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2019

Wet Season Agricultural Performance in Nigeria

Executive Summary

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National Agricultural Extension and Research Liaison Services

Federal Ministry of Agriculture and Rural Development

Ahmadu Bello University, Zaria

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NAERLS

VISION

To be the foremost Institute for agricultural extension research and capacity development for effective delivery services increased agricultural productivity, sustainable agricultural growth and wealth creation

MISSION STATEMENT

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 agricultiral development of the country

MANDATE

- Advance the frontiers of agricultural extension research and services
- Conduct agricultural performance assessment and provide feedbacks
- Build the capacity and skill of key actors in agricultural extension services
- Plan, coordinate. monitor and evaluate REFILS activities nation wide
- Package and disseminate improved agricultural innovations to target users in Nigeria
- Review and support the extension activities of agricultural research institutes

2019 Wet Season Agricultural Performance in Nigeria.
Executive Summary

By

National Agricultural Extension and Research Liaison Services,
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www.naerls.gov.ng

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Certified By

National Technical Committee on Agricultural Statistics

Collaborators

P&PCD, NBS, FDAE, FDA, FDFA, FDAPHS, IAR, DFISS, NARI, NIMET, NIFOR, LCRI, IAR&T, NIHORT, GIZ, NAPRI, NASC, SG 2000

October 2019

1.0 Preface

Assessment of agricultural production in Nigeria is one of the core mandates of NAERLS. The 2019 Wet Season Agricultural Performance Survey (APS) was conducted from 25th August to 1st September. The field work was done in collaboration With the following agencies and organisation

- 36 States and FCT Agricultural Development Programme (ADPs)
- Federal Department of Agricultural Extension (FDAE), FMARD;
- 36 State Ministries of Agriculture and FCT Department of Agriculture;
- National Bureau of Statistics (NBS);
- Nigerian Meteorological Agency (NIMET);
- Planning Policy and Coordination Department (PPCD), FMARD;
- Federal Department of Fisheries and Aquaculture (FDFA), FMARD;
- Federal Department of Animal Production and Husbandry Services (FDAHS), FMARD;
- National Agriultural Seeds Council (NASC)
- Deutche Gesellschaft Fur InternationaleZusammenarbeit (GIZ) GmbH-Nigeria;
- Word Food Programme, Abuja;
- Institute for Agricultural Research (IAR),ABU, Zaria;
- Institute for Agricultural Research and Training (IAR&T), OAU, Ibadan;
- National Animal Production Research Institute (NAPRI), ABU, Zaria;
- Lake Chad Research Institute, Maiduguri
- Sasakawa Global 2000
- Nigerian Institute for Horticultural Research (NIHORT), Ibadan;
- Nigerian Institute for oil Palm Research (NIFOR), Benin-City; and
- Nigerian Hydrological Services Agency (NIHSA), Abuja

Twenty teams with each consisting of 3 scientists covered 148 LGAs in 36 states and the Federal Capital Territory (FCT). A monitoring team of six scientists, one per geo-political zone, participated in the survey. Agricultural production situation was assessed as well as impact of floods on food production due to widespread incidence of flood in the country.

The survey report provides an insight into annual cropping season with emphasis on food production, crop pests and disease situation, market situation, commodity prices, agro-meteorological conditions, and agro-pastoral situation across the country. The survey also provides insight on performance of policy thrust as well as progress made on special interventions and programmes on agriculture by the Federal and states Governments. The outputs of the evaluation exercise are put together into an executive summary and national report, which are usually circulated to all states, relevant agencies and other stakeholders. The report provides findings and data that can guide policy formulation and focused research in agriculture. Floods are becoming increasingly a common and recurring disaster annually in the country; therefore reports of floods were documented nation-wide. Thee frequency, severity, and spread of these foods increased significantly up to September 2019.

In an effort to improve the quality and reliability of the data generation, NAERLS continues to expand its range of partners for inclusive data capture and analysis. The Institute continually explores best options on strengthening the capacity of key partners in data collection and management.

The sincere appreciation of NAERLS goes to farmers and farmers' groups, officials of the State Ministries of Agriculture, State Agricultural Development Projects (ADPs), Departments and Agencies and State and Local Government officials across the country for contributing substantially to the success of the field work. We are highly indebted to the Honorable Minister of Agriculture and Rural Development, Alhaji Mohammed Sabo Nanono and the Honourable Minister of State, Alhaji Mustapha Baba Shehuri for their untiring support. We are also sincerely appreciative of the Board Chairman of NAERLS, the ever-supportive Vice-Chancellor of Ahmadu Bello University, Zaria, Prof. Ibrahim Garba.
We welcome comments and suggestions for improvement, as you browse through this summary.

Prof. M. K. Othman
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2.0 Methodology

Methodology

- Twenty multi-disciplinary teams conducted the exercise across the 36 States, Federal establishments and Federal Capital Territory.
- Participatory approach was employed and combined “qualitative” and “quantitative” techniques including:
  - Key informant interviews
  - Focus group discussion and interviews
  - Individual farmers interviews across local governments in the nation
  - Questionnaire/ checklists
  - Farm visits/observations,
  - Interviews with Ministry/ADP officials
  - Official government reports
  - Input from Crop models
  - Wrap up/ validation with relevant stake holders

NARLs Partners

Institute for Agricultural Research (IAR), ABU, Zaria
National Animal Production Research Institute (NAPRI) ABU, Zaria
Institute of Agriculture and Training (IAR&T), OAU, Ibadan
Lake Chad Research Institute (LCRI), Maiduguri
National Institute for Oil Palm Research (NIFOR)Benin City
Nigeria Hydrological Services Agency (NIHSA)
Nigerian Institute for Horticultural Research (NIHR) Ibadan

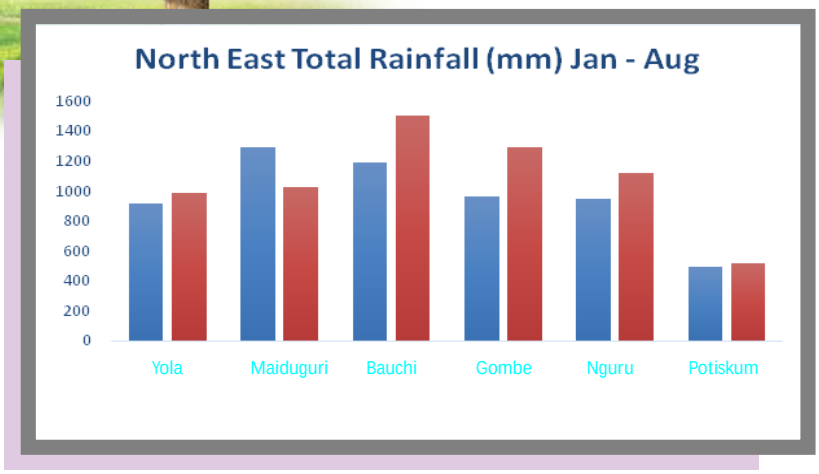
Non NARLs Partners

Federal Departments and Other Organisations

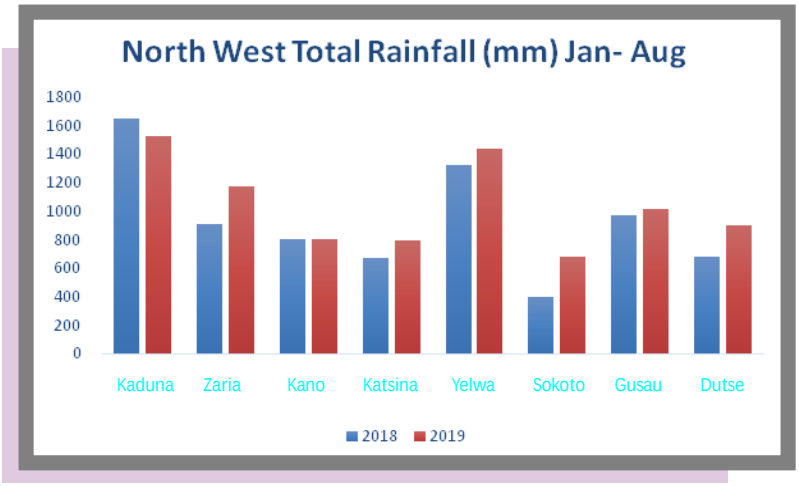
Nigerian Meteorological Agency (NIMET), Abuja
National Bureau of Statistics (NBS)
Federal Dept. of Agric Extension FMARD
Planning and Policy Coordination Department (P&PCD),FMARD
Federal Dept. of Agric, FMARD
Federal Department of Animal Production and Husbandry Services,FMARD
Federal Department of Fisheries and Aquaculture,FMARD
Dept. of Monitoring and Evaluation, Federal Ministry of Budget and National Planning
Sasakawa Global 2000
National Agricultural Seeds Council

4.0 Rainfall Situation in 2018 and 2019

Most States recorded increase in rainfall in the North-East and North-West zones in 2019

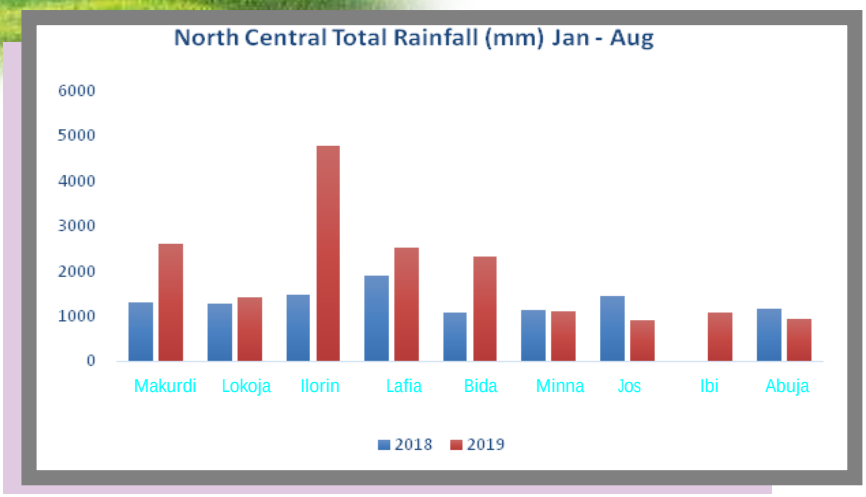


Bauchi State had the highest total rain fall in the North-East from January to August, 2019 followed by Gombe State

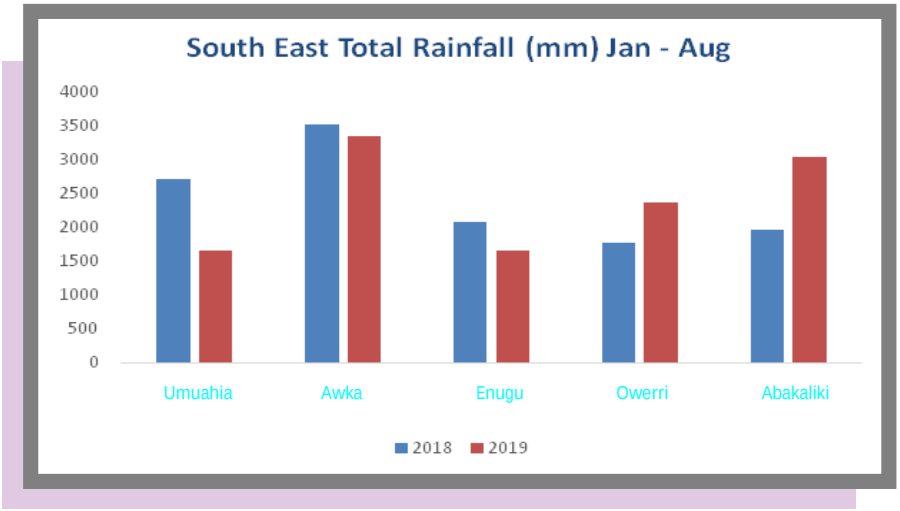


In the Northwest, Kaduna had the highest rainfall for 2019, while Sokoto had to lowest volume for same year.

Most States recorded increase to rainfall in the North-Central and South-East zones in 2019

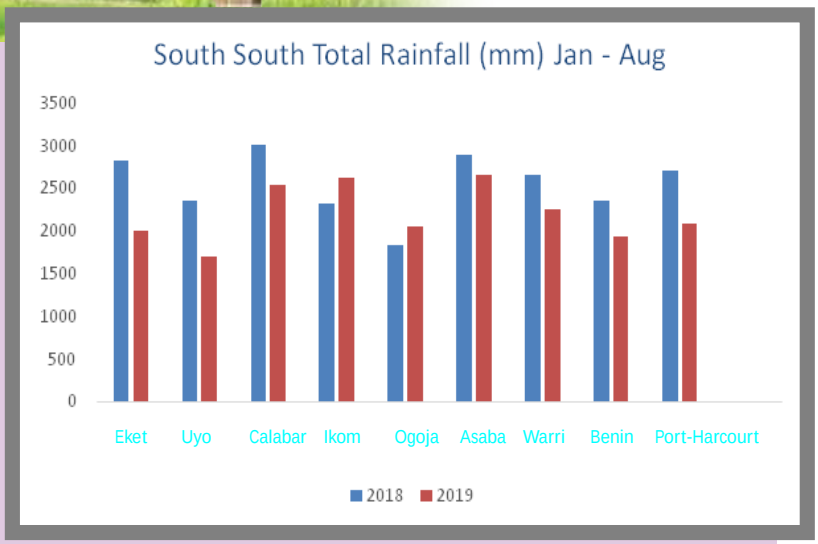


Kwara State experienced the highest rainfall in 2019, Plateau State recorded the lowest. Generally, in the North-Central, the rain fall pattern for 2019 was lower than the other 5 zones in 2019.

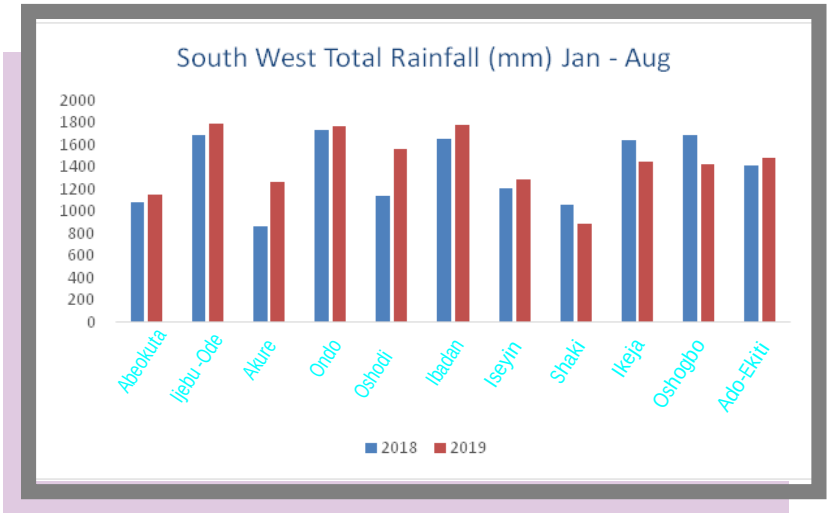


Anambra State witnessed the highest rain fall in the South-East for 2019. This was lower than what was experienced in 2018. There was increased rain fall in Imo, while Abia recorded the lowest rain in 2019.

Most of the States in South-South and South-West recorded increased rainfall in 2019



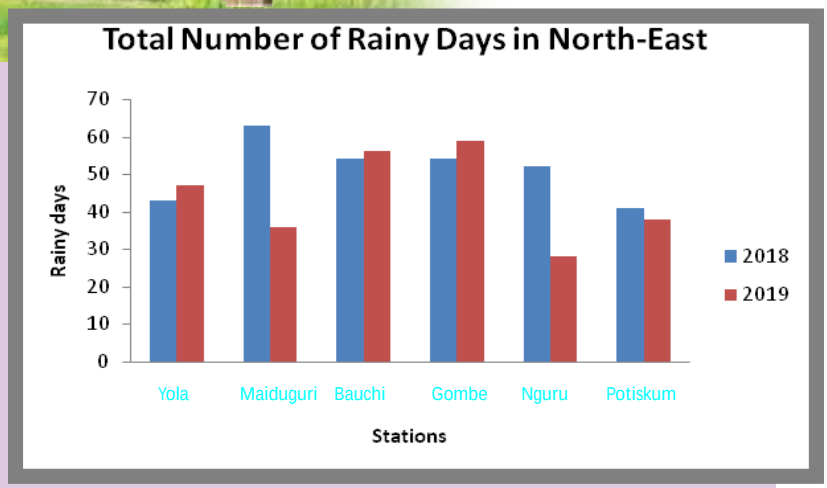
In 2019, Asaba in Delta State has the highest rain fall, while Uyo in Akwa-Ibom State recorded the lowest.



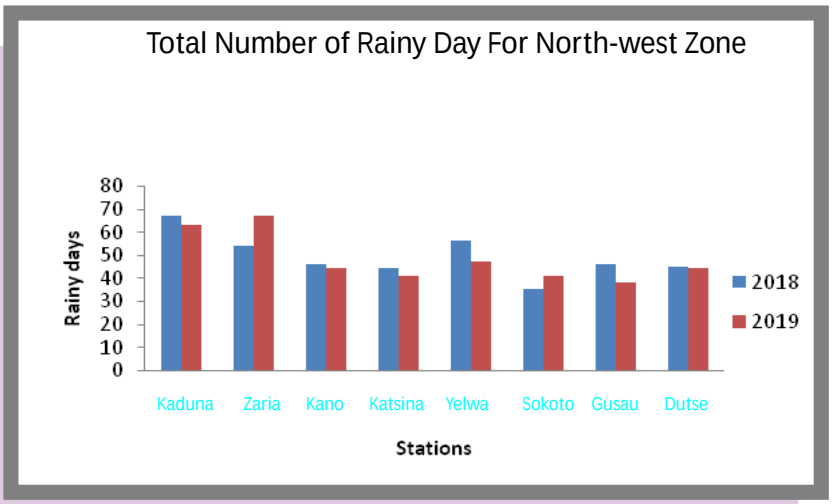
Ibadan had the highest rain fall in the South-West, while Shaki has the lowest in 2019.

Total Number of Rainy Days

Rainy days increased in half of the States in the North East, similar situation was recorded for number of rainy days in the Northwest zones in 2019.

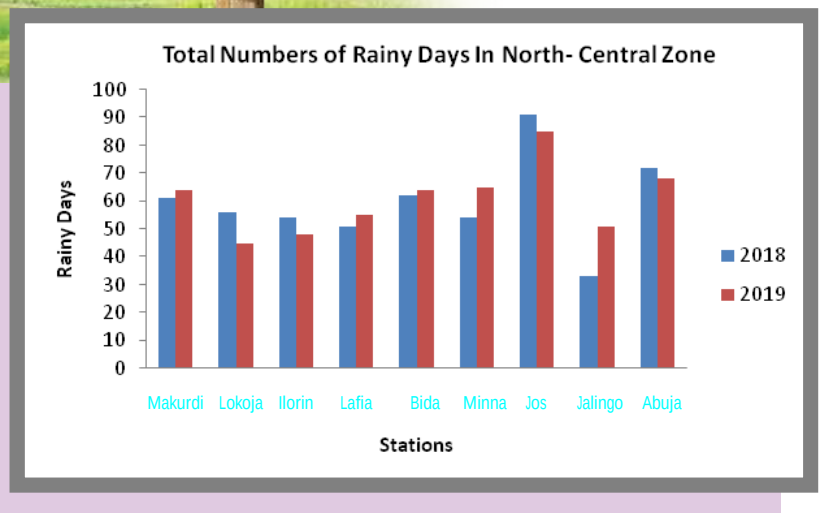


Gombe experienced the highest rainy days (above 60), while Nguru had 30 days of rains in 2019. No State had less than 30 days of rain in the North-East in 2019.

