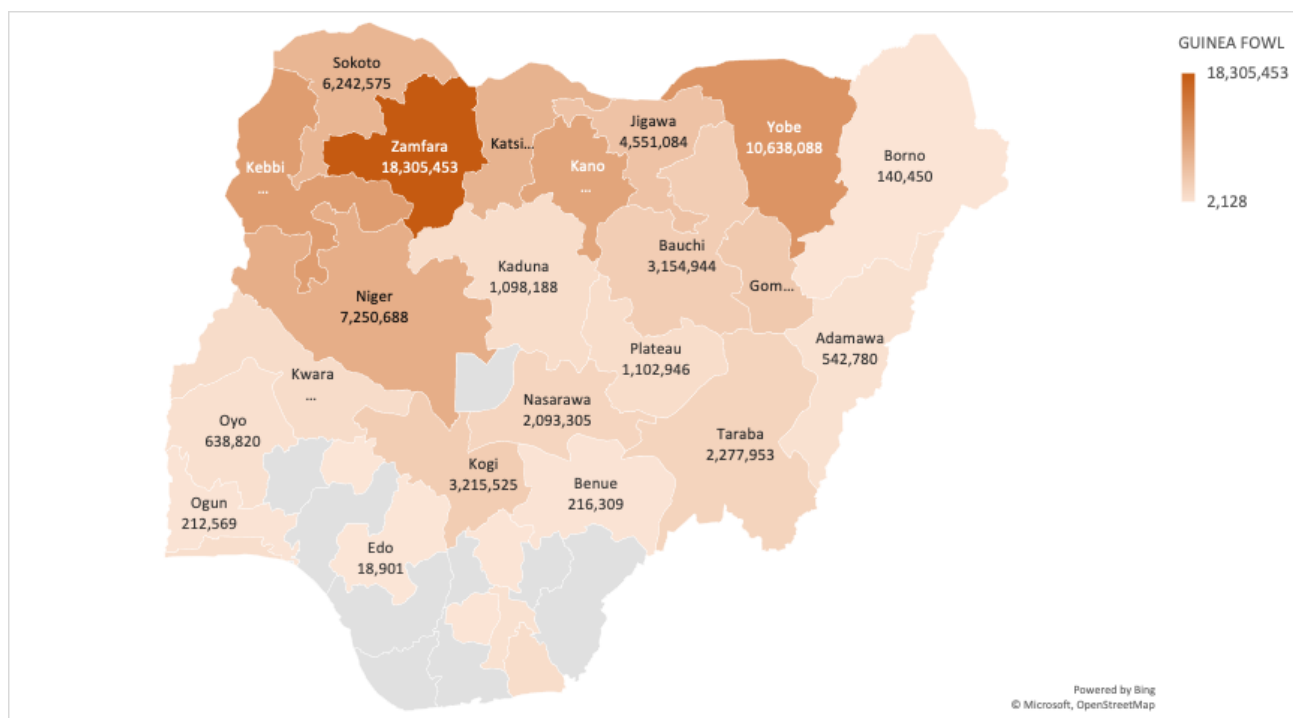
Figure 13.5 States with prominent populations of Guinea Fowls in Nigeria. The population of guinea fowls in 20 States make up 99.02% of the stock in the country. *Source: Federal Department of Animal Production and Husbandry Services, FMARD, Abuja*
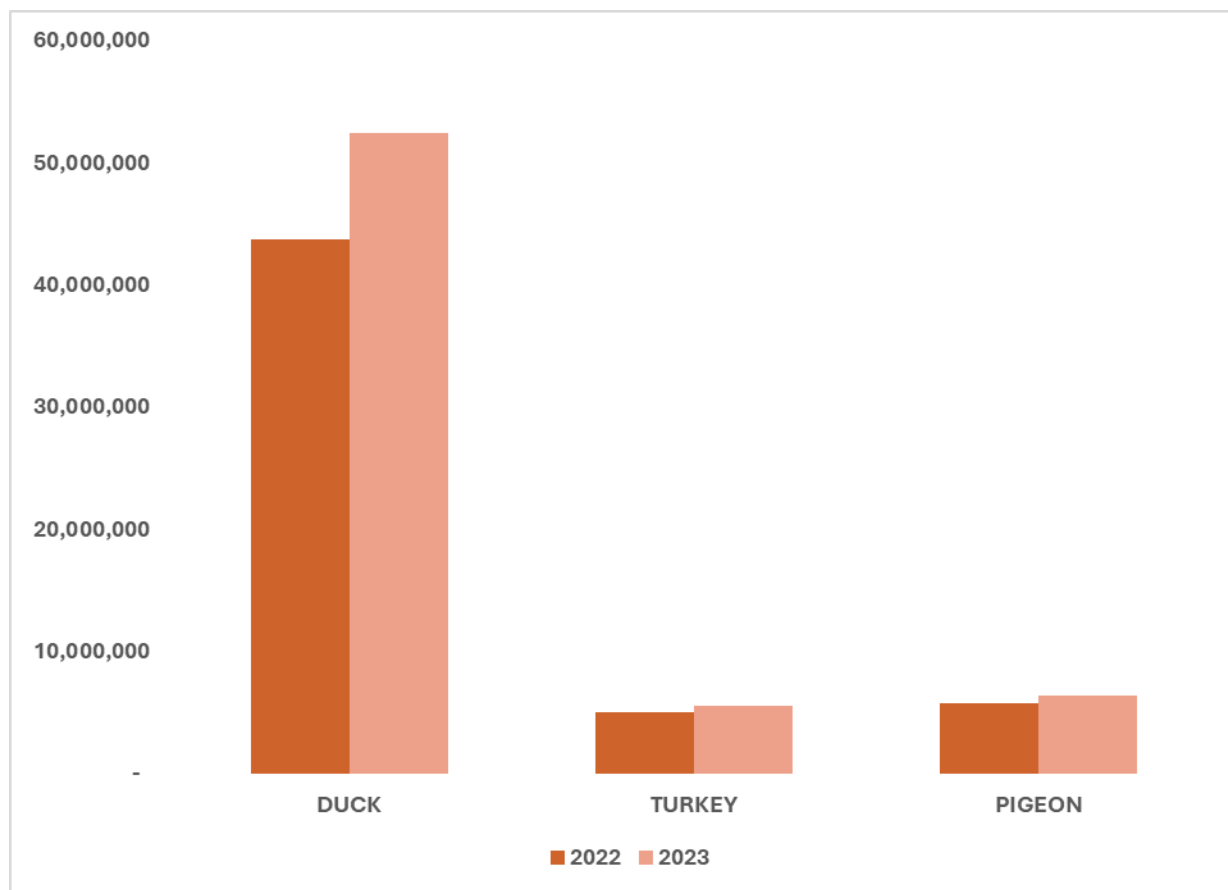
Figure 13.6: Population of other poultry birds in Nigeria
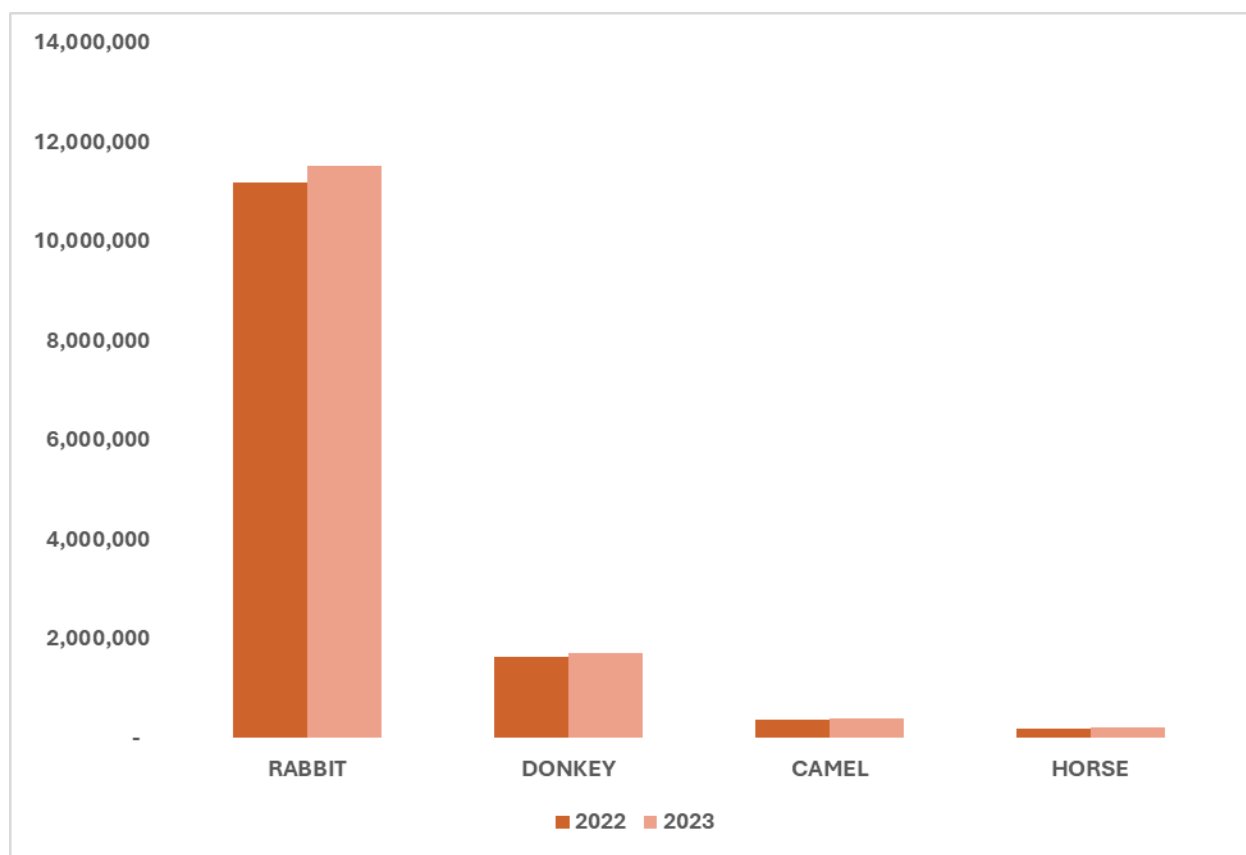*Source: Federal Department of Animal Production and Husbandry Services, FMAFS, Abuja*

Figure 13.7: Population of other livestock in Nigeria
Source: Federal Department of Animal Production and Husbandry Services, FMAFS, Abuja

13.2   Livestock Production Inputs

Table 13.2 shows the information on livestock farm inputs procured and distributed to farmers. Only 16 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.

Table13.2: Livestock Farm Inputs (Government Sources)

States	Inputs	Quantity provided			Quantity Distributed	No of the farm families benefited	Accessible by farmers		Affordable by farmers		Total Estimated requirement for the State
		FG	State	Others			Yes	No	Yes	No	
North-Central											
Niger state	Day old chicks	FG			2000	25	Yes		Yes		
	Livestock Vaccines		State		25	25	Yes		Yes		25
Nasarawa	Poultry vaccines/ drugs	FG			20,000		Yes		Yes		1,500,000
	Livestock feed ingredients	FMARD			Gamba grass seeds Napier cuttings Mucuna mucuna seeds Stylosanthes hamate seeds		Yes		Yes		
	Livestock vaccines/drugC BPP Vaccine	FG			30,000 doses		Yes		Yes		1,000,000
	PPR vaccine				8,000 doses						150,000
	FMD vaccine				200 doses						1,000
North-East											
Adamawa	Livestock vaccines			ICRC	LBPPV 400,000 viles						
Borno	Day old chicks			FAO	500	20	Yes				100,000
	Poultry feeds			FAO	2500kg	20	Yes		Yes		2000MT
Gombe	Day old chicks		State		1000	20	Yes		Yes		100,000
	Poultry vaccines NCD/ LASOTA		State		20,000	5000	Yes		Yes		50,000
	Poultry Feeds		State		100	20	Yes		Yes		
	Parent stock (Livestock)		State		1838	612	Yes		Yes		16,000
	Livestock Feed				2850	1500	Yes		Yes		50,000 bags
	Livestock feed ingredients (Mineral salt lick)				625 (salt lick)	1500	Yes		Yes		30000 blocks of mineral salt licks
	Livestock vaccine										
	PPR vaccine		State		395,272	255,000	Yes		Yes		800,000
	CBPP VAC		State		579,662	420,000	Yes		Yes		100,000
	Rabies	FG			25,500	21,200	Yes		Yes		50,000

Table13.2: Livestock Farm Inputs (Government Sources) (Cont'd)

States	Inputs	Quantity provided			Quantity Distributed	No of the farm families benefited	Accessible by farmers		Affordable by farmers		Total Estimated requirement for the State
		FG	State	Others			Yes	No	Yes	No	
North West											
Kaduna	Poultry vaccine	FG			50,000 doses of Newcastle disease vaccines.	All LGA	Yes		Yes		1,000,000 doses
Kano	Day old chicks		State		101500	2030	Yes		Yes		10,000,000
	Poultry Vaccine (LASOTA)		State		10150	2030	Yes		Yes		
					71,000	165,000					
	Poultry feeds		State		10,150	2030	Yes		Yes		
	Livestock feeds				77000	5500	Yes		Yes		
	Livestock vaccines/ Drugs				22,000 252,000 134,000	5500 1025000 750,000	Yes		Yes		
Katsina	Livestock feed	400	69,230		69,230		Yes		Yes		100,000 bags
South East											
Abia	Day old		900		500	180	Yes		Yes		
	Poultry vaccines		3600		2000	180	Yes		Yes		
	Poultry feeds		72,000		400	180	Yes		Yes		
Ebonyi	Day old chicks (broilers)							No		No	10,000,000
	Day old chicks (layers)							No		No	8,000,000
	Poultry feeds (broilers)							No		No	2,000,000
	Poultry feeds (Layers)							No		No	2,000,000
	Poultry feed ingredients (Maize)							No		No	1000
	Poultry feed ingredients (Rice)										400,000 tons
	Poultry vaccine (NCDV)	15,000			15,000doses	30					100,000 doses

Table13.2: Livestock Farm Inputs (Government Sources) (Cont'd)

States	Inputs	Quantity provided			Quantity Distributed	No of the farm families benefited	Accessible by farmer		Affordable by farmers		Total Estimated requirement for the State
		FG	State	Others			Yes	No	Yes	No	
South South											
Akwa-Ibom	Day old chicks broilers			12,000	12,000	40					300000
	Day old layers			10,000	10,000	50		No		No	
	Poultry feeds	300 Bags		600	600	12,000		No		No	80MT
	Livestock feeds (MT)			1.86	1.86	62		No		No	1.9
Cross River	Day old chicks										20,000 day old chicks
Delta	Day old Chicks		1250		1250		Yes		Yes		5000 birds
	Poultry feeds		150Bags		150 Bags		Yes		Yes		30,000 bags
South-West											
Lagos	Day old chicks		State		4030	100	Yes			No	
	Poultry feed		State		1500	100	Yes			No	
	Livestock vaccine/drug										
	ARV	20,668									
	CBPP	10,000									
	NCDV	200									
	PPR	10,000									
	ANTRAX	50,000									

Table13.2: Livestock Fam Inputs (Government Sources) (Cont'd)

States	Input	Quantity Provided			Quantity Distributed	No of the farm families benefited	Accessible by farmers		Affordable by farmers		Total Estimated requirement for the State
		FG	State	Others			Yes	No	Yes	No	
Ogun	Day old chicks-Pullets		892,349		803,114	89,235	Yes		Yes		
	Broilers		542,184		487,966	54,218	Yes		Yes		
	Turkey		1,820		1,638	182	Yes		Yes		
	Poultry feeds(bags) i-Pullets point of lay		251,218		251,218	89,235	Yes		Yes		
	ii- Broilers feed		79,261		79,261	54,218	Yes		Yes		
	iii- Turkey feeds		2548		2548	182	Yes		Yes		
	Parent stock (livestock) Pullet		111,544					No		No	
	Broiler		61,923								
	Cockrel		36,533								
Osun	Day old chicks (Broilers)		260,000		260,000	65	Yes			No	78,000,000
	Poultry feeds kg		910,000		910,000	65	Yes		Yes		273,000,000
Ekiti	Day old chicks		State		9027	37	Yes		Yes		200000
	Poultry feeds		State		856 bags	37	Yes		Yes		Lasota- 400,000 Gumboro- 400000 Fowlpox- 200000
	Poultry vaccines		State		9027	37	Yes		Yes		150,000

13.3   Livestock Pests and Diseases

13.3.1 Livestock Pests and Diseases (Cattle)

Table 13.3.1 shows the occurrence of cattle diseases in Nigeria for the year 2023. Every zone of the six agroecological zones reported Contagious Bovine Pleuro-Pneumonia (CBPP). This shows the endemicity of CBPP across Nigeria. States like Nasarawa (5,248) and Taraba (101,644) recorded a very high numbers of cattles affected. A mass cattle vaccination was conducted in Niger, Borno, Gombe, Kaduna and Oyo States to mitigate the devastating nature of the disease. The incidence of Foot and Mouth Disease (FMD) was widely reported in all the agroecological zones except South-West and South-South zones. Foot and Mouth disease is a viral disease which is highly contagious. There was also re-emergence of a zoonotic disease, Anthrax in North-Central (Niger State) and South-West (Lagos). Only Kano State reported Lumpy skin disease (LSD) while the report of Foot rot disease was only limited to Osun and Ekiti States.

Table 13.3.1: 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
North-Central								
Benue	TB	Across the State	-	Few	-	Few	Low	-
	CBPP	Across the State	-	Few	-	Few	Low	
Kwara	FMD	Ilorin-South LGA	-	-	-	1	-	
	Trypanosomiasis	-	-	-	-	-	-	-
	Helminthosis	21 LGAs	-	-	-	-	-	Treatment
Nasarawa	CBPP	All LGAs	692	5,248	4,918	210	18	
	FMD	All LGAs	24	18,574	12,948	2,019	None	
Niger	Ectoparasitism	AA LGAs	Over 50	956	-	741	44	
	CBPP	Tafa LGA	Over 40	872	-	1,683	83	Vaccination
	Anthrax	Tafa LGA	4	15	-	-	15	Vaccination
North-East								
Adamawa	FMD	Mubi	216	216	75,000	-	-	-
	CBPP	Ganye	405	405	8,500	-	6	
	Trypanosomiasis	Toungo	85	85	-	-	-	
Bauchi	FMD	20 LGAs	-	4,200	55	730	61	-
	CBPP	20 LGAs	-	387	-	-	-	
	Helminthosis	20 LGAs		4,204	-	-	-	
Borno	CBPP	Jere, Kaga and MMC LGAs	3	6	-	5	3	Vaccination
Gombe	FMD	All LGAs	83	83	32	83	-	-
	Helminthosis	All LGAs	13,121	13,121	-	-	-	-
	FMD	All LGAs		18,511	1,041	83	53	Vaccination
	CBPP	All LGAs		101,644	5688	811	28	Vaccination
	Trypanosomosis	All LGAs		-	-	203	13	-

Table 13.3.1: Livestock Pests and Diseases (Cattle) (Cont'd)

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
North-West								
Kaduna	CBPP	23	7	200	17,400	-	400	Vaccination
Kano	CBPP	State wide	175	590	-	-	-	-
	FMD	State wide	68	430	430	-	-	-
	LSD	State wide	53	279	279	-	-	-
Zamfara	CBPP	14 LGAs	-	-	-	-	-	-
	Tuberculosis	14 LGAs	-	-	-	-	-	
	Helminthosis	Statewide	-	-	-	-	-	Deworming
South-East								
Abia	FMD	Umuahia-South	4	4	-	-	1	-
Ebonyi	FMD	Abakaliki	7	100	80	-	-	-
	CBPP	Izzi	2	50	50	-	5	
	Trypanosomiasis	Ebonyi	2	20	-	-	-	
South-south								
Bayelsa	Dermatophilosis	Yenagoa	3	105	105	None	None	-
	Tick infestation	Yenagoa	3	105	105	None	None	
Cross Rivers	CBPP	Calabar, Akpabuyo, Ikom and Ogoja LGAs	2,000	635	421	470	7	NIL
South-West								
Ekiti	Helminthosis	Ado LGA	30	30	30	-	-	Procurement of drugs for treatment
	Mastitis	Ado LGA	10	10	10	10	-	
	Foot Rot	Ado LGA	5	5	5	5	-	
Lagos	Anthrax	-					10%	Vaccination
Osun	Laminitis	Iwo LGA	3	6	6	-	-	-
	Foot Rot	Osogbo and Ede LGAs	5	44	44	-	-	
	Helminthosis	Ilesa LGA	2	12	12	3	-	
Oyo	CBPP	21 LGAs	27	531	2,824	2,053	11	Vaccination

13.3.2 Livestock Pests and Diseases (Sheep and Goats)

Table 13.3.2 shows the reported diseases of the small ruminants in Nigeria. According to the information shown in the table, Peste des petit ruminants (PPR) has remained the most endemic disease of small ruminants (Sheep and Goats) in Nigeria. This viral disease has been a major hinderance towards small ruminant production in the tropics. It has a very high morbidity rate in all the state it was reported. All the states captured in the table below reported PPR except Ekiti and Lagos States. Helminthosis and PPR were concurrently reported in North- Central (Benue and Kogi) States, North-East states (Adamawa, Bauchi and Taraba) States, South-West (Osun and Oyo) States. Vaccination against this ravaging disease (PPR) of small ruminants was carried out in many states of the zones captured. Foot and Mouth Disease (FMD) has also been an endemic disease of small ruminants in Nigeria. However, only Kwara (54 affected animals) and Ebonyi (200 affected animals) reported this disease this year. This could be due to availability of locally produced FMD vaccine in National Veterinary Research Institute (NVRI) Vom, Plateau State, Nigeria. Bauchi and Bayelsa States reported Orf while Only Kogi State reported Contagious Caprine Pleuro-Pneumonia.

Table 13.3.2: 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
North-Central								
Benue	Goat: PPR	Across the State	-	Few		Few	Low	
	Helminthosis	Across the State	-	Few	-	Few	Low	
	Sheep: PPR	Across the State		Few	-	Few	Low	
	Helminthosis	Across the State		Few		Few	Low	
Kwara	Sheep: FMD	Ilorin LGA	17	54	201	5	2	Vaccination
	PPR	Asa LGA	23	35	50	1	1	Treatment
	Goat: PPR	Asa LGA	14	54	201	5	2	Vaccination
Kogi	Sheep: PPR	21 LGAs	-	-	-	-	-	Vaccination
	Helminthosis	21 LGAs	-	-	-	-	20	
	CCPP	6 LGAs	-	-	-	-	-	Treatment
	Goat: PPR	All LGAs	-	-	-	-	30%	Vaccination
	Mange	All LGAs	-	-	-	-	-	Treatment
Niger	Sheep: PPR	All LGAs	12,704	-	-	-	-	Vaccination
	Ectoparasitism	All LGAs					46	-
	Goats: Ectoparasitism	All LGAs	3,447	-	-	-	-	-
Nasarawa	Sheep: PPR	All LGAs	443	4,846	3,083	87	None	FG/REDISSE
	Goat: PPR	All LGAs	258	5,910	3,831	69	None	

Table13.3.2: Livestock Pests and Diseases (Sheep and Goats) (Cont'd)

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
North-East								
Adamawa	Sheep: PPR	Shelleng	4,001	4,001	6,000	-	26	-
	Helminthosis	Jada	345	345	345	-	-	
	Ectoparasitism	Madagali	117	117	117	-	-	
	Goats: PPR	Yola-North	388	388	6,000	-	18	-
	Helminthosis	Yola-South	290	290	290	-	-	
	Ectoparasitism	Mubi	128	128	128	-	-	
Bauchi	Sheep: PPR	20 LGAs	3,240	-	4,889	-	-	-
	Helminthosis	20 LGAs		9,000	4,311	120	114	
	Orf	20 LGAs			317	-	-	
Borno	Sheep: PPR	Jere, Kaga, MMC and Gubio LGAs	1	15	-	-	5	Vaccination
	Goats: PPR	Jere, Gubio and MMC	2	30	-	30	6	Vaccination
Gombe	Sheep: PPR	All LGAs	1,216	1,216	1,216	1,216	03	Vaccination
	Mange	All LGAs	306	306	-	-	-	-
	Mastitis	All LGAs	297	297	297	297	-	-
	Goat: PPR	All LGAs	1,997	1,997	1,997	1,997	04	-
	Mange	All LGAs	554	554	-	-		-
	Mastitis	All LGAs						-
Taraba	Sheep: PPR	All LGAs		19,222	3,419	-	631	Vaccination
	Helminthosis:	All LGAs		86,205	-	-	-	-
	Ectoparasitism:	All LGAs		7,666	-	-	-	-
	Goat: PPR	All LGAs		26,307	6,122	-	917	Vaccination
	Helminthosis:	All LGAs		104,144	-	-	-	-

Table13.3.2: Livestock Pests and Diseases (Sheep and Goats) (Cont'd)

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
	Ectoparasitism:	All LGAs		72,171	-	-	-	-
North-West								
Kaduna	Sheep: PPR	23 LGAs	15	100	34,800	-	18,600	Vaccination
	Goats: PPR	23 LGAs	15	100	34,800	-	18,600	Vaccination
Kano	Sheep: PPR	State wide	184	207	-	-	-	-
	Foot-rot	State wide	47	63	-	-	-	-
	Goat: PPR	State wide	114	236	-	-	-	-
South-East								
	Sheep: Mange	Umuahia-South	6	6	-	-	-	-
	Goats: PPR	Umuahia-North	15	15	-	-	8	
Abia	Goats: PPR							
	Sheep: PPR		10	8,000	7,500	450	50	Treated
	FMD	Abakaliki	6	100	90	5	5	
	Pneumonia	Ebonyi	7	50	-	-	-	
	Goats: PPR	Ikwo	6	10,000	8,950	1,000	50	-
	FMD	Afikpo	6	200	180	15	5	-
Ebonyi	Pneumonia	Ebonyi	6	50	-	-	-	-
Enugu	Goat: PPR	State wide	-	-	-	-	-	Vaccination

Table13.3.2: Livestock Pests and Diseases (Sheep and Goats) (Cont'd)

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
South-South								
Bayelsa	Sheep: Foot rot	Yenagoa LGA	10	336	336	-	-	-
	Mange	-	-	-	-	-	-	
	Mastitis	-	-	-	-	-	-	
	Goat: Orf	-	5	110	110	-	-	
	Mastitis	Yenagoa	10	36	36	-	-	
	PPR	Yenagoa	65	1,150	1,150	510	200	
Cross-River	Sheep: PPR	Odukpani, Ikom and Ogoja LGAs	2,450	2,309	2,350	-	510	NONE
	Goat: PPR	Calabar and Ogoja LGAs	1,150	1,150	200	1,050	171	NONE
	Foot-rot	Calabar LGA	650	650	0	650	20	NONE
South-West								
Ekiti	Sheep: Helminthosis	Ado LGA	25	25	25	0	0	Procurement of drugs for treatment
	Mange	Ado LGA	10	10	10	0	0	
	Bloat	Ado LGA	5	5	5	5	2	
Lagos	Sheep: Anthrax	-	-	-	-	-	10%	Vaccination
	Goat: Anthrax	-	-	-	-	-	10%	
Osun	Sheep: PPR	Osogbo and Ilesa LGAs	5	254	254	5	6	- -
	Helminthosis	Ilesa LGA	4	144	140	4	6	
	Foot Rot	Ikirun and Ede LGAs	3	10	10	-	-	
	Goats: Dystocia	Ilesa and Osogbo LGAs	12	12	12	0	-	

Table13.3.2: Livestock Pests and Diseases (Sheep and Goats) (Cont'd)

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
	Enthesitis	Iles and Ife LGAs	1	6	6	-	-	
	Mange	Ede, Ife and Ikire LGAs	15	76	76	-	-	
Oyo	Sheep: PPR	21 LGAs	41	751	1,825	-	23	Vaccination
	Mange	21 LGAs	34	173	-	-	-	Treatment
	Helminthosis	21 LGAs	215	435	-	-	-	
	Goat: PPR	21 LGAs	57	477	2,870	-	21	Vaccination and Treatment
	Mange	21 LGAs	39	259	-	-	-	Treatment
	Foot Rot	33 LGAs	42	305	-	5	5	

13.3.3 Livestock Pests and Diseases (Poultry)

Table13.3.3 Among the most common diseases of economic importance in poultry in Nigeria are Newcastle disease (NCD), Infectious bursal disease (IBD), Fowl typhoid, Coccidiosis, Fowl cholera and Marek's disease. Avian influenza (AI) is another endemic disease of poultry but zoonotic to humans. It has become endemic since its first outbreak in the year 2006 in Nigeria. Newcastle disease happened to be the most common disease of poultry in Nigeria according to this report. Every state captured in the North-Central had reported cases of NCD. Fowl typhoid, Fowl cholera, Coccidiosis, Infectious bursal disease and Fowl cholera were also reported. In North-East, Fowl pox, Coccidiosis, IBD and Chronic Respiratory Disease (CRD) were reported in addition to NCD. Only Kano reported cases of poultry disease in North-West zone which were NCD, IBD and Fowl cholera. Fowl pox was reported in Cross- River in South-South and in Ekiti and Oyo states in South-West. Only Niger State had reported cases of AI in all its LGAs.