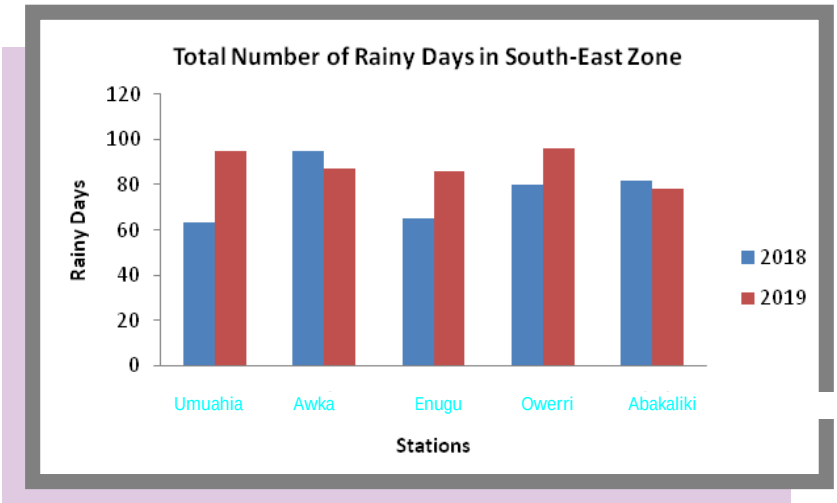


Zaria had the highest rainy days (70) as against the lowest recorded in Gusau in 2019.

The rainy days increased in many States in the North-Central as well as in the South-East in 2019.

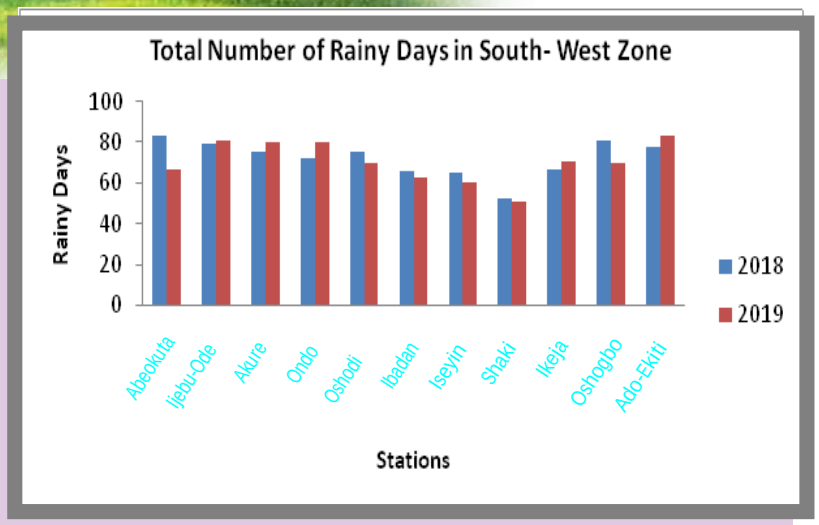


Jos recorded the highest rainy days (85 days) for 2019 but this was lower than 90 rainy days in 2018, while Lokoja had the lowest (45 days) in 2019

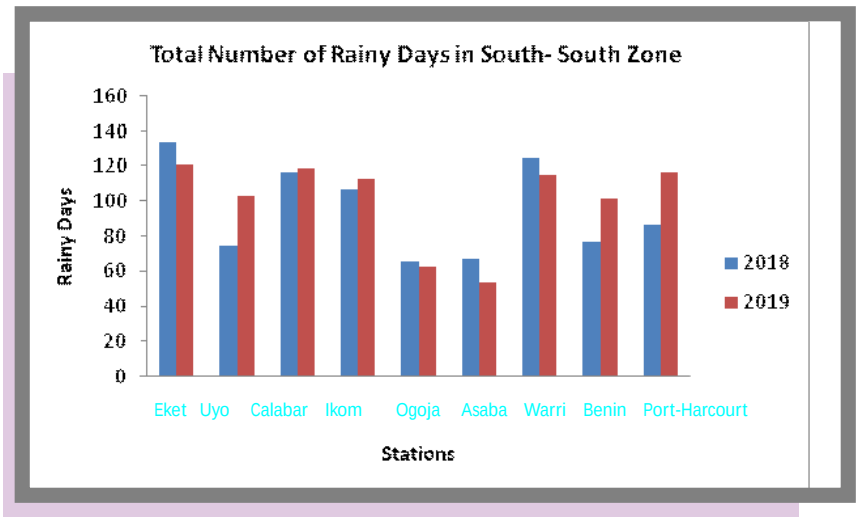


Number of rainy days increased across the States in the South-East in 2019 with Owerri recording the highest of about 100 days.

Rainy days increased in only 5 cities in the South-West and 7 cities in the South-South in 2019 compared with 2018.



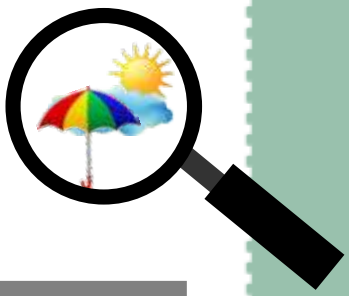
Ado-Ekiti recorded the highest rainy days in the South-West, while Shaki recorded the lowest rainy days in 2019.

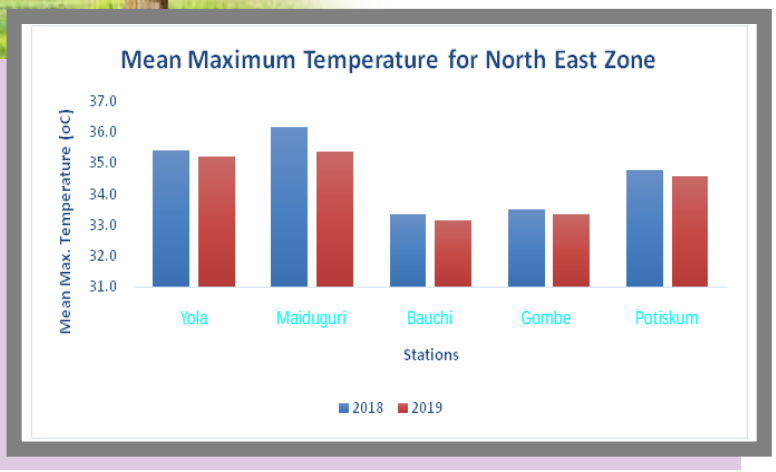


Eket had the highest rainy days (about 120) in the South-South and Asaba recorded the lowest (about 50 days) in 2019.

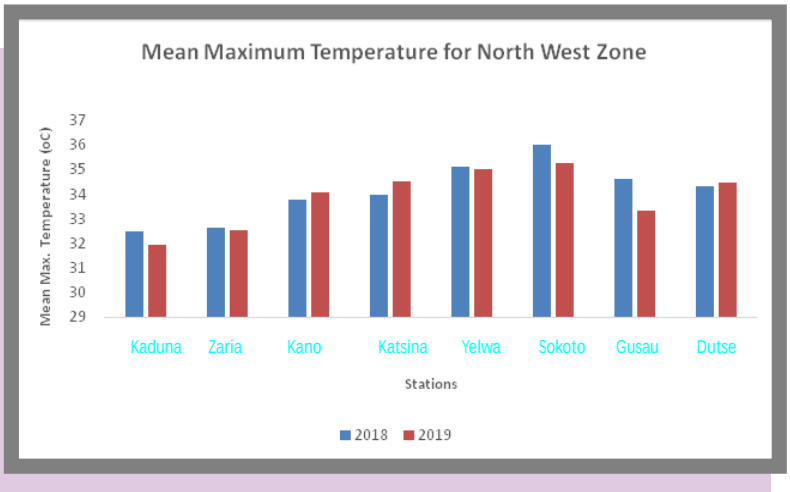
5.0 Temperature Situation in 2018 and 2019

Mean maximum temperature reduced in the North-East while it increased in the North-West considerably in 2019.



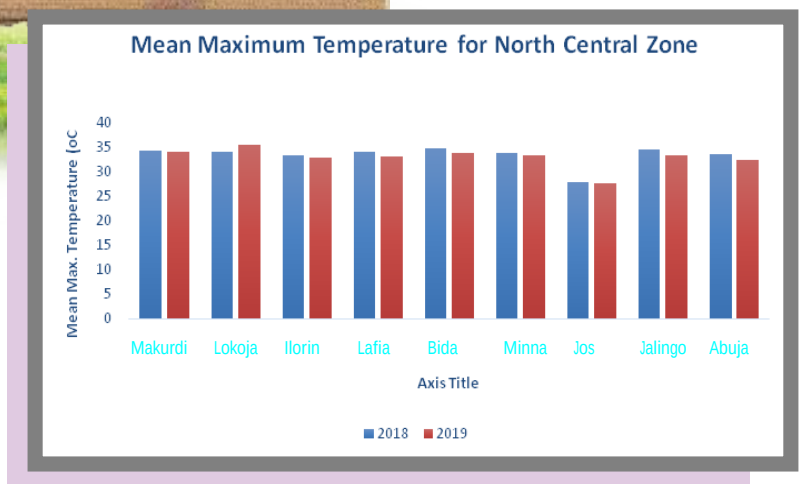


Bauchi had the lowest mean maximum temperature reduction in the North-East in 2019, but Maiduguri recorded the highest mean maximum decrease

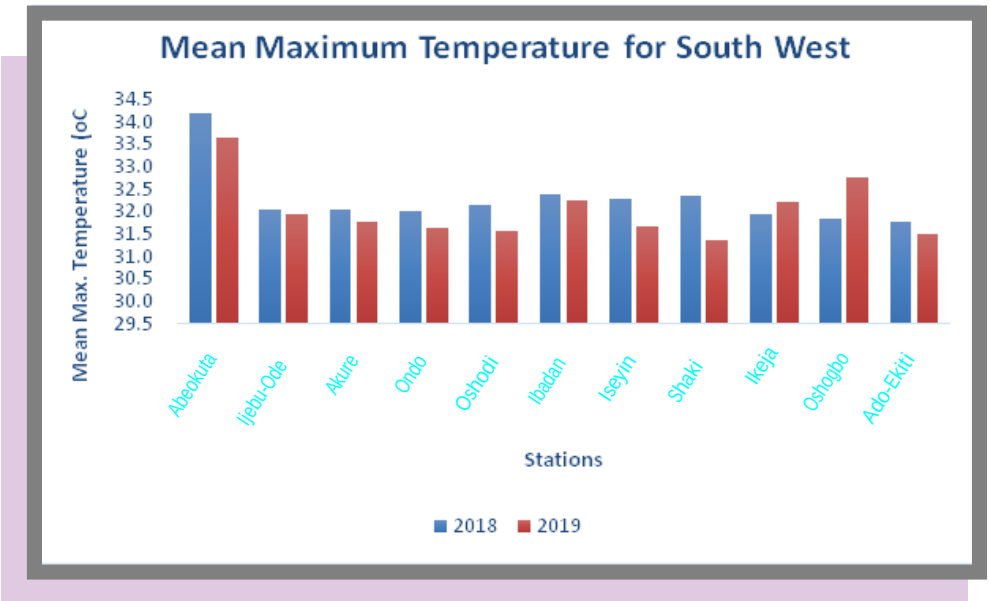


Sokoto recorded the highest mean maximum temperature increase and Zaria had the lowest mean maximum temperature increase in the North-West in 2019.

Mean maximum temperature increased moderately in the NC while it was lower in many parts of the SW states in 2019

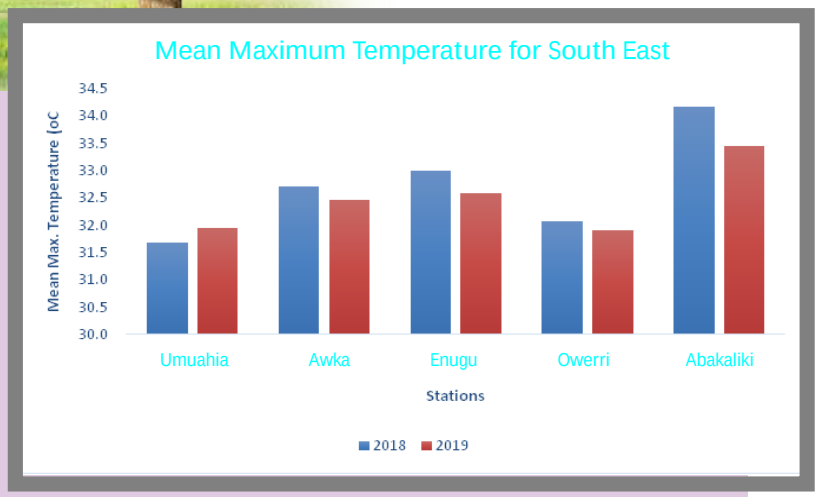


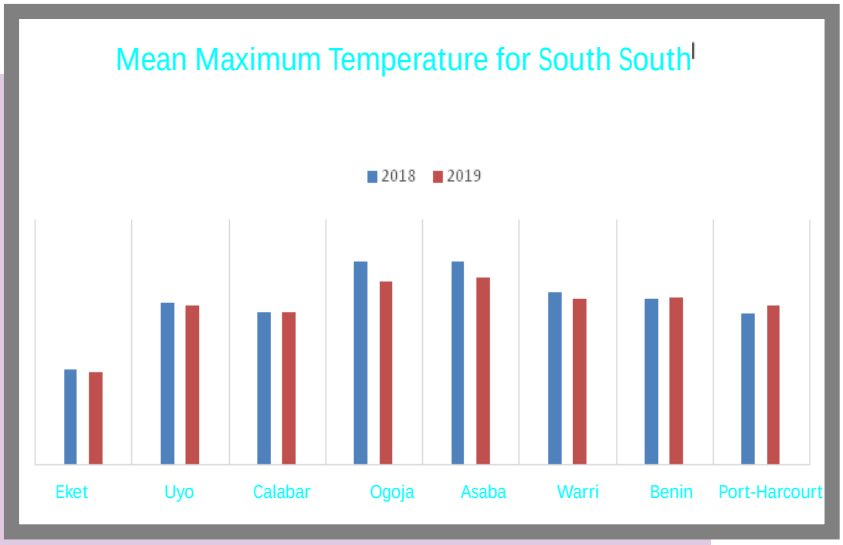
For 2019, Lokoja recorded the highest mean maximum increase in temperature in the NC while Jos recorded the lowest increase almost the same mean maximum temperature recorded in 2018.



Abeokuta had the highest mean maximum temperature increase in the SW in 2019, while Shaki recorded the lowest mean maximum temperature increase in that zone in 2019.

The mean maximum temperature decreased slightly for most cities in the South East and South South in 2019.



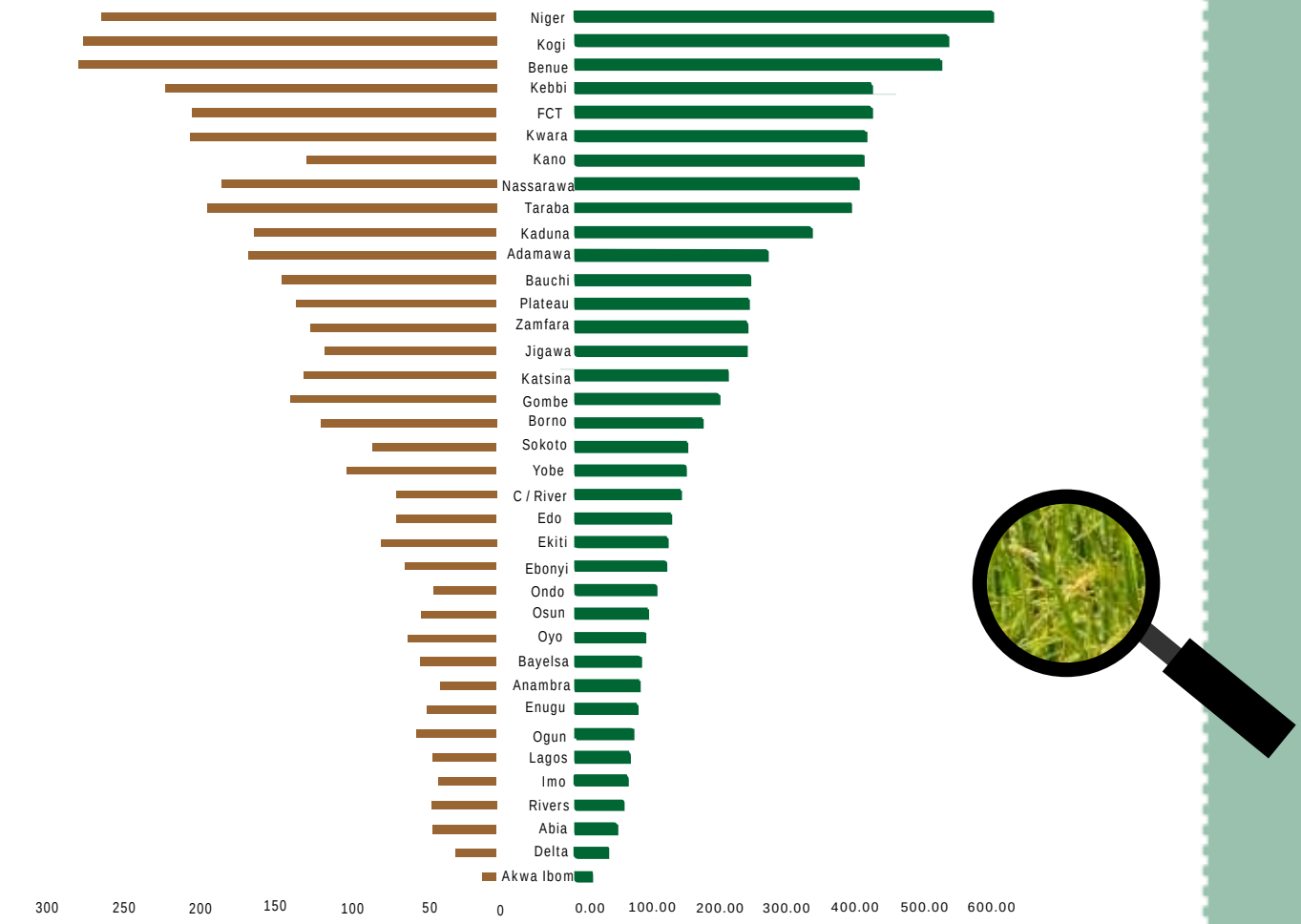


Ogoja and Asaba had the highest mean maximum temperature increase in the SS in 2019 though this was lower than what was obtained in 2018

6.0 Crop Production and Land Area in 2019

Rice

Generally, cultivated land area for rice and production output did not increase considerably in all the states in 2019. The highest increase in both was recorded in Niger State

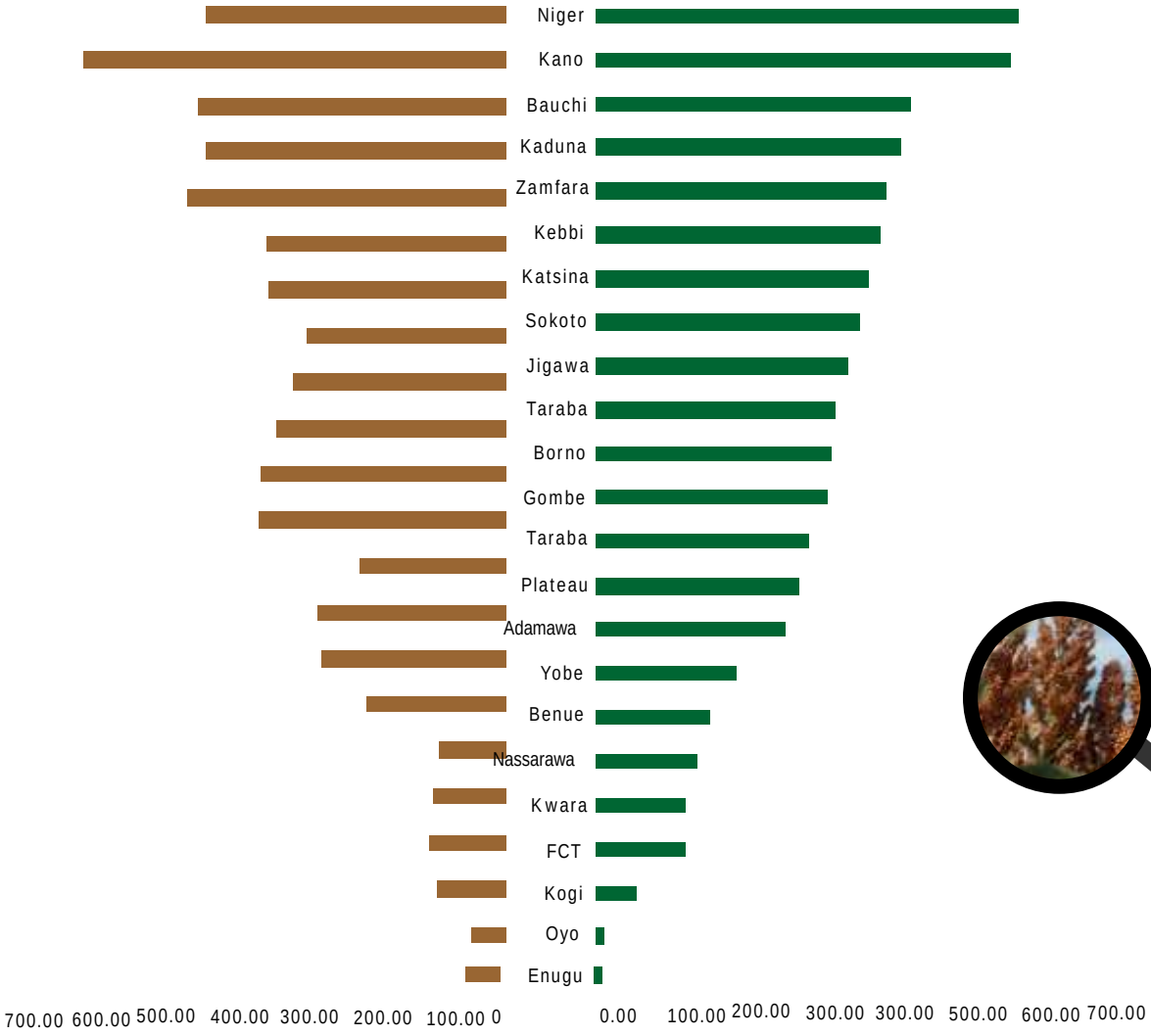


Sorghum

There was increase in cultivated land area and production output mostly in the NC, NW and few states in the NE in 2019. Niger State had the highest land and crop production output for sorghum in 2019.

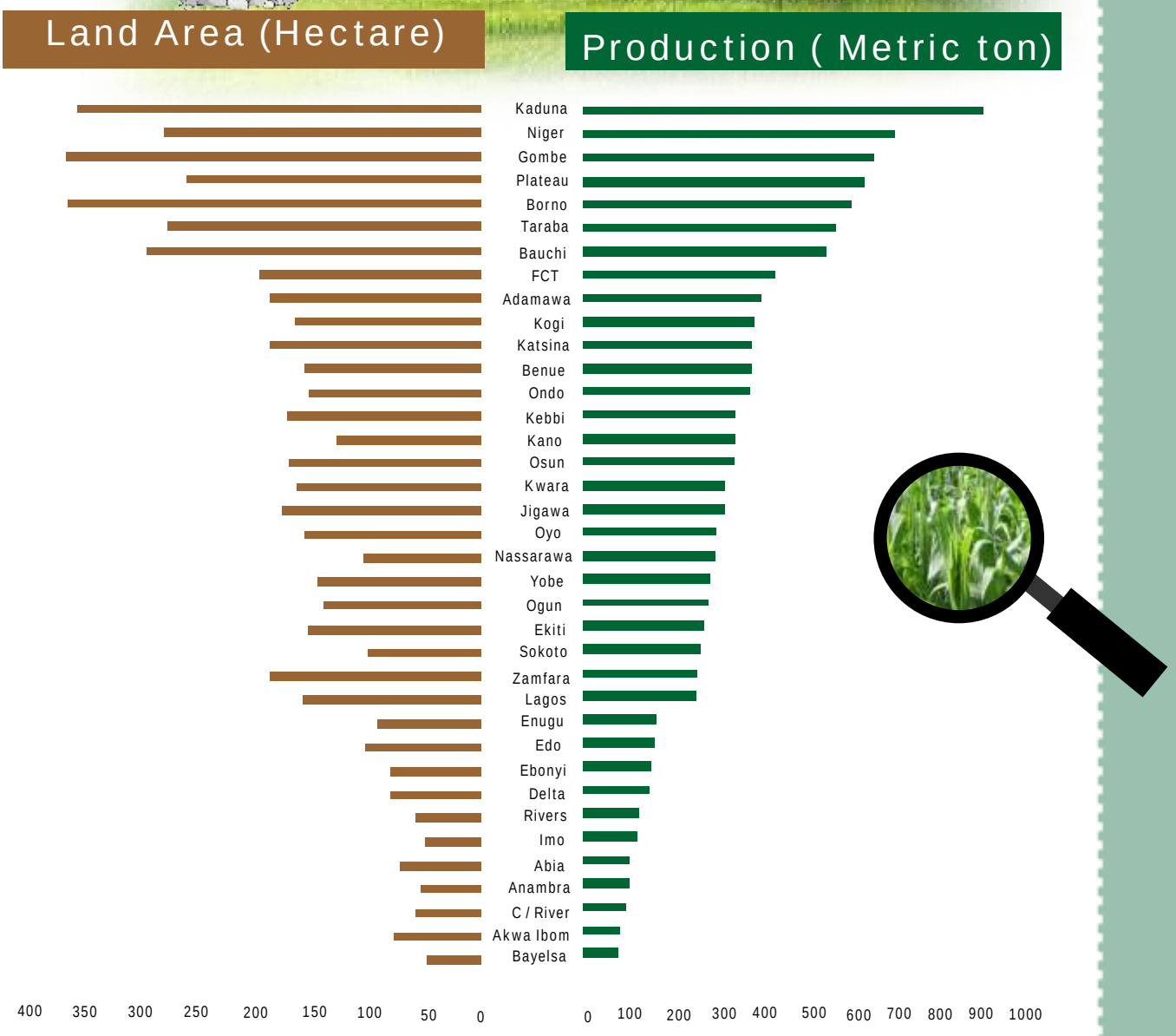
Land Area (Hectare)

Production (Metric ton)



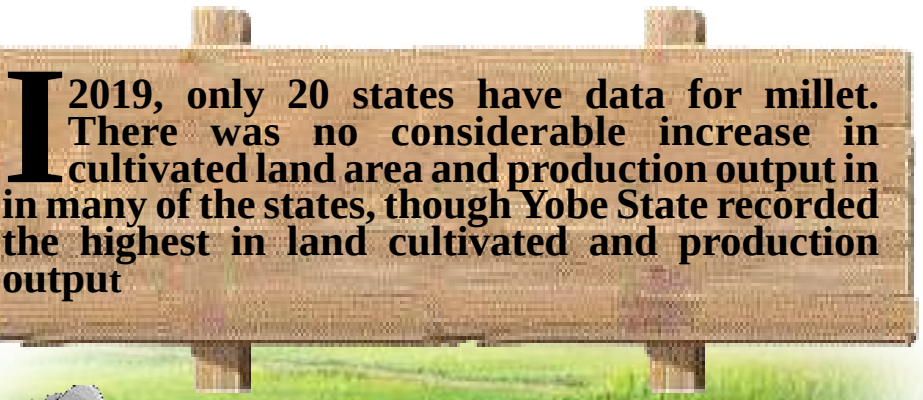
Maize

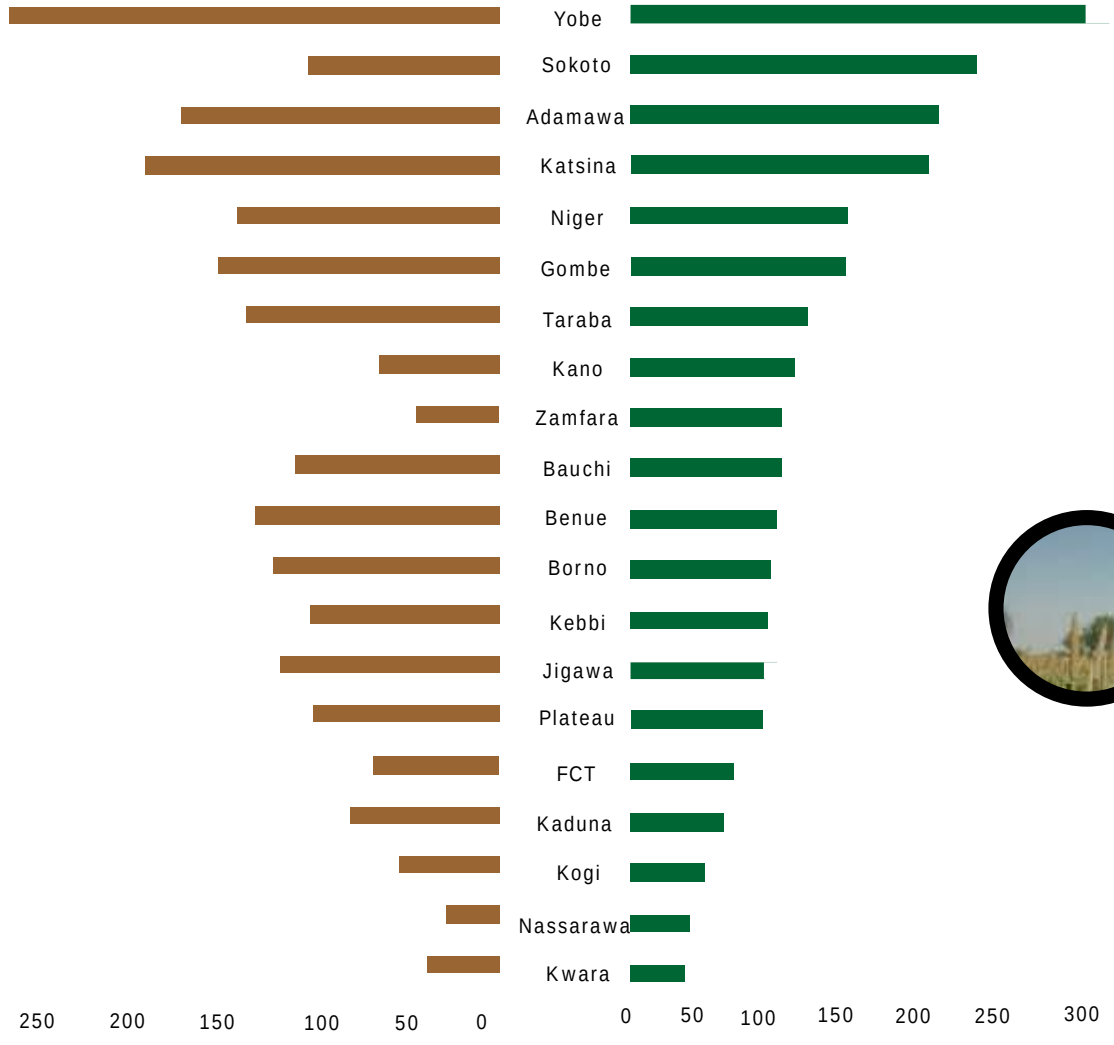
There was increase in cultivated land area and production output for maize in many states in 2019, but this increase was not significant against that of 2018. This may be due to the fall in market price of maize shortly before the planting season in 2019. Kaduna had the highest increase in cultivated land and production for maize in 2019



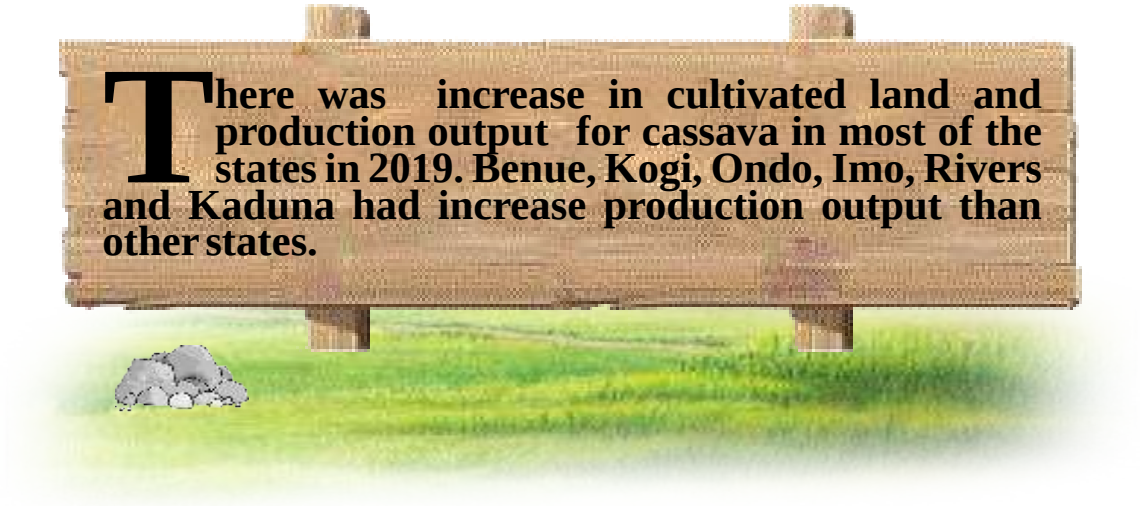
Millet

In 2019, only 20 states have data for millet. There was no considerable increase in cultivated land area and production output in in many of the states, though Yobe State recorded the highest in land cultivated and production output



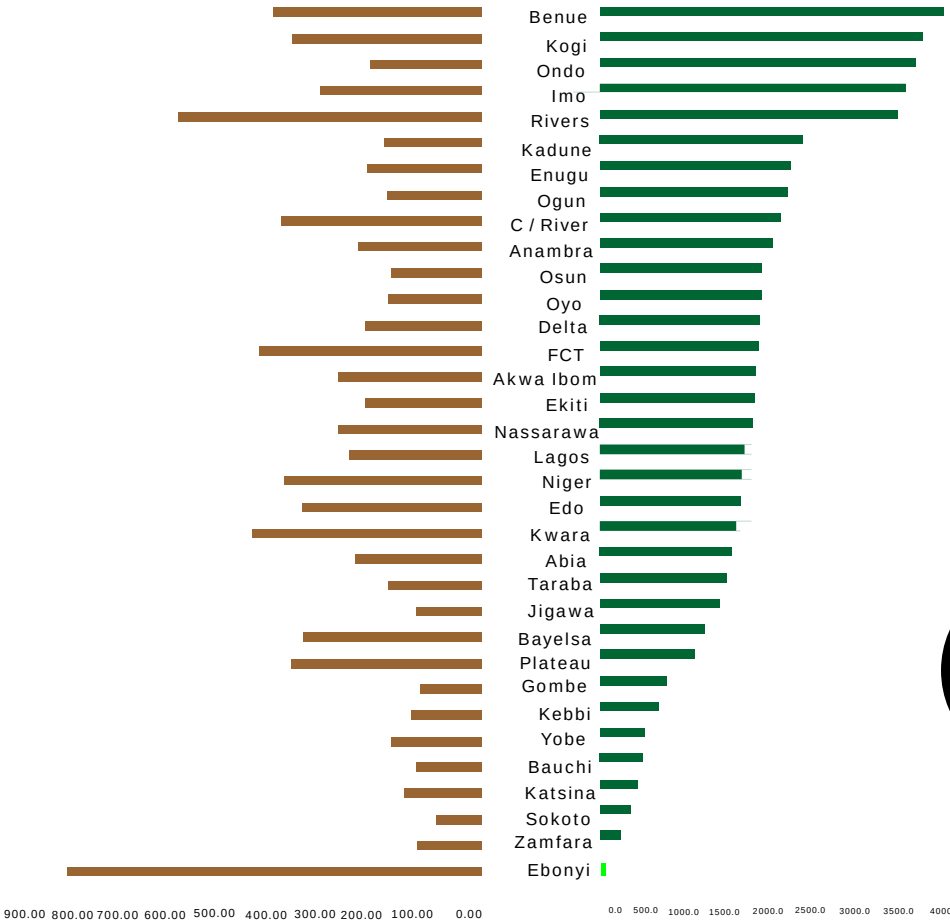


Cassava



Land Area (Hectare)

Production (Metric ton)

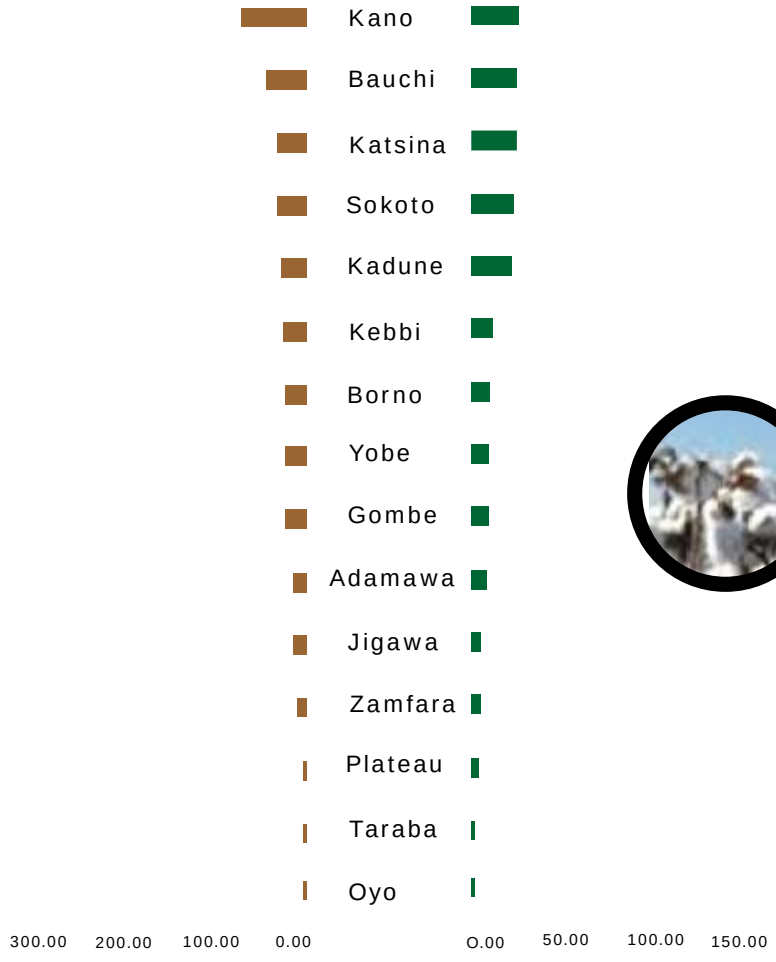


Cotton

There was no considerable increase in cultivated land and production output in all the 15 states that grew cotton in 2019. Kano State top the league of cotton producing states