Table 13.3.3: 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
North-Central								
Benue	NCD	Across the State	Numerous	-	High	High		
	Gumboro	Across the State	Numerous	-	High	Few		
	Fowl Tyhoid	Across the State	Numerous	Few	High	Few		
Kwara	NCD	Ilorin	5	2,227	2,227	-	15	Vaccination
Kogi	NCD	21 LGAs	-	-	-	-	1,000	Vaccination
	Coccidiosis	21 LGAs	-	-	-	-	500	Treatment
	Fowl Cholera	21 LGAs	-	-	-	-	1,200	Treatment
Nasarawa	NCD	All LGAs	33	18,956	15,681	2,914	-	REDISSE
	Gumboro	All LGAs All	12	20,015	6,185	6,018		
	Fowl pox	LGAs	18	12,294	10,287	6,096	-	-
Niger	NCD	All LGAs	Over 500	-	-	87	60	Vaccination
	IBD	All LGAs	Over 200	-	-	-	-	Vaccination
	AI	All LGAs	Over 100	-	-	-	-	-
North-East								
Adamawa	NCD	Yola-North	288	288	4,560	36	86	-
	Gumboro	Yola-South	177	177	2,340	61	21	
	Coccidiosis	Mubi	260	260	260	15	40	
Bauchi	NCD	20 LGAs	2,100	6,191	4,522	69	1,880	-
	Fowl pox	20 LGAs			907	-	-	
	Coccidiosis	20 LGAs			2,166	-	-	
Borno	NCD	MMC and Jere	30	100	-	110	73	Vaccination
Gombe	NCD	All LGAs	5859	5,859	5859	5859	102	Vaccination
	IBD	All LGAs	4936	4936	4936	49366	112	
	CRD	All LGAs	3216	3216	3216	3216	93	-
	Coccidiosis	Gombe	-	-	-	-	-	
Taraba	NCD	All LGAs		5,817	21,652	-	2,818	Vaccination
	IBD	All LGAs		653	14,631	-	1,361	Vaccination
	CRD	All LGAs		-	-	-	-	Vaccination

Table 13.3.3: Livestock Pests and Diseases (Poultry) (Cont'd)

State	Disease/Pest	Location	Total number of cases reported	Number of animals affected	Number vaccinated or treated	Number culled due to infection	Mortality	Intervention
North-West								
Kano	NCD	Statewide	562	20,500	-	-	-	
	IBD	Statewide	499	27,000	-	-	-	
	Fowl Typhoid	Statewide	613	41,000	-	-	-	
South-East								
Abia	Fowl typhoid	Umuahia-North	1000	1000	-	-	10	-
Ebonyi	IBD	Afikpo	8	10,000	9,500	450	50	-
	NCD	Abakaliki	8	25,000	22,000	3,750	250	
	CRD	Afikpo	8	10,000	9,800	170	10	
Enugu	NCD	Statewide	-	-	-	-	-	Vaccination
	Gumboro	Statewide	-	-	-	-	-	
South-South								
Bayelsa	NCD	Yenagoa	50	4,150	4,150	3,000	2,600	-
	Coccidiosis	-	-	-	-	-	-	-
Cross-River	New Castle Disease	Akpabuyo	70,000	70,000	70,000	-	15,000	NONE
	IBD	Akamkpa	60,000	60,000	60,000	-	25,000	
	Fowl-pox	Ogoja	80,000	80,000	80,000	-	10,000	
South-West								
Ekiti	Coccidiosis	Ado LGA	15,000	15,000	5,000	25	10	Procurement of drugs for treatment
	NCD	Ado LGA	10,000	10,000	8,500	2,000	25	
	Fowl Pox	Ado LGA	3,000	3,000	3,000	10	5	
Ondo	NCD	Akure-South	-	-	-	-	10%	Treatment
	CRD	Akure-South	-			-	10%	

Table 13.3.3: Livestock Pests and Diseases (Poultry) (Cont'd)

State	Disease/Pest	Location	Total number of cases reported	Number of animals affected	Number vaccinated or treated	Number culled due to infection	Mortality	Intervention
Oyo	NCD	7 LGAs	7	5,800	5,583	-	217	Vaccination and Treatment
	Fowl pox	2 LGAs	2	650	235	650	15	Vaccination
	Coccidiosis	3 LGAs	7	3,150	2,500	-	178	Treatment

13.3.4 Livestock Pests and Diseases (Swine)

As shown in the Table 13.3.4 it is evidenced that African swine fever (ASF) is a disease of high economic importance in swine. Its effect cut across all the geo-political zones. In North-Central, Benue State reported it across the state. In North-East, it was reported in Gombe and Taraba states in all their LGAs. In North-West, only Kaduna State reported the incidence of ASF. In the South-East, up to 1,500 swine were affected with ASF this year, 2023 in Anambra as against 6,000 affected swine in the year 2022. The reduction in the number of affected swine could be due to observance of biosecurity measures recommended by this report in the year 2022. Cross-river State recorded the highest number of ASF cases, which was (3,700). This was quite more than the highest number of cases recorded in Anambra, last year, 2022. In addition to ASF reported in Bayelsa State, a very important disease of swine, Diamond skin disease (Erysipelothrix) was also reported. It is a contagious bacterial infection in swine. Piglet anaemia which is a common condition of piglets deficient in Iron was reported in Ekiti and Osun. This condition can be corrected by providing Iron supplement to the piglets.

Table 13.3.4: 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
North-Central								
Kwara	ASF	Asa LGA	4	6	-	-	6	Treatment
Benue	ASF	Across the State	-	Numerous	-	High	High	
	Helminthosis	Across the State	-	Numerous	Low	Low	Low	
Kogi	Helminthosis	6 LGAs	-	-	-	-	2	Treatment
	Salmonellosis	7 LGAs	-	-	-	-	5	Treatment
	Malnutrition	8 LGAs	-	-	-	-	-	Treatment
Nasarawa	ASF	-	-	-	-	-	-	-
North-East								
Adamawa	ASF	Numan,	104	104	4,560	36	86	-
		Demsa	201	201	2,340	61	21	
		Hong	176	176	260	15	40	
Bauchi	ASF							
Gombe	ASF	All LGAs	001	001	001	001	-	-
	Helminthosis	All LGAs	166	166	166	166		
	Pneumonia	All LGAs	044	044	044	044		
Taraba	ASF	All LGAs	-	36	-	-	32	-
	Helminthosis	All LGAs	-	396	351	-	-	-
	Ectoparasitism	All LGAs	-	551	551	-	-	-
North-West								
Kaduna	ASF	Kaduna South and Chikun LGAs	06	300	NIL	NIL	300	NIL
South-East								
Abia	Mange	Umuahia-South	30	30	-	-	-	-
	FMD	Izzi, Abakaliki	2	100	90	5	5	
	Trypanosomiasis	Izzi, Abakaliki	5	60	55	5		

Table 13.3.4: Livestock Pests and Diseases (Swine) (Cont'd)

State	Disease/Pest	Location	Total number of cases reported	Number of animals affected	Number vaccinated or treated	Number culled due to infection	Mortality	Intervention
South-South								
Bayelsa	ASF	Brass	2	75	-	40	35	-
	Diamond Skin Disease	Yenagoa LGA	1	32	32	5	2	
Cross-River	ASF	Akpabuyo, Akamkpa and Ogoja LGAs	3,700	3,700	-	-	240	NONE
South-West								
Ekiti	Helminthosis	Ado LGA	2,500	2,500	2,500	0	0	Procurement of drugs for treatment
	Piglet anaemia	Ado LGA	200	200	200	0	0	
Lagos	ASF	Badagry and Ikorodu LGAs	-	-	-	-	30%	GAP
Osun	Anaemia	Ilesa and Ikire LGAs	4	90	90	5	6	-
	Mange	Ikire and Iwo LGAs	3	12	12	-	-	
Oyo	ASF	6 LGAs	6	1,780	-	777	1,780	-
	Arthritis	2 LGAs	3	47	22	15	10	Treatment

13.3.5 Livestock Pests and Diseases (Donkeys, Camels, Horses)

Colic is a common non-infectious disease condition in horses. It was reported in Bauchi State across 20 LGAs constituting the highest number of cases (105), followed by Kano with (79) and Gombe (70) cases. Trypanosomiasis, a disease transmitted by Tsetse fly, was only reported in camel in Adamawa State, reported in horses in Kogi State while Taraba State reported it in donkeys. African Horse Sickness was only reported in Bauchi State. Equine influenza (EI) and Equine viral arteritis (EVA) were reported in Niger State. These diseases are of high economic importance in horses. In the whole of Southern Nigeria, only Osun State reported a disease (Laminitis) in horses. Helminthosis was also commonly reported in Kogi and Bauchi states for horses as shown in the Table 13.3.5 below:

Table 13.3.5: 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
North-Central								
Kogi	Horse: Trypanosomiasis	3 LGAs	-	-	-	-	3	Treatment
	Helminthosis	6 LGAs	-	-	-	-	-	
	Mange	5 LGAs	-	-	-	-	-	
Nasarawa	Horse: Colic	-	-	-	-	-	-	
Niger	Horse: CHI	03 LGAs	23	64	50	-	07	-
	EVA	9	90	200	136	-	13	
	EI	05	25	80	67	-	09	
North-East								
Adamawa	Camels: Trypanosomiasis	Yola-North	23	23	23	-	-	-
Bauchi	Horse: Colic	20 LGAs	105	105	57	-	-	-
	Helminthosis	20 LGAs			48	-	-	
	Horses: African Horse Sickness	-	-	-	-	-	-	
Gombe	Horse Colic:	All LGAs	070	070	-	-	-	
	Lameness	All LGAs	015	015	015	-	-	
	Pneumonia	All LGAs	005	005	005	-	-	
Taraba	Donkey: Helminthosis	All LGAs		178	162	-	-	Nill
	Trypanosomiasis	All LGAs		61	61	-	-	Nill
	Ectoparasitism	All LGAs		210	210	-	-	Nill

Table 13.3.5: Livestock Pests and Diseases (Donkeys, Camels, Horses) (Cont'd)

State	Disease/Pest	Location	Total number of cases reported	Number of animals affected	Number vaccinated or treated	Number culled due to infection	Mortality	Intervention
North-West								
Kano	Horse: LSD	All LGAs	51	51	51	-	-	-
	Colic	All LGAs	79	79	79	-	-	
South-West								
Osun	Horse: Laminitis	Iwo	2	2	2	-	-	-
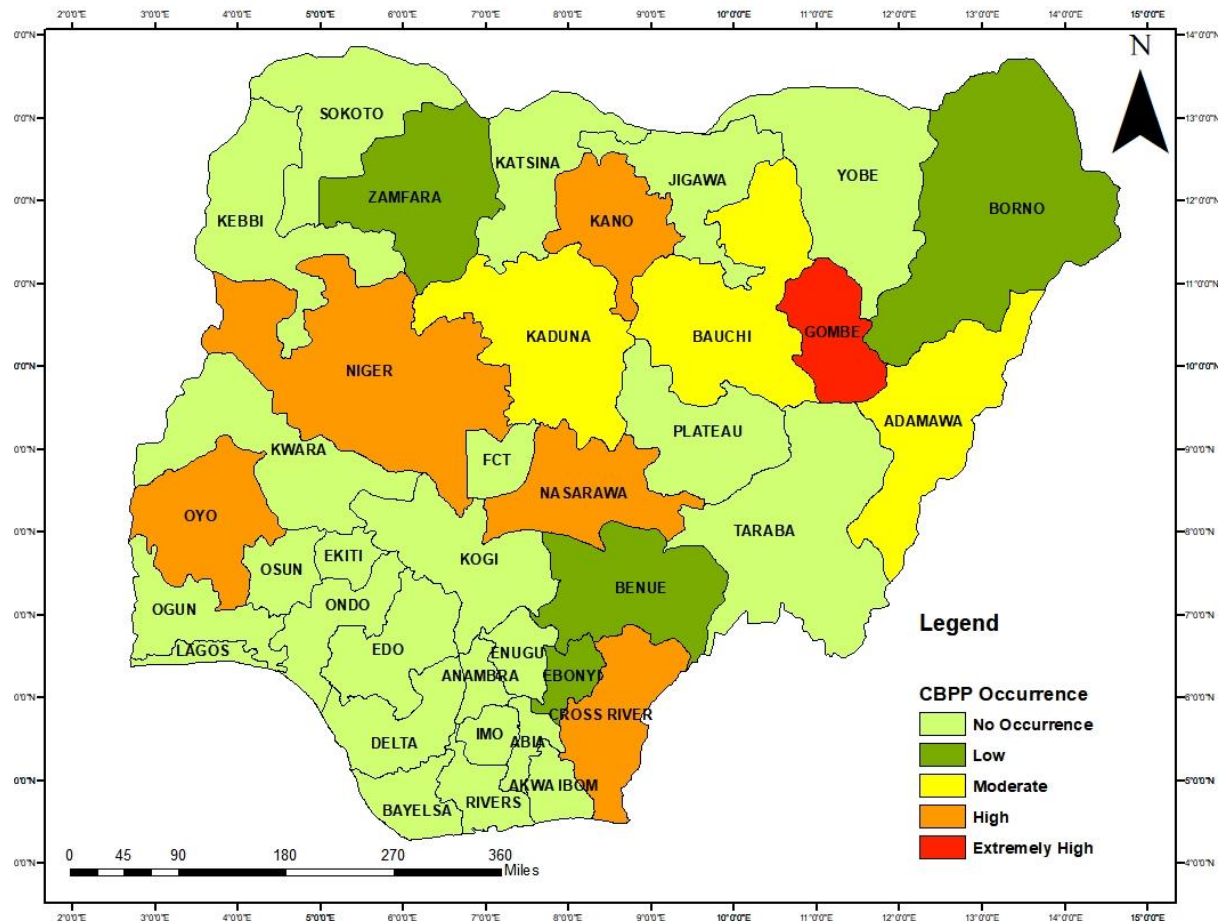
Figure 13.8: States with incidences of CBPP in 2023
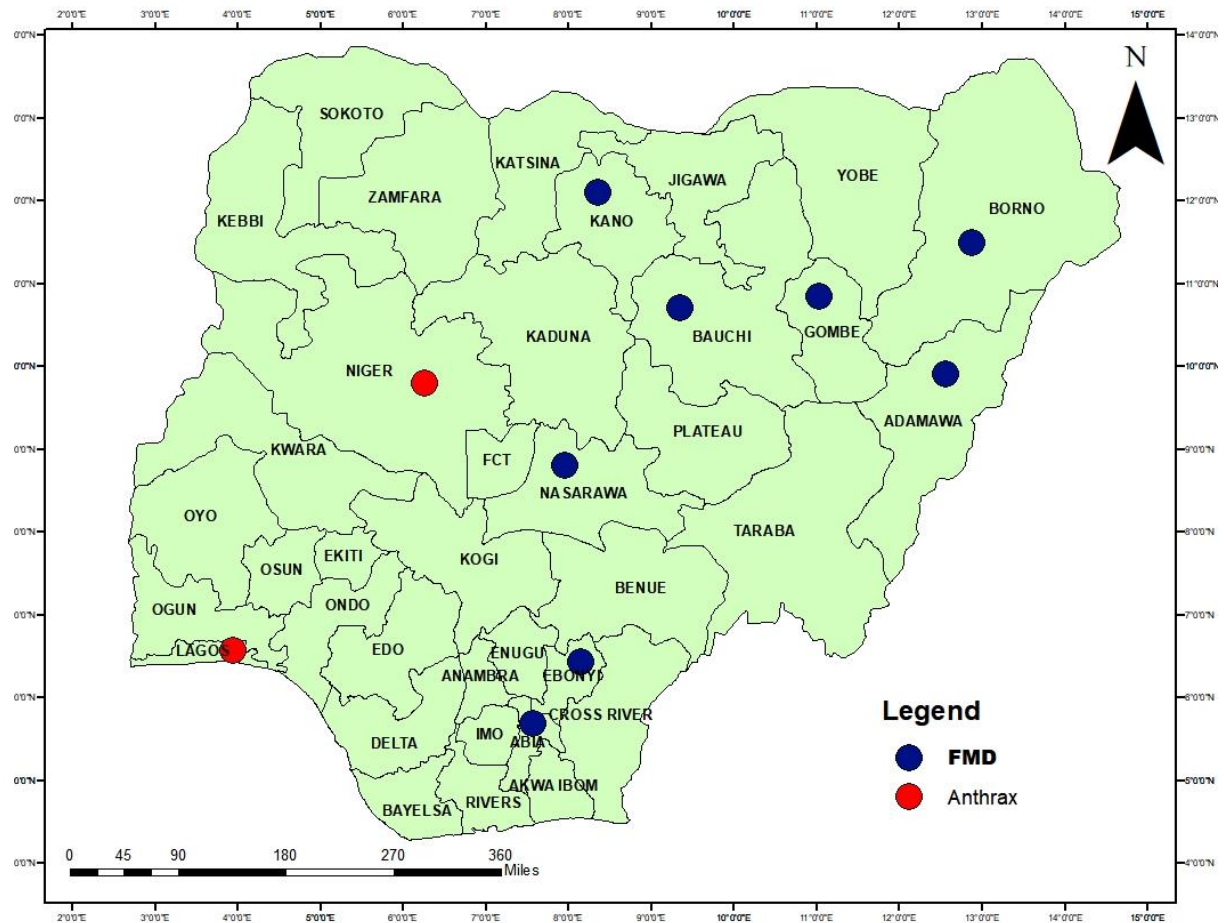
Figure 13.9: States with incidences of FMD and Anthrax in 2023
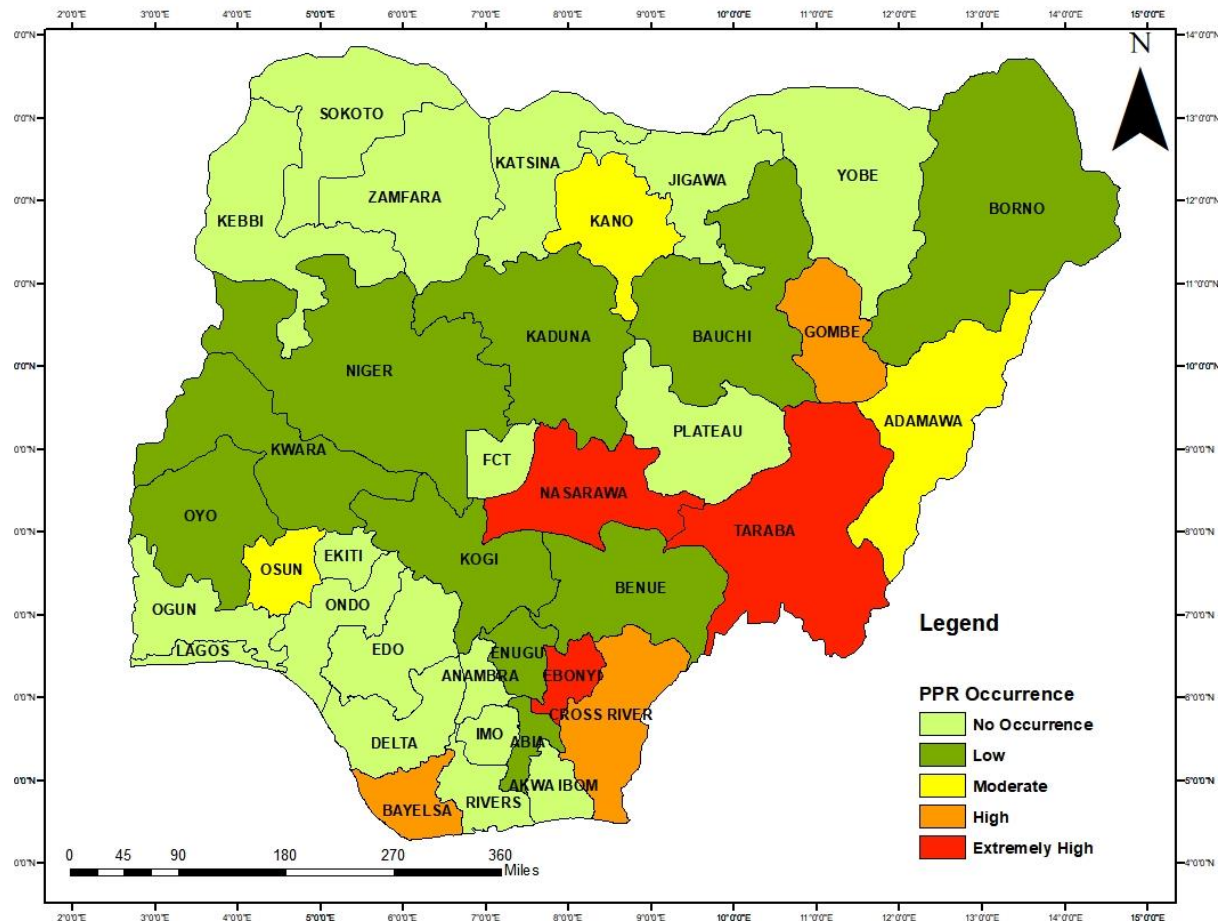
Figure 13.10: States with incidences of PPR in 2023
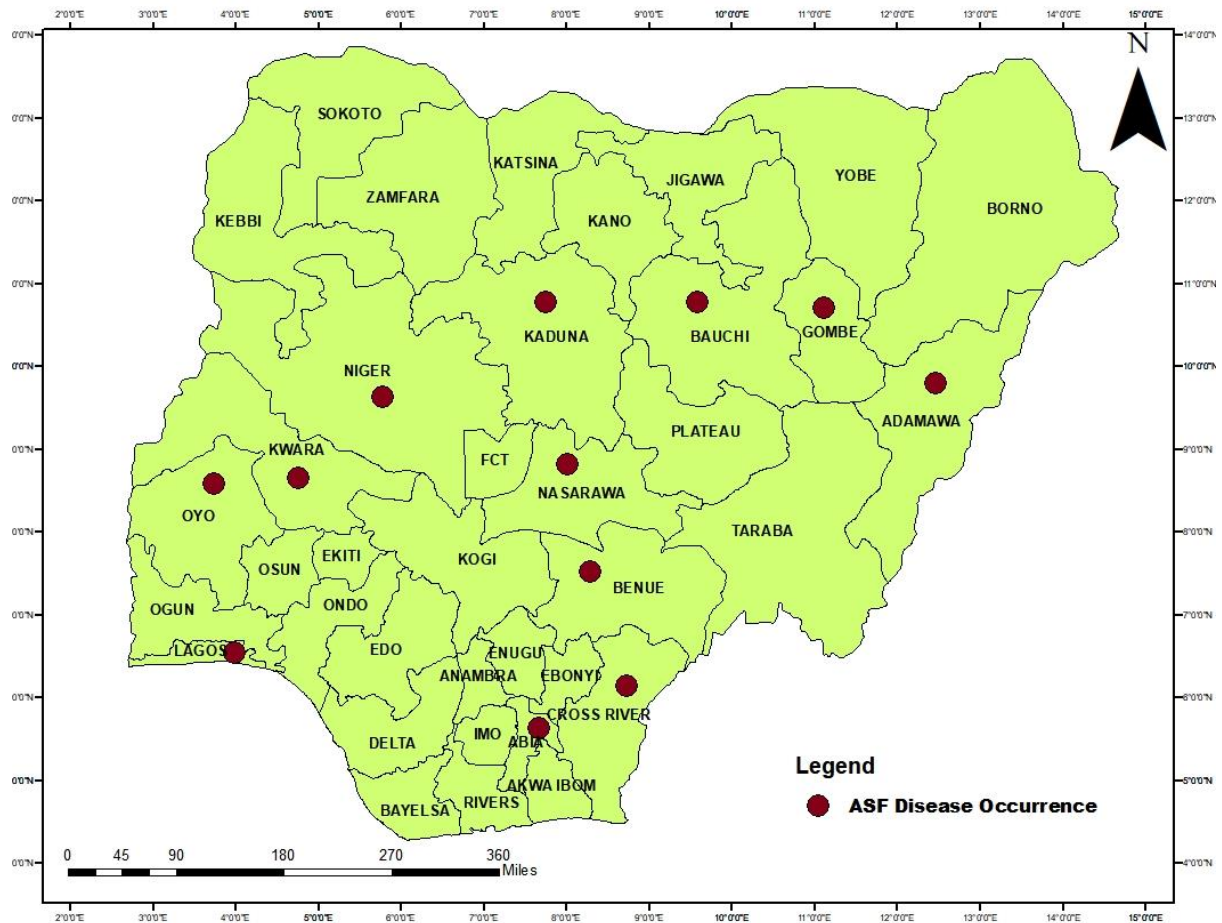
Figure13.11: States with incidences of African swine fever (ASF) in 2023

14.0 FISHERIES PRODUCTION SITUATION

14.1. Aquaculture Production

The 2023 aquaculture production for most of the States and FCT is shown in Table 14.1, while Table 14.2 reflects the summary based on agroecological zones. South-West zone had the highest production in 2022 with 261,734 MT representing 39.40% of total aquaculture production in the country. The South-East had total production of 191,125 MT, that is, 28.76% 0f national production in 2022. Data for 2023 were incomplete as at the time of the fieldwork and not complete. However, only 14 States and FCT gave partial figures.