Land Area (Hectare)

Production (Metric ton)

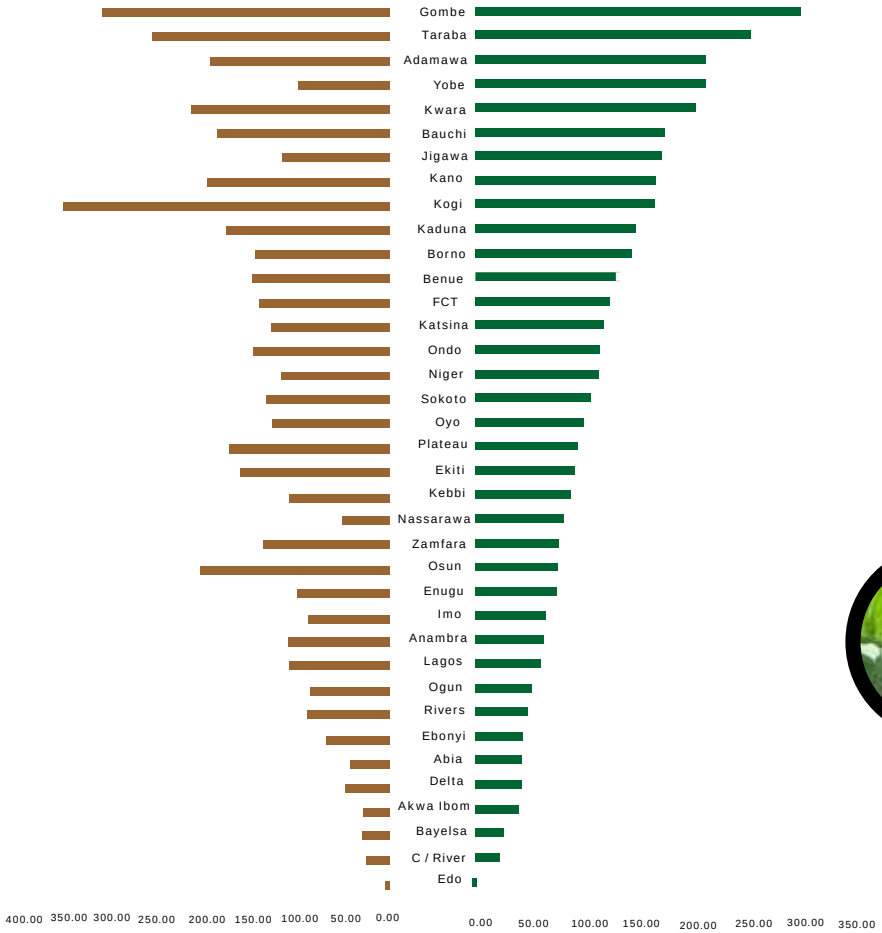


Cowpea

There was no considerable increase in the land area cultivated for cowpea in most of the states in 2019. This situation may be due to drop in market price of cowpea just before the start of the planting season.

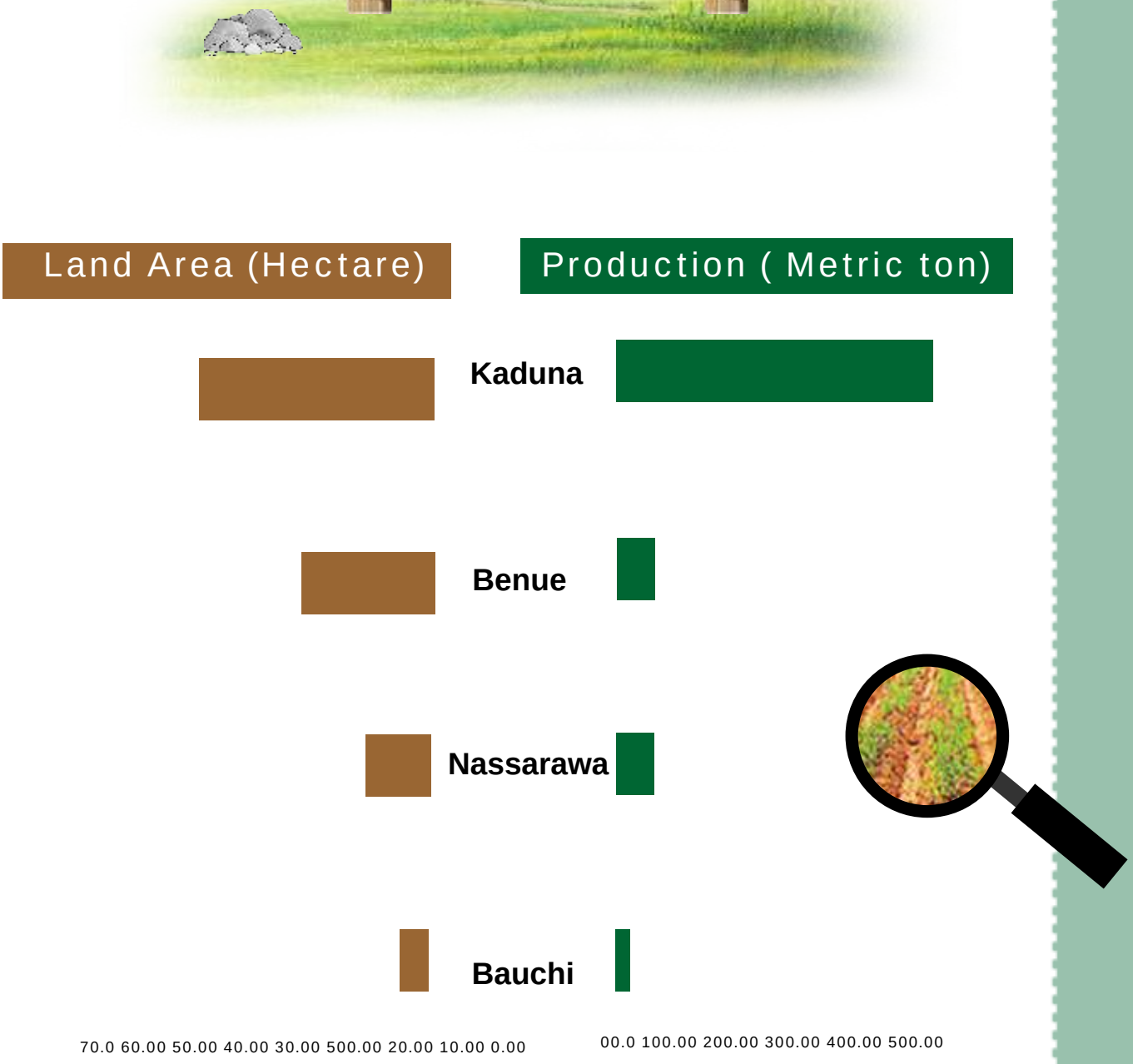
Land Area (Hectare)

Production (Metric ton)



Ginger

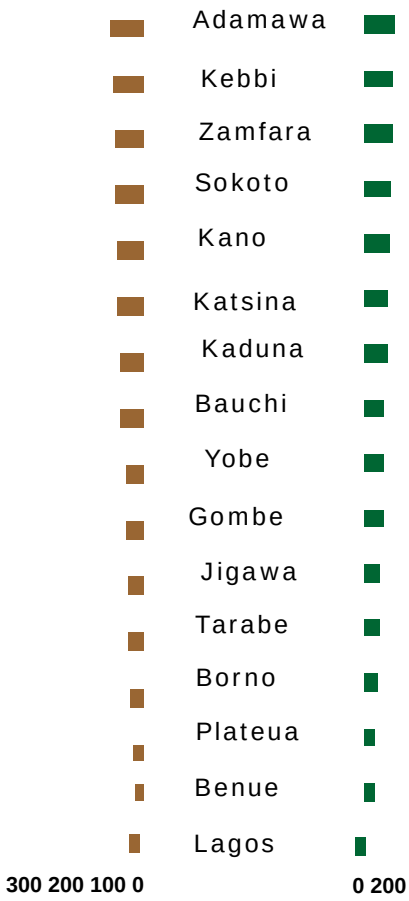
Land area devoted to ginger cultivation and the corresponding production output was far greater in Kaduna state than other states in 2019



Onion

Land Area (Hectare)

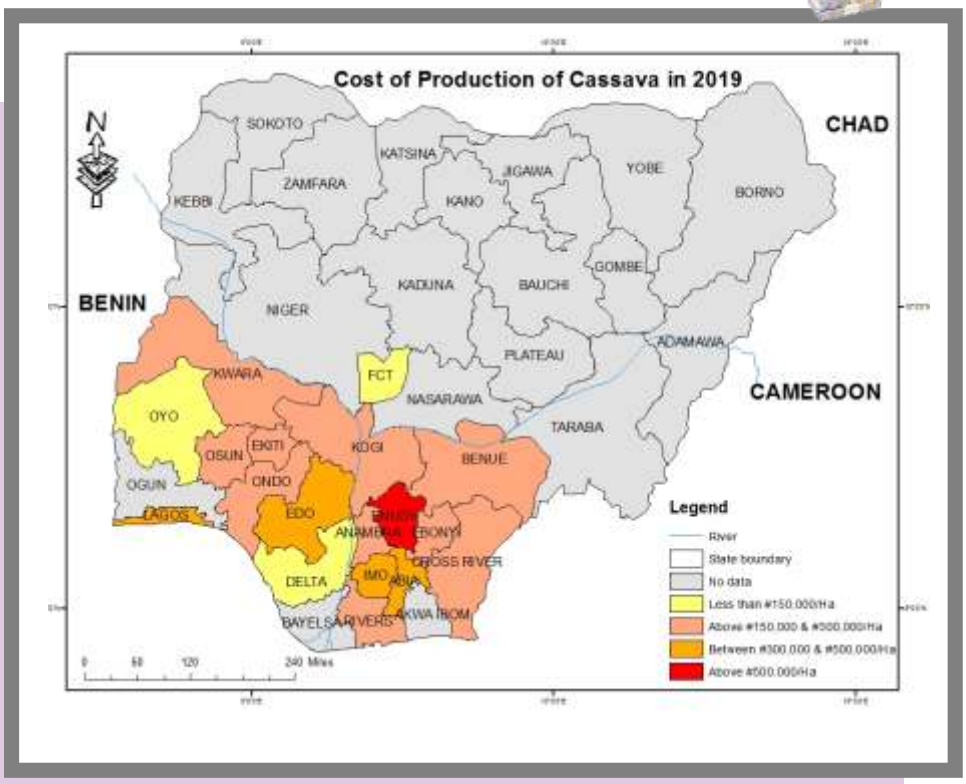
Production (Metric ton)



7.0 2019 Cost of Commodity Production

Cassava

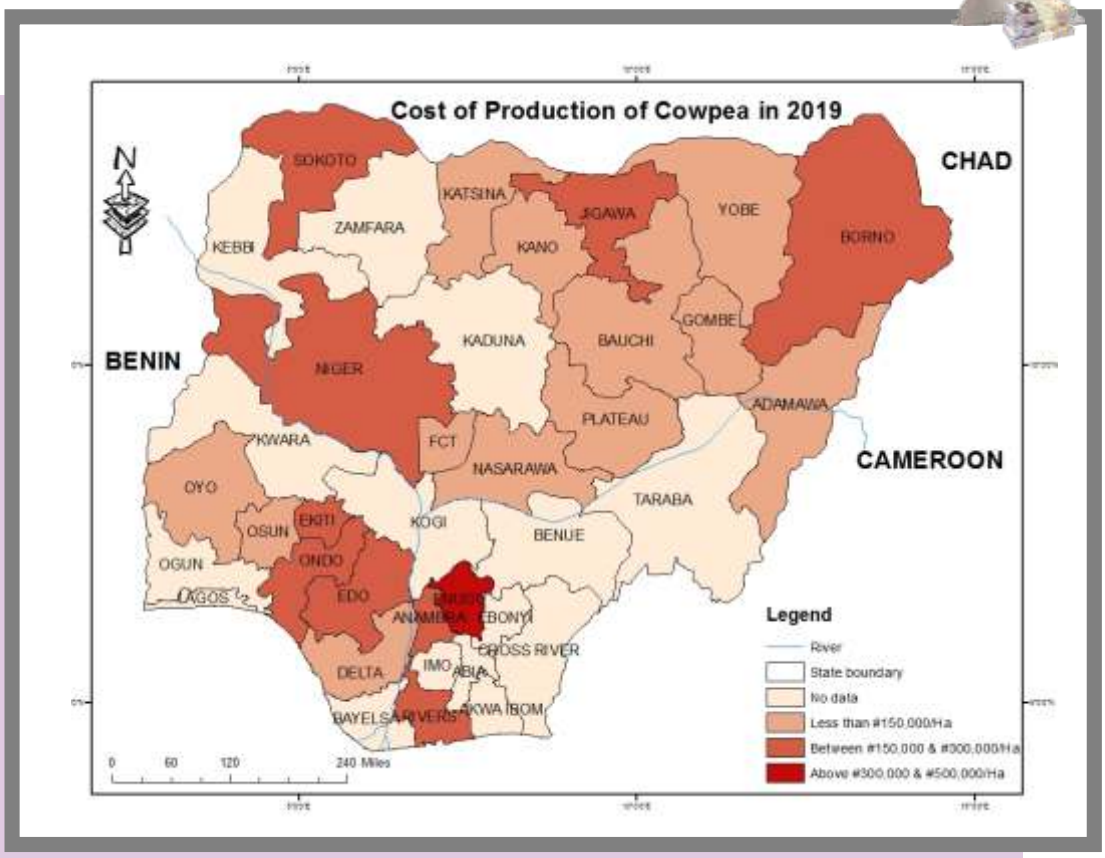
Labour costs constituted the highest for production of cassava in 2019. The production cost ranged between N150,000 and N350,000 per hectare in most states



Cowpea

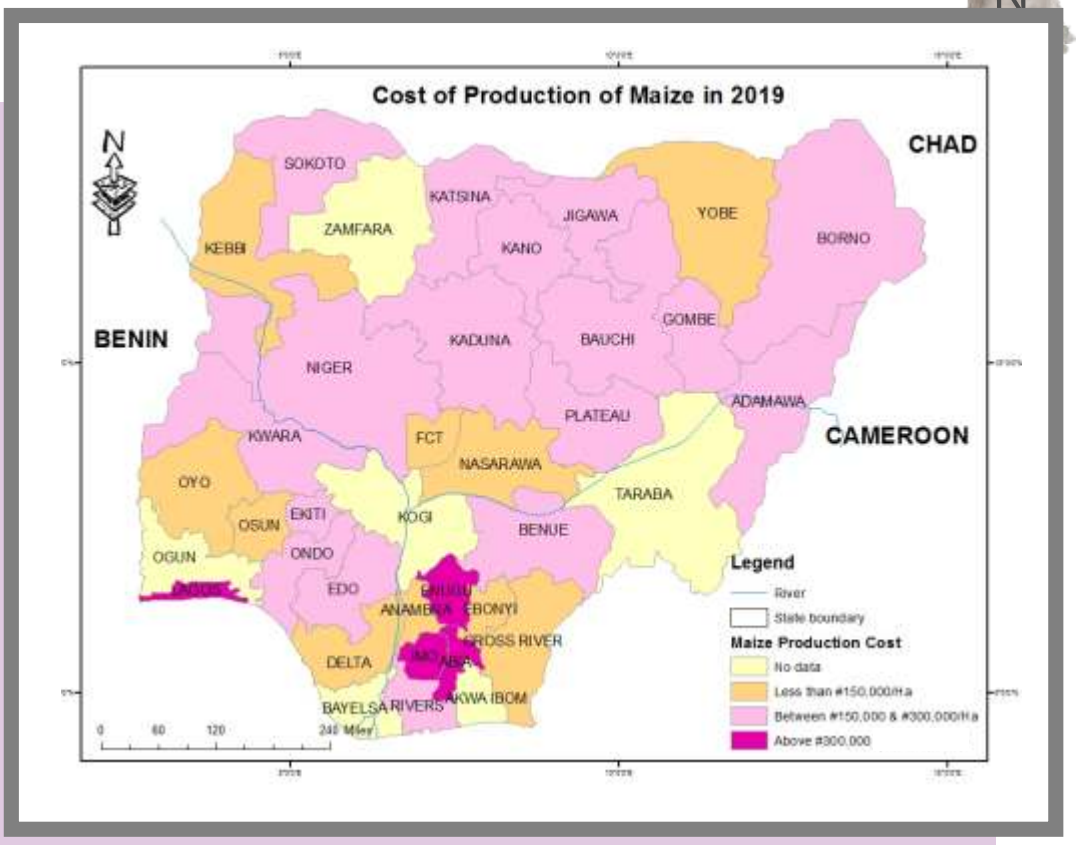
Commodity Production

Cost of production of cowpea was relatively higher in the SE zone than other zones in 2019.