Table 14.1:   Aquaculture Production in States in 2022 and 2023

State	Species	Production in 2022 (MT)	Production in 2023 (MT)*
North Central			
Benue	Clarias sp	2.8	3.0
	Heterobranchus sp	100.2	150.8
FCT	Clarias sp	143.17	90
Kogi	Tilapia	7.69	
	Clarias	20,453.1	
	Heterotis	0.03	
Nasarawa	Clarias spp	1,000	1,000
	Heterobranchus spp	800	850
	Tilapia spp	600	600
	Heterotis spp	200	2,000
	Carp	50	30
Plateau	Tilapia	1.9	
	Heterobranchus	0.6	
	Carp	0.4	
	Clarias spp.	1.8	
Sub-Total		23,261.96	4,723.8
North-East			
Adamawa	Clarias sp	130	145
	Tilapia sp	106	122
	Others	65	53
Bauchi	Clarias sp.	2,891.31	2,384.11
	Tilapia sp	593.38	504.7
	Heterobranchus spp	46.88	39.85
Borno	Tilapia spp	912	
	Clarias spp	2,500	
Gombe	Clarias spp	801	103
	Heterobranchus spp	78	38
	Tilapia sp	14	1.3
	Carp	0.53	
Taraba	Clarias spp	45,977	40,865
Yobe	Clarias	27,000	
	Tilapia	18,000	
Sub-Total		99,115.1	44,244.95

North-West			
Jigawa	Clarias sp	8,137	23,810
	Tilapia sp	10,421	13,721
Katsina	Clarias sp	1,512	
	Tilapia	576	
	Heterotis	167	
Kebbi	Clarias sp	25,520	
	Heterobranchus sp	400	
	Tilapia	23,000	
Sokoto	Clarias sp	10,000	
Zamfara	Clarias sp	450	455
	Tilapia	206	204
Sub-Total		80,389	38,190
South-East			
Abia	Clarias sp	700	700
	Heterobranchus sp	400	500
Ebonyi	Clarias sp	50,000	
	Tilapia	40,000	
Imo	Clarias	80,000	
	Tilapia	20,000	
Sub-Total		191,125	1,200
South South			
Akwa-Ibom	Catfish	3,772.85	
	Tilapia sp	2,816.43	
Cross-River	Clarias sp	373	272
	Heterobranchus	321	283
	Heterotis	411	383
	Tilapia sp	802	610
Rivers	Clarias	310	36,124
Sub-Total		8,806.28	37,672
South-West			
Lagos	Clarias spp	32,68.85	23,000
	Tilapia sp	21,450	16,791
	Chrysichthys sp	3,305.08	288
	Heterotis spp	15.2	
Ogun	Clarias spp	50,897.6	52,876.5
	Tilapia spp	20,412,4	20,543.8
Ondo	Clarias sp	6,500	
	Tilapia sp	5,000	
	Chrysichthys sp	900	
Osun	Clarias sp	304.6	101
	Tilapia sp	10	10
Oyo	Clarias sp	39,860	36,420
	Tilapia sp	1,700	1,420
	Heterotis spp	925	841
Sub-Total		261,734	152,291

*Data from only 14 States and the FCT

Table 14.2: Summary of Aquaculture Production (MT) in the Zones in 2022 and 2023

S/No.	Zone	2022		2023*	
		MT	%	MT	%
1	South-West	261,734	39.40	152,291	54.72
2	South-East	191,125	28.276	1,200	0.43
3	North-East	99,115.1	14.92	44,244.95	15.90
4	North-West	80,389	12.10	38,190	13.72
5	North-Central	23,261.96	3.50	4,723.8	1.70
6	South-South	8,806.28	1.32	37,672	13.53
Total		664,431.34	100	278,321.75	100

*Data from only 14 States and the FCT

14.2. Capture Fisheries Production

Only twelve (12) states gave data on the artisanal production figures, and the details are presented in Tables 14.3a and 14.3b. Across the zones, the South-West had highest production of 399,010 MT i.e. 37% of the total national production in 2022. The South-East, North-West and North-East had significant productions of 241,040 MT (22.58%), 197,967 MT (18.54%) and 151,109.6 MT (14.15%) respectively of the estimated total national production of 1,067,647 MT in 2022. Data for 2023 was not available in as at the time of the field work.

Table 14.3a: Artisanal Fisheries Production in States in 2022 and 2023

State	Species	Production in 2022 (MT)	Production in 2023 (MT)*
North-Central			
Benue	Clarias spp	450.05	550
	Heteroclarias	110.40	170
FCT	Clarias sp	47.32	
Kogi	Clarias	155.17	
	Tilapia	100.28	
	Alestes	0.04	
	Citharinus	4.26	
	Heterotis	30.71	
Nasarawa	Clarias	1,200	1500
	Heterobranchus	700	1200
	Tilapia	300	350
	Carp	30	40
	Heterotis	150	200
Plateau	Tilapia	1.0	
	Heterobranchus	0.5	
	Carp	0.03	
	Clarias	0.9	
Sub-Total		3,280.66	
North-East			
Adamawa	Catfish	185	226
	Tilapia	130	148
	Others	90	47
Bauchi	Clarias spp	21.04	23.25
	Tilapia spp	30.04	32.34

	Heterobranchus	23.01	19.11
Borno	Catfish	36,000	
	Tilapia	10,561	
	Heterotis	420	
	Alestes	319	
	Momyrus	196	
Gombe	Clarias spp	204	53
	Heterobranch	0.5	0.2
	Tilapia sp.	345	110
	Carp	185	40
Taraba	Clarias spp	16,900	19,991
Yobe	Catfish	34,500	
	Tilapia	23,000	
	Heterotis	12,000	
	Trunk fish	9,000	
	Lung fish	7,000	
Sub-Total		151,109.6	
North-West			
Jigawa	Clarias	23,799	14,277
	Tilapia	21,015	28,602
	Heterotis	101.04	
	Lates niloticus	307.06	
	Lung fish	44	
	Bagrus	204.4	
Katsina	Catfish	1,783	
	Oreochromis niloticus	2,239	
	Lates niloticus	265	
	Heterotis niloticus	167	
Kebbi	Catfish	60,000	
	Tilapia	30,000	
	Nile Perch	6,500	
	Heterobranchus	40,000	
Sokoto	Clarias	5,000	
	Tilapia	6,000	
	Gymnachus	3	
	Lates niloticus	1	
Zamfara	Clarias spp	190	160
	Tilapia spp	108	103
	Synodontis spp	120	115
	Labeo spp	120	105
Sub-Total		197,967	
South-East			
Abia	Tilapia	420	700
	Catfish	400	600

	Carp	220	200
Ebonyi	Catfish	60,000	
	Tilapia	50,000	
Imo	Catfish	80,000	
	Tilapia	50,000	
Sub-Total		241,040	
South-South			
Akwa-Ibom	Baracuda	2,465	
	Bunga	3,064	
	Catfish	463.24	
	Crayfish	375.61	
	Croaker	145.22	
	Grunters	21.64	
	Horse Mackerel	9.73	
	Mullet	21.64	
	Sardinella	85.34	
	Soles	11.33	
	Snapper	28.47	
	Thread fin	26.37	
	Tilapia sp	15.45	
	Shining nose	406.38	
Rivers	Cray fish	101.8	120
	Catfish	68,000	80,000
Sub-Total		75,240	
South-West			
Lagos	Croaker	52.12	111.11
	Clarias spp	33.65	
	Pseudotolithus	1,845.78	
	Pomadasosis sp	0.906	10
	Tilapia	11.03	99.27
	Chrysichthys spp	0.83	19,2
	Polydactyllus	2,508.46	
	Ethmalosa	2,531	2890
	Heterotis	1.47	
	Mormyrus spp	0.3	
	Lutjanus spp	959.32	
Ogun	Clarias spp	802.5	2600
	Tilapia	150	160
Ondo	Catfish	256,250	
	Tilapia	86,875	
	Chrysichthes	25,625	
	Schilbe mystus	10,250	
Osun	Catfish	303	130
	Tilapia	1.0	4

	Carp	1.4	1
	Heterotis	7.0	4
	Electric fish	0.6	
Oyo	Lates spp	4320	3927
	Gymnachus spp	3240	2945
	Hepsetus spp	216	196
	Snake head	540	491
	Bagrus spp	141	128
	Chrysichthys spp	1620	1473
	Synodontis	270	245
	Prawn	453	412
Sub-Total		399,010	

Table 14.3b: Summary of Artisanal Production (MT) in the Zones in 2022

S/No.	Zone	2022	
		MT	%
1	South-West	399,010	37.37
2	South-East	241,040	22.58
3	North-West	197,967	18.54
4	North-East	151,109.6	14.15
5	South-South	75,240	7.05
6	North-Central	3,280.66	0.31
Total		1,067,647	100

Aquaculture inputs provided by States are presented in Table 14.4. While 12 States and the FCT had records of inputs procurement and distribution in 2022, only three (3) States - Akwa-Ibom, Benue and Katsina; and the FCT procured and distributed fisheries and aquaculture inputs in 2023. Most of the inputs provided were fingerlings and fish feeds though, the quantities procured and distributed were insufficient. The inadequate quantities of the fishing inputs can be attributed to the poor funding status of the ADPs and the Ministry of Agriculture across the States.

Table 14.4: Fisheries Input Situation in the States

States	Types of input	Quantity Procured		Quantity Distributed	
		2022	2023	2022	2023
North-Central					
Benue	Juveniles	20,000	10,000	20,000	10,000
	Fish feeds	800	800	800	800
	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	Fingerlings		100,000		100,000
	Fish feed(bags)		200		200

State	Input				
	Gill nets		20 bundles		20 bundles
	Life jackets		20		20
North-East					
Borno	Fingerlings	10,000		500	
	Fish Feed (bags)	1,000		50	
	Fishponds	50		40	
North-West					
Kano	Fingerlings	18,000		18,000	
	Fish feeds	36,000		36,000	
Katsina	Fingerlings		100,000		100,000
	Fish feeds (bags)		100		100
	Feeds Ingredients (bags)		100		100
South-East					
Imo	Fingerlings	1610,000		12000	
	Fish Feed	300,000			
South-South					
Akwa Ibom	Fingerlings	310,000	315,000	310,000	315,000
	Juveniles	465,000		465,000	
	Fish feed	25.2	25.2	25.2	630
	Fishing Net	150		150	
	Floats	300		3000	
Bayelsa	Fingerlings	583,000		583,000	
	Fingerlings	11660		11660	
Edo	Fingerlings	87,000		87,000	
	Fish feeds	2,340		2,340	
South-West					
Ekiti	Broodstock	750		700	
Lagos	Fish feed (bag)	414,620		414,620	
	Fingerlings	500,000		500,000	
	Broodstock	200,000		200,000	
	Juveniles	29,0500		29,0500	
Ogun	Agric lime (MT)	5000		5000	
	Nets	100		100	
	Life Jacket	500		500	
Osun	Net	400		400	
	Rope	25		25	
	Twine	20		20	
	Lime	20		20	

The quantity of fresh and smoked fish marketed in 2023 revealed that Catfish species were the most traded in all the States; this was followed by tilapia which was favourably cultured and traded in Nigeria (Table 14.5). Other fish species traded were Heterobranchus species, Heterotis species, Labeo species, and *Lates niloticus*. 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.

Table 14.5: Quantity of Fresh and Smoked Fish Traded in the States

State	Fish Species	Fresh Fish Traded		Smoked Fish Traded (MT)	
		2022	2023	2022	2023
North Central					
Benue	Clarias spp	117.41	112.5	80,000	70,000
	Heterobranchus spp	12.5	13	60,000	40,000
	Tilapia spp	40.6	30	5,000	6,000
	Lates spp	4.72	3.10	2000	3000
	Synodontis spp	1.52	2.50	3000	7,000
	Lates niloticus	4.72	3.10	41	-
	Labeo spp	5.2	4.7	3,000	5,000
FCT	Clarias spp	6,685	2,379	786.3	356.9
	Gymnachus spp	52.05	273	40.8	12.7
	Lates niloticus	93.5	76.4	16.3	5.1
	Heterobranchus spp	18.7	15.3	81.6	25.4
	Frozen fish	28.1	22.9	24.5	7.6
Kogi	Clarias sp	18,621		930	
	Heterobranchus	15,203		433	
	O. niloticus	25,432		21,611	
	Heterotis sp	10,221		3,143	
	Lates	611		6,321	
	Gymnachus sp	1,178		5,673	
Nasarawa	Clarias spp	1000	1000	7000	650
	Heterobranchus spp	1000	1000	5000	7000
	Heterotis	770	770	7000	7000
	Tilapia	770	770	8000	4000
Plateau	Clarias	1.9		600	
	Tilapia	2.2		250	
Taraba	Clarias spp	24,904		26,613	
North East					
Bauchi	Clarias spp	93.26	21.04	9.15	9.20
	Tilapia	3.05	4.01	8.09	9.07
	Heterobranchus sp	15.01	16.05	6.74	6.75
Borno	Clarias spp	2,000	5,000	16,000	16,000
	Tilapia	900	5,130	90,000	95,000
	Heterotis	710	890	710,000	188,000
	Alestes	430	670	430,000	576,000
	Momyrus	245	-	245,000	209,147
Gombe	Clarias spp	538	41	263	62
	Heterobranchus spp	56	18	22	16
	Oreochromis niloticus	3.1	0.3	10.9	1
	Carp	0.53	-	-	-
	Tilapia	17,506	18,802	18,901	16,282
North-West					
Katsina	Catfish	1788	1688	1602	1482

	Tilapia	2,201	2113	1991	1892
	Heterotis niloticus	269	262	194	169
	Lung fish	170	158	98	72
	Lates	45	39	41	32
Kebbi	Catfish	10,000		5,000	
	Tilapia	12,000		6,000	
	Heterobronchus spp	9,000		3,000	
	Nile perch	9,000		3,000	
Zamfara	Clarias sp	250	280	200	125
	Tilapia sp	160	110	46	94
	Synodontis	106	82	35	50
	Labeo spp	82	70	40	40
Sokoto	Clarias sp	85		80	
	Heterobranchus sp	40		35	
	Heteroclarias	20		57	
Kano	Clarias	450		486	
	Tilapia	245		243	
Jigawa	Tilapia	300		100	
	Clarias	200		100	
	Heterotis	60		65	
	Lates	60		65	
	Bagrus	60		65	
South East					
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	625.2	625.4	341.32	341.04
	Tilapia	475.2	460.0	323.76	323.44
	Barracuda	10.21	8.20	6.85	6.81
	Bonga	25.19	25.78	25.92	24.02
	Catfish	88.32	83.37	62.43	62.49
	Crayfish	411.32	617.35	116.32	106.32
	Croaker	119.3	120.6	65.42	62.42
	Grunter	15.76	15.70	9.17	7.17
	Horse Mackerel	6.43	6.38	4.18	4.26
	Mullet	15.72	14.70	5.13	5.18
	Ray	12.98	8.91	2.34	2.39
	Sardinella	65.35	41.30	51.32	56.72
	Soles	24.52	4.33	6.85	3.15
	Snapper	17.98	13.72	8.52	6.76
	Thread Fins	12.05	13.28	3.18	8.50
Cross River	Clarias spp	311	273	213	200
	Chrysichthys sp	216	200	180	173
Rivers	Clarias spp	300	11.0	250	7.35

	Tilapia	350	6.15	300	2.10
	Heterobranchus sp	1.05	4	5.80	1.30
	crayfish	10.2	3	8.80	12.98
	Heterotis spp	3.10	15	5.30	10.00
South West					
Lagos	Catfish	3,216	2,994	1,320	1178
	Tilapia	8,698	1761	2,175	810
	Heterotis	1015	1116	960	1253
	Chrysichthys	3,075	816	1260	1396
	Croaker	142	129	34	23
	Grunthers	-	11	-	215
	Shiny nose	2,213	-	737.5	
	Redsnapper	-	10	-	
	Sphyraena (Baracuda)	32	65	235	287
	Ethmalosa sp	2,000	1610	2000	423
	Other species	2.516	1511	976	419
Ogun	Clarias spp	200		15,000	
	Tilapia	150		10,000	
	Heterobranchus	100		40	
	Lates	100		40	
	Momyrus	200		80	
	Crayfish	200		150	
	Bagridae	50		20	
	Carp	100		50	
	Heterotis	300		150	
	Crabs	200		60	
Oyo	Clarias spp	32,020		4,500	
	Tilapia	1,060		850	
	Heterotis spp	500		300	
	Lates niloticus	-		2,420	
	Gymnachus spp	300		1,500	
	Snake heads	180		215	
	Bagrus sp	40		70	
	Chrysichthyes sp	50		950	
	Synodontis sp	50		155	
	Prawn	100		300	

Fish diseases were reported across the 6 geo-ecological zones (Table14.6). 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 prevalent fish diseases. Some of the diseases reported were broken heads, skin ulcers, saprolegniasis, 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.

Table 14.6: Pest and Diseases of Cultured Fish

State	Fish spp Affected	Pest/Disease	Location of incidence (LGA)	Severity (light, moderate, heavy)	Estimated Loss (%)	Control measure(s)
North-Central						
Benue	Tilapia	Skin Lesion	Agatu	Light	40	Antibiotics
	Clarias	Skin Lesion	Makurdi	Moderate	30	Antibiotics
	Heterbranchus	Skin Lession	Kastsina-Ala	Light	10	Antibiotics
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						
Gombe	Clarias spp	Bloating	Y/Deba	Light	5	Salt bath
	Heterobranchus sp	Cracked head		Moderate	3	Antibiotics
	Tilapia sp	Dropsy		Light	0.5	Antibiotics
Niger	Catfish	Sore on skin	Bosso	Heavy	10	Antibiotics
Kebbi	Clarias sp	Bacterial infection	B/kebbi	Moderate	10	Antibiotics
	Tilapia	Fungal infection	-	Moderate	30	Antibiotics
Taraba	Clarias sp	Ichthyopthirius multipilis	Bali; Mayo-kan	Light	10	Salt water bath
Zamfara	Catfish	Bacterial	Gusau	Moderate	10	-
	Tilapia	Fungal	Bakura	Light	2	Water quality management
North-West						
Adamawa	Clarias sp	Fungal infection	Yola South	Moderate	30	Disinfection and cleaning of water tank
Bauchi	Clarias sp	Gill rot	Bauchi	Moderate	25	-
	Tilapia	Swollen skin	Ganjuwa	-	25	
	Heterobranchus sp	Skin infection	Bauchi	Mild	10	Water management
Kano	Clarias sp	Red spot	Kumbotso	Light	15	Antibiotics
		Fin rot	Kumbotso	Light	10	Antibiotics
		Dropsy	Dawkin kudu	Light	8	Potassium permanganate
		Fin rot	Kumbotso	Light	6	Antibiotics
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	Chemotherapy
		Gill rot	Owerri west	Light	2	Chemotherapy
	Tilapia	Leeches	Oguta	Light	5	Chemotherapy
		Fin rot	Olu	Light	3	Chemotherapy
Abia	Tilapia	Leech	Aba	Light	1	Malachite green
	Catfish	Dropsy	Arochukwu	Light	2	Antibiotics
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
		Skin ulcers				
		Cracks on head		Moderate	30	Antibiotics
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
		Swollen Eye	Egbeda	Light	1	Antibiotic

		White Barbells	Oluyobe	Heavy	5	Antibiotic
		Gill rot	Lagelu	Heavy	5	Antibiotic
		Broken head		Light	5	Antibiotic
Ekiti	Clarias spp	Broken head	Statewide	Light	5	Avoid water turbidity
		Skin lesion	State wide	Light	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	-

15.0. AGRICULTURAL DEVELOPMENT PROGRAMME (ADPs) EXTENSION ACTIVITIES

15.1   Funding Situation

Funding extension activities of the Agricultural Development Programmes (ADPs) in the country remains an integral part of the extension service delivery system. The funding comprises both public and private sectors. Since ADPs are under the Ministry of Agriculture in the states, their funding is usually handled by the state governments. However, the participation of ADPs in implementing some projects organized by donor agencies usually attracts additional funds for the ADPs. Some of the agencies were JICA-SHEP PROJECT, AGRA, MERCY CORPS, Diamond Del Institute, and DSV Scheme among others. Above all, Table 15.1 clearly shows the status of ADPs' funding in both 2022 and 2023 in the country. On average, funding of the state ADPs in 2022 was better than in 2023. According to the record in Table 15.1, only Abia State had 100% funding achievement in 2022 and 2023, Borno State also had 100% in 2022. Only 18 States ADP provided funding records. Other states achievements in 2023 include Gombe (87.2%), Ebonyi (83%), Kwara (64%) and Enugu (58.3%).

Table 15.1: Status of ADP Funding in 2022 and 2023

State	2022			2023			% diff.
	Target (₦)	Achieved (₦)	%	Target (₦)	Achieved (₦)	%	
North-Central							
Kwara	16,351,120.00	11,376,127.00	69.57	9,410,047.00	6,036,458.75	64.1	5.5
Niger	8,000,000	1,606,666.65	0.20	8,000,000	160,866.66	2.0	1.8
Nasarawa	19312,0000	63850219.23	0.33	272,100,000	32,837,719.68	12.1	11.8
Taraba	193721000	96,736,000	49.9	9,834,000	-	0	-
Plateau	356,300,369.00	217,130,780.83	60.9	710,777,776.00	173,235,388.09	24.4	36.5
North-East							
Bauchi	258,390.628	Nil	0	258,390.628	172,260.41	0.06	-
Gombe	420650000	299672000	71.2	217950000	191200000	87.2	
Borno	10,000,000	1,000,000	100	20,000,000	5,000,000	25	
North-West							
Sokoto	12,000,000	6,000,000	50	Nil	Nil	-	
South-East							
Abia	12,000,000	12,000,000	100	8,000,000	8,000,000	100	
Ebonyi	10,000,000	9,650,000	96.5	12,000,000	10,000,000	83.3	
Enugu	1,200,000	1,100,000	91.7	1,200,000	700,000	58.3	
South-South							
Akwa Ibom	21,180,000	12,000,000	56.7	-	-	0	
Bayelsa	10,000,000	4000,000	40	10,000,000	4000,000	40	

Cross Rivers	3.800000	2.200000	57.9	3,950,000	500,000	12.7	
Edo	162,837,752	2400,000.00	1.5	162,837752	14,000,000	8.6	
South-West							
Ekiti	7,000,000.00	3,000,000,	42.9	8,000,000.	5,400,000.00	67.5	
Ogun	886,822,997.94	495,872,331.85	55.9	974,488,447.87	220,861,188.11	22.7	

15.2   Performance Indicators of ADPs

Agricultural extension activities cannot succeed without some specific indicators such indicators assessed in 2023 include the number of farm families covered by extension agents, the number of extension workers, the 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 15.2).

15.2.1 Number of Farm Families

Farm families are the receivers of agricultural technologies in all farming communities. Adoption of agricultural technologies is based on the high number of farm families reached in targeted communities. Yobe (597, 3228), Kogi (560,110), Lagos (558,430), Ebonyi (550,000), Delta (545,987), Anambra (536,000), and Cross River (481,506) had the highest number of farm families compared to previous records. Other states farm families include Oyo (415,030), Kwara (400,000), Zamfara (320,000), Taraba (288,000), Nasarawa (252,606), Enugu (242,542), Ekiti (200,000), Osun (182,000), FCT (150,000), Ondo (95,000), Borno (62,000), and Edo (30,000). The number of farm families remains on the increase across the States. This implies that more extension personnel need to be recruited to ensure that more farmers can be covered by extension agents).

15.2.2   Number of Extension Workers

The active extension workers in agricultural extension delivery personnel across the country are Block Extension Agents (BEAs) and Village Extension Agents (VEAs). Therefore, the higher the number of VEAs and BEAs in any ADP, the better the extension coverage in the state. Every state ADP is generally classified into extension Cells/Circles, Blocks, and Zones. A Cell/Circle that is meant to be manned by a VEA for their close contact with the farmers. Generally, there shortage of extension agents across the country as reported below. States like Benue, Kwara, Nasarawa, Bauchi, Katsina, and Lagos had no record of extension workers. However, Yobe, Kogi, and Enugu states had 10, 16, and 17 extension workers respectively, while Edo, Bayelsa, and Ekiti had less than 36 extension workers. This result implies that most states had extension workers.

15.2.3   Farm Visits by VEAS

Farm visits are an important function of VEAs. Therefore, technology transfer is dependent on them. Also, the VEAs need mobility to effectively carry out their visits to farmers. 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. Oyo (63000), Ebonyi (14,000), Ekiti (10250), and River (8221) recorded the highest number of farm visits in 2023. Other states include

FCT (75), Anambra (55), Kebbi (15), and Enugu (10) low visits recorded. Compared to previous years, the record of farm visits by extension agents remained low in 2023.

15.2.4 Technology/Knowledge Sharing, Transfer and Feedback Mechanism

Usually, the sharing of technology among ADP workers is carried out through Monthly Technology Review Meeting (MTRM) and Fortnightly Training (FNT). Also, MTRM provides an opportunity for the researcher to interact with the Subject Matter Specialists (SMSs) while FNT is an avenue where the SMSs, VEAs, BESs, and BEAs interact together. However, MTRM and FNTs are not held regularly due to inadequate funds reported by ADPs across the country. In 2023, a record of MTRM shows that only Edo (4), Ekiti (4), Lagos (3), and Rivers (3) conducted MTRM. Based on the record above, the dissemination of improved agricultural technologies is generally low. For instance, FNT is supposed to be conducted about 52 times a year. Enugu was able to conduct 50 FNT while only 13 states conducted up to 15 FNT as at the end of August 2023: Imo (26), Kwara (24), Osun (24), Ondo (24), Oyo (24), Ebonyi (18), Plateau (18), Nasarawa (17), Akwa-Ibom (17), Kogi (16), Abia (15), Cross-River (15), Delta (15), Edo (14), Lagos (14), Anambra (12), Rivers (7), Bauchi(6) and Bayelsa (3). Fifty-four (54%) of the States did not conduct FNT in 2023. This implies that there was a big gap between the National Agricultural Research Institutes (NARIs) and the ADPs thereby, making frontline extension workers not to have access to new research technologies.

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 the provision of inputs, technical back-up, and logistics. Hence, the number of OFAR, MTP, or SPAT established by the ADP depends on the availability of funds. ADPs were requested to supply the number of each of the trials as well as the number of replicates. Only Yobe (50), Ekiti (47), Sokoto (4) and Zamfara (4) reported OFAR activities. SPAT information reveals the following: Ekiti (150,000), Edo (2819), Zamfara (1150), Abia (1050), Adamawa (800) Akwa Ibom (541), Ebonyi (360) Cross River (355), Ondo (170), Bayelsa (112) Anambra (58), and Yobe (35). Information on the number of MTPs established across each state indicates Bauch 2870, Kano 1200, Adamawa 485, Anambra 305, Ebonyi 230, Kogi 80, Nasarawa 79, Zamfara 70, Enugu 50, Yobe 40, Osun 26, Ondo 8, Rivers 3 and Kwara 1. The data provided revealed a decline compared to previous years. Very poor performance in the establishment of OFAR, MTP, and SPAT portends poor technology dissemination/delivery.

15.2.6   Farmers' Groups Development and Management

Farmers' group development and management is imperative for participatory extension. The report of inadequate extension agents gave rise to the group formation of farmers. This will ensure that EAs cover more farmers within the state. Also, this saves more time and energy as well as good management of farmers. Data provided by states across the country indicated that Adamawa had 32,480 farmers group, Bauchi (11,000), Imo (3000), Ebonyi (18000) Yobe (1000), Kano (900), Kogi (840), Lagos (680), Niger (200), Edo (192), Akwa-Ibom (168), Zamfara (120), Osun (113), Cross River (100), Abia (90), Ondo (82), Delta (80), FCT (80), Ekit i(45), Anambra (28), Kwara (20), Plateau(10) and Bayelsa (5) respectively. Adamawa state had the highest farmers' group.

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

The extent of performance of the village extension agent (VEA) is measured by the number of families covered by the VEA. This is otherwise known as the Extension Agent-Farm family ratio

(EA: FF ratio). The EA: FF ratio for a State is estimated by dividing the number of farm families by the sum of VEA and BEA (WIA). Realizing the recommended ratio of 1:800-1000 has not been easy over the years due to the gross inadequacy of the number of VEAs despite the increase in the number of farmers in the states. This was the reason why states that provided data had a high EA: FF ratio all through. Data recorded shows that Borno state had one ratio thirty thousand (1:35,000), Akwa Ibom (1: 14,576), Yobe (1: 11,864), Adamawa (1: 10,000), Gombe (1:9499), Osun (1:9143), Lagos (1:7758), Cross River (1:6781) Edo (1:6250), Delta (1:5300) Ondo, Zamfara (1:4917), Ondo (1:4186), Abia (1:3890), Kebbi (1:3888), Niger (1:3200) Ekiti (1:3100), Kogi (1:3000), Rivers (1:2800), Jigawa (1:2100), Ebonyi (1:1000), Kwara (1:1000), Kano (1:900), Oyo (1:800), Imo (1:450), FCT (1:300) and Plateau (1:51). This situation needs government's urgent intervention before it gets out of hand.

15.2.8 Training of Farmers

Training and re-retraining of farmers is a prerequisite for technology adoption. Therefore, farmers' knowledge and skills need to be increased from time to time. This is only possible through regular training of farmers in the rural areas. Also, the activeness and performance of farmer's cooperatives are usually sustained through training whenever funds are available. The number of farmers trained in 2023 indicates that Edo trained 3216, Ekiti 8250, while Kogi (1800) and Zamfara (1200). Others include Anambra (450), Kebbi (300), Yobe (300), Abia (200) Sokoto (200), Akwa Ibom (198) Lagos (180), Katsina (170), while Bayelsa (3) trained less than 200 farmers. Compared to previous years, the training of farmers was greatly reduced. This may be due to poor funding. However, many states did not indicate farmers trained in 2023.

15.2.9 Status of Farmer Field Schools (FFSs)

The Farmer Field School Approach FFS) is a participatory training approach that can be considered both as an extension tool and a form of adult education. It focuses on building farmers' capacity to make well-informed crop management decisions through increased knowledge and understanding of the agroecosystem. Farmer Field School Approach in most states has not been properly documented as shown in the record. Anambra recorded 800 FFSs in 2023, Zamfara (47), and Ekiti and Kebbi indicated 30 each. Oyo 27, Edo 19, Niger 11, Borno 8, while Bayelsa reported 3. The few states that provided data on the 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/Achievement	№ 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
FCT	2022	Tar	200,000	36	26	26	131	12	24	131	-	1310	524	120	1:1000	-	-
		Ach	175,000	24	16	9	75	-	-	75	-	-	-	65	1:2333	-	-
	2023	Tar	200,000	36	24	26	131	-	24	131	-	1350	580	100	1:1200	-	-
		Ach	150,000	24	16	9	75	-	-	75	-	-	-	80	1:300	-	-
Kogi	2022	Tar	552,144	5	36	10	192	12	24	5	4	12	180	10,500	1:1000	2000	12
		Ach	473,144	3	15	24	80	-	19	-	-	-	95	6300	1:2500	1200	-
	2023	Tar	620,134	5	36	-	192	12	24	5	6	12	180	12,600	1:1000	3000	18
		Ach	560,110	3	12	-	68	-	16	-	-	-	80	8400	1:3000	1800	-
Kwara`	2022	Tar	400,000	-	-	-	12	-	-	-	-	-	-	16	1:3,000	-	-
		Ach	400,000	-	-	-	1	-	-	-	-	-	-	3	1:1000	-	-
	2023	Tar	400,000	-	-	-	12	-	24	24	4	-	16	50	1:1300	-	-
		Ach	300,000	-	-	-	-	2	8	10	-	-	1	20	1:1000	-	-
Nasarawa	2022	Tar	252,606	18	32	32	253	12	24	-	-	-	68	12	1:1000	-	-
		Ach	252,606	14	24	14	60	-	-	-	-	-	68	8	1:4009	-	-
	2023	Tar	252,606	18	32	32	253	-	26	-	-	-	79	12	1:1000	-	-
		Ach	252,606	18	30	20	140	-	17	-	-	-	79	9	1:4210	-	-
Niger	2022	Tar	-	5	46	46	365	12	24	60,0000	-	-	15	150	1:800	-	27
		Ach	-	5	46	28	209	2	2	23,0000	-	-	-	180	1:2400	-	9
	2023	Tar	-	5	46	26	365	12	24	60,000	-	-	15	150	1:800	-	27
		Ach		5	46	24	179	-	-	21,000	-	-	-	200	1:3200	-	11
Plateau	2022	Tar	600	18	47	55	338	12	26	338	-	200	338	300	1:338	-	-
		Ach	3	10	27	4	51	-	18	51	-	-	-	15	1:51	-	-
	2023	Tar	6	18	47	55	336	12	26	336	-	338	338	300	1:338	-	-
		Ach	3	10	27	4	53	-	18	53	-	-	-	10	1:51	-	-
Taraba	2022	Tar	288,000	8	30	30	288	12	24	288	-	-	64	240	1:1000	-	-
		Ach	288,000	3	8	14	72	-	-	72	-	-	48	167	1:4000	-	-
	2023	Tar	-	22	70	60	288	-	-	288	-	-	-	-	-	-	-
		Ach	-	14	30	30	166	-	-	166	-	-	-	-	-	-	-

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	2022	Tar	-	8	46	-	344	2752	12	24	-	2220	222	-	1:800	-	15
		Ach	-	3	46	-	11	888	1	-	-	1240	340	27,520	1:10,000	-	15
	2023	Tar	-	8	46	-	344	2752	12	24	-	1420	142	50,000	1:800	-	-
		Ach	-	3	46	-	71	568	2	-	-	800	485	32,480	1:10,000	-	-
Bauchi	2022	Tar	-	-	-	-	-	-	-	24	-	-	500	-	1:800	-	-
		Ach	-	-	-	-	-	-	-	-	-	-	-	-	1:300	-	-
	2023	Tar	-	-	-	-	-	-	-	24	-	-	3500	-	1:800	-	-
		Ach	-	-	-	-	-	-	-	6	-	-	2870	-	1:3500	-	-
Borno	2022	Tar	125,000	7	27	200	500							15000	1:250	-	10
		Ach	40,000	7	18	58	123							7200	1:25000	-	4
	2023	Tar	150,000	7	27	200	500							20,000	1:200	-	12
		Ach	62,000	7	11	31	58							11,000	1:35000	-	8
Gombe	2022	Tar	-	15	66	139	463	29376	12					-	1:800	1350	75
		Ach	125	15	-	14	51	7542	2					125	1:6552	-	-
	2023	Tar	-	13	66	139	463	24570	12					-	1:800	-	-
		Ach	-	13	-	110	6	5600	3					-	1:9499	-	-
Yobe	2022	Tar	593,22	25	20	20	40	50	12	24	50	35	40	200	1:1000	500	50
		Ach	593,228	13	4	5	10	30	-	-	-	-	-	100	1:11864	350	-
	2023	Tar	593,228	25	20	20	40	50	12	24	50	35	40	300	1:1000	500	-
		Ach	593,228	13	4	5	10	35	-	-	-	-	-	1000	1:11864	300	-

Ach = Achieved; Tar = Targeted

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

State	Years	Target/Achieve	Nº of Farm Families	SMSs	BES	BEA's/WIA	VEAs	VEAs' Visits	MTRMs	/ QTRMs	FNTs/MTs	OFARs	SPATs	MTPs	Nº of Groups	/Coops	EA/Farmer Ratio	Nº of farmers Trained	Nº of farmers' field schools
Jigawa	2022	Tar	8570	20	-	81	278	-	-	-	-	-	-	-	-	-	1:1000	-	-
		Ach	8570	5	-	54	278	-	-	-	-	-	-	-	-	-	1:1200	-	-
	2023	Tar	9570	20	-	81	278	-	-	-	-	-	-	-	-	-	1:1900	-	-
		Ach	9570	5	-	54	278	-	-	-	-	-	-	-	-	-	1:2100	-	-
Kano	2022	Tar	-	50	176	-	1036	-	-	-	-	100	-	-	1000	800	1: 800	2000	-
		Ach	-	50	176	-	1036	-	-	-	-	-	-	-	1000	900	1:900	-	-
	2023	Tar	-	50	176	-	1036	-	-	-	-	-	-	-	1200	800	1:800	-	-
		Ach	-	50	176	-	1036	-	-	-	-	-	-	-	1200	900	1:900	-	-
Katsina	2022	Tar	800	7	66	612	-	-	-	-	-	-	-	-	-	-	1 :800	170	-
		Ach	16000	7	34	75	-	-	-	-	-	-	-	-	-	-	1:16,000	170	-
	2023	Tar	-	7	68	612	-	-	-	-	-	-	-	-	-	-		170	-
		Ach	-	7	34	75	-	-	-	-	-	-	-	-	-	-		170	-
Kebbi	2022	Tar	525,000	8	30	340	500	20	-	-	-	-	-	-	-	-	1:1000	1500	30
		Ach	525,000	8	30	170	135	15	-	-	-	-	-	-	-	-	1:3,650	1500	30
	2023	Tar	525,000	8	30	340	500	20	-	-	-	-	-	-	-	-	1:1000	300	30
		Ach	525,000	8	30	170	135	15	-	-	-	-	-	-	-	-	1:3,888	300	30
Sokoto	2022	Tar	_	12	46	60	2000	-	12	-	26	-	-	-	-	-		500	25
		Ach		5	20	15	368	-	-	-	1	-	-	-	-	-		200	2
	2023	Tar	-	10	46	60	2000	-	12	-	26	-	-	-	-	-		500	25
		Ach	-	5	20	15	368	-	-	-	-	4	-	-	-	-		200	2
Zamfara	2022	Tar	655000	10	40	40	350	12	14	-	4	4	4200	120	1120	-	1:1000	1500	50
		Ach	350000	10	20	10	120	12	-	-	-	4	1200	80	140	-	1:4917	1200	41
	2023	Tar	655000	10	40	40	350	12	-	-	-	4	4500	120	1200	-	1:1000	1500	50
		Ach	320000	10	20	10	100	12	-	-	-	4	1150	70	120	-	1:4917	1200	41

Ach = Achieved; Tar = Targeted

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

State	Years	Target/Achievement T	№ 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	2022	Tar	144	18	38	38	400	-8	12	24	5	8520	450	144	1:800	1000	81
		Ach	88	18	38	38	101	-	1	24	-	1200	200	88	1:3800	340	-
	20223	Tar	200	18	38	38	400	-	24	24	5	6000	450	200	1:800	1000	81
		Ach	90	18	36	38	101	-	-	16	-	1050	200	90	1:3890	200	-
Anambra	2022	Tar	700,000	20	10	20	25	50	12	12	-	50	500	20	1:1000	800	1200
		Ach	536000	20	10	8	20	40	2	12	-	45	305	25	1:10,000	700	1300
	2023	Tar	700,000	20	10	20	25	60	4	12	-	80	500	30	1:1000	500	700
		Ach	536000	20	10	18	18	55	2	12	-	58	305	28	1:10000	450	800
Ebonyi	2022	Tar	1,000,000	15	24	26	500	21,000	12	25	999	5000	515	25000	1:1000	-	-
		Ach	500,000	15	24	26	109	13,400	3	17	-	354	187	15000	1:800	-	-
	2023	Tar	1,500,000	18	26	30	500	23,000	12	24	-	5000	600	30,000	1:800	-	-
		Ach	550,000	18	26	30	250	14000	5	18	-	360	230	18000	1:1000	-	-
Enugu	2022	Tar	80,000	30	17	17	342	396	12	72	-	-	50	50	1:800	-	-
		Ach	242,542	11	11	4	18	100	1	50	-	-	-	30	1: 10,000	-	-
	2023	Tar	120,000	30	17	17	342	396	12	72	-	-	50	60	1:800	-	-
		Ach	242,542	10	11	4	17	10	-	50	-	-	-	25	1:10,000	-	-
Imo	2022	Tar	-	15	27	27	238	-	11	26	4	-	-	1000	1:920	-	3
		Ach	-	15	27	27	115	-	-	24	-	-	-	3000	1:440	-	-
	2023	Tar	-	13	27	27	238	-	11	26	4	-	-	1000	1:920	-	3
		Ach	-	15	27	27	115	-	-	24	-	-	-	3000	1:450	-	-

Ach = Achieved; Tar = Targeted

Table 15.2e: Extension Activities/Workers in the South-South 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
Ak/Ibom	2022	Tar	685,095	30	40	40	274	12,480	12	26	-	2,645		640	1:2500	500	-
		Ach	685,095	27	40	18	66	3,073	-	26	-	1,010	-	188	1:12926	282	-
	2023	Tar	685,095	30	40	40	274	10816	-	26	-	2,225		416	1:2500	500	-
		Ach	685,095	27	31	18	47	2,812	-	17	-	541	-	168	1:14576	198	-
Bayelsa	2022	Tar	95,474	12	8		174	-	12	24	-	1,099	30	50	1:549	-	-
		Ach	-	3	-	-	30	-	-	8	-	177	-	5	1:3298	3	3
	2023	Tar	95,474	12	8	8	174	-	12	24	-	1,099	29	50	1:549	-	-
		Ach	15,912	3	-	-	29	63	-	3	-	112	-	5	1:3292	3	3
C/River	2022	Tar		15	18	18	144	13632	12	24	-	355		720	1:3343	--	-
		Ach	481506	15	15	17	51	3632	-	24	-	355	-	400	1:6781		-
	2023	Tar		15	18	18	90	13632	12	24	-	355		880	1:3343		
		Ach	481506	14	15	15	51	8221	-	16	-	150	-	100	1:6781		
Delta	2022	Tar	545,987	-	25	25	200	-	12	24	-	-	125	200	1:1000	-	-
		Ach	545987	-	25	25	120	-	-	24	-	-	-	64	1: 4549	-	-
	2023	Tar	545987	-	25	25	200	-	12	24	-	-	125	200	1:1000	-	-
		Ach	545987	-	25	25	103	-	-	15	-	-	-	80	1:5300	-	-
Edo	2022	Tar	300,000	9	36	36	288	208	12	2624	30000	1600	-	7140	1:800	7140	1:800
		Ach	300000	7	22	-	4	144	2	10	30000	567	-	1365	1:82	1365	1:82
	2023	Tar	30000	9	36	36	288	-	12	26	3	3000	-	250	1:800	3410	25
		Ach	30000	7	22	-	26	-	4	14	-	2819	-	192	1:6250	3216	19
Rivers	2022	Ta	450,000	-	-	-	283	96	12	24	-	-	3	-	1:79000	135	10
		Ach	28,000	-	-	-	70	48	3	12	-	-	3	-	1:28000	-	-
	2023	Tar	450,000	-	-	-	283	96	12	24	-	-	3	-	1:79000	-	-
		Ach	28,000	-	-	-	70	48	3	7	-	-	3	-	1:28000	-	-

Ach = Achieved; Tar = Targeted

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

State	Years	Target/Achieve Met	№ 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
Ekiti	2022	Tar	200,000	16	16	16	112	24,575	12	-	320	200,000	100	100	1:1000	250	-
		Ach	200,000	10	16	14	35	6245	3	-	45	200,000	45	45	1:3100	75	-
	2023	Tar	200,000	16	16	16	112	24,575	12	-	320	200,000	-	100	1:1000	20,000	70
		Ach	200,000	12	16	12	30	10,250	4	-	47	150,000	-	45	1:3100	8250	30
Lagos	2022	Tar	-	0	-	-	-	-	12	26	12	15	30	500	1: 1000	250	81
		Ach	558,420	-	-	-	-	-	3	12	-	-	-	650	1:7756	130	-
	2023	Tar	-	-	-	-	-	-	12	26	12	15	15	-	1:1000	250	81
		Ach	558,430	-	-	-	-	-	3	14	-	-	-	680	1:7758	180	-
Ogun	2022	Tar	360,000	20	20	20	126	115,200	12	-	3	-	470	-	1:800	-	-
		Ach	168,000	16	18	17	94	90,240	1	-	1	-	285	-	1:2740	-	-
	2023	Tar	360,000	20	20	20	126	-	12	-	3	-	415	-	1:800	-	-
		Ach	-	16	20	16	83	-	-	-	-	-	-	-	-	-	-
Ondo	2022	Tar	180,000	16	18	18	256	1,920	12	24	-	1000	10	248	1:725	-	-
		Ach	100,000	10	18	11	43	1,100	1	24	-	200	6	82	1:2,950	-	-
	2023	Tar	180,000	16	18	18	256	1,920	12	24	-	1000	10	248	1:725	-	-
		Ach	95,000	7	18	14	44	900	-	216	-	170	8	82	1:4,186	-	-
Osun	2022	Tar	256,000	9	-	-	248	-	12	24	-	-	65	150	1:1000	-	-
		Ach	182,000	3	-	-	20	-	-	24	-	-	26	113	1:9143	-	-
	2023	Tar	256,000	9	-	-	248	-	12	24	-	-	65	150	1:1000	-	-
		Ach	182,000	3	-	-	20	-	-	24	-	-	26	113	1:9143	-	-
Oyo	2022	Tar	415,030	20	33	33	264	63,360	12	24	5	-	-	-	1: 800	-	27
		Ach	415,030	14	28	12	25	12,480	-	23	-	-	-	-	1: 6385	-	1
	2023	Tar	415,030	20	33	33	264	63,360	12	24	5	-	-	-	1: 800	-	27
		Ach	415,030	13	28	11	24	12,750	-	16	-	-	-	-	1: 6400	-	1

Ach = Achieved; Tar = Targeted

15.3 List of Technologies under OFAR, MTP, SPAT

The routine activities carried out by the ADPs in demonstrating and disseminating improved agricultural practices and technologies to farmers relate to on-farm adaptive research (OFAR), Management Training Plots (MTPs), and Small Plot Adoption Techniques. Usually, these activities are used to solve immediate field problems. This is why technologies for dissemination in each state are different from one another. These include the use of plant extract to control ND in poultry, the use of organic manure for maize production, and the propagation of cassava cuttings/ha. Others include on-farm Sesame variety trial, evaluation of planting techniques on rice yield, variety response of sweet potato to soil nutrient, liquid fertilizer trial, the introduction of crop varieties, spacing and micro dozen application of fertilizer, demonstration of Pod Borer Resistant Variety (PBRV), demonstration of Samsorg 47 variety, sunflower varietal trial, use of quality protein maize and Sorghum and Rice. Each technology is expected to be replicated in ADP zonal offices across the state. Many ADPs had no complete record list of technologies conducted while some had no record at all. Table 15.3 shows that only Plateau, Zamfara, Enugu, Ogun, Ondo, Cross Rivers, Bayelsa, and Edo ADPs reported a complete list of technologies conducted under OFAR, MTP, and SPAT. In general, only 25 states gave records of technologies tried under OFAR, MTP, and SPAT respectively.

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

State	OFAR	MTP	SPAT
North-Central			
Plateau	Use of plant extract to control ND in poultry	50x50 metre	Maize
kogi	-	Use of organic manure for maize production. Propagation of cassava cuttings/ha	-
Nasarawa	On-farm Sesame variety trial. Evaluation of planting techniques on Rice yield Variety response of sweet potato to soil nutrient Effect of intercropping timing on the yield of cereal	Rice Maize	-
North-East			
Bauchi	Liquid Fertilizer Trial Varietal Trial Organic/Inorganic Trial	-	-
Yobe	Orange flesh sweet potato Sampea 20Tn (pod borer resistant) cowpea	-	Improving potato qualities
North-West			
State	OFAR	MTP	SPAT
Kaduna	-	Good Agronomic practices (GAP). Smart Agricultural practices	-
Kano	Introduction of crop varieties, spacing & micro dozen application of fertilizer	-	-
Kebbi	Demonstration of Pod Borer Resistant Variety	-	Rice Advice Pod borer cowpea trials Safe use of Agrochemicals
Jigawa	Demonstration of Samsorg 47 Variety	-	-
Zamfara	Sunflower varietal trial.	Cereal/Legumes integration	Cereal/Legumes integration

	Quality Protein Maize. Samsorgh 45 and Samsorgh 49. Extra Early G/nut Variety	System Rice Intensification Shelter belt establishment Use of quality protein maize, Sorghum, and Rice	System Rice Intensification Shelter belt establishment Use of quality protein maize, Sorghum, and Rice
Sokoto	-	Spacing Planting techniques	Use of quality protein maize, Sorghum, and Rice System Rice Intensification
South-East			
Abia	-	-	C/M/E C/M/SP YM/CFO/CP Y/M/T Sheep/goat Piggery poultry
Anambra	-	Yam/maize Yam/melon Yam staking	Cassava/maize Planting of rice Tomato staking
Enugu	Planting Techniques	PLANTING DISTANCE PLANTING	CASSAVA SWAMP RICE
Imo	-	CMV Intercropping YCMV alternate cropping YCMV Convectional Sheep and goat Artificial brooding Rabbit farming Beekeeping Poultry farming Fish farming Snail farming	CMV Intercropping YCMV alternate cropping YCMV Convectional Sheep and goat Artificial brooding Rabbit farming Beekeeping Poultry farming Fish farming Snail farming
Ebonyi	-	Cassava Variety's Introduction Pro Vitamin A Introduction Bee Keeping Management Rice Row Planting System Of Rice Intensification Yam Minisett/Maize	Rice Row or Line Planting Bee Keeping Yam Minisett C/M/ Sweet Potatoes Processing/Utilization Sheep/Goat Management Breeding Of Local Chicks Fish Pond Management Housing For Sheep/Goats Dry Season Vegetables
South-West			
State	OFAR	MTP	SPAT
Ogun	On-farm assessment of the performance and acceptability of newly released cowpea varieties to farmers in Ogun State. Comparison of the use of improved hermetic drum and farmers' practice in the storage of ofada rice in Ogun State. Demonstration on the optimum culture period for table-sized clarias gariepinus production in concrete fish tanks. Assessment of two varieties of cocoa hybrid	Akilimo cassava Akilimo maize Pod borer-resistant cowpea Seed yam through a mini-set Fattening of sheep and goats. Improved feed formulation using locally sourced ingredients. Value addition to fish.	Akilimo cassava Akilimo maize Pod borer-resistant cowpea Seed yam through a mini-set Fattening of sheep and goats. Improved feed formulation using locally sourced ingredients. Value addition to fish.