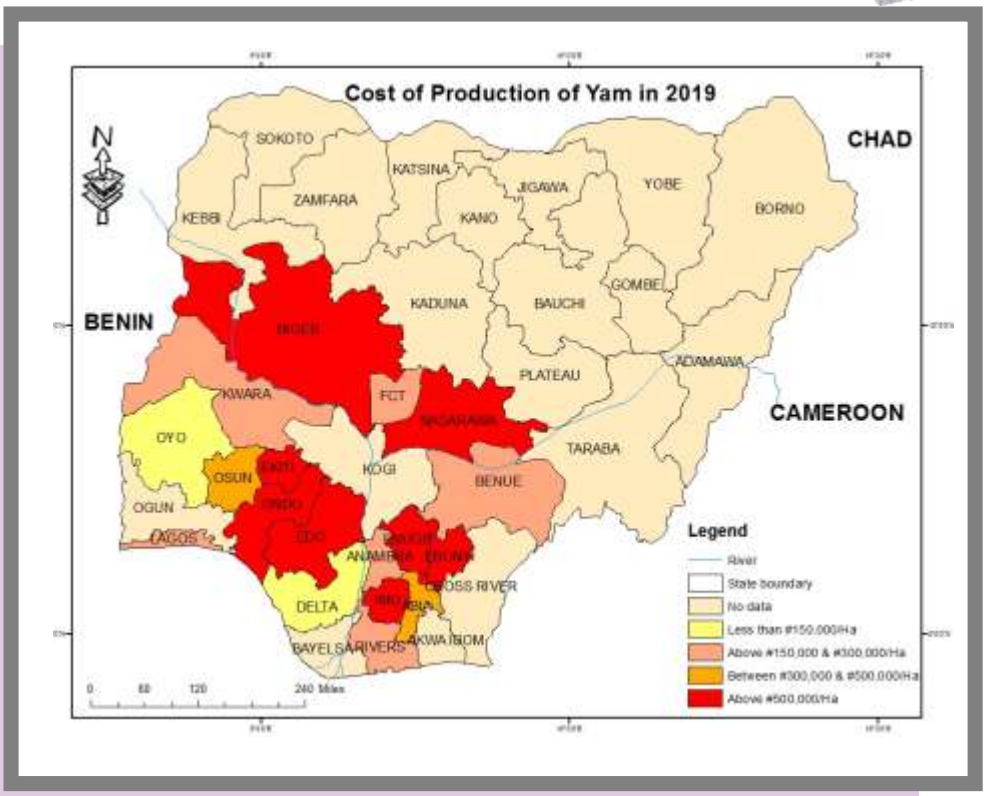


Commodity Production

The average cost of production/ hectare of maize in 2019 was between N150,000 and N300,000 across the zones

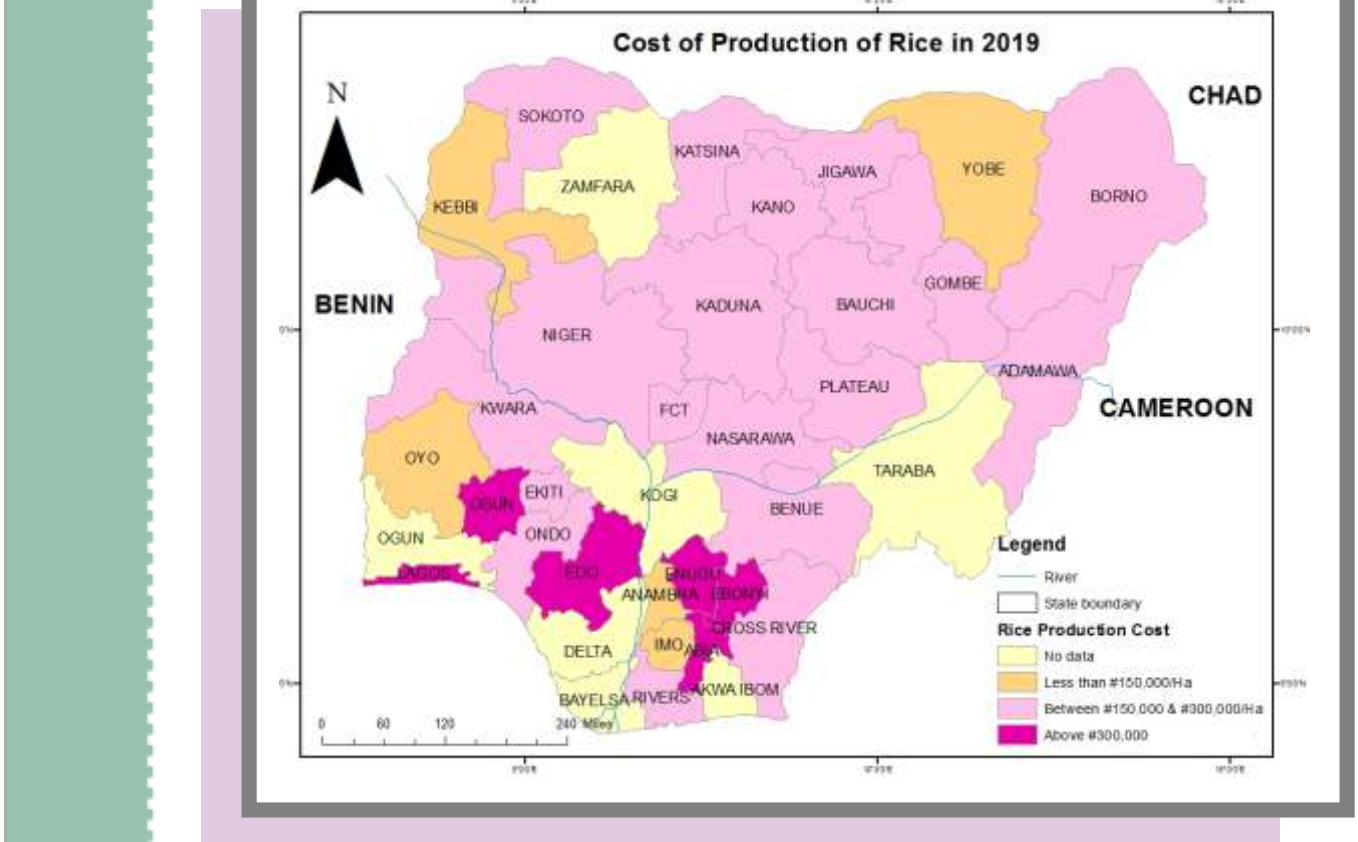


Yam Commodity Production

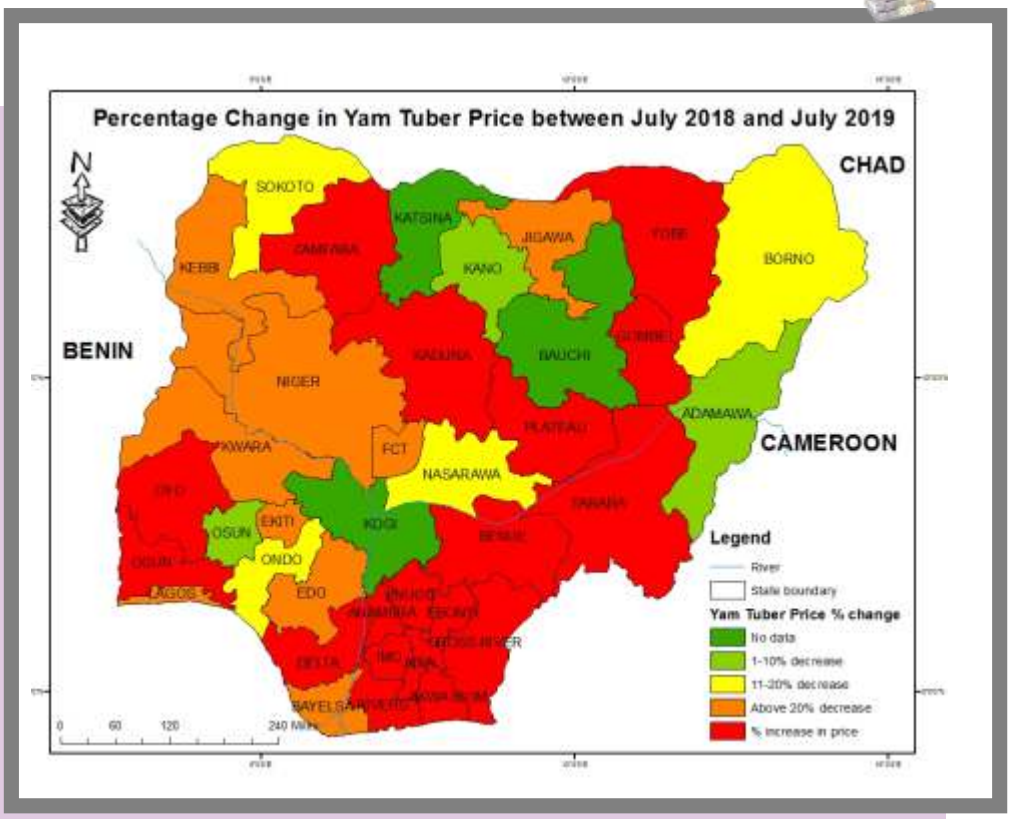


Rice Commodity Production

Production cost for rice was between N150,000 to N300,000 per hectare in most States

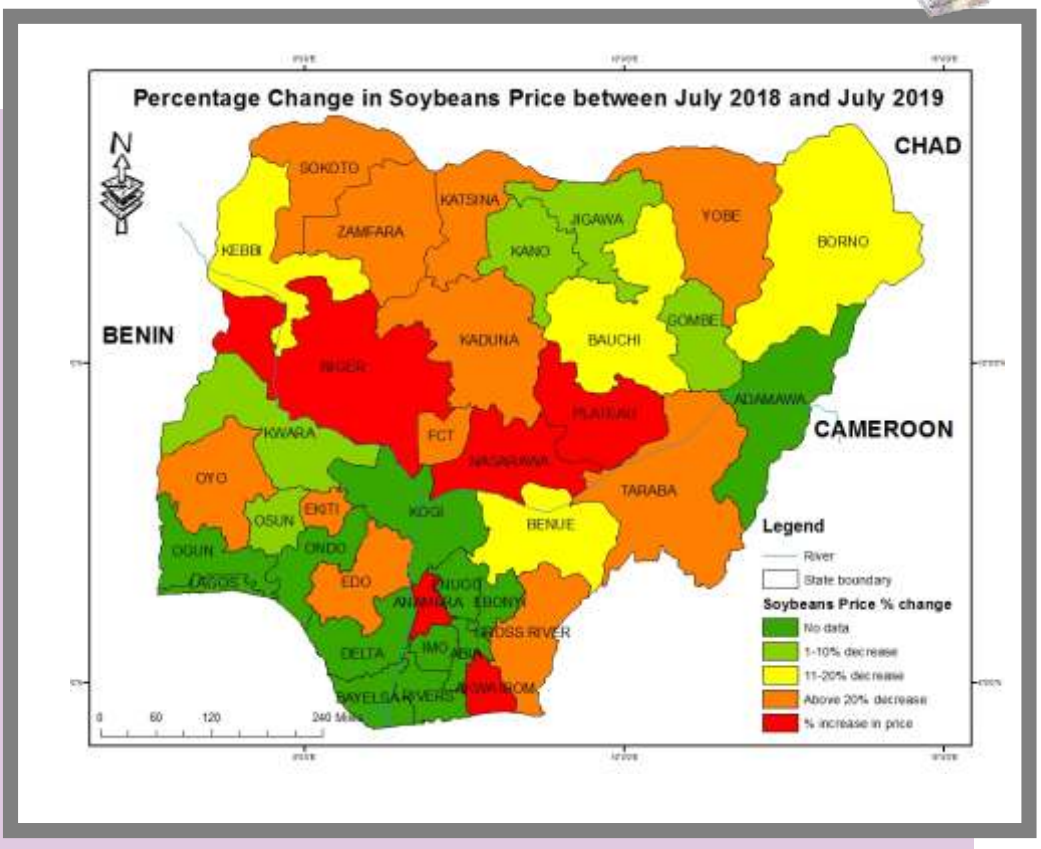


Yam Commodity Prices



Commodity prices

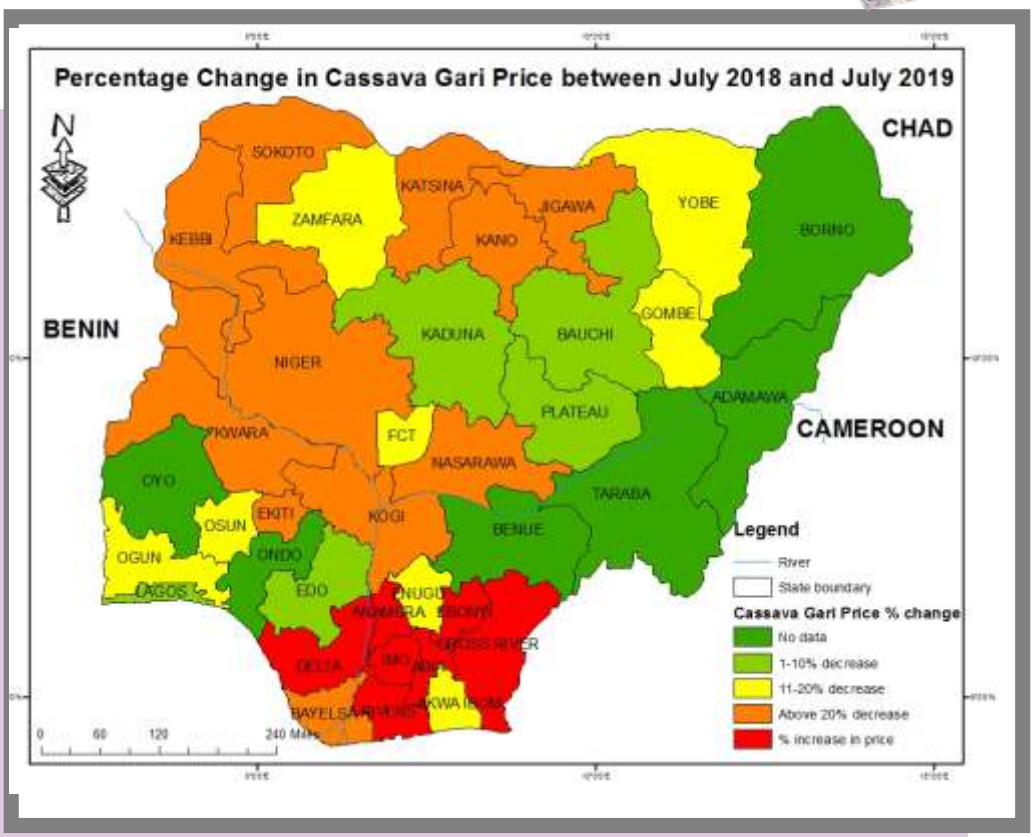
Market price of soybean was nearly the same from 2018 to 2019 except in a few few states which received 11% and 20%.



Cassava Garri

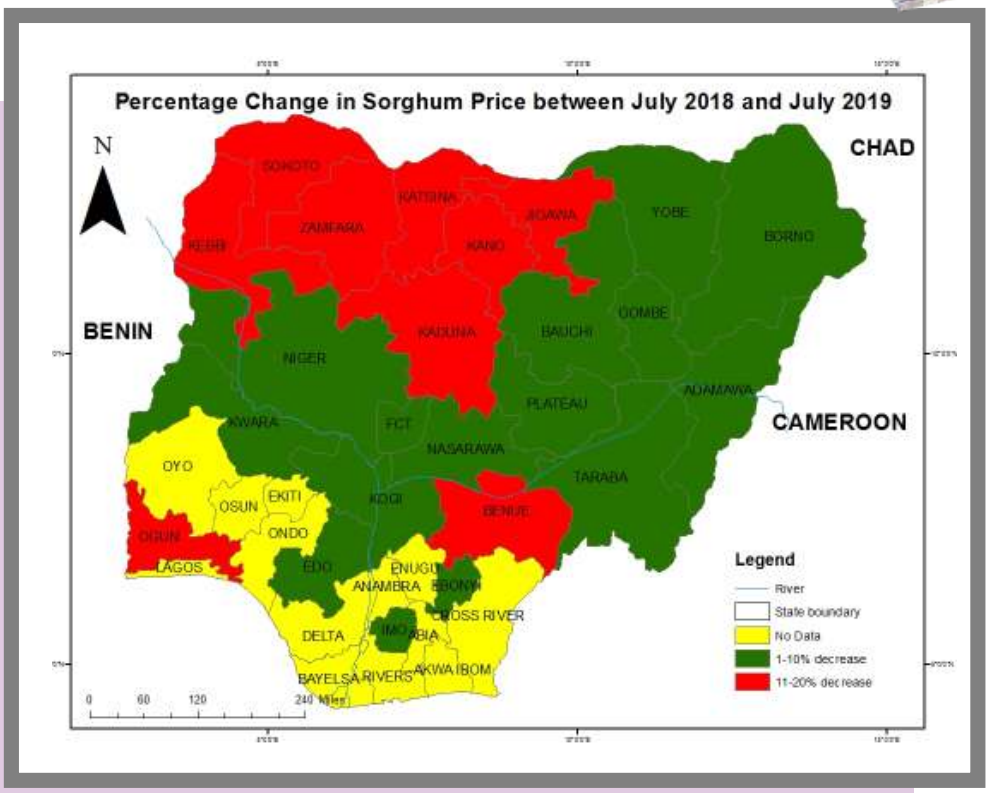
Commodity prices

Market price of cassava generally remained the same as in 2018 except in some states with marginal increase of 20%



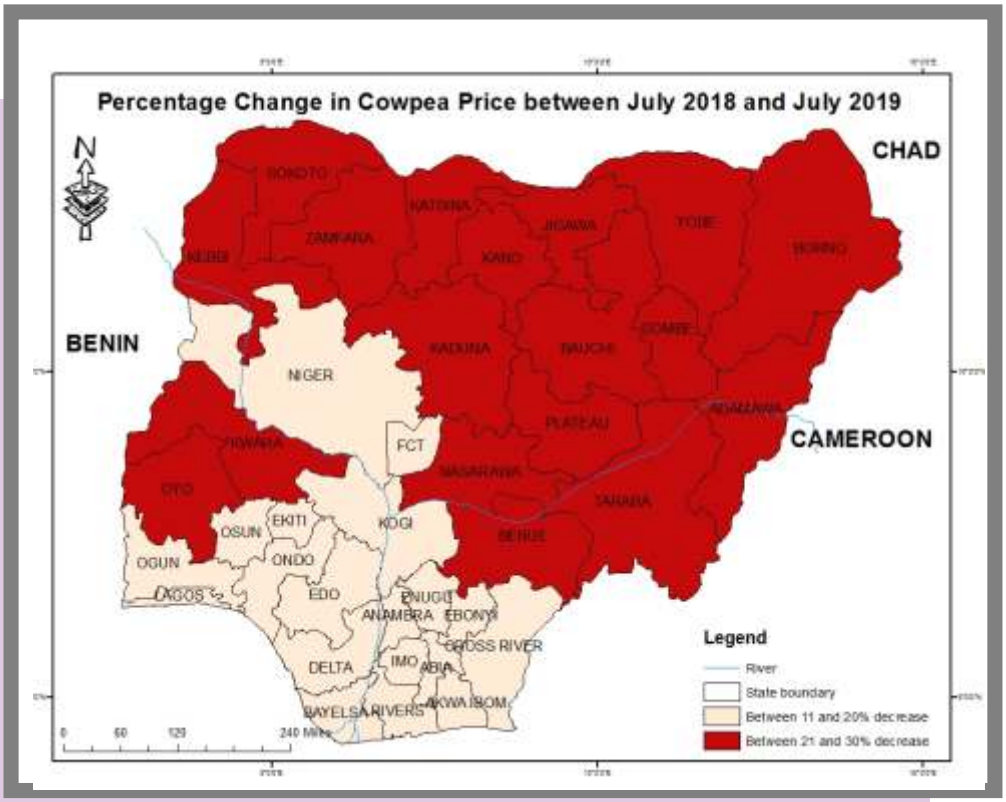
Sorghum Commodity Prices

The market price for sorghum increased marginally between 2018 and 2019

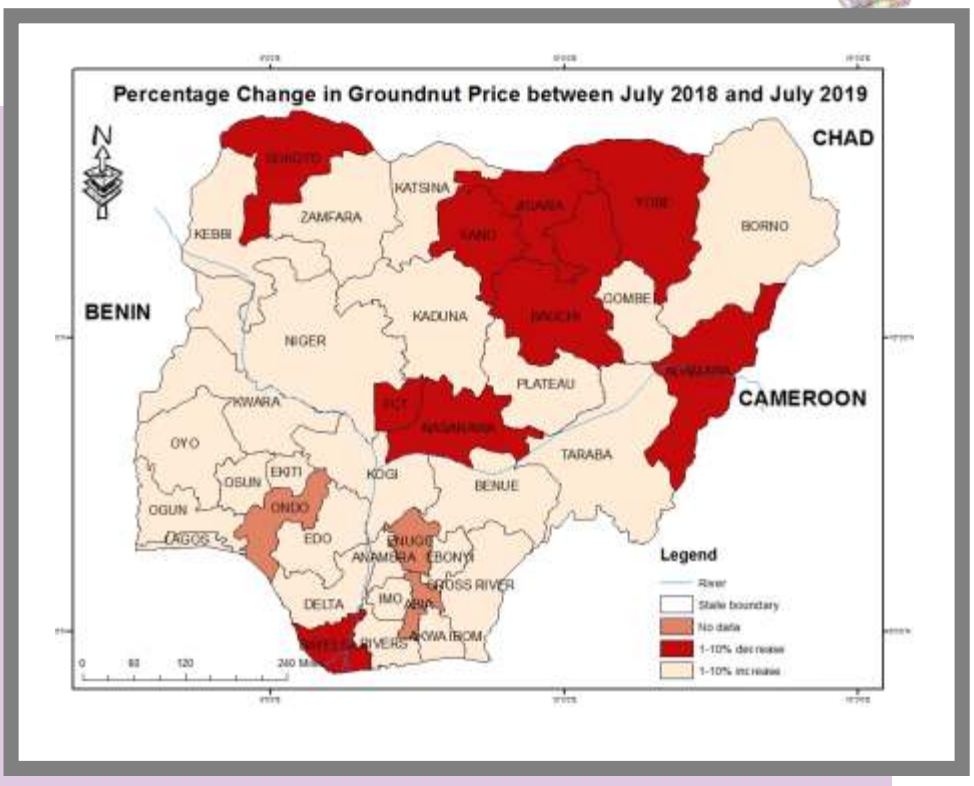


Cowpea Commodity Prices

There was percentage increase in the market price from 21 to 30% between July 2018 to July 2019 in most of the states.