State	OFAR		SPAT
Ondo	Evaluation of the performance of newly released hybrid maize varieties. Evaluation of the use of organic, Inorganic fertilizer for yam production, Evaluation of increasing the yield of tomato using biochar. Demonstration of smoking kiln to artisanal folks	Plantain Inter Crop with Cassava mixed cropping Cassava (sole), Maize (OPP)	Onion Production Tomato Production
Kwara	-	Maize Rice Soyabean Sweet potato	Cowpea
Ekiti	-	-	Fertilizer application to crop Seed Yam Production (miniset). Optimum Plant Population (OPP) Introduction Orange Flesh Sweet Potato (OFST). Introduction of PBR cowpea. Rehabilitation of cocoa
South-South			
State	OFAR		SPAT
Akwa-Ibom		Cassava/Maize/Vegetables Yam/Maize/Vegetables Concrete fishpond Poultry production Swamp rice Plantain/Banana Forest vegetables	Cassava/ Maize/ Vegetable Yam/Maize/Vegetables Dry season vegetables Swamp rice Pig production Artificial brooding of local chicks Concrete fish pond Plantain/banana/cocoyam Processing or utilization of agro-product Forest vegetable Poultry production
Cross Rivers	Evaluation of Privita cassava-variety adoption in Cross River State	Pond management Oil palm nursery	Cassava, maize Row planting. Boiling of rice Sole cropping of Cassava. Oil palm nursery. Good farm management
Delta	-	Improved maize seed Improved tomato production Broiler production Fishery production	-
Bayelsa	Storage of cassava stem during flood Demonstration of confectionaries (soybean) Evaluation of the productivity and acceptability of broiler Chicken raised on sand litter	Breeding of local chicks Homestead fish Snail farming dry season Veg production	Cassava/maize Intercrop Production of swamp rice Plantain/cocoyam intercrop Fish processing
Edo	Effect of planting distance on bitter leaf growth and	Cassava based mixture Yam minisett technology	Yam-based crop mixture Cassava based mixture

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yield under 3 ecological zones Effect of probiotics on water quality management of African catfish	Maize production Soya bean Cowpea Rice production	Yam minisett technology Plantain/banana production Pineapple production Soya bean Cowpea Sweet potato Rice and cocoyam production

15.4   Radio Programs

Radio serves as an important medium in disseminating agricultural extension messages in both rural and urban centers. Radio is a communication tool recognized as a means of reaching out to rural farmers. This is achieved by broadcasting improved agricultural information to farmers. Agricultural programs aired on the radio in different states in 2022 and 2023 are shown in Table 15.4. There was a reduction in the number of agricultural programs aired on radio across the states in 2022. The reason for this was due to poor funding of the ADPs. However, some states like FCT, Benue Kogi, Niger, Plateau, Adamawa, Bauchi, Borno, Gombe, Yobe Katsina, Sokoto, Enugu, Edo, Ekiti, and Ogun reported agricultural radio programs in 2023 (Table 15.4). The table shows that the Northern states had more radio programs aired in comparison to the Southern states. It implies that many farmers, even in the rural areas could have access to those radio programs 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 Programs (Agriculture) Aired in 2023

State	Programmes title	Number Proposed 2022	Number Proposed 2023	Number Achieved 2022	Number Achieved 2023	Time aired	Station aired	Programme duration	Language	Cost of airing per annum	Sponsor
North-Central											
FCT	Agric sector	24	24	-	-		Kapital Fm	15'	English	68,000	FCT-ADP
Kogi	Farmers friend Food basket	104 80 -	104 80 52	36 20 -	40 20 15	2x/wk 2x/wk 2x/wk	Grace Fm Prime FM Kogi Fm	1Hr 1Hr 30Mins	English English English	Free 250,000 Free	MOA NGOs MOA
Taraba	PROSELL Take kira Noma Tushen Arziki	26	26	5	6	11:00 am	TSBC	60mins	Hausa	-	PROSELL
Benue	Rice Awareness programme	1	1	1	1	10am	Radio Benue	1hr	English	50,000	GIZ
Kwara	_	-	-	-	-	-	-	-	-	-	-
Nasarawa	Wealth Alternative	3	3	2	2	10am	NBS	30mins	Hausa	100,000	NBS
	Mu Koma Gona	2	2	2	2	10 am	NBS	30mins	Hausa	100,,000	NBS
Niger	GAP for rice	52	52	NA	NA	8:30 pm	Crystal FM, Minna	25 mins	English, Hausa, Nupe, Gbagyl	₦2M	NAMDA
Plateau	Potato	10	10	4	4	5 pm	PRTV	1 HOUR	English	150,000	GIZ
North-East											
Adamawa	Agric Digest	-	52	-	6	1:30 pm	Usaku and Gotel	30mnutes each	English and Husa	-	Usalu extension
Bauchi	Noma Tushen Arzi Akoma Gona	52 52	52 52	52 52	32 32	7:30 pm 6:30 PM	Globe FM BRC	30 Minutes 30Minutes	Hausa Hausa	702000	BSADP BSADP
	Noma da Raya Karkara	52		32	-	4.30	Albarka	30 mins	Hausa	1,0404000	BSADP
Borno	Akoma gona Filin manoma	12 -	12 5	4 -	8 5	4-5pm 4-5pm	Al-ansar Al-ansar	1hour 1hour	Hausa Hausa		DRC MERCY CORP

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State	Programmes title	Number Proposed		Number Achieved		Time aired	Station aired	Programme duration	Language	Cost of airing per	Sponsor
	Kuloro Waltiyau Kuloro Waltiyau	8 5	12 5	4 -	8 5	5-6pm 1:30- 2PM	Al-ansar Al-ansar	1 hour 30 mins	Kanuri Kanuri		DRC FADAMA
-Gombe	Noma da kiwo HIRA DA MALAMA GONA	24	24	8	8	12-1 pm	JEWEL	60mins	Hausa	-	GSLACK
Obe	Zauren manoma	48	48	48	30	1 Hr	YBC	1 Hr	Hausa	200,000	ADP
North-West											
Kaduna	Wheat production	10	Nil	6	Nil	9:30am	KSMC	30min	Hausa	-	-
	Gender policy	4	3	1	1	2:00 pm	Liberty	2hrs	English & Hausa		
Kano	Noma da Kiwo	13	13	13	13	7:30 pm and 5:30 pm	Rahama Radio	30mins	Hausa	-	KSADP
Katsina	KARTAD	52	52	52	-	4-4:30pm	KITV	30mins	Hausa		KTARDA
Kebbi	Filin Manoma	60	60	45	40	-	Kebbi Radio	30min	Hausa	-	KANDA
	IFAD takes Kira.	50	50	40	40	-	Kebbi Radio	30min	Hausa	-	KARDA
	Naduke	50	60	35	30	-	Kebbi Radio	30min	Hausa	-	KARDA
	Don Manoma	50	40	35	30	-	Kebbi Radio	30min	Hausa	-	KARDA
Jigawa	Masaka	-	-	-	-	-	Jigawa Radio	-	Hausa	-	Jigawa State govt
Sokoto	Mukoma Gona	15	20	12	6	11:30am	Rima Radio	30min	Hausa	-	SADP
Zamfara	Noma tushen arziki	52	52	24	24	Sat/Tue	Radio Zamfara	30mt	Hausa	540000	ZADP
South-East											
Abia	Aka Ajaja	12	-	-	-	6 pm	BCA	45mins	Igbo	45000	ADP

State	Programmes title	Number Proposed		Number Achieved		Time aired	Station aired	Programme duration	Language	Cost of airing per	Sponsor
Ebonyi	-	-	-	-	-	-	-	-	-	-	-
Enugu	Extension Service delivery	12	12	-	6	1:30-3 pm	FRCN	1 hr 30mins	English		ADP
		48		28		4:30-7 pm	ESBS	30 mins	English		ADP
		48		28		4:30 pm 4:30 pm	Dream FM Urban radio	1 hr	English		ADP
South-South											
Akwa-Ibom	Radio farmer	104	104	-	-	6.30 pm	AKBC	15mins	English/Efik	₦2.04m	AKSG
Edo	Farming Hints	12		2		6.30 pm	EBS	30mins	Pidgin English	600,000	Edo ADP
South-West											
Ekiti	Agbeloba	315	315	315	76	5:45 am-5:55 am	BSES	10 minutes	Yoruba	N100,000.00	EKSG
Ogun	Agbe-Afokosoro	52	52	-	-	7:30-7:45	OGBC	15min	Yoruba	139,750	State Government
	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	-	-	5:00 pm	AMULUDUN	15mins	Yoruba	1,144,000	OYSG

Note: There were no data from 7 states

15.5:   Television Programmes

Television, just like some other communication medium, passes both moral and immoral messages. The critical factor, therefore, is how its potential can be harnessed. Its unique characteristic of sight, sound, motion, and consequent demonstrative power is a living testimony of its capacity to sensitize, convince, and mobilize its audience socially, morally, psychologically, emotionally, and otherwise. Television offers a great avenue for disseminating (audio and video) agricultural information to farmers. Such programs 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 to improve their productivity. Table 15.5 provides information on such agricultural programs aired in different States in 2023. Only a few states (Benue, Bauchi, Borno, Gombe, Kaduna, Katsina, Plateau, Zamfara, Cross River, and Ekiti) provided information on agricultural programs televised in 2023. There was a slight increase in the number of such programs by the ADPs in the Northern zone while a decrease in the Southern part of the country as compared to the 2022 records. More attention was given to television programs in 2023 as a means of information dissemination to farmers in the Northern Zone. This implies that the farmers in the Northern part of the country in 2023 could have been more exposed to new technologies and practices which could be assessed through television programs.

Table 15.5: Television Programmes aired in different States in 2023

State	Programmes	No. Proposed		No. achieved		Time of Airing	Station Aired	Programme duration	Language	Cost of Airing per annum	Sponsor
		2022	2023	2022	2023						
North-Central											
FCT	Agric sector	24	24	-	-	-	Kapital Fm	15'	English	68,000	FCT-ADP
Benue	Rice awareness program	1	1	1	1	10am	Radio Benue	1hour	English	50,000	GIZ
Plateau	Potato	10	10	4	4	5pm	PRTV	1HOUR	English	150000	GIZ
Kwara	Agbeloba	12		-	-	-	NTA Ilorin	25 mins	English & Yoruba	540,000	KWS
Niger	GAP for rice	52	52	NA	-	7:30 pm	NTA, Minna	25 mins	English, Hausa, Nupe, Gbagyl	₦2M	NAMDA
Nasarawa	Noma Turshi Arziki	24	24	22	-	4:00pm	NBS	30mins	Hausa	1.980,000	NBS
North-East											
Adamawa	Mu leka gona, Agric digest	24	24	-	-	7:45 pm	ATV	45mins	-	-	ADST
Bauchi	Noma Tushen Arziki Akoma Gona	52 52	52 52	52 52	52 32	7:30pm 7:30 pm	BATV NTA	30MIN 30MINS	Hausa Hausa	786,000 800,000	BSADP BSADP
Borno	Filin manoma Back to farm	- 20	5 30	- 17	5 20	8-8:30 10 am	BRTV BRTV	30Min 1 hour	Hausa English		FADAMA LCRI
Gombe	Noma da Kiwo	-	-	2	52	8:30 pm	GMC	30mins	-	-	Sakatara
	Fall Distribution and Post-Harvest	-	-	-	1	-	NTA	30mins	-	-	-

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State	Programmes	No. Proposed		No. achieved		Time of Airing	Station Aired	Programme duration	Language	Cost of Airing per annum	Sponsor
		2022	2023	2022	2023						
	Management										
	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	10PM	KTTV	30 mins	Hausa	-	KTARDA
Kaduna	Wheat production Anthrax Gender policy	3 - -	- 3 1	3 - -	- 3 1	10 am 9 am 2 pm	KSMC Liberty liberty	30mins 1 hour 2hours	Hausa English English and Hausa	- - -	- - -
Jigawa	Jarda Jagoran Manoma	103	103	62	-	7:30 PM	NTA Dutse	30mins	Hausa	300,000	Jigawa State Government
Zamfara	Noma Tushen Arziki	12	12	6	5	Mon.	NTA	30mins	Hausa	500,000	NTA
South-East											
Enugu	EXTENSION SERVICE DELIVERY	12	12	NIL	2	7:30 PM	ESBS TV	30 MINS	ENGLISH		ADP
South-South											
Cross-River	FEED THE FUTURE	12	12	6	4	-	-	-	English	-	USAID
Edo	Farming Hints	52	52	2	-	6.30 pm	EBS	30mins	Pidgin English	600,000	Edo ADP
South-West											
Ekiti	LAHERE	54	54	54	31	5:30PM-6:PM	EKTV	30 minutes	Yoruba	100,000	EKSG
Ogun	Agbelere	52	-	52	-	7:30-7:45	OGBC	15min	Yoruba	139,750	State

State	Programmes	No. Proposed		No. achieved		Time of Airing	Station Aired	Programme duration	Language	Cost of Airing per annum	Sponsor
		2022	2023	2022	2023						
											Government
Lagos	Bohiya	52	-	30	-	6:25pm	Lagos radio107:5	30min	Youruba	240,000	-
Ondo	Obalagbe Jingles	13 4	13 4	-	-		-	-	-	-	-
Osun	Aye Agba	-		-	-	-	-	-	-	-	-

Note: There were no data from 9 states

15.6 Problems Affecting the Effective Performance of ADPs in Nigeria

Every Agricultural Development Programme (ADP) across the country aimed at grassroots extension delivery services to rural farmers to change their attitude, increase income generation, and improve livelihood status. But unfortunately, the ADPs are usually underfunded as reported in Table 15.6, making it impossible for them to carry out this function successfully. No wonder then, that, Table 15.6 showed that inadequate funding was generally the major problem affecting the effective performance of ADPs in Nigeria. This was followed by a shortage of trained extension personnel and inadequate mobility. Others include insufficient training of extension staff, lack of office facilities (computers, laptops, and printers), and lack of motivation and non-payment of hazard and transport allowances.

15.6:   Problems Affecting the Effective Performance of ADPs

States	Problems
North-Central	
Niger	Inadequate funding. Inadequate staff Insufficient training of available staff Inadequate pieces of machinery Inadequate mobility for effective extension delivery
FCT	Aging staff population Poor funding Low staff motivation Mobility.
Kogi	Lack of funds for extension publication Inadequate staff/extension agents Inadequate mobility
Taraba	Insufficient funding Dilapidated infrastructures Inadequate extension personnel
Nassarawa	Inadequate funding Inadequate staffing Inadequate vehicles for supervision
Benue	Inadequate staff No functional mobility Insufficient training of extension staff
Kwara	Paucity of funds Inadequate number of extension agents and enumerators. Lack of vehicles or mobility machines for extension agents and enumerators. Lack of office equipment (computer, laptop, printers, etc. No execution of regular training for extension agents and enumerators Mobility (vehicles for transport and transportation system); Low rate of extension agents to farmers; and Lack of funds to deliver extension services
North-East	
Borno	Inadequate funding to conduct trials

States	Problems
	A declining number of extension workers
	Lack of motivation
Yobe	Inadequate funding
	Inadequate staff
	Logistic issues
Bauchi	Inadequate Funding
	Inadequate Extension staff
	Lack of Mobility
	Inadequate Extension Materials
	Poor condition of service of Extension staff.
	Lack of manpower
	Lack of refresher training
	Decayed infrastructure
Gombe	Insufficient funds
	Inadequate staff strength
	Inadequate working materials e.g. mobility
Adamawa	Lack of funding
	Inadequate extension agents
	Inadequate capacity building
	Lack of demonstration skills
North-West	
Kano	Poor funding
	Lack of incentive for extension agents
	Lack of training and re-training of extension
	High cost of transportation
Katsina	Inadequate funding
	Insecurity
	Insufficient Manpower
	Supervision
Kebbi	Poor funding
	Capacity building
	Staff recruitment
Jigawa	Lack of sensitization,
	lack of mentorship among the officer
	late release of funds for the program
Sokoto	Lack of funding
	Lack of staffing
Zamfara	Shortage of extension workers
	Poor training facilities
	Lack of motivation and incentives e.g. mobility, allowance etc.
Kaduna	Lack of fund
	Inadequate staff
	No Capacity building
	No Working tools
South-East	
Anambra	Lack of funds

States	Problems
	Inadequate extension staff
	Inadequate research findings
Ebonyi	Inadequate funding
	Inadequate staff especially field officers
	Lack of mobility for field officers
	Inadequate utility vehicles for administrative officers
Imo	Inadequate funding
	Lack of subvention
	Poor salaries of workers
	No existing projects
	Lack of mobility
Abia	Insufficient funding
	Inadequate extension personnel
	Lack of modern extension delivery tools
South-South	
Akwa-Ibom	Inadequate extension staff
	Poor mobility services
	Non-payment of hazard/ transport allowance
	Lack of rain outfits
Bayelsa	Lack of funds
Edo	Lack of mobility
	Inadequate funding
	Inadequate qualified staff
	Lack of farming inputs
Rivers	Lack of mobility
	High ratio of eas/farm family
	Lack of funding for programs
South-West	
Ekiti	Weakling of the ADP system as a result of the non–existence of a National Coordinating Office for ADPs in the country. This has degraded the ADP system.
	Fear of banditry and kidnapping is hindering the optimum performance of the Extension Agents and other Extension Personnel in the discharge of their duties.
	Poor funding of the ADP by the State Government
	Mobility problem (Inadequate number of Hilux pickup vans for monitoring and supervision).
	Motorcycles for EAs are in different stages of disrepair.
	Insufficient working tools like raincoats, rain boots, and GPS for land area measurement.
Oyo	Low number of staff
	Logistics
	Unavailable Mobilization at the zone and headquarters
Ondo	Lack of Finance for effective Extension activities
	Inadequate field staff (Eas) and office staff
	Lack of mobility (Motorcycles & Hilux Vehicles) for extension

States	Problems
	delivery and supervision
Osun	Lack of personnel
	Lack of motorcycles for extension agents and enumerators
	Poor funding
	Low political will
	Inadequate project vehicles
Lagos	Lack of funding and vehicle

15.7: NGOs Participation in Extension Activities

Non-governmental organizations (NGOs) in extension activities recorded in Table 15.7 shows that 25 out of 37 states ADPs gave a record of NGOs extension delivery services. Meanwhile, Kaduna, Kebbi, Abia, Imo, Ogun, and Ondo did not provide information on the activities of NGOs in their respective states. The NGOs participated with the state ADPs in the areas of digital extension, capacity building, sensitization, seed multiplication, veterinary services, women and youth empowerment, technology transfer, irrigation activities, and general extension delivery services among others. The major NGOs recorded in Table 15.7 were Care International, SG200, JICA, USAID, AGRA, WISE, CEEPE, Harvest Plus, Mercy Corp, TRIMMING, N-Power Project, CARITA, WISE, NRC, SEEDCO, NCARES, APPEALS, and World Bank.

Table 15.7 NGOs Participating in Extension Service Delivery

State	NGO	Activities	Location	No Farm families Reached
North-Central				
Benue	CEFFER	e-extension	23 LGAs	10,000
Niger		Capacity building		8000
		Sensitization	20 LGAs	10,300
Kwara	WISE	Tree growing	Ilorin South LGA	20
	CEEPE	farming	Kaiama LGA	20
FCT	JICA	Capacity building	AMAC/Glada	120
Nasarawa	YMCA	Private extension delivery	Lafia	-
	Farm NET	Private extension delivery	Lafia	-
	AGRA	Private extension delivery	Lafia	-
Plateau	GIZ	FBS,GAP,FFS	Plateau	28,000
	NRC	Refugees	Plateau	4000
	CIP	Seed multiplication	Plateau	20,000
	SEEDCO	Varieties of Seed	Plateau	20,000
	CRUDAN	Agric Extension	Bukuru State Wide	20,000
	ASTC	Extension delivery	State Wide	20,000
	NVRI	Vet Services	Vom	20,000
Taraba	Diamond Del. Institute	Extension	6 LGAs	150
	DSV Scheme	General extension services	16 LGAs	500

State	NGO	Activities	Location	No Farm families Reached
	Alluvid agriculture	Women empowerment	8 LGAs	250
North-East				
Adamawa	Feed the future	Humanitarian & extension services	7LGAs	
	UNDP	"	2LGAs	-
	GIZ/OXFAM	"	2LGAs	-
	NURU Nigeria	"	4LGAs	-
	NG. Camel	"	21LGAs	-
	IITA	"	7LGAs	-
Bauchi	Mennonite Economic Development Associates (MEDA)	Women and Youth Empowerment, Market out linkage Processing, Technology innovation, Soy, Rice, and Groundnut Processing.	7 LGAs (Bauchi,Toro,Dass,, Warji,I, Ganjuwa, Katagum and Jamaare)	
	Women Farmers Advancement Network (WOFAN)	WOFAN – Icon2 Farming and Processing	7 LGAs (Bauchi,Dass,Warji,Tafawa Balewa, Toro, Ganjuwa and Ningi)	
Borno	NRC	-	Training farmers	Jere//MMC
	MERCY CORPS	-	Training farmers	Konduga/Jere
Gombe	Trimming	IRRIGATION	1 LGA	350
	Mercy cooperation	Extension	5	1250
	INOFAN	Extension	33	250
	SG200	Extension	9	2400
	JICA	Vegetable production	2	460
	IITA	Seed production	5	2300
Yobe	USAID ─ (ITTA)	Livelihood	3 LGAs	3000
	Mercy corps	Livelihood	5 LGAs	7000
	Care International	Livelihood	5LGAs	7000
South-West				
Kano	KSADP		State	2000
	NCARES		State	2000
	SASAKAWA		State	2000
	TRIMMING		State	2000
	APPEALS		State	2000
Zamfara	SG 2000	Ext. service and input support	-	-
	AGRA			

State	NGO	Activities	Location	No Farm families Reached
Sokoto	USAID	Agric activities and nutrition	All LGA's	382,000
South-East				
Anambra	SHEF	Extension	Owa NIMO	30
South-South				
Akwa-Ibom	Domita farms	Crops, livestock	Uyo	220
	Vika farms	Integrated farms	Uruan	65
	Isobara farms	Crops	Essien Udim	30
	Edet farms	Processing	Essien Udim	25
	Ene Compost Service Ltd	Crops	All zones	40
Cross River	USAID FTF	Video enabled extension act	Statewide	4500
Delta	USAID	Training	Oshimili North	-
		Input supply	Oshimili North	-
		Extension delivery	Uvwiel	-
		Extension delivery	Ondokwa West	-
Edo	LAPO	Credit and extension support to farmers	Statewide	-
	GIZ	Farmers training	Statewide	-
	IDRC	Farmers training	Statewide	-
	Caritas	Training of youth	Statewide	-
South-West				
Osun	JICA	Sheep	Iwo, Irewole, Ife East, Ede South	400
	WORLD BANK	Nigeria For Women Project	Ifedayo, Olaoluwa, Atakumasa East	2,800
Oyo	GIZ-GIAE	Training on cassava value addition	10LGAs	48,300
	GAIN	Training	4 LGAs	48,300
	Harvest – Plus	Commercialization of bio-fortified crops	33 LGAs	100
Ekiti	Justice Development and Peace Initiative	Catholic Diocese of Ekiti, Ajilosun, Ado-Ekiti	Training of farmers on organic agriculture. Production and airing of radio agricultural enlightenment program	All the 16 LGAs

15.8. Training Needs

For the ADPs to fully comprehend and disseminate new and improved agricultural information to farmers, they must have different levels of training engagements to learn experiences to meet their needs, be relevant, and help them achieve their goals such as the provision of capacity building for the rural and urban farmers to maintain efficient and sustainable farms, improving the standard of

living of the farmers through higher and increased productivity, improving the knowledge, skills and attitudes and leadership potentials of rural farmers etc. Some of the training requested by the various ADPs in the country as shown in Table 15.8 were crop production, good agronomic practices (GAP), agricultural value chain, extension communication, pest and irrigation management, farm record keeping, and feed formulation. Others include climate-smart agriculture, food and nutrition, ICT, effective extension delivery skills, radio programs, agro-forestry, fishery, and chemical handling. The category of personnel requiring this training included Extension agents, farmers, zonal managers, forestry and fishery staff, women groups, FADAMA, BEAS, and SMSs.

Table 15.8: Training Needs of ADPs

State	Subject matter	Category of personnel	No of personnel
North-Central			
Kwara	Training on maize production	Extension agents	All extension agents
	Training on rice production	Extension agents	All extension agents
	Training on the use of ICT to improve extension service delivery	Extension agents	All extension agents
	Training on the effective use of meteorological equipment	Extension agents	All extension agents
	Training on advanced M-S Excel	Extension agents	All extension agents
	COREN engineering	LEVEL 9-17	20
	Training on NIMET	LEVEL8-17	25
	Training on NIAC	-	30
	NSE Training	LEVEL 9-17	23
	SEMMART	Women in Agric.	50-100
	Workshop	Extension agents	All extension agents
Kogi	Good agronomic practices GAP	Extension agents and Farmers	2545
	ICT	Extension and farmers	3000
	Agricultural value chain	Extension Officers	20
	Food and Nutrition Security	,,	40
	Provision of Nutrition in Emergency	,,	10
FCT	Capacity building	Head extension	80
	Handling of sacks and chemicals	DH/ extension and zonal program manager	80
	Good agricultural practices		80
Taraba	Extension skill	EAs	77
	Climate-smart agriculture	EAs	116
	ICT operation	EAs	116
Plateau	FBS (GIZ)	VEA'S/Farmer's	25
	GAP (GIZ)	VEA'S/Farmer's	25
	CBS (GIZ)	VEA'S/Farmer's	25

State	Subject matter	Category of personnel	No of personnel
	Farm Radio (GIZ)	VEA'S/Farmer's	25
	Potato (CIP)	VEA'S/Farmer's	25
	Refugee Programme (NRC)	VEA'S/Farmer's	25
Nasarawa	Pre-season training	Extension staff	200
	APS training	PME staff	50
	FUAS training	FADAMA	200
	Mid-season training	Extension TSD & PME	300
	Agro-forestry training	Forestry Staff	70
	Fisheries training	Fishery staff	60
	Women group training	Women group	70
FCT	Capacity building	Heads extension services	80
	Handling of sacks and chemicals	Zonal program managers	80
	Recommended agricultural practices for selected crops		
North-East			
Borno	FFS facilitation	Extension agents	10
	Climate-smart agriculture	EAs	20
	E-Extension training	Extension agents	27
	Training on ICT	All categories	30
	Integrated pest control management	Extension officers	500
	Produce inspection and grading	Extension officer	300
	Extension media	Produce inspectors	300
	Communication in extension	Agric. Superintendents	500
	Planning research	Livestock superintendents	145
	Animal Science	Fishery superintendents	100
Gombe	Smart agriculture	Extension agents	50
	Good agricultural practices	Extension agents	50
	Precision agriculture	Extension agents	50
	Effects of water on global warming		
Yobe	Training on good	Extension staff	40
	Pre-season training	Extension staff	40
	Spraying & handing	Extension staff	40
North-West			
Kano	CBS (GIZ)	VEA'S/Farmer's	25
Katsina	Farm Radio (GIZ)	VEA'S/Farmer's	25
	Potato (CIP)	VEA'S/Farmer's	25
	Refugee Programme (NRC)	VEA'S/Farmer's	25
	Capacity business	SMS	28
	Long time courses	BES	34
	Off courses	EAS	612
Kebbi	Crop production	EA	70
	Pest management and control	"	70

State	Subject matter	Category of personnel	No of personnel
	Diseases control	"	50
	Livestock production	"	50
	Fisheries	"	60
	Soil and water	"	40
	Computer	Enumerators	20
Jigawa	Food Nutrition	Women and Youth	50
Sokoto	Refresher training of EAs	EA's/BED's	250
	FNT	EA's/BED's	220
	MTRM	SMS, SENIOR OFFICERS	30
Zamfara	Agroforestry	Extension Workers	200
	Soil testing	"	50
	Animal disease management	"	200
	Rice disease management	Farmers	500
	Fisheries production management	"	500
	Irrigation management	"	500
	Modern Effective communication gap in agronomic practice	Extension Workers	50
South-East			
Abia	Climate resilience	EAs/farmers	1000
	Livestock training	EAs/Farmers	2000
	Fish processing and preservation	EAs/Farmers	2000
	E-extension training	SMS/EAs	401
Anambra	Extension	EAs	75
	MTRM	SMS, ZM, ZEO	16
Ebonyi	Good Record Keeping	All field staff	130
	Crop Value Chains/Rice/Cassava	ZEOs, SMS, BES/EAs	180
	Establishment Of OFAR/MTPS	All field staff	210
	Effective Extension Methods	All field staff	215
	Upgrade In ICT	All field staff	200
	Post-Harvest Handling Of Crops	All field staff	200
	Good Agronomic Practices (Gap)	ZMs, ZEOs, SMS, BEAs/EAs	120
Imo	Mushroom production	All staff	250
	Feed formulation	All staff	250
	Poultry feed formulation	All staff	250
	Cassava/cocoyam flour	All staff	250
	Horticultural crops	All staff	250
	Production and Marketing	All staff	250
	Bread making	All staff	250

State	Subject matter	Category of personnel	No of personnel
South-South			
Akwa-Ibom	Rice production	EAs, BEAs, BES, SMSs	47,18,31,27
	Maize production	EAs, BEAs, BES, SMSs	47,18,31,27
	Pepper production	EAs, BEAs, BES, SMSs	47,18,31,27
	Tomatoes production	EAs, BEAs, BES, SMSs	47,18,31,27
Bayelsa	MTRM	Programme managers Directors, SMS, ZM's and AEOs	42
	MT	EAs DES, ZM's, AEAs, BEAs, SMS.	42
Cross Rivers	Training on the use of data collection tools	Technical extension	10
	Group training for area measurement	Technical extension	15
	Feed formation for fish and poultry	Technical extension	20
	Administrative skills	Admin and technical staff	10
Delta	Pre-season training	All front-line staff	-
	Capacity building	Farmers across the state	-
	Cassava value chain	Farmers across the state	-
	ICT training	Zonal and program managers	-
Edo	Agricultural production survey training	SMS, BES	36
	Policy dialogue engagement in extension service delivery	SMS, BES	36
	Management of Bettle	SMS, BES	50
	Infestation in yam production	SMS, BES	32
	Cadre harmonizes framework on food and nutrition	SMS, BES	2
	TOT of good agronomic practices in cassava production	BES and EAs	10
	Workshop on effective extension delivery services in Nigeria	Director of the extension	1
	Cassava-based workshop	Extension officer	1
	Seminar on beekeeping	Extension officer	3
	Seminar on poultry production	Extension officer	1
	Refresher TOT for FBS trainers and supervisors	MIS Officer	1
	Catfish production	Farmers	47
	Industrial training in agricultural production	SMS	15
	Training of trainers on catfish production/processing	EAs, CPO, and I.T Students	15
	Hatching of clarias fingerlings	Technical staff	15
	Fishery and pig production	Technical staff	46

State	Subject matter	Category of personnel	No of personnel
	Crop production and animal husbandry	Technical staff	15
	Snail production	Technical staff	20
	Cassava stem multiplication	Technical staff	36
	Weather report training	Enumerators	20
	Market survey training	Enumerators	36
	Audio-visual media production technology for Agric. and Rural Development	CCO/Camera Man	36
	Computer network and internet connectivity	MIS	2
	Budget preparation skills	Directors of planning, monitoring, and evaluation	2
	Monitoring and evaluation in agricultural business	Directors of planning, monitoring, and evaluation	3
	Mainstreaming gender and the invaluable groups into a development program	Head of women in agriculture	3
Rivers	Extension	Extension agents	100
	Research	SMS	20
	Post-harvest loss	Farmers	500
	Mushroom production		30
	Feeds formulation	Livestock farmers	30
South-West			
Osun	Modern crop protection techniques	Extension agents	20
Oyo	Effective Extension Delivery	GL08 – 16	4
	Basic Computer Training	GL08 – 16	8
	Climate Smart Agriculture	GL08 – 16	14
	Good Agricultural Practices on major crops grown in South-west, Nigeria	GL08 – 15	8
	Communication training Enterprise	GL08 – 15	6
Lagos	Climate-smart agriculture	Extension officers	70
	E-extension	Extension officers	70
	Community approach to situations	Extension officers	70
Ekiti	Training on scientific reporting and ICT	Subject Matter Specialists (SMSs)	15
	Training on Good Agricultural Practice (GAP)	Extension Agents (EAs)	30
	Agric. Business Practice and Implementation Management	Planning Officers and Enumerators	10
	Management of Extension and	Extension Officers and Extension	

State	Subject matter	Category of personnel	No of personnel
	advisory services	Agents	
	Gender Development and empowerment	Women-In-Agriculture (WIA)	10
	Feasibility Study and Proposal Writing in Agric. Business Management	PME Officers	5
	Training on scientific reporting and ICT	Subject Matter Specialists (SMSs)	15
Ondo	Modern Practice in Livestock	EAs & Livestock Staff	55
	Training on management skill	Management Staff	20

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 a need for a well-articulated and comprehensive Agricultural Extension Policy (AEP). The Nigerian extension service is bedeviled by several problems as identified in Table 15.9 across the states in the six agro-ecological zones of the country. These include inadequacy of funding and inconsistent release of budget after approval, insufficient number of extension workers, mobility (vehicles for transport and transportation system) for staff/ extension agents, inadequate training and E-training Inadequate working materials, low motivation in terms of stipends payments for field activities, disproportionate Extension Agent: Farm Family ratio.

Table 15.9: Problems of Extension Services in Nigeria

State	Problems
North-Central	
Kogi	Inadequate staff/extension agents Inadequate mobility Poor funding Lack of political will
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.
Kwara	Mobility (vehicles for transport and transportation system); Low rate of extension agents to farmers; and Lack of funds to deliver extension services
Taraba	Poor funding Inadequate trained personnel Inadequate working materials,
Plateau	Insufficient funds

State	Problems
	Lack of mobility Inadequate staff number
North-East	
Adamawa	Lack of funding
Yobe	Lack of mobility Inadequate personnel Poor funding
North-West	
Kaduna	Funding Motivation Training of trainers Capacity building Working tools
Katsina	Insecurity
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 Inadequate agricultural extension Inadequate farm input Inadequate transport facilities for agricultural extension agent Ignorance of the traditions and customs of the local community
Sokoto	Little or no training and retraining Inadequate funding Lack of mobility
Zamfara	Lack of mobility Shortage of extension personnel Lack of pre-season and post-season training
South-East	
Abia	Lack of mobility Poor job incentive Inadequate funding Non-implantation of Extension policy
Anambra	Inadequate funding Inadequate Extension staff
Ebonyi	Inadequate number of extension agents, Inadequate funding Lack of mobility
Enugu	Inadequate funding Inadequate number of VEAs Lack of mobility.

State	Problems
Imo	Poor funding Lack of mobility Low motivation in terms of stipend payments for field activities. Very costly farm inputs The Imo ADP also could not acquire the inputs for the 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 high ratio of EAs/farm family lack of funding of programmes
South-West	
Ekiti	Mobility problem (Inadequate number of Hilux Pick-up Vans for monitoring and supervision). Motorcycles for EAs are in different stages of disrepairs. Insufficient working tools like raincoats, rain boots and GPS for land area measurement
Oyo	Low number of staff Inadequate logistics Inadequate mobility Inadequate training and E-training
Ondo	Lack of Finance for effective Extension activities Inadequate of field staff (EAs) and office staff Lack of mobility (Motorcycles & Hilux Vehicles) for extension delivery and supervision
Ogun	Inadequate insurance policy Mobility Issues Insecurity Poor funding
Osun	Poor funding Lack of mobility
Lagos	lack of mobility

Note: There was no information from the four 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 research in 2023. 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-tolerant varieties, early maturing varieties of crops, research on seed development, Post-harvest management of crops as well as identification of diseases and control measures, Need for higher yield crops resistant to drought among others.

In horticulture, the areas that required research were; the development of progeny orchids with improved varieties, nursing fruits and orchard development for income generation by different categories of farmers, management of flowers, fruit abortion on tree crops, capacity building on good agricultural practices and availability of pest and disease resistant and high yielding varieties that are adaptable to ecology.

In livestock: Training on how to produce high-quality animal feeds, improving genetic qualities/growth performance, Management of major livestock disease, research into systemic values of keeping animals ranching, vaccine development, development of simple and affordable technologies in livestock production, etc. were identified as important challenges that required research in the area of livestock.

In the area of fisheries, there is a need to research feed formulation both floating and extruded to ascertain the most suitable for industrial-scale fish farming, highly prolific species of catfish and tilapia, and Fish disease and water quality management, etc.

For Agro-forestry, the following were identified as problems needing research; there is a need for research in farming systems related to Agro-forestry technology for farmers' adoption. New technology on tree production, research needs for identification, adaptation, and dissemination of proven agricultural technology on agroforestry, Effective and affordable panacea for fruit spoilage or insect pest attack (infestation) in Agroforestry crops, Agro-forestry tools mitigation and adoption to climate change among others.

In the area of irrigation, Operation, and handling of irrigation equipment, Increased level of mechanization in agriculture, increased agricultural output and promotion of local fabrication of agricultural machinery and equipment, Appropriate irrigation System/method for specific crops, and Development of mini irrigation that is adaptable for individual farmers were identified as problems needing research.

The Training needed for agricultural Engineer through seminars and workshops on mechanization, harvesting, transportation, storage, and processing of agricultural products, Simple and environmentally friendly machines need to be developed and distributed to farmers at an affordable price this will solve farming problems associated with drudgery to encourage more participation in agriculture these needing serious attention in terms of agricultural mechanization.

For extension services, areas such as Research on New methodologies and approaches of extension 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's involvement in agriculture (WIA): there is a need for the development of gender-friendly equipment for farming and processing, the Importance of women's involvement in agricultural value chain activities, and there should be responsive research on the training of women in the area of processing, 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 farmlands by women for agricultural activities across all states.

Table 15.10a. Problems Needing Research North-Central

State	Problem	Identified Area(s) of Research
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.
	Agro-Forestry	Alley cropping/farming.
		Security of Alley crops.
	Extension Services	Extension methods/approaches.
		Extension supports.
		Partnership in extension delivery.
	Women in Agriculture (WIA)	Labor-saving devices.
		Gender matters.
		Group dynamics in WIA
Kogi	Crop	Physical identification of diseases of major crops
		Training on eradication of army worm infestation in maize
		Improve agricultural practices
		Capacity building for extension staff
		Innovation in crop management and farm inputs
		Rice (Identification of symptoms of diseases and control).
		Groundnut (Identification of symptoms of diseases and control).
	Horticulture	Practical training on budding, grafting, and layering
		Training on sustainability of cassava and yam seedlings during dry seasons
		Treatment of fruit droppings in coconut
		Training on the Value chain, Improving varieties, and Expansion of the farm
	Livestock	Training on how to produce high-quality animal feeds
		Breeds and sources
		Effect of livestock disease on human
		Vaccination of livestock
	Fisheries	Research on the quality of fish feeds
		Poor growth of fish due to diseases
		Effective fishery business plan
		Fish multiplication
		Hatching method and processes
	Agro-Forestry	More research on Guava Varieties
		Increase in yield of Banana Varieties
		Maintenance /fire tracing
		Expansion/Afforestation
	Irrigation	Effective/efficient water supply distribution

		Operation and handling of irrigation equipment Sources of irrigation equipment Advantage of irrigation to crop farmers Cost-efficient irrigation facilities
	Agricultural mechanization	Fabrication of affordable simple machines Maintenance of farm machinery Capacity building for machine operators Training on the durability of agricultural machines
	Extension Services	Training and development of ICT extension staff Relevance of extension services in the agricultural value chain Extension services as a channel of communication Capacity building on extension methods
	Climate Resilience	Early warning notification
	Women in Agriculture (WIA)	Training of SMS WIA on a new nutritional approach Training of SMS WIA on excessive breastfeeding Training of women and youth on skill development Importance of women's involvement in agricultural value chain
Kwara	Crop	Research on how to control fall armyworm (FAW) infestation on maize. Research on how to prevent cassava mosaic infestation. Not enough personal Lack of acceptance of innovation by the farmers.
	Horticulture	Research on how to space cashews (to help farmers develop them under canopy before overlapping. Nursing fruits and orchard development for income generation by different categories of farmers.
	Livestock	Artificial and insemination and breeding Pasture development and conservation Alternative feeds for livestock
	Fisheries	Capacity building in hatchery for effective fish production. Efficient fish pond management.
	Agro-Forestry	Product of seedling
	Irrigation	Harnessing flood water for agricultural purposes and strategies for effective water management It is important to manage water because of its positive due to the peak of the dry season.
	Agricultural mechanization	More tractors particularly MF75Hp and suitable implement (Bhujar) are required to be made available as subsidized hiring prices for our farmers.
	Extension Services	Training of extension agents on e-extension service delivery Training of EAs on the management of climate change conditions especially to improve the yield of major crops (maize, rice, cassava).
Nasarawa	Crop	Need for higher yield crops resistant to drought. Inclusion of vitamin A crop genes that are more nutrient efficient.

		Research into the best way to eradicate the prevalence of Army Worm in the Maize production cycle.
	Livestock	There is a need for training of staff on livestock production and Management for all livestock officers in the state.
	Fisheries	There is a need to research 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 a need for research in farming systems related to Agro-forestry technology for farmers' adoption.
	Extension Services	There is a need for research dissimilation through the Monthly Training Review Meeting (MTRM), and Forth Nightly Training (FNT) for innovation and skill to all Extension Agents (EAs).
	Women in Agriculture (WIA)	There is a need for training of Block Extension Agents (BEAS) on processing and utilizing Vitamin A Cassava and Orange fleshed sweet potato to reduce malnutrition, especially in women and children to prevent deficiency that causes diseases but boosts the 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	Horticulture	Pest management Improved crop varieties Post-harvest practices Soil and irrigation Training and establishment of cashew, mango, and lemon seedlings
	Livestock	Increase usage of indigenous medicine as compared to orthodox.
	Fisheries	The problem of water quality and source The cost implication of establishing ponds Security and disaster by flood Fish diseases Fish feed formulation Fish diseases Fish feed formulation Soil type for fish farming
	Agro-Forestry	Fruit and vegetables Post-harvest practices Soil and irrigation Pest management
	Irrigation	More advanced technological training of modern youth-friendly equipment and machines to agricultural mechanization especially in the area of dry season farming to

		feed the nation
	Agricultural mechanization	Training of agricultural Engineers by sponsoring them to attend seminars and workshops on mechanization, harvesting, transportation, storage, and processing of agricultural products.
	Extension Services	Need for skill acquisition Centre in all the zones. Early maturing crops to meet climatic change Research on soil reclamation to meet fertilized demand
	Women in Agriculture (WIA)	A good method of preservation of feed. Training on Nutrition and hygiene A good method of income-generating activities
Plateau	Crop	Potato – Research needs to be carried out intensively on the control
	Horticulture	Research needs on Mango, Citrus, Pawpaw, and Guava for quality production.
	Livestock	Research on local fish farmers should be carried out to know the number of fish producers and the quantity of fish produced in the State. Research on the availability of fish feeds should be carried out to help the local farmers raise production.
	Fisheries	Hatching of fingerlings.
	Agro-Forestry	Research should be carried out to control diseases destroying crops like Mango and Citrus etc.
	Extension Services	The adoption rate of new technologies.
	Women in Agriculture (WIA)	The new technology for preservation and storage (Cold storage) of perishable goods prolongs their life span. More new technology to add value chain tuber crops
Taraba	Livestock	Research on livestock feeds and natural resources management is required if the incessant farmers-herders clash is to be curtailed.
	Agro-Forestry	Pragmatic government efforts driven by research solutions are needed to curtail the unhealthy habit of destroying the forest/environment through practices like deforestation.
	Agricultural mechanization	Simple and environmentally friendly machines need to be discovered to solve farming problems associated with drudgery to encourage youth participation in agriculture.
	Extension Services	Research on how to curtail the funding problem of bedeviling extension services is earnestly needed for the survival of agricultural extension.

Table 15.10b. Problems Needing Research for North-East

State	Problem	Identified Area(s) of Research
Adamawa	Crop	Maize – Variety. Smart Agriculture, Crop Geometry. Plant Population.
	Horticulture	Banana – Tissue Culture. Mango – Budding.
Borno	Crop	need to improve on high-yielding and drought-tolerant varieties
	Horticulture	tomatoes, garden eggs, and okra
	Livestock	sheep, goat, and cattle
	Fisheries	highly prolific species of catfish and tilapia
	Agro-Forestry	mango lactation, guava, and lemon
	Irrigation	there is a need to create more dams for irrigation purposes, drip, flow, and sprinkler irrigation
	Agricultural mechanization	need to produce/fabricate light farm implements that are affordable
	Extension Services	there is a need to increase the number of extension workers to close EA to farmer ratio, training, and research
	Women in Agriculture (WIA)	more women should be trained and empowered to processing
	Other	Climate-smart agriculture, climate resilience approach, and climate mitigations and adaptation.
Yobe	Crop	Pest and disease control
	Horticulture	Processing and storage
	Livestock	Disease control method.
	Fisheries	Processing and marketing.
	Extension Services	Digitization
	Women in Agriculture (WIA) Others	Processing and Utilization

Table 15.10c. Problems Needing Research for North-West

State	Problem	Identified Area(s) of Research
Jigawa	Crop	Development and introduction of new varieties
	Horticulture	Development of progeny orchids with improved varieties
	Livestock	To promote the pasture in grazing reserved and sensitization of the nomads. Upgrading of ingest breeds of livestock in the state
	Fisheries	Enhancing fishing activities as well as well as flood control
	Agro-Forestry	Research needs for identification, adaptation, and dissemination of proven agricultural technology on agroforestry.
	Irrigation	Increase irrigated land, water, and alternative energy infrastructure in agriculture.
	Agricultural mechanization	Increased the level of mechanization in agriculture, increased

		agricultural output, and promoted local fabrication of agricultural machinery and equipment
	Extension Services	Strengthened extension, research, and development in agriculture
	Women in Agriculture (WIA)	Based on the achievement of one program executed, named l local chicken production (ILOCP) by the women in Agriculture in Jigawa ADP, the program observed that there were some diseases affecting local chickens e.g. Coccidiosis which diseases caused the reduction of income by the rural women based on other diseases affecting the local community.
Kaduna	Crop	cereals and pulse Development of smart agriculture crop varieties with bio-fortified nutrients.
	Horticulture	Nursery, Grafting, and budding
	Livestock	Embryo transfer technology
	Fisheries	Fish diseases and pest Breeding and Hatching Fish oil extraction technology solution to fry dying within a week.
	Irrigation	Irrigation techniques
	Agricultural mechanization	Simple farm machines. Simple farm machinery.
	Extension Services	Building capacity on innovations Use of ICT in extension service delivery Inadequate motivation to extension agents Refresher training/ technology review meetings
	Women in Agriculture (WIA)	Nutrition Review of land tenure reform to give women and youth access to land Technical/vocational training and business grants for vulnerable women
Kano	Crop	Early maturing. Resistant to diseases variety Weather tolerant.
	Horticulture	Early maturing
	Livestock	Livestock with high milk content Livestock with some level of resistance to diseases Exotic breed of livestock
	Fisheries	High-yielding fingerlings.
	Extension Services	E-Extension Training and re-training of EA Provision of working equipment for EAs
	Women in Agriculture (WIA)	Training on GAP Training on value addition Training on income generation
Kebbi	Crop	Post-harvest technology Pre-harvest technology

	Horticulture	New varieties of fruits and vegetables.
	Fisheries	New improved technology on fisheries.
	Agro-Forestry	New technology on tree production.
	Irrigation	Training on water and soil management.
	Agricultural mechanization	New agricultural machines and operations.
	Extension Services	Capacity building.
	Women in Agriculture (WIA) Others:	Capacity building for women extension agents. Training of Extension on E-Extension system.
Sokoto	Crop	Research on improving varieties of both cereal, Legumes, and vegetable crops that varieties that are resistant to pests and diseases and early maturing
	Horticulture	Research on new and improved Varieties
	Livestock	Producing new breeds of cattle, sheep goats etc.
	Fisheries	Producing new and improved fingerling
	Extension Services	Research on New methodologies and approaches to extension
Zamfara	Crop	Pest and disease control on cereal, legumes, and vegetable crops Improved variety of all farm crops
	Horticulture	Management of flowers, fruit abortion on tree crops
	Livestock	Management of major livestock disease
	Fisheries	Modern fisheries and aquaculture production techniques
	Agro-Forestry	Nursery establishment on orchard trees
	Irrigation	Simple irrigation methods techniques
	Agricultural mechanization	Power tiller maintenances Power tiller fabrication
	Extension Services	Use of power points on extension delivery Use of effective communication skills
	Women in Agriculture (WIA)	Demonstration on supplementary feeding using under-utilized crops Offseason activities generation to housewives

Table 15.10d. Problems Needing Research for South-East

State	Problem	Identified Area(s) of Research
Abia	Crop	Cocoyam blight, Maize fall army, Cassava blight. Research on seed development and storage.
	Horticulture	Early maturing and drought-resistant crops. Abortion of Flower and fruit Diseases and pest infestation on fruit
	Livestock	A common disease of poultry and other livestock.
	Fisheries	Local feed production and feed conservation rate.
	Agro-Forestry	Diseases and pest infestation on plantain and banana Value addition on agroforestry produce.
	Irrigation	Water harvesting technique Construction of small dam.
	Agricultural mechanization	Low-cost and affordable farm machinery for farm operatives (weeding, planting, and harvesting). Processing machine
	Extension Services	Strengthening the ADP through regular funding for effective delivery
	Women in Agriculture (WIA)	Training of women and youth on self-reliance and improved nutrition
Anambra	Crop	Cocoa yam Fungal diseases
	Livestock	Swine fever in pig Broiler head disease
	Agro-Forestry	Fruit abortion
	Agricultural mechanization	Inadequate mechanized implement
	Extension Services	Scarcity of fund
	Women in Agriculture (WIA)	Lack of processing equipment.
Ebonyi	Crop	Plant breeding techniques Pest and disease control
	Horticulture	Need for new improvement on Horticultural varieties. More information on grafting and cross-breeding
	Livestock	Animal physiology and modern breeding techniques Improvement in the management of goat and sheep including technical know-how in administering vaccines
	Fisheries	Research on fish feed formulation and production Technical know-how in administering vaccines
	Agro-Forestry	Best method of maintaining plantation and control of natural disaster.
	Irrigation	New modern irrigation methods Innovation on irrigation facilities that will have zero effects on weather changes and location of use changes
	Agricultural mechanization	Design of machine that will be adopted by local farmers and procured at low cost Machine to save energy loss with greater output
Imo	Crop	Production of xanthosoma cocoyam with low acidity.
	Horticulture	Reduction of post-harvest losses of horticultural crops.