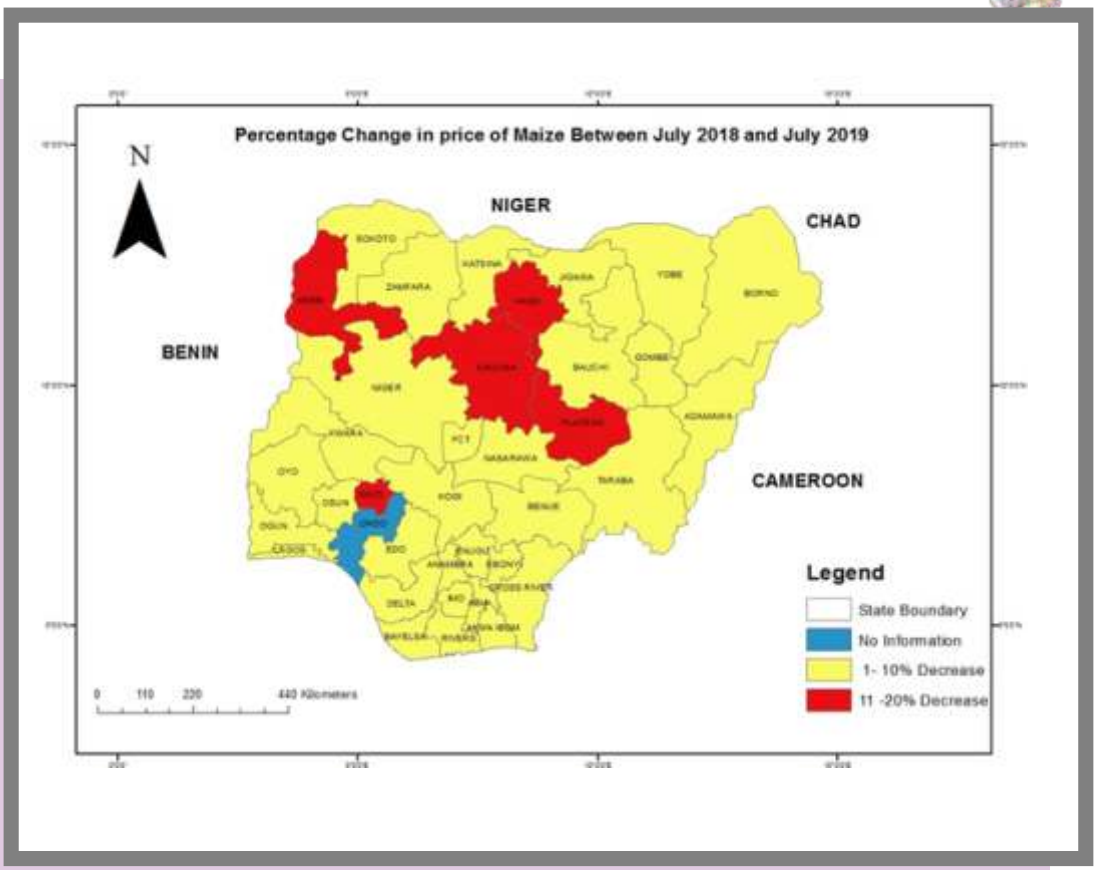
Groundnut Commodity Prices



Maize

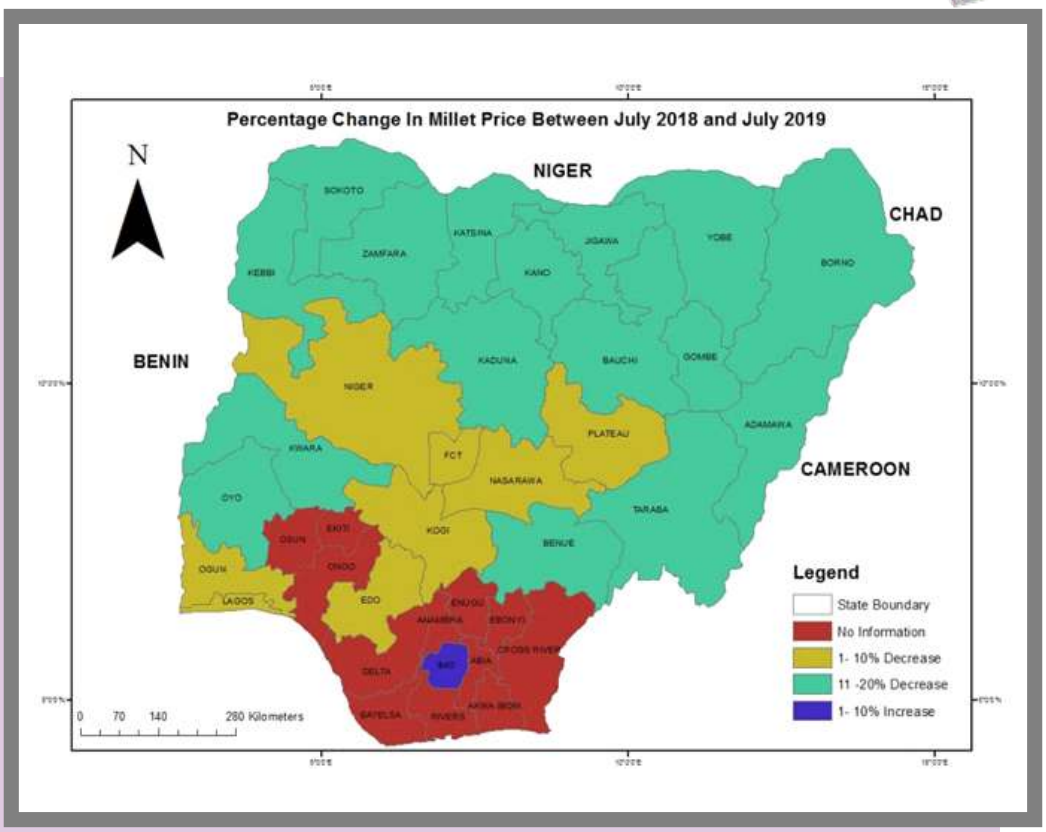
Commodity Prices

Some states had between 1% to 10% decrease in the prices of maize between July 2018 to July 2019



Millet Commodity Prices

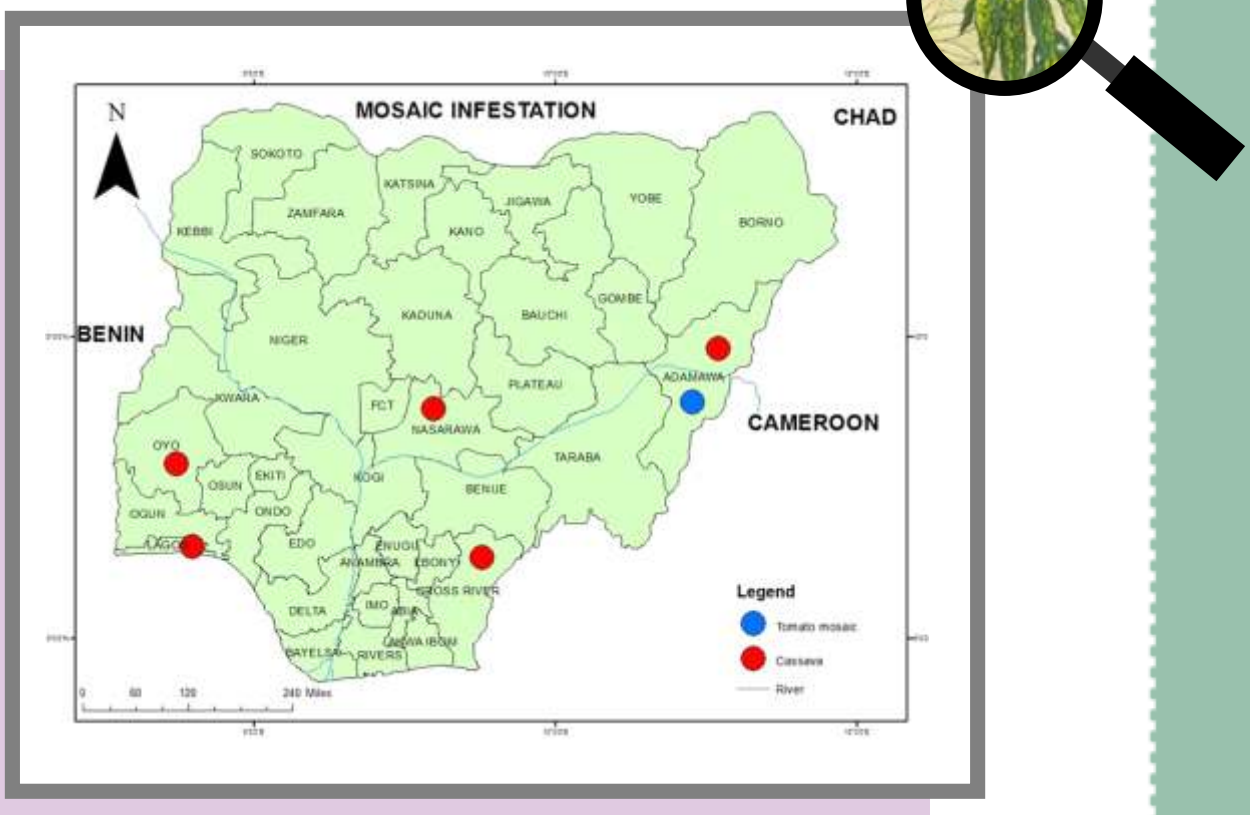
Most of the states had between 11 to 20 %price decrease for millet between July 2018 to July 2019

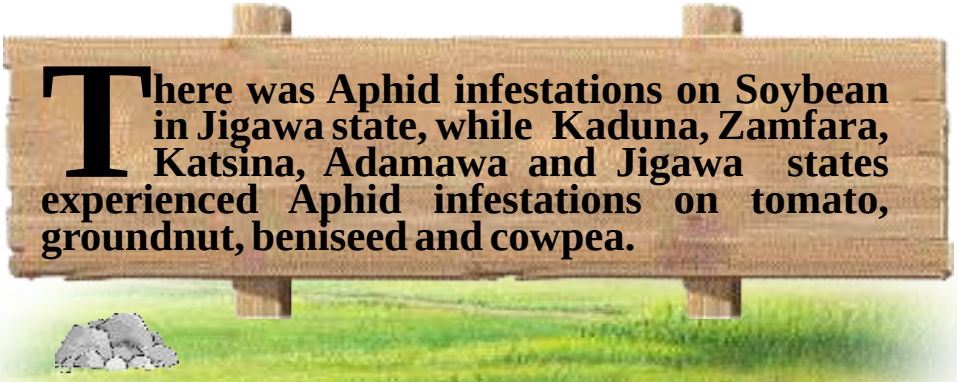


8.0 Pests and Diseases in 2019

In 2019, there were records of cassava mosaic infestations in 5 states while Adamawa state recorded tomato mosaic infestation.

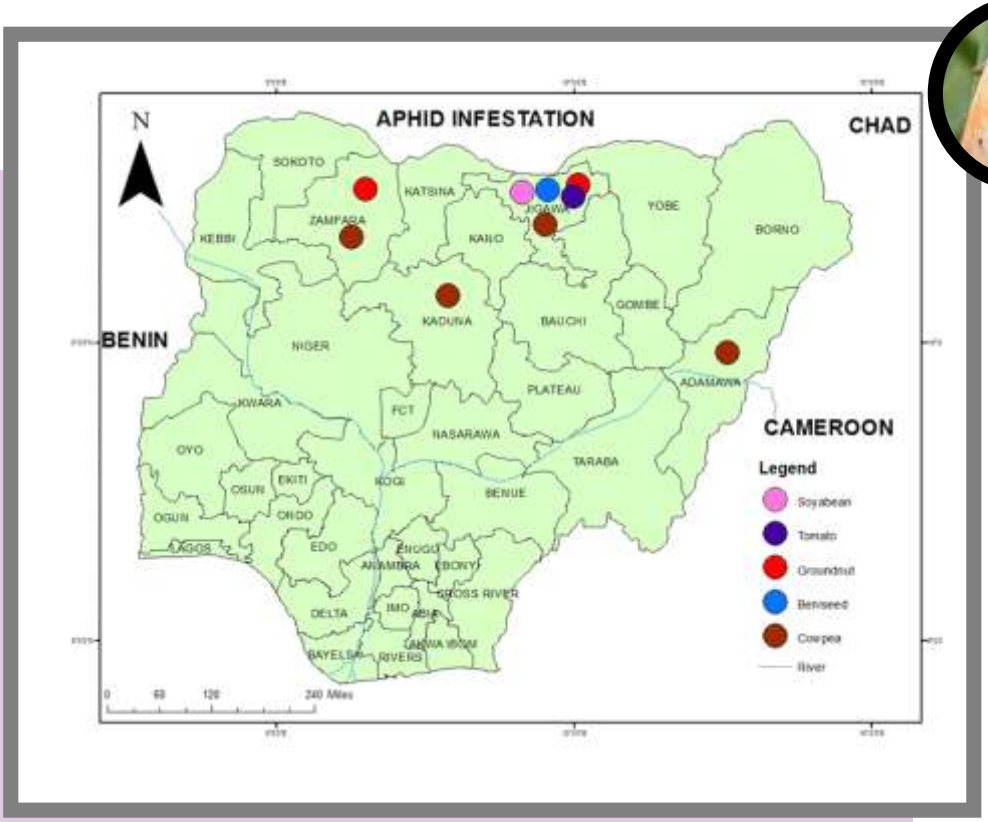
Mosaic Infestation





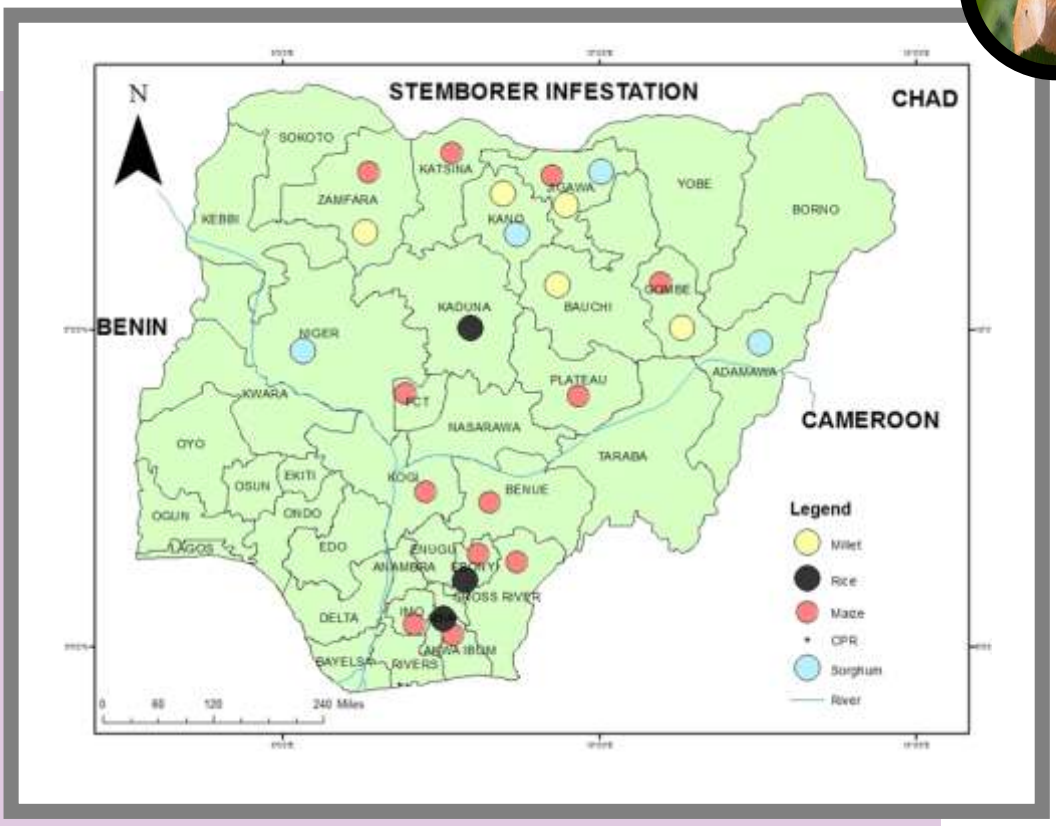
There was Aphid infestations on Soybean in Jigawa state, while Kaduna, Zamfara, Katsina, Adamawa and Jigawa states experienced Aphid infestations on tomato, groundnut, beniseed and cowpea.

Aphid Infestation



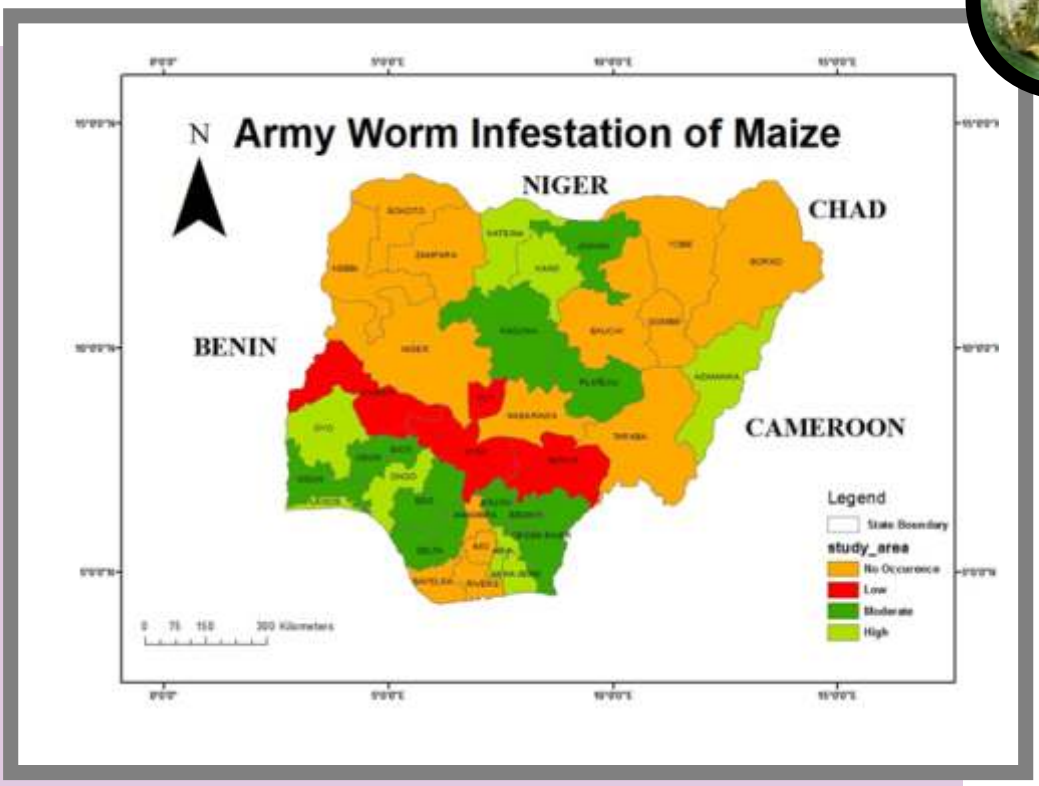
There were records of stem-borer infestations on millet, rice, maize and sorghum across states in the Northern and Southern parts of Nigeria in 2019.