	Livestock	Alternative feed sources for poultry Treatment of poultry diseases with herbs
	Agro-Forestry	Mushroom production reduction in the baiting period.
	Irrigation	Use of wash bore-holes in every part of the country
	Agricultural mechanization	Development of technology for palm wine tapping using a machine
	Extension Services	Effective coverage of a large number of farmers by AEs using improved technology
	Women in Agriculture (WIA)	Production of yam, cassava, and cocoyam varieties with high-binding textures in pastries

Table 15.10e. Problems Needing Research for South-South

State	Problem	Identified Area(s) of Research
Akwa-Ibom	Crop	Research needs in the use of neem ash/palm bunch ash in control of armyworm attacks.
	Livestock	Livestock farming in poultry, goat, piggery, rabbitry, etc., is a recent farming pattern in the state hence it is not that developed.
	Fisheries	Production of floating fish feed from locally serviced raw materials
	Agro-Forestry	Mushrooms spawn production from available raw materials.
	Women in Agriculture (WIA)	Sterilization of nutrients in soymilk production by home-state pasteurization
Bayelsa	Crop	Research is needed in rice cultivation because most of the arable lands are submerged by floods during the flood season.
	Livestock	Animal feed formulation from Cassava and Plantain peels. Livestock farming in poultry, goat, piggery, rabbitry, etc.
	Fisheries	A lot of people are into fish farming but with crude methods because of ignorance and lack of funds.
	Irrigation	Irrigation services are only needed during the planting season between November to March but are greatly affected because of a lack of funds.
	Agricultural mechanization	Agricultural mechanization is off it because it is capital intensive.
	Extension Services	Extension services are poor.
	Women in	WIA are mostly illiterate, so little or no room is given to modern techniques
Delta	Crop	Yam Beetle infestation of yam tubers. Tuta Absoluta on Tomato. Army warm on maize and others.
	Livestock	Investigation on Bird Flu and Swine Fever.
	Agro-Forestry	Black Sigatoka disease on plantain. Fruit premature abortion and rotting.
	Extension Services	Proper integration of Training and Visit (T&V) and FFS and harmonization to extension models into one unit.
	Women in Agriculture	Alternative storage Devices for vegetables.

State	Problem	Identified Area(s) of Research
	(WIA)	
Edo	Crop	Tomato wilt and armyworm
	Livestock	Management of dropping/dung in the 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 processors. Storage of 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 mushrooms.
Rivers	Crop	crop diseases (maize) crop storage disease prevention/management
	Livestock	feed formulation/breeding
	Fisheries	grass rearing/breeding snail farming
	Agro-Forestry	The problem of afforestation and encroachment.
	Agricultural mechanization	maintenance of farm machinery safety precautions on machines
	Extension Services	capacity building / advisory services e- extension
	Women in Agriculture (WIA)	processing/packaging marketing strategy

Table 15.10f. Problems Needing Research for South-West

State	Problem	Identified Area(s) of Research
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-piercing moth.
	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.
	Women in Agriculture (WIA)	Mushroom production technology. Preparation of recipes from some food crops.
Lagos	Crop	Development of wilt-resistant tomato varieties development of drought-resistant cassava varieties
	Horticulture	development of insect-resistant varieties of Amarantus
	Livestock	Reduction in the cost of production of cheaper feeds for livestock More research in tilapia culture
	Irrigation	Research in hydroponics Popularization of drip irrigation system
	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 on 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 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 pests 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 the 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 Agroforestry crops e.g. Citrus, Mango. Agro-forestry tools mitigation and adoption to climate change.

	Irrigation	Appropriate irrigation System/method for a 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 skills using the e-extension method.
	Women in Agriculture (WIA)	Storage of Rice using Prudile Improved 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	Extension Services	Extension working tools, Motorcycles, and Field Vehicles (Hilux Fund for extension activities
	Women in Agriculture (WIA)	Fund for WIA activities Processing equipment Entrepreneurship & empowerment training for women
Oyo	Crop	Development of tolerant/resistant maize varieties against fall armyworm. Production of cowpea varieties with less praying regime
	Horticulture	Development of tolerant/improved tomato varieties against tomato wilt disease. Processing and packaging of fruits and vegetables.
	Livestock	Control| Privation of African swine fever in pig
	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 the Annual Performance Survey (APS) of 2023 on special projects is presented in Table 17.1 below. The table shows that in the North-Central Zone, 6 states and the FCT (Benue, FCT, Kogi, Nasarawa, Niger, Plateau, and Taraba) gave information on the various special projects that were executed by their respective states ADP's for the year 2023 Annual Performance Survey (APS). There was no information on special projects from Kwara state ADP for the year 2023 APS report. The special projects executed by the North-Central Zone included; the National Program for Food Security (NPFS), Market-Oriented Agricultural Extension for Livelihood Improvements, Global Alliance for Improved Nutrition (GAIN), VCDD, FADAMA, CARES, Construction of Rabbit House, Construction of public toilets for ADP HQ, Construction of drainage system at swampy places in ADP, Rehabilitation of WIA house and procurement of processing machines. Rehabilitation /furniture replacement at ADP Head Quarters, IFAD Harvest Plus, Plateau State Potato Value Chain, Support Project (PS-PVCP), Rural Access and Agricultural Marketing Project (RAAMP), Potato Fadama COVID-19 Action and Recovery Economic Stimulus (Fadama-NG) Fadama III, IFAD/VCDP and N-Agric. The table also indicated that these special projects received sponsorship from mainly; NPFS, JICA, GAIN, IFAD, ARDS, ADPs, FGN, USAID, AfDB, WB, and SG/TRSG which cuts across the zone. The table also shows that over 106 LGA were covered by the special projects throughout the North-Central Zone. More so, the table shows that about 1,041,786 farmers and processors benefitted from the special projects throughout the entire North-Central Zone State and the FCT. The table also reveals that the various special projects had an average of 65% completion across the Zone in the year in review.

More so, table 16.1 shows that in the Northeast Zone, data for the APS on special projects for 2023 were received from 4 state ADPs of the zone. The states included; Adamawa, Bauchi, Borno, and Gombe state. There was no data from Yobe State ADP for special projects for the 2023 APS review. The special projects reported from the different state ADPs of the zone were: Fadama CARES, FADAMA, NG-Corps, Sasakwa, and Women group formation. The table also shows that the sponsorship for the special projects came from World Bank/FG/State, NIPPCAL, U.K, JAPAN and UN Women spread across the zone. The table also shows that about 234 LGAs were covered by the special projects across the Zone. The table also indicates that the special projects had an average of about 70% mark in terms of completion across the Zone. More so, the table also shows that about 39,824 farmers benefitted from the special projects which cut across the various states of the North-East Zone.

Table 16.1 shows that North-West Zone ADPs who submitted reports for the 2023 APS included; Jigawa, Katsina, Kebbi, Sokoto, and Zamfara state. There were no data from Kaduna and Kano state ADPs on special projects for 2023 APS. The table reveals that the various special projects executed in 2023 by the ADPs across the Zone included J-CARES, RESULT AREA 2, FADAMA, Sasakawa Afrim GLOBAL 2000, NG CARES, ATASP-1, IFAD/CASP FADAMA II, RAMP, CARI, Trimming project SRI, FADAMA III and Special project on food security (phase III). The sponsorship for these special projects came from; the World Bank, FGN, JGSG, Nippon Foundation, NB/NGF, AfDB, IFAD and CARI spread across the Zones. The table also shows that the special projects embarked upon by the ADPs in the Zone recorded an average of 66% in terms of completion. More so, it reveals that about 107 LGAs were covered by the special projects across the states in the North-West Zone. In addition, the table indicates that about 79,375 farmers benefitted from the special projects across the North-West Zone for the 2023 APS in review.

Table 16.1 indicates that in the Southeast Zone, 4 ADPs submitted reports for the special projects in their various states for the 2023 APS. The states included Abia, Anambra, Ebonyi, and Enugu state.

There was no information from the Imo state ADP on the special project. The table reveals that the various special projects executed in 2023 by the ADPs across the Zone included 4 million Tera Palm oil Development, Poultry clusters, NPFS input support, LIFE-ND Projects, Nigerian for Women Project, VCDP/IFAD, SHEP Project, IFAD, Japanese International Co-operation Agency, JICA, Agriculture for food and job plans, AFJP, Nigerian COVID 19 action recovery and economic stimulus, NG-CARES, ATASP-1. APPEALS, IFAD VCDP. The sponsorship for these special projects came from; Abia State Government, State ADP, FG/NNDC, IFAD, JKA, JICA/FGN, VCDP, FMARD, WB, and AfDB. The table also shows that the special projects embarked upon by the ADPs in the Zone recorded an average of 71% in terms of completion. More so, it reveals that about 64 LGAs were covered by the special projects across the states in the Southeast Zone. In addition, the table indicates that about 2,665,223 farmers benefitted from the special projects across the South-East Zone for the 2023 APS in review.

Table 16.1 also reveals that in the South-South Zone, 5 ADPs had reported for the special projects in their various States for the 2023 APS – these are Bayelsa, Cross Rivers, Delta, Edo, and Rivers state. There was no submission of data on special projects from Akwa Ibom state ADP for 2023 APS. The table reveals that the various special projects executed in 2023 by the ADPs across the South-South Zone were; NG-CARES RAZ, APPEALS, Livelihood improvement family interpose project (LIFE-ND), Establishment of trial plots, Livelihood Improvement Family Enterprises Project Niger, Delta (LIFE-ND), Edo Agripreneur Program (EAP).Independent Farmers' Initiative (IFI).Cashew Seedling Production (CSP), Fishery Intervention (FI), N-CARES, Root and Tuber, National Food Security Programme, Community Based Natural Resource Programme, FADAMA III, SASAKAWA-G2000, Rivers-CARES. The funding for these special projects came from; the World Bank, IFAD, OCP Africa, NISS/SSSN, FGN/NDDC /Edo State Govt, CBN with Support from NIRSAL, FACAN, and collaboration with Edo State ADP, IOM, and IDA. The table also shows that the special projects embarked upon by the ADPs in the Zone achieved an average of about 60% in terms of completion. More so, it reveals that about 152 LGAs were covered by the special projects across the states in the South-South Zone. The table also indicates that about 32,906 farmers benefited from the special projects across the Southeast Zone for the 2023 APS in review.

Table 16.1 also reveals that in the Southwest Zone, 3 ADPs had submissions for the special projects in their respective states for the 2023 APS. The states included Lagos, Ogun, and Oyo state. There was no submission of data on special projects from Ekiti, Ondo, and Osun state ADP for the 2023 APS. The table reveals that the various special projects executed in 2023 by the ADPs across the South-West Zone were; NPFS, APPEALS Project, L-CARES, FGN/IFAD Value Chain Development Programme (VCDP), OG-CARES FADAMA-RA2 DL1 2.1, OG-CARES FADAMA-RA2 DL1 2.2, OG-CARES FADAMA-RA2 DL1 2.3, OG-CARES FADAMA-RA2 DL1 2, Global Alliance for Improved Nutrition (GRIN)/Strengthening Nutrition in Priority Staples. The funding for these special projects came from; FMARD, Lagos State Gov, IFAD/FGN/Ogun State Govt, and GAIN. The table also shows that the special projects embarked upon by the ADPs in the Zone achieved an average of about 50.25% in terms of completion. More so, it reveals that about 80 LGAs were covered by the special projects across the states in the Southwest Zone. The table also indicates that about 37,637 farmers and processors benefitted from the special projects across the Southeast Zone for the 2023 APS in review.

Table 16.1a: Special Projects/Programme for North-Central Zone

State	Project	Take off year	Key activities	No. of project sites	Sponsors	Percentage of achievement	No. of beneficiaries	Remarks
Benue	National Program for Food Security (NPFS)	2023	Fertilizers, and crop seeds (faro 44) were given to farmers	2 LGAs	NPFS	100%	200	Outstanding
	1. Rabbitry house	2021	Construction of rabbit house	1 LGA	ARDS	15%		
	2. Proposed public toilet	2023	Construction	1 LGA	ADP	15%		For public visitors
	. Proposed construction of drainage system in ADP	2023		1 LGA	ADP	15%		Drain waterlogged area.
	4. Proposed WIA AGRO Processing house rehabilitation and materials for processing	2022 – 2023	Rehabilitation and Procurement	1 LGA	ADP	15%		For training of WIA
	5. Face-lift rehabilitation and furniture of ADP headquarters	2023	Rehabilitation and Procurement	1 LGA	ADP	15%		Face-lift rehabilitation
Kogi	Global Alliance for Improved	2021	Capacity building and distribution of inputs	41 LGAs	GAIN	50%	725 farmers 482 processors	Phase out in 2025

	Nutrition (GAIN)							
	VCDD	2020	Value chain		IFAD	-	-	Ongoing
	FADAMA CARES	2022	Empowerment	21 LGAs		-	-	Ongoing
Nasarawa	Integrated Approach to climate change in Rice production system in Nigeria	2022	Training of farmers/demonstration on Rice production	4LGAs (16 Communities)	EU/GIZ	40%	4,500	On-progress
	Sustainable Rice Production SRP	2022	-	-	-	-	-	-
	Farmers Business School (FBS)	2022	Training of farmers in Agric business	4 LGAs	EU/GIZ	-	-	-
	Good Animal Husbandry Practices (GAHP)	2022	Soil collection and testing	4 LGAs	EUGIZ	40%	600	-
	OCP LAP Project	2023	Soil collection and testing.	13 LGAs(100cm)	OCP	90%	20,000	In-progress
	SASAKAWA Africa	2021	a) To boost Cassava, Maize, Soybeans, Rice &Sorghum	5 LGAs	Japan NGO	98%	3,800	-
			b) Training of farmers in the evaluation of the networking market	5 LGAs	Japan NGO	98%	3,000	-

	Rice Advice		Training on Rice on fertilizer recommendation	4 LGAs	Japan NGO	45%	2,500	-
	MUFA Project	2023	-	-	Japanese Govt	-	50	-
Niger	1. IFAD value chain	-	-	-	-	-	-	-
	2. FADAMAN-CARE	2022	Sensitization and mobilization	50 FAs	FG/NS	86%	1991	Ongoing
	3. Harvest Plus	2022	Sensitization on Vit	20 LGAs	USAID	60%	OPEN	-
	4. JICA	2016	Rice processing	-	-	-	-	-
Plateau	Plateau State Potato Value Chain Support Project (PS-PVCP)	2018	Spot road improvement Provision of hydraulic structures for irrigation (Water harvesting structure, wash bore, and tube well). Commodity markets. Diffuse light store. Processing Centres. Capacity building Tissue culture laboratory.	State-wide	AfDB	70%	30,000	-
	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	The project targeted reducing postharvest losses and increasing the standard of living of rural

								dwellers, reducing travel time and cost, and increasing access to rural roads.
	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 production, and small-scale primary processing. DL12.4 Upgrading water and sanitation infrastructure existing wet market.	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 the project target.
Taraba	Fadama III	1998	Empowerment	Statewide	WB/FGN/TRSG	98%	Ongoing	Ongoing
	IFAD/VCDP	2016	Empowerment	8 LGAs	WB/FGN/TRSG	94%	Ongoing	Ongoing
	N-Agric	2018	Empowerment	Statewide	FGN	100%	Ongoing	Ongoing

Table 16.1b: Special Projects/Programme for North-East Zone

State	Project	Take off year	Key activities	No. of project sites	Sponsors	Percentage of achievement	No. of beneficiaries	Remarks
Adamawa	NG-CARES Fadama Result in Area 2	2021	1. Input support and services. 2. Labour-intensive agricultural infrastructure 3 Asset Support to farmers 4. Upgrading of wet markets to function safely with water and sanitation services	21 LGAs	World Bank and State Government	60% 50% 40% 95%	5,040 4,880 840 1760	-
Bauchi	Fadama CARES	2022	Food Security	180	World Bank	62%	10,000	On-going
Borno	FADAMA NG-Corps	2020	Crop/livestock	27 LGAs	World Bank/FG/State	79%	17,394	-
Gombe	UNDD; Resilient Food security	2019	Value Addition of Rice and groundnut. Production of the energy cook stove. Agriculture and Livestock Management	2	UNDD	75%	500	-
	SASSAKAWA	1998	Storage Methods of post-harvest	Statewide	Nippon Foundation	78%	700	-
	Women group formation	2021	-	-	-	-	-	-

Table 16.1c: Special Projects/Programme for North-West Zone

State	Project	Take off year	Key activities	No. of project sites	Sponsors	Percentage of achievement	No. of beneficiaries	Remarks
Jigawa	State FADAMA J-CARES	2021	DLI Z.Z Agricultural support	27 LGAs	World bank, FGN JGSG	31%	3040	Implementation in progress
	RESULT AREA 2 FADAMA	-2022	DLI Z.Z Labour-intensive Agricultural infrastructure	18 LGAs	World Bank, FGN JGSG	21.37%	1520	Implementation in progress
	Sasakawa Afrim GLOBAL 2000	1992-2023	Regenerated agriculture -Market oriented Agriculture-Nutrition sensitive agriculture -SAFE	27LGAs	Nippon Foundation	90%	-	Ongoing
Katsina	NG CARES	2022	-	34 LGA	NB/NGF	15.21%	3,010	Still ongoing
Kebbi	ATASP-1	2015	Infrastructural development Outreach 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
Sokoto	ATAPS	2016	Extension Advisory. Reconstruction of Dams Empowering farmers and youth	1 LGA	FGN/AFDB	70%	A lot	-
Zamfara	1. Trimming project	2017	Monitoring	1	FGN	80%	-	End of lifecycle

SRI							
2. Takaful Islamic Insurance on Millet /Sorghum	2023	Monitoring of Growth of Millet and Sorghum against abnormalities e.g. Pest, Drought e.t.c	10	A.B.U Zaria.	-	150	At the early stage of implementation
3. NG CARES(RESULT AREA)	-	-	-	-	-	-	

Table 16.1d: Special Projects/Programme for South-East Zone

State	Project	Take off year	Key activities	No. of project sites	Sponsors	Percentage of achievement	No. of beneficiaries	Remarks
Abia	4 million Tera Palm oil Development	2015	Raising of improved Palm oil seedlings	1	Abia State Government	90	400,000	Sustainable
	Poultry clusters	2016	Broiler production and training of youths on poultry production	1	State Govt	95%	454,000	Sustainable
	NPFS input support	2023	Increase in food security	Statewide	FG/STATE ADP	80%	500	Sustainable
	LIFE-ND Projects	2020	Empowering of youths	5 LGAs	FG/NNDC	75	200,000	Sustainable
	Nigerian for Women Project	2020	Women Empowerment	3 LGAs	IFAD	75	-	-
Anambra	SHEP	2022	Extension	21 LGAs	JICA	59%	50	Excellent
	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%	5120 Farm farm families	-
	Agriculture for food and job plans	2020	Enumeration of rural farmers	13 LGAs	FMARD	5%	Scores of farm families	-
	Nigerian COVID-	2021	Provision of	13 LGAs	WB/ FGN and SG	3%	101 farm	-

	19 action recovery and economic stimulus		Agricultural input & services. Labor-intensive agric. Infrastructure. Upgrading wet market to function safely.				familied	
Enugu	ATASP-1	2017	Rice, Cassava and sorghum	3 LGAs	AfDB	-	-	-
	APPEALS	2019	Rice, Poultry, Cashew	Statewide	World Bank	-	-	-
	VCDP	2019/2020	Rice and Cassava	5 LGAs	IFAD			

Table 16.1e: Special Projects/Programme for South-South Zone

State	Project	Take off year	Key activities	No. of project sites	Sponsors	Percentage of achievement	No. of beneficiaries	Remarks
Bayelsa	NG-CARES RAZ	2022	Increasing food security and safe functioning of the food supply chain	150	World Bank	20%	15000	-
Cross Rivers	Video-enabled Agri Extension	2022	Video production and dissemination	Statewide	USAID(FTF)	30%	Over 4000	Ongoing
	Fertilizer blend trials	2023	Fertilizer trial with test crops	10	NISS/OCP	55%	10	Ongoing
	APPEALS	2018	Support to women and youth commodity interest groups	Statewide	World Bank	81.09%	60,000	Closing 30th Sept 2023
	LIFE-ND	2018	Livelihood support	10 LGAs	IFAD	50%	Over 50,000	Ongoing
Delta	Establishment of trial plots	2023	Trials on 6 units of smart fertilizer blends for upscaling speculating fertilizer blends for enhancement of stable crops(Rice, Maize, and G/nut	10 LGAs	OCP Africa, NISS/SSSN	100%	10 FARMERS	
Edo	Livelihood Improvement Family Enterprises Project Niger, Delta (LIFE-ND).	2020	-	50	IFAD/FGN/NDDC and Edo State Government (EDSG)	50%	256	-
	Edo Agripreneur Programme (EAP).	2019	Crop Production. Livestock	30	EDSG and CBN) with Support from	-	The actual number of	-

			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.		NIRSAL		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	-	-

Table 16.1f: Special Projects/Programme for South-West Zone

State	Project	Take off year	Key activities	No. of project sites	Sponsors	Percentage of achievement	No. of beneficiaries	Remarks
Lagos	NPFS	2007	Addressing harvest food security needs, capacity building, conflict resolution Provision of inputs & revolving loans	10	FMARD	75%	10,103	-
	APPEALS Project	2019	Empowering farmers on 3 value chains: poultry, rice & aquaculture. Capacity building & training of women, IDPs & youths.	Statewide	WB & FMARD	75%	1792	-
	L-CARES	2021/2022	Empowerment of farmers & capacity building	Statewide	WB/FMARD/ Lagos State Gov.	60	2150	-
Ogun	FGN/IFAD Value Chain Development Programme (VCDP)	2015	Support to value addition and Market linkages. Support to Climate Resilient Market infrastructure. Strengthening of Farmers Organization and	8LGAs	IFAD/FGN/Ogun State Govt	-	17,000	The Programme beneficiaries enjoy inputs, equipment, infrastructural supports, and capacity building

			Support to Smallholder Production Programmer Coordination and Management					along the Cassava and rice value chain.
	OG-CARES FADAMA-RA2 DL1 2.1	2022	Agro input support to farmers	All 20 LGAs	WB/FGN/OG SG	25%	900	Ongoing project
	OG-CARES FADAMA-RA2 DL1 2.2	2023		8LGAs	-	52%	1470	Ongoing project
	OG-CARES FADAMA-RA2 DL1 2.3	2022	Provision of infrastructure	All 20 LGAs	-	45%	1770	Ongoing project
	OG-CARES FADAMA-RA2 DL1 2	2023	Support of assets to farmers Upgrading of water market	10 LGAs		20%	1245	Ongoing project Ongoing project
Oyo	Global Alliance for Improved Nutrition (GRIN)/Strengthening Nutrition in Priority Staples	2021	Capacity building, distribution of inputs (Vitamin A). Cassava OPSP. Herbicides and fertilizer.	4 LGAs	GAIN	50%	725 processors and 482 farmers	The project would phase out in 2025

17.0 GENERAL CONSTRAINTS IN AGRICULTURAL PRODUCTION FOR 2023

The constraints to agricultural production for the year under study are like those of the past four years, especially concerning increasing incidences of insecurity. The data in this section are presented according to the spread of the country, using the number of states as a unit of measurement.

17.1 Rainfall and Weather-Related Challenges

As of August 2023, there was excessive rainfall that led to heavy flood occurrence in about 22 states. The affected crops were cassava, maize, millet, sorghum, rice, cowpea, and sesame. Also, some small ruminants, poultry, and aquaculture were affected. In some states, the flood affected farm infrastructure and homes of farmers, in addition to crops and livestock production. The maximum amount of rainfall was recorded in June, the average of which was higher than those of 2021 and 2022. The general effects of flooding and 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. In this age of climate change, there is an increased focus on sustainable adaptation and mitigation practices. The 2023 weather conditions were, however, considerably better than those of 2022, especially regarding flooding in all the zones (Figure 17.1).
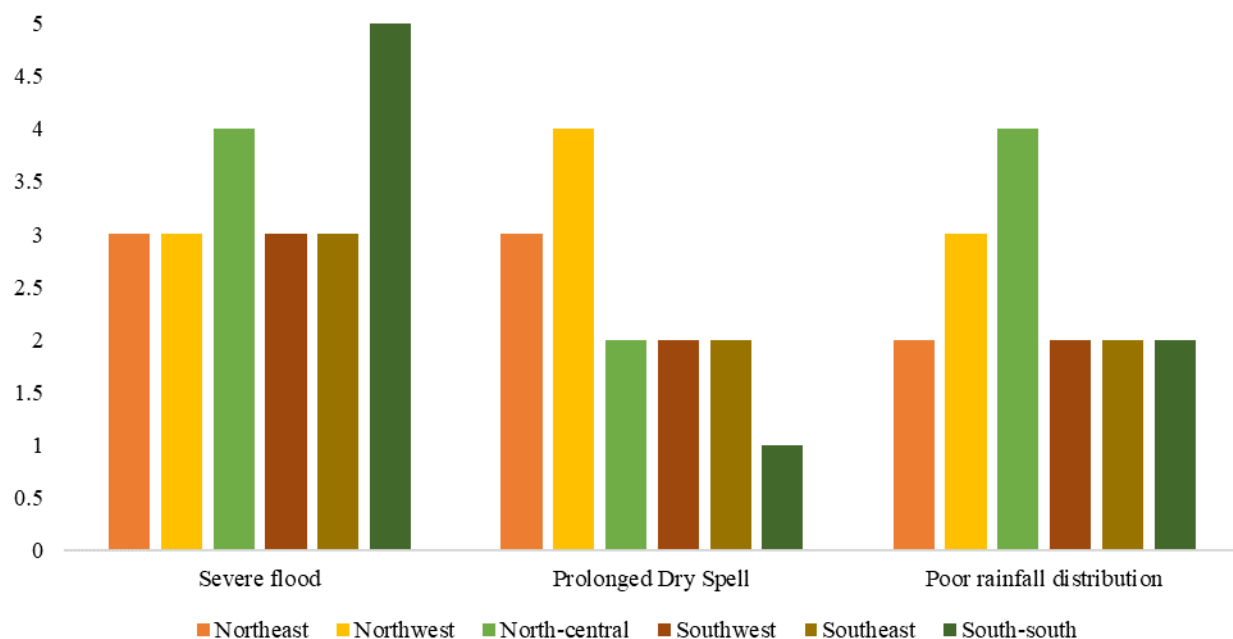
Figure 17.1: Rainfall and weather challenges to agricultural activities

17.2 Farm Input Provision, Availability and Accessibility

Profitable agriculture is a product of the quality of inputs used (including seeds, animal stocks, fingerlings, fishing nets, fertilizers, herbicides, and advisory information). This also means that such quality inputs are adequately available and accessible to farmers. In 2023, about 26 state governments reported that they procured and distributed various farm inputs to farmers to aid agricultural production. However, the majority of the farmers reported that they purchased their farm inputs mainly from the open market and at exorbitant prices. Concerning government inputs, the survey generally showed that farmers found them inaccessible, unaffordable, inadequate, and

substandard. The survey data (Figure 17.2) show that government inputs were largely inadequate in 25 states (for seeds and stocks) and 15 states (for chemicals); untimely in 16 states (for chemicals) and 12 states (for seeds and stocks); unavailable/ inaccessible in 22 states (for chemicals) and 16 states (for seeds and stocks). There were increased incidences of substandard/adulterated products in 2023, compared to 2022.
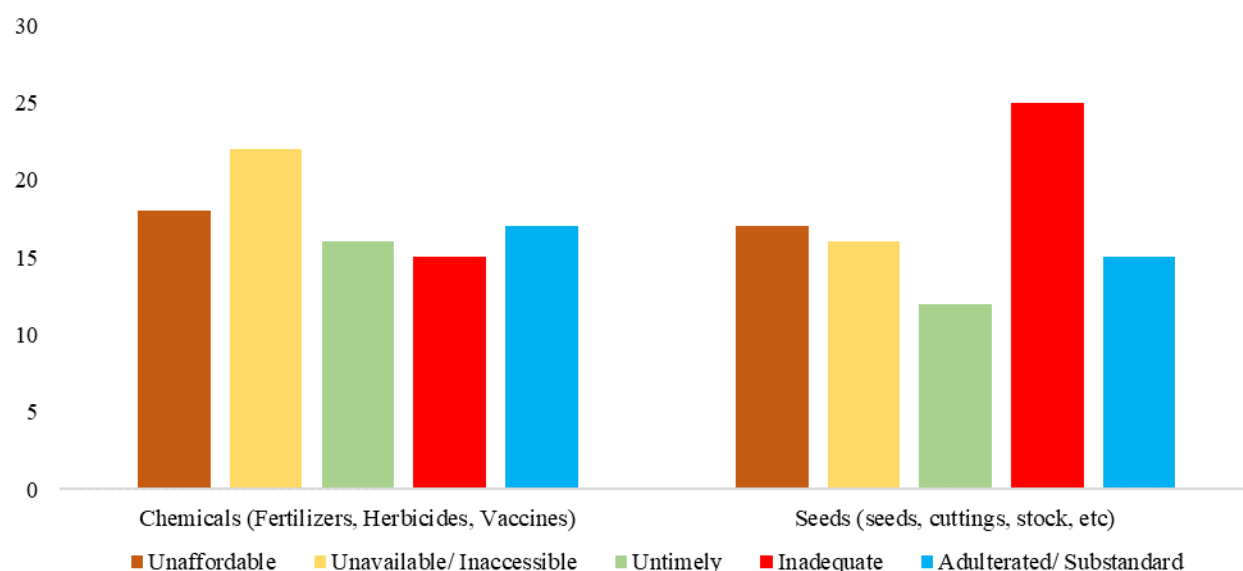
Figure 17.2: Farm input-related challenges

17.3   Production-Related Challenges (Labour and Diseases)

Pest and disease outbreaks were documented in 33 states and the Federal Capital Territory (FCT) in 2023. Four categories of crops, including cereals and legumes, roots and tubers, fruits and vegetables, and tree crops, experienced the impact. The severity of cases ranged from light to heavy with maize, rice, cassava, and yam as the most affected. Over 43,000 hectares were affected by pests and diseases, which mainly concerned heavy infestation of fall armyworms, brown spots, rice blasts, bacterial leaf blight, African gall mites, stem borer, rodents, quelea birds, and smut. To combat these issues, farmers employed various strategies, such as the use of agrochemicals, planting pest-resistant varieties, early planting, implementing biological control methods, hand-picking of affected crops, seed treatment, and conducting pre-planting fumigation. Moreover, since 2018, there has been a dramatic rise in agricultural labour costs. The increases, coupled with the effects of climate change, such as decreasing soil fertility and drought, are impacting productivity and agricultural profit. In 2023, production costs rose by an average of 42% over the 2022 data, while incidences of pests and diseases on crops rose by 20%, and those on livestock by 15% across the 36 states (Figure 17.3).
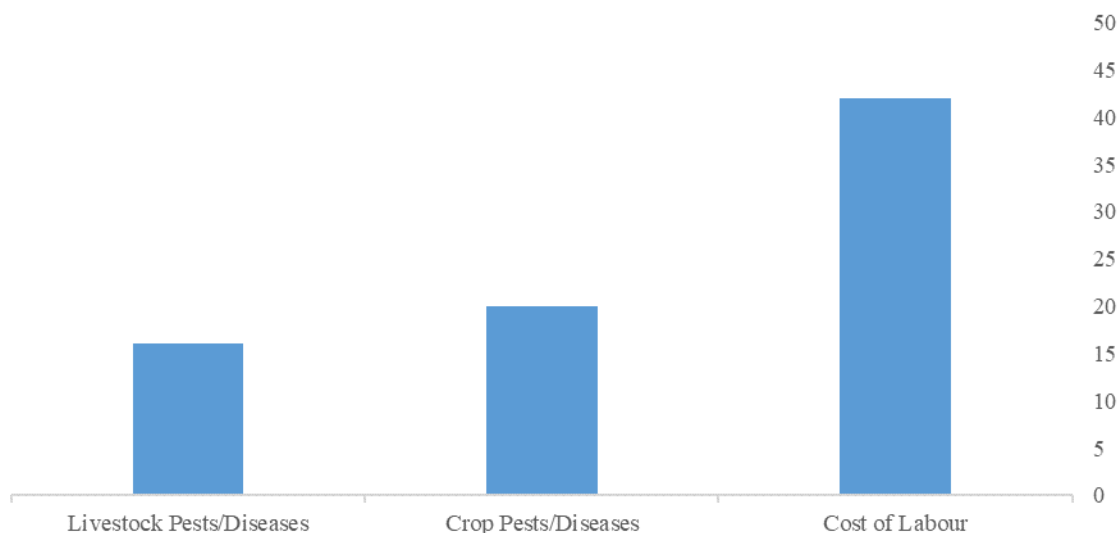
Figure 17.3: Percentage increase of production-related challenges

17.4   Other Production-Related Challenges (Postharvest Loss, Policy and Work Tools)

For the 2023 survey, certain peculiar production-related challenges were also documented. The survey data showed that the south-south zone had the highest percentage (95) of farmers that used manual methods or crude implements in agriculture, followed by southeast (93%), southwest (85), and north-central (65%). The northwest and northeast, perhaps due to the presence and use of work bulls/animal traction, had the lowest percentages, 58% and 62% respectively. Moreover, the north-central zone had the highest rate of postharvest losses (40%), while the lowest rate (28%) was recorded for the south-south zone (Figure 17.4). Furthermore, the naira redesign/ cashless policy of the government, which took full effect from 1 February 2023 and lingered on to early April 2023 seriously impacted agricultural production in the country, especially in southern states, where the wet season agricultural activities began around the same period. Farmers had very limited cash for input procurement and farm labour. The impact was felt the most in the south-south, where about 70% of the farmers surveyed were affected; followed by southwest (67%) and southeast (65%).
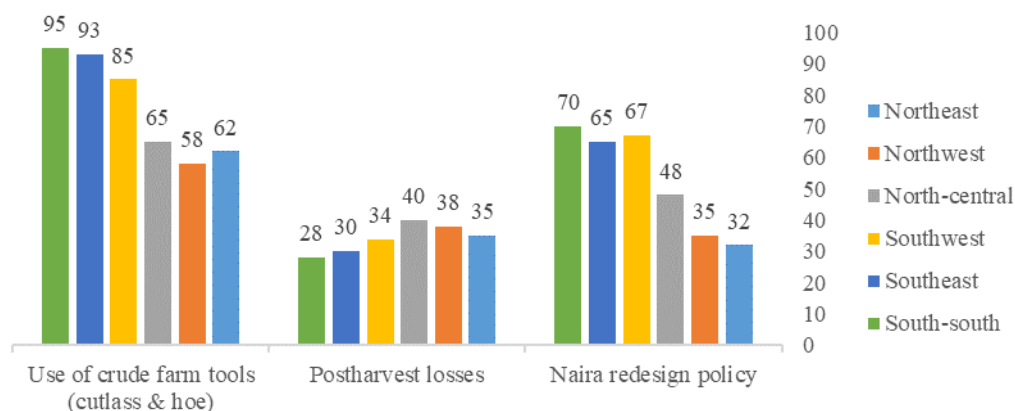
Figure 17.4: Percentage of farmers experiencing selected challenges

17.5   Agricultural Mechanization

Research has shown over the years that mechanization is critical to the achievement of food security and economic development in any country. The data in Figure 17.5 shows that there has not been much difference in data on agricultural mechanization for the past five years - see also the data on crude implement use among farmers in Figure 17.4 above. There is however a slight improvement for the year under study, compared to the statistics of 2022. The survey data show that Nigerian farmers fared a little better in 2023, regarding tractor availability/ accessibility and cost of tractor hiring, compared to the 2022 data. On tractor suitability and availability of irrigation infrastructures, the 2023 situation is slightly better.
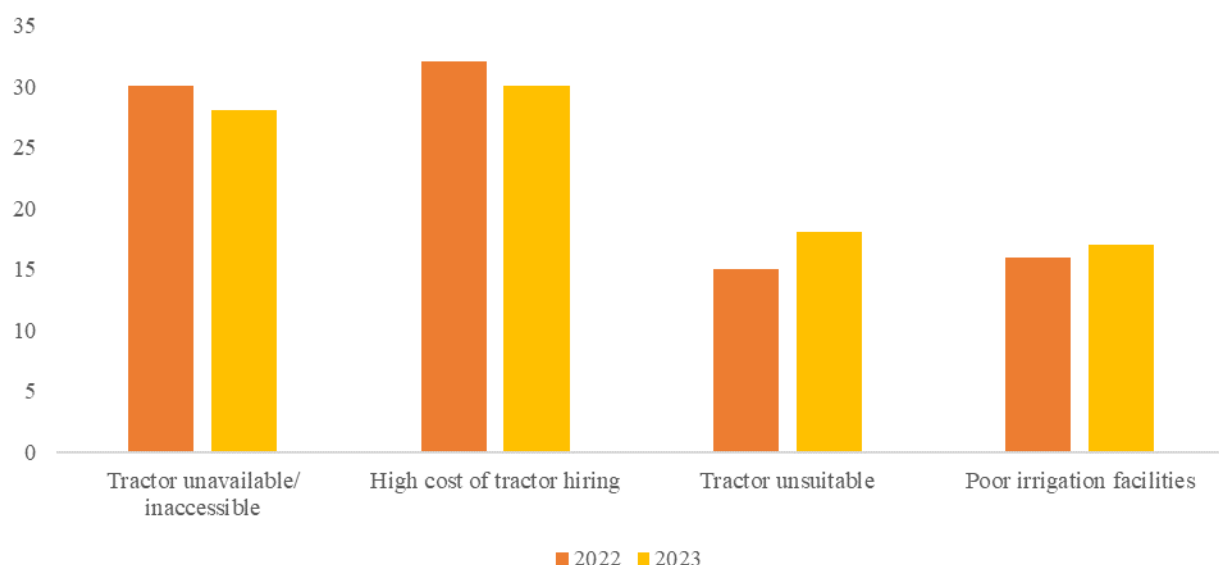
Figure 17.5: Data on Mechanization (2022-2023)

17.6   Extension Provision Activities

The survey data show that extension activities have continued to decline. The data in Figure 17.6 shows that the ADPs, which are the primary extension providers in the country, were highly under-staffed and underfunded—with about 16 states receiving zero funds at the time of the survey; moreover, of the 22 ADPs that received some form of funding, 10 stated that this was inadequate. The poor funding also seriously impacted the level of staff capacity and several vehicles available for fieldwork. Yet, agricultural extension and advisory are critical to the development of the agricultural sector. The ADP in each state is expected to provide advisory services that are necessary for developing the sector and enhancing farmers' livelihoods. Apart from their conventional function of providing knowledge for improved agricultural productivity, the ADPs are expected to fulfill 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. By implication, farmers were not reached with the requisite information and technologies for agricultural productivity. With only about 8 ADPs having vehicles for fieldwork, the ADPs cannot perform their functions effectively. However, the three-year comparative data show that 2023 is still better than 2021 and 2022 in many aspects.
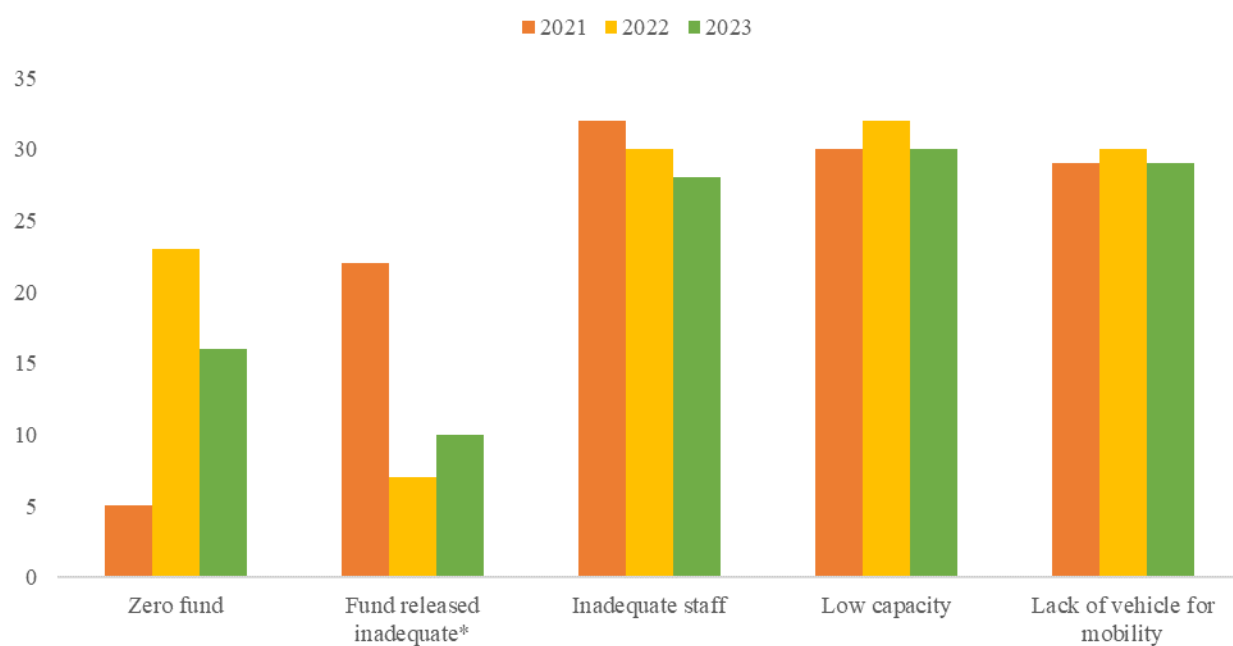
Figure 17.6: Comparative data on constraints related to ADP activities (2021-2023)

NB: *Of the ADPs that got funds for capital projects

17.7   Agricultural Broadcasts

Some of the channels for reaching farmers with agricultural information are radio and television. Each state ADP is expected to produce and disseminate agricultural information through conventional and new media to farmers in the languages and formats they are familiar with. The consequences of not getting the right information to farmers are grievous, affecting their agricultural decisions and outcomes. For the 2023 survey, 34 of the 37 ADPs were constrained by a lack of media infrastructure to effectively produce agricultural programs. The agricultural broadcast was also compromised for 28 ADPs because of the high cost of airtime (see Figure 17.7).
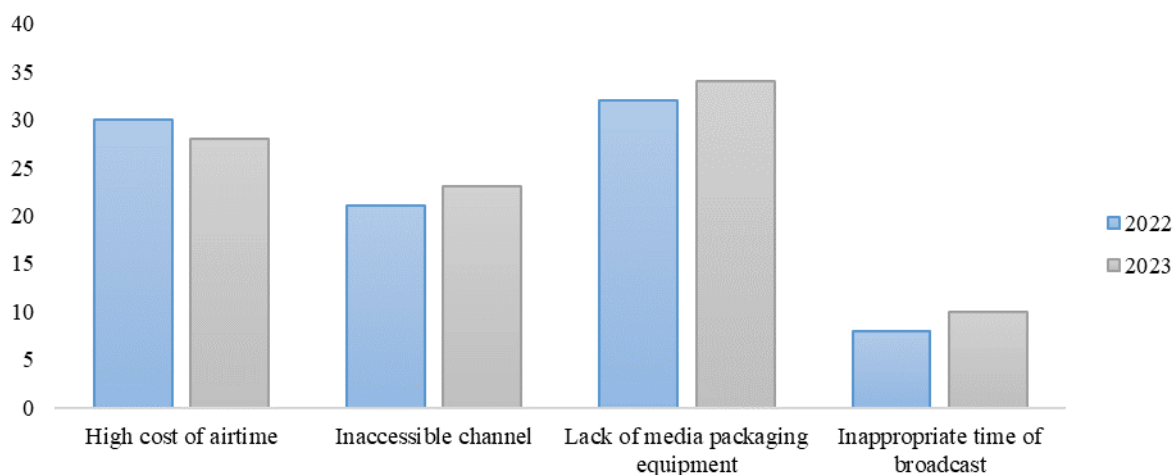
Figure 17.7: Comparative data on constraints in agricultural broadcasts

17.8   E-Extension

With dwindling funding and other forms of support to ADPs, attention is now shifting to leveraging ICT infrastructures and gateways for e-extension activities. Currently, e-extension intervention is proving to be the fastest and most reliable means of delivering advisory services to farmers and other stakeholders. The survey data reveal that the 2022 situation was comparatively better than that of 2023 regarding network provision and support received (Figure 17.8). The 3 years comparative data showed, however, that both years were better than 2021, especially in areas of network provision and cost of data. Generally, therefore, a situation in which over 20 states (in all areas and for the 3 years) were constrained from effectively providing advisory leveraging the crucial global superhighways for information dissemination and professional collaboration is not healthy for the nation's agriculture.
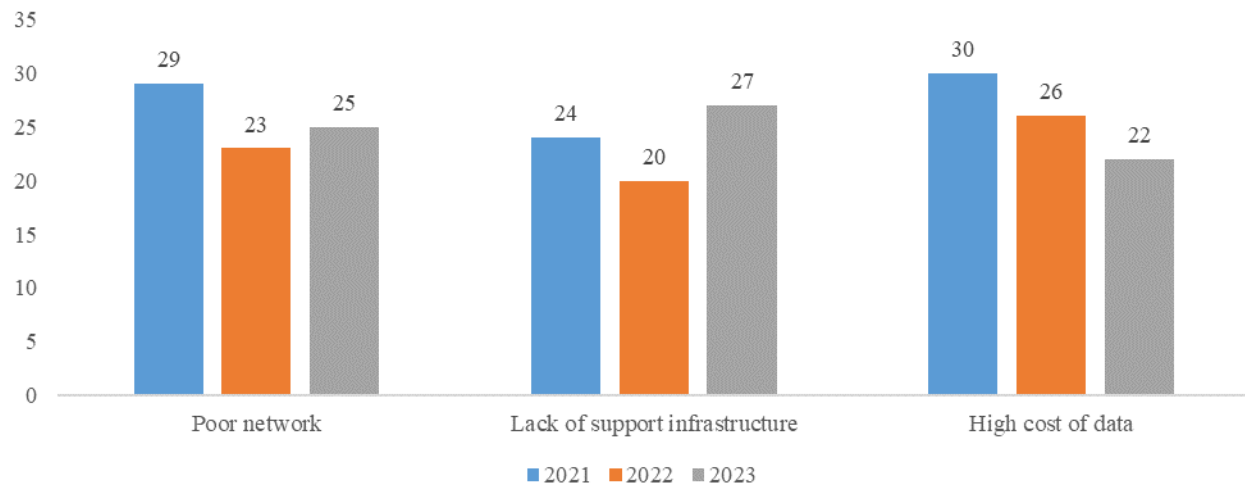

Figure 17.8: Challenges on e-extension (3 years' data)

17.9   Security-elated Challenge

Security is a necessary condition for productivity; conversely, insecurity poses a threat to agricultural productivity and other forms of economic activity. Since 2016, there has been a gradual and incremental growth in insecurity in the country, especially in the rural areas. This led to an expressed concern about widespread insecurity and higher prices of farm inputs in the country, which have impacted heavily on cultivation and access to productive inputs. Previous APS reports have shown that many farming households in rural areas were displaced from their farmlands by cattle herders or some form of communal crisis. Although the government has done a lot to stem the tide of insecurity, the menace persists. The data in Figure 17.9 shows that kidnapping is still ravaging rural communities in 25 states and that crop theft is on the rise, having been reported in 28 states. Other indicators of insecurity across the country were farmers-herders clashes, banditry, and rustling activities. Insurgency is now mainly limited to southeast states.
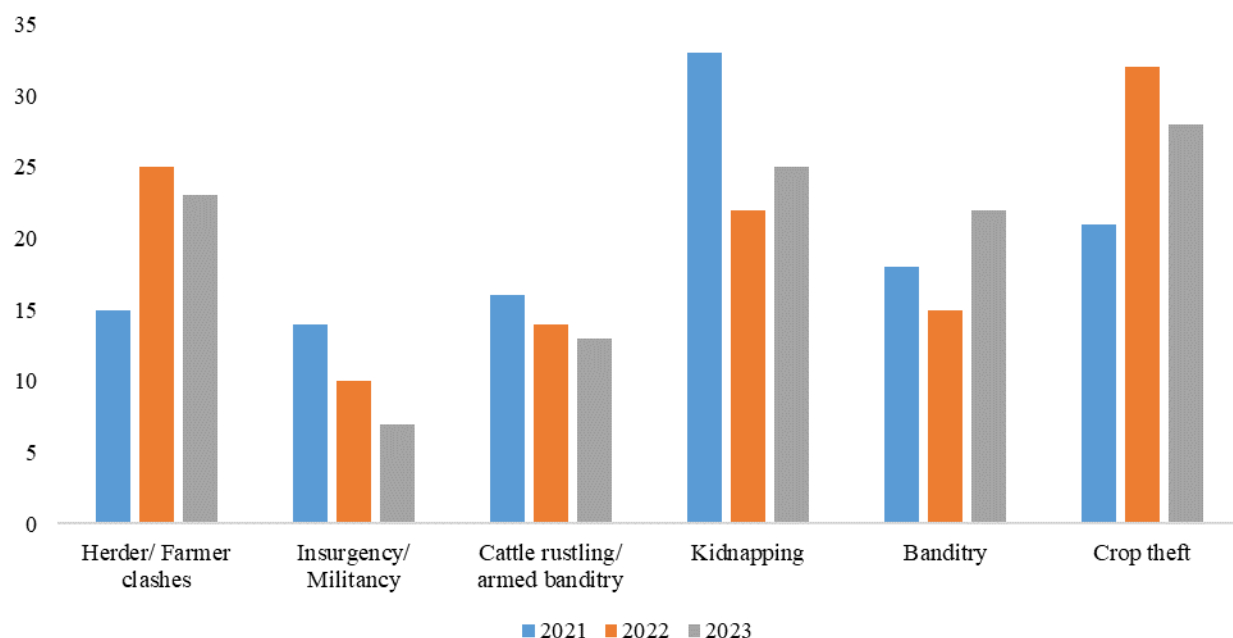
Figure 17.9: Comparative data on constraints related to insecurity (2021-2023)

Conclusion

The 2023 Wet Season Agricultural Performance Survey was conducted without many hitches, and with the support of all 37 ADPs, ministries of agriculture, NARIs, and other organizations. The data were analyzed to achieve the goal of the study. The results present a very realistic outlook of agricultural activities and development in the country in 2023, highlighting, among others, the prospect of marginal increases in the national agricultural output (for crops, livestock, and fisheries), as well as the challenges confronting production during the year, including low use of improved inputs and mechanization, and sharp increases in the costs of farm management.

Recommendations

1. National Agricultural Extension Policy: Develop Policy Implementation Capacity Improvement Plan. Comprehensive advocacy for agricultural Extension Policy to ensure extensive buy-in.
2. Invest in Irrigation. Develop and expand irrigation infrastructure to mitigate the impact of erratic rainfall, especially in drought-prone regions.
3. Enhance Flood Management. Strengthen flood management measures, including early warning systems and infrastructure development to minimize flood impacts.
4. Integrated Pest and Disease Management (IPDM). Promote integrated pest and disease management practices and strengthen research and extension services.
5. Structured Support for Agricultural Value Chains. Implement subsidies or support mechanisms to make essential farm inputs more affordable for small-scale farmers.
6. Crop Diversification. Encourage crop diversification to reduce reliance on crops affected by pests and diseases.
7. Livestock Disease Control. Invest in livestock disease control programs and livestock

management practices to ensure the health and productivity of livestock.

8. Fisheries Sector Diversification. Promote the cultivation of other fish species in addition to catfish and improve data collection for the fisheries sector.
9. Post-harvest Infrastructure. Invest in modern storage and processing facilities, transportation, and marketing systems to reduce post-harvest losses.
10. Mechanization Support. Encourage mechanization and the provision of modern farming equipment, with a focus on accessible, affordable options for various categories of farmers.
11. Price Stabilization Measures. Implement measures to stabilize commodity prices, ensuring food affordability for all, particularly vulnerable populations.
12. Extension Service Revitalization: Allocate resources to address the challenges faced by Agricultural Development Programs, including improving extension staff capacity, motivation, and funding.
13. Government at all levels (Federal, State, and Local Government) must prioritize food security, investing in infrastructure, technology, and extension services while addressing price inflation and post-harvest losses. A holistic and multi-stakeholder approach is essential to ensure the success of the eight-point action plan and achieve the vision of food and nutrition sufficiency for Nigeria.

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