Stemborer Infestation



Army worms high infestation of maize was recorded in Oyo, Ondo, Akwa- Ibom, Adamawa, Kano and Katsina states

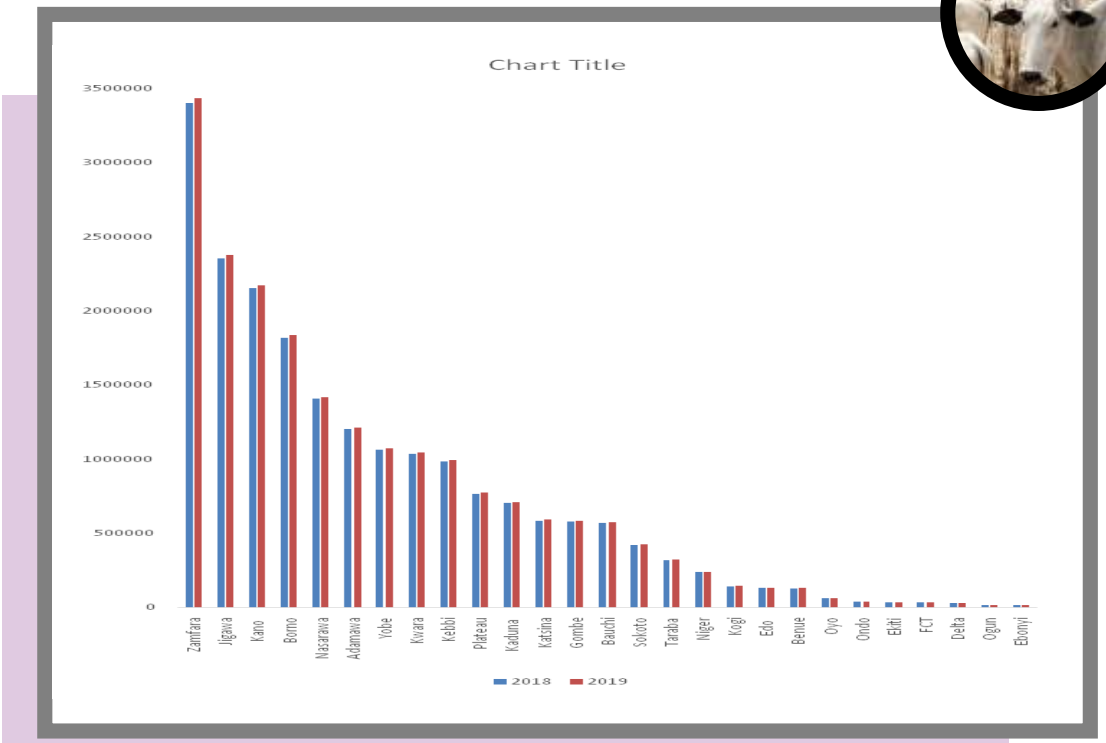
Army Worm Infestation of Maize



9.0 Livestock Production in 2018 and 2019

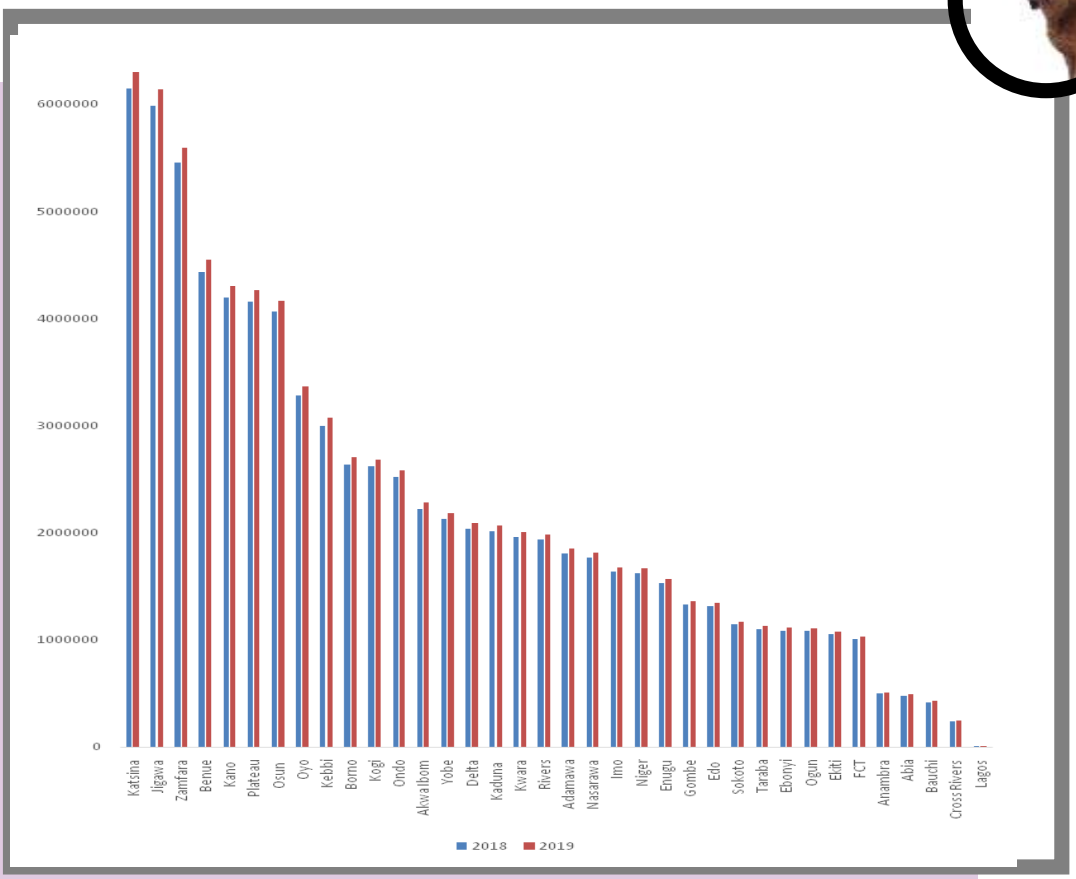
Cattle

Cattle production increased slightly across the states from 2018 to 2019. Zamfara recorded the highest population of about 3,500,000 cattle



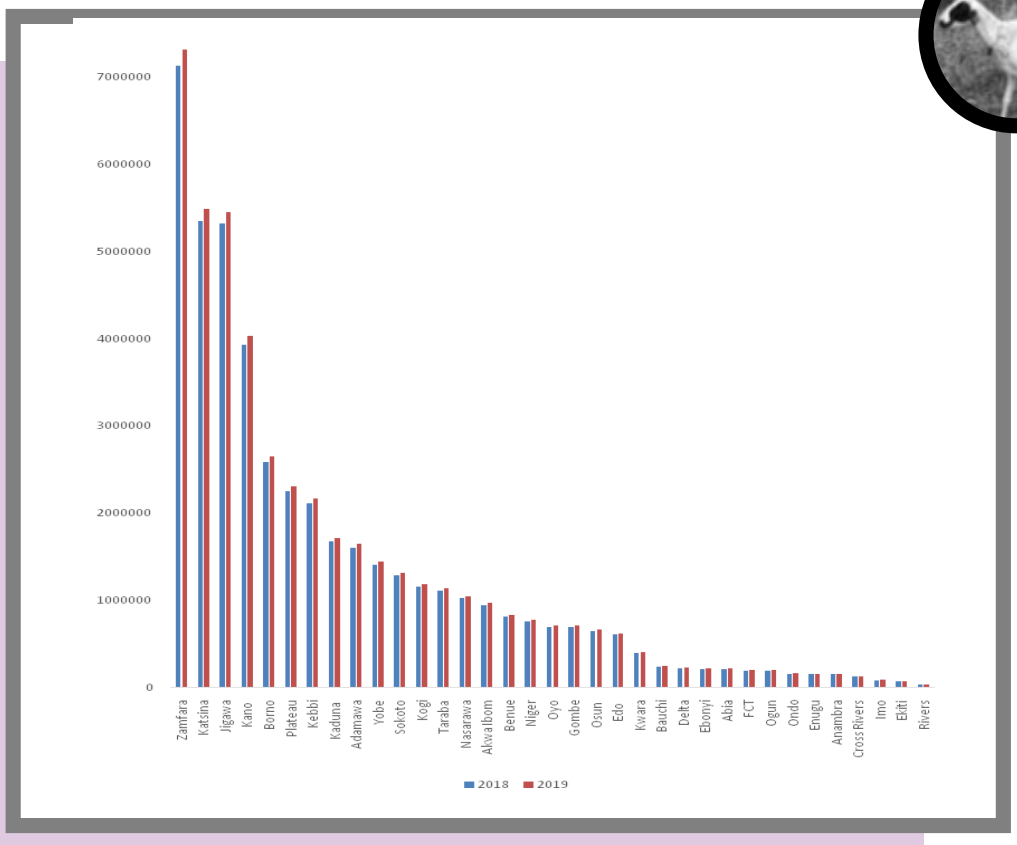
Goat

Goat population slightly increased in 2019 across the states with Katsina state having the highest population of more than 6 million


6000000
5000000
4000000
3000000
2000000
1000000
0
Katsina
Jigawa
Zamfara
Benue
Kano
Plateau
Osun
Oyo
Kebbi
Borno
Kogi
Ondo
Akwaibom
Yobe
Delta
Kaduna
Kwara
Rivers
Adamawa
Nasarawa
Imo
Niger
Enugu
Gombe
Edo
Sokoto
Taraba
Ebonyi
Ogun
Ekiti
FCT
Anambra
Abia
Bauchi
Cross Rivers
Lagos
2018
2019

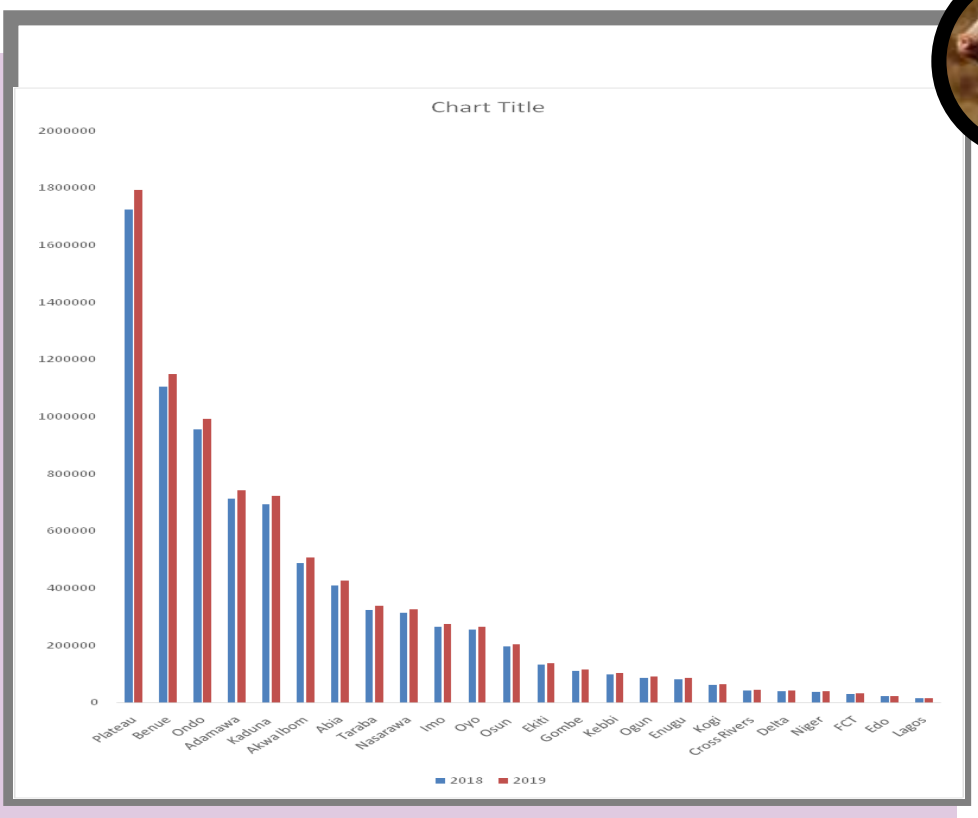
Sheep

Sheep population was highest in Zamfara state (700,000) in 2019. This was a slight increase as with other states against 2018 figures



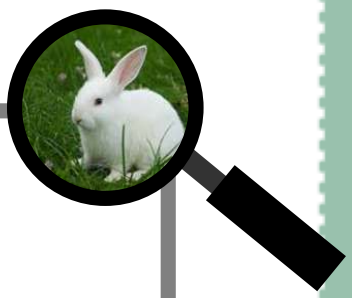
Pig

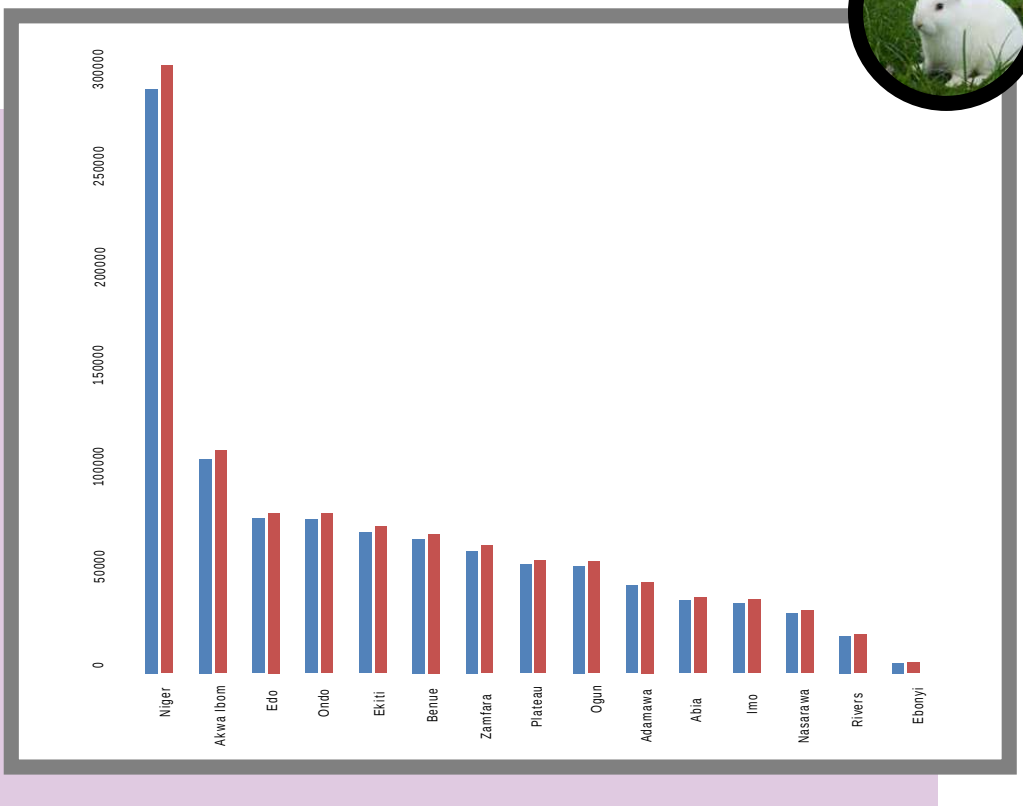
Pig production was highest in Plateau. State and all states with production data had slight increases in 2019 as against 2018



Rabbit

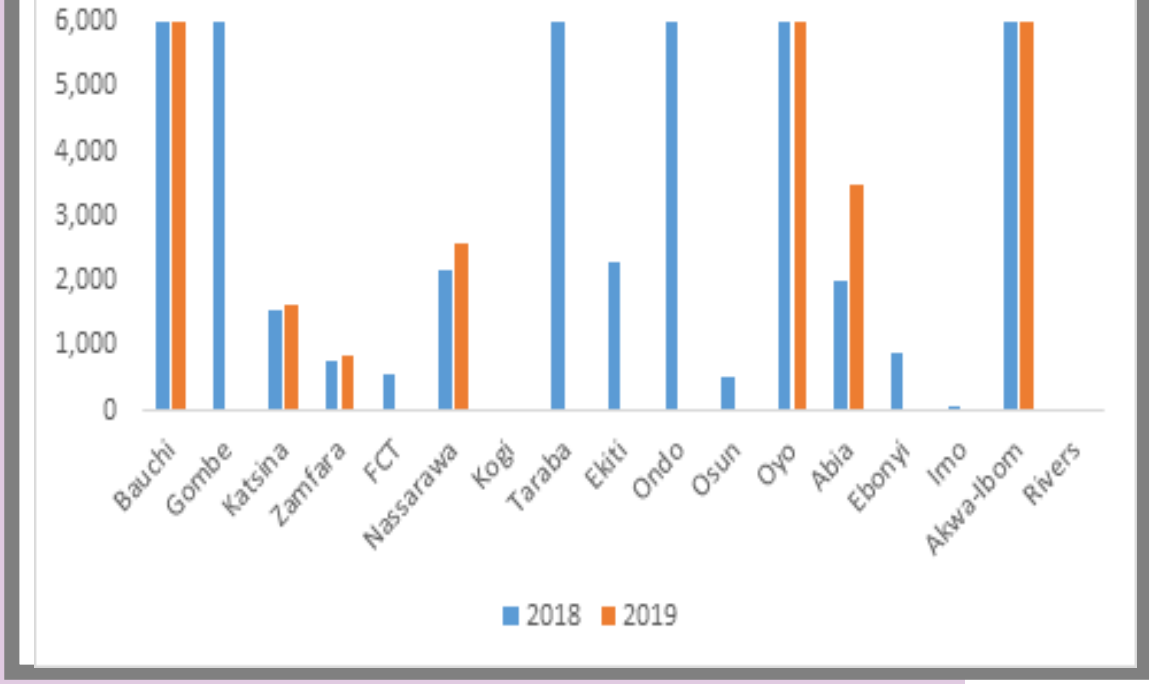
For rabbit among states with data in 2019, Niger State had the highest figure at 300,000,while Ebonyi recorded the lowest among the 15 states in 2019.





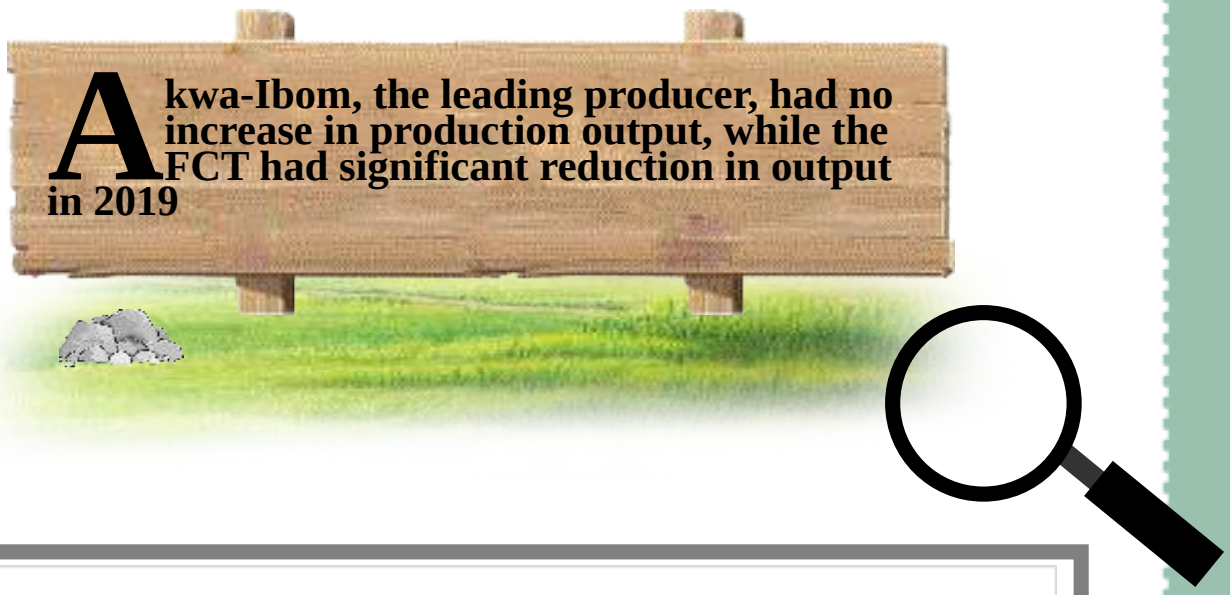
Aquaciulture

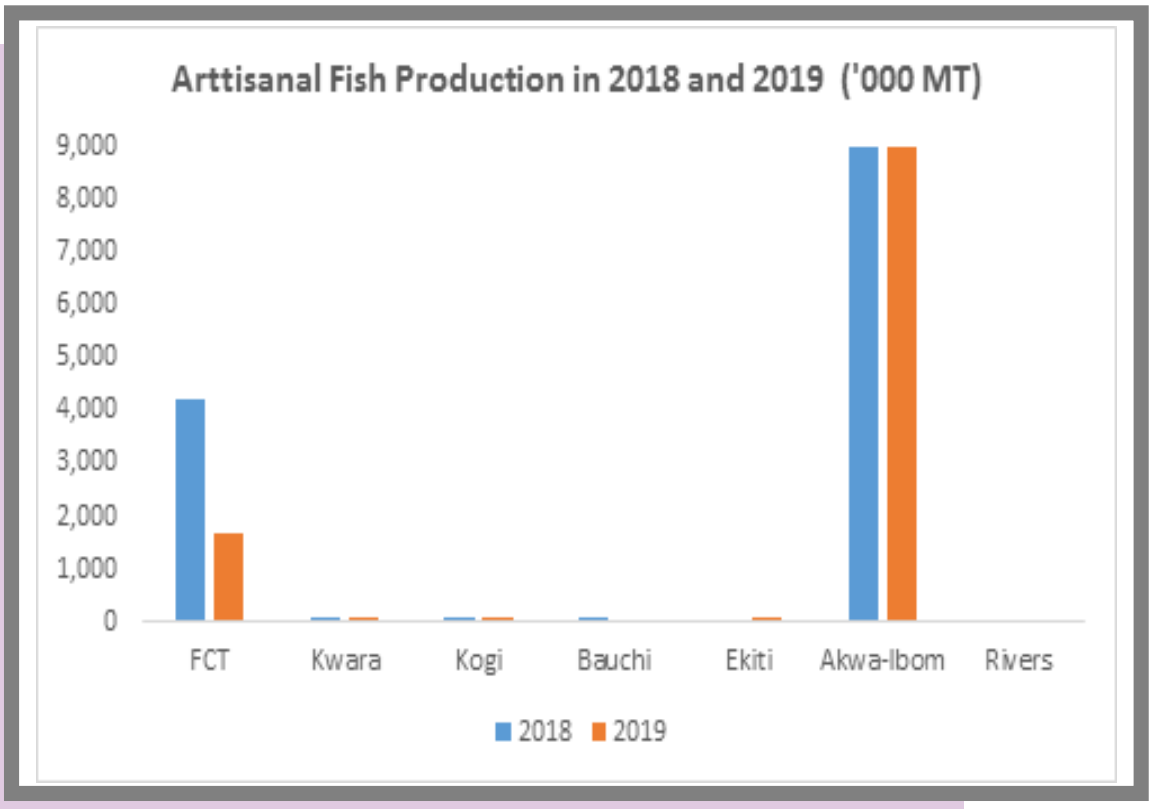
Production output for Bauchi, Oyo and Akwa-Ibom States were at same levels in 2018 and 2019. However Abia, Nasarawa and Katsina had marginal increases



Arttsanal Fish Production

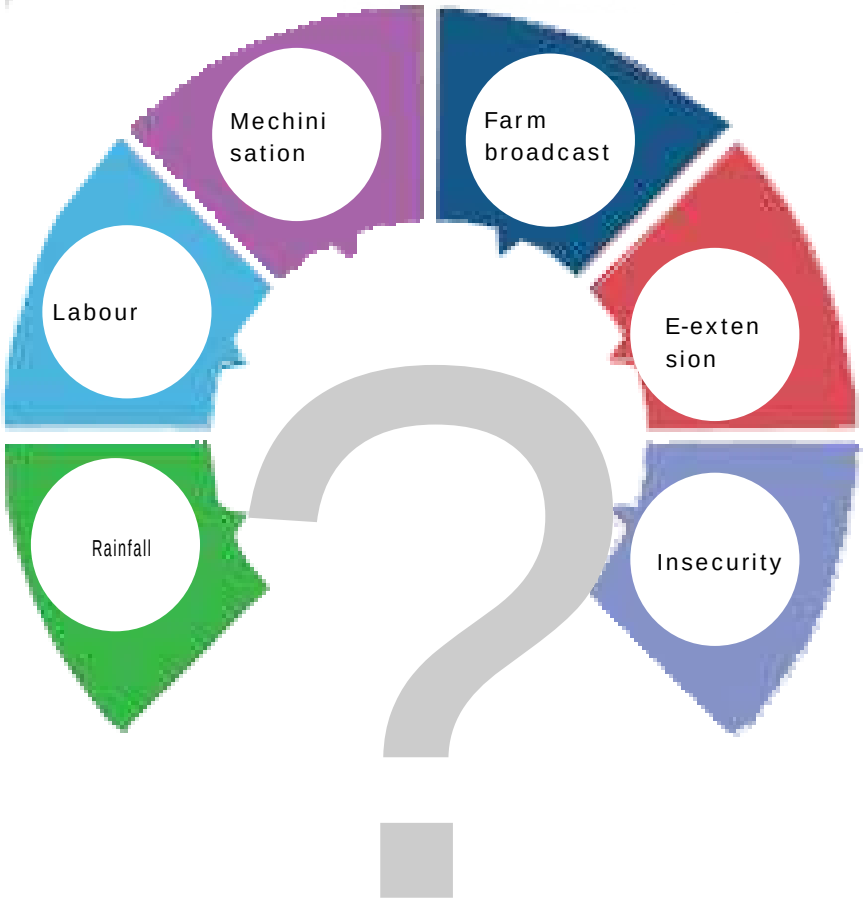
Akwa-Ibom, the leading producer, had no increase in production output, while the FCT had significant reduction in output in 2019



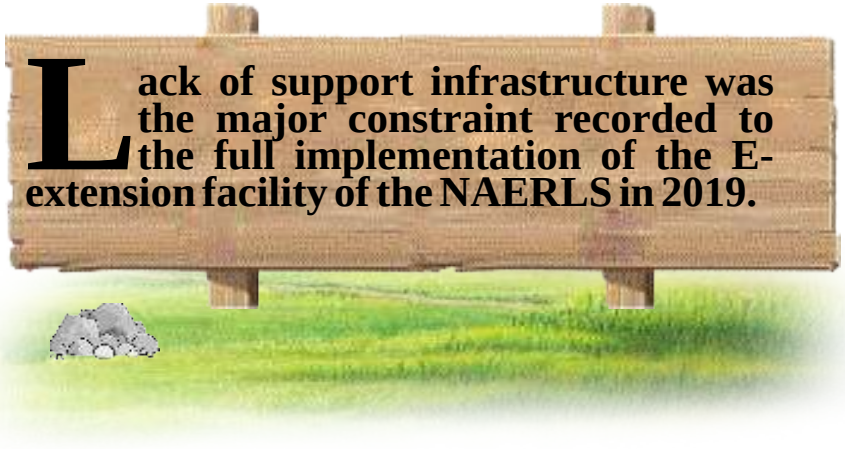


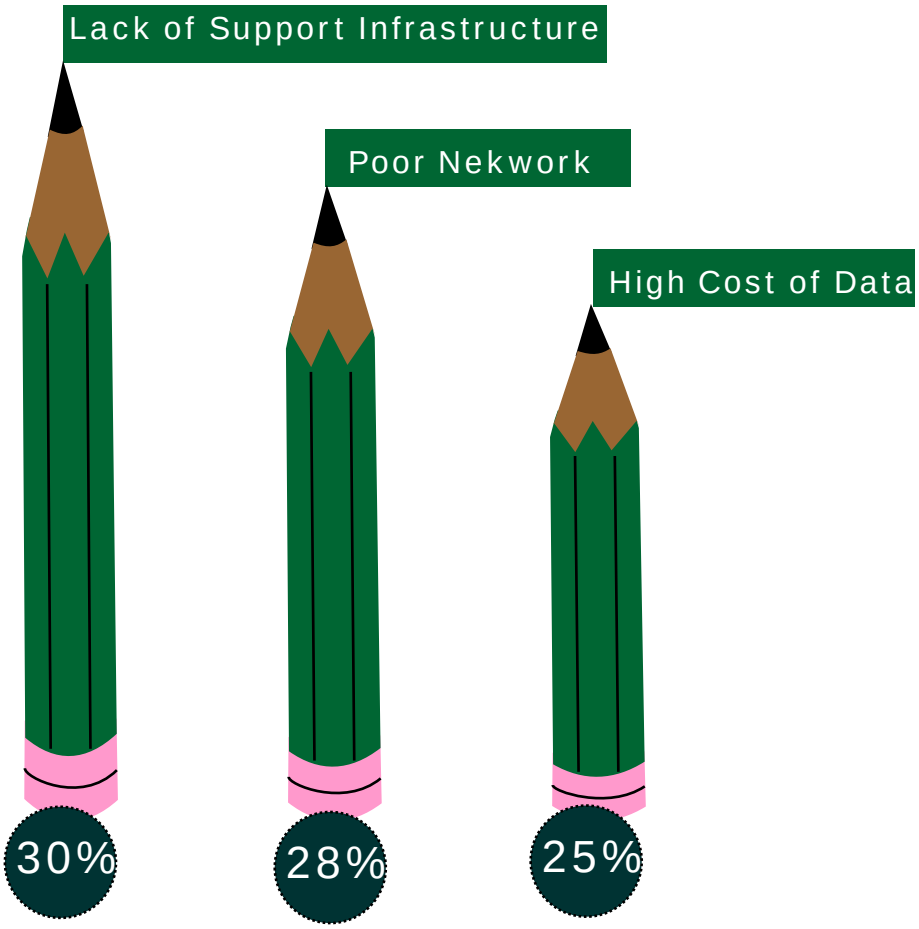
10.0 Constraints to Agricultural Production in 2019

In 2019, heavy rain falls (leading to flood in about 26 states up to September), high cost of labour, low farm mechanization, lack of access to agricultural information, weak and uncoordinated extension services and insecurity were the recorded prominent constraints to agricultural development and productivity in Nigeria in 2019.



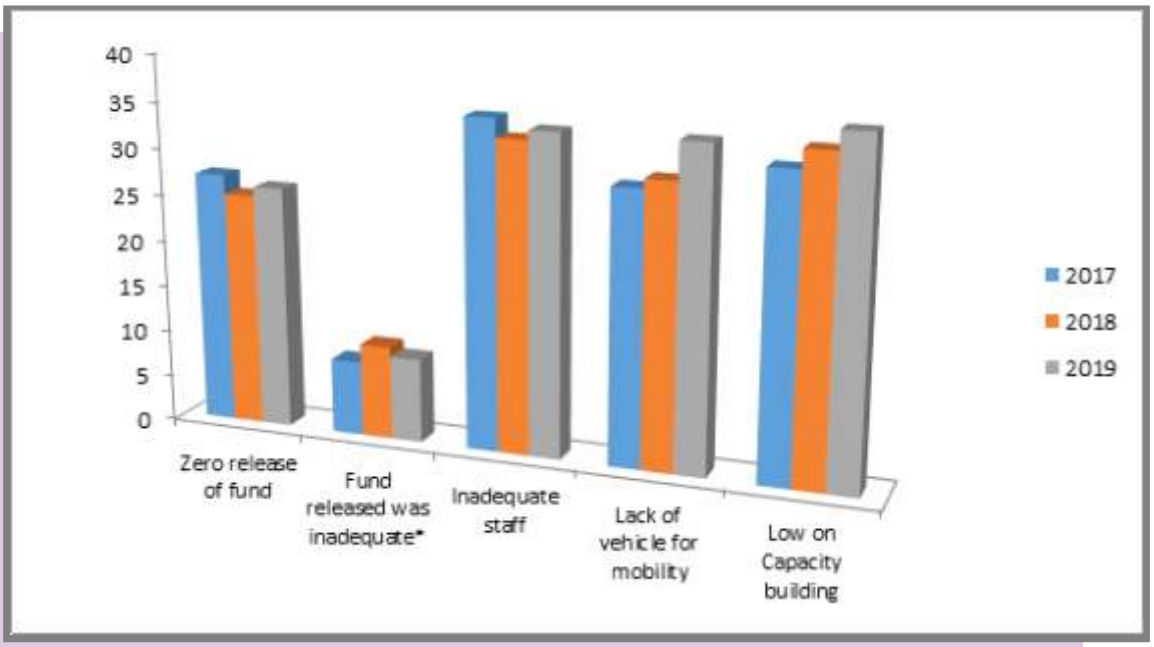
Challenges on E- Extension





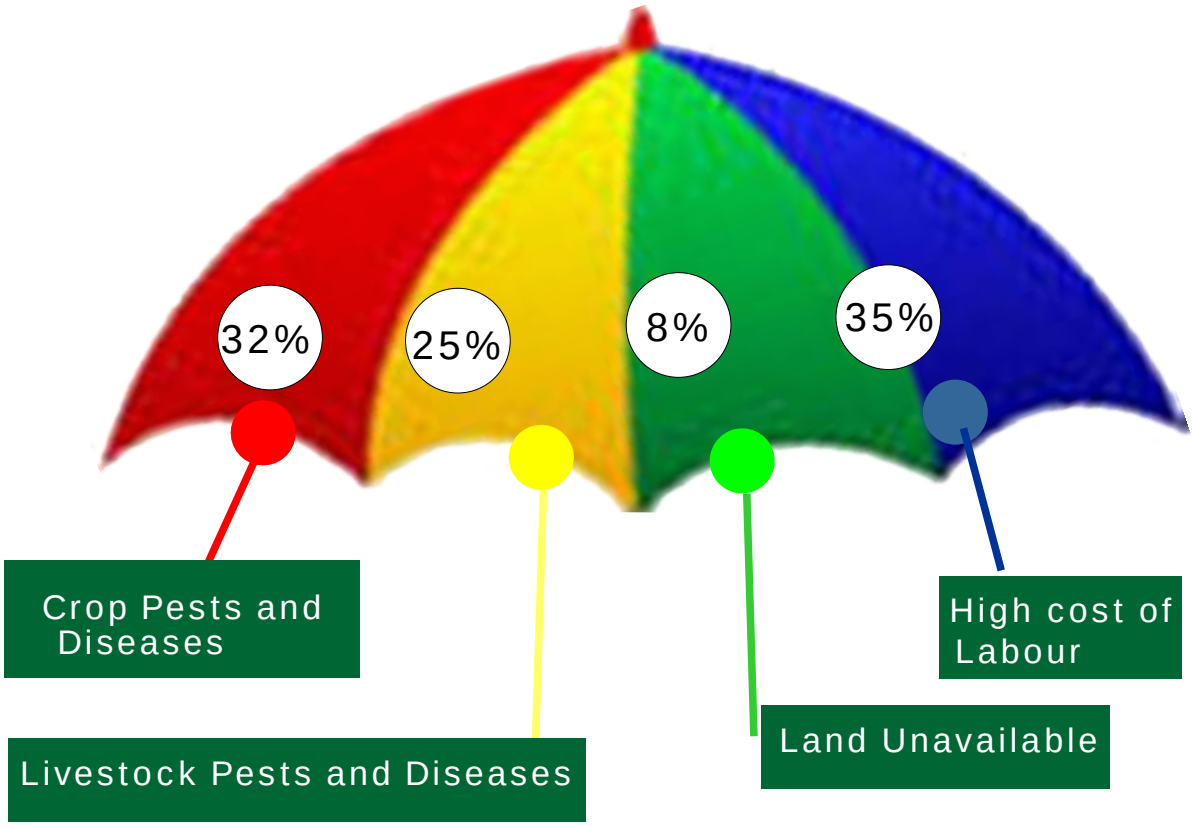
Constraints to ADP Activities (2017-2019)

Major constraints to effective performance of the ADPs in 2019, include low capacity building for staff, inadequate funding, logistic and mobility challenges and shortage of staff



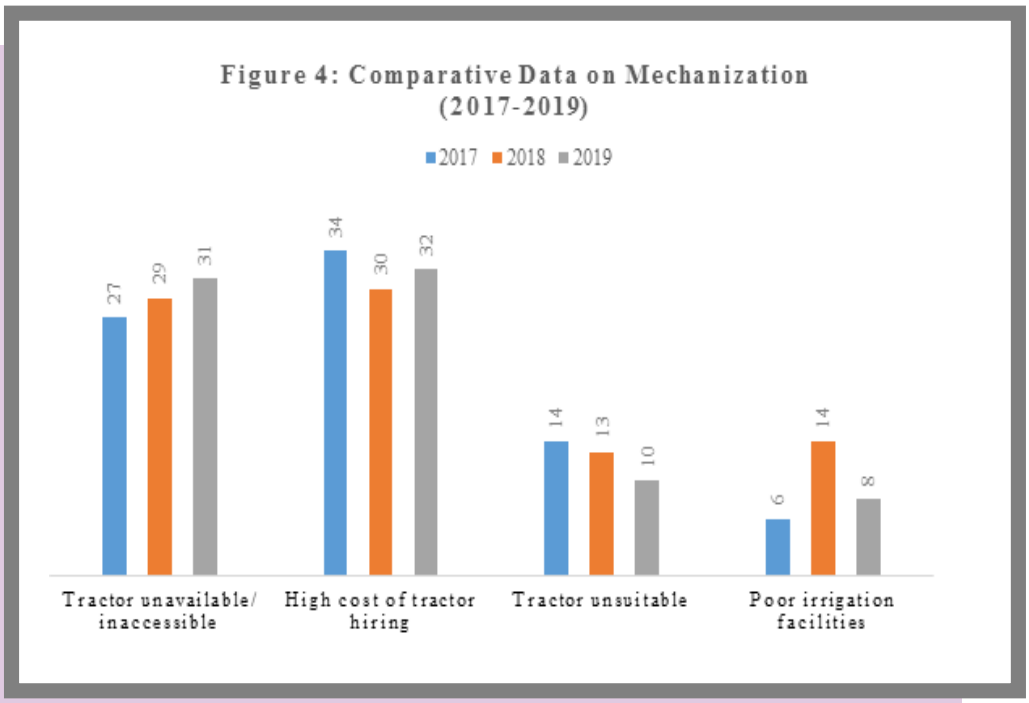
Production Challenges

Production challenges in 2019, were mainly high labour cost, pest and diseases infestation in crop and livestock.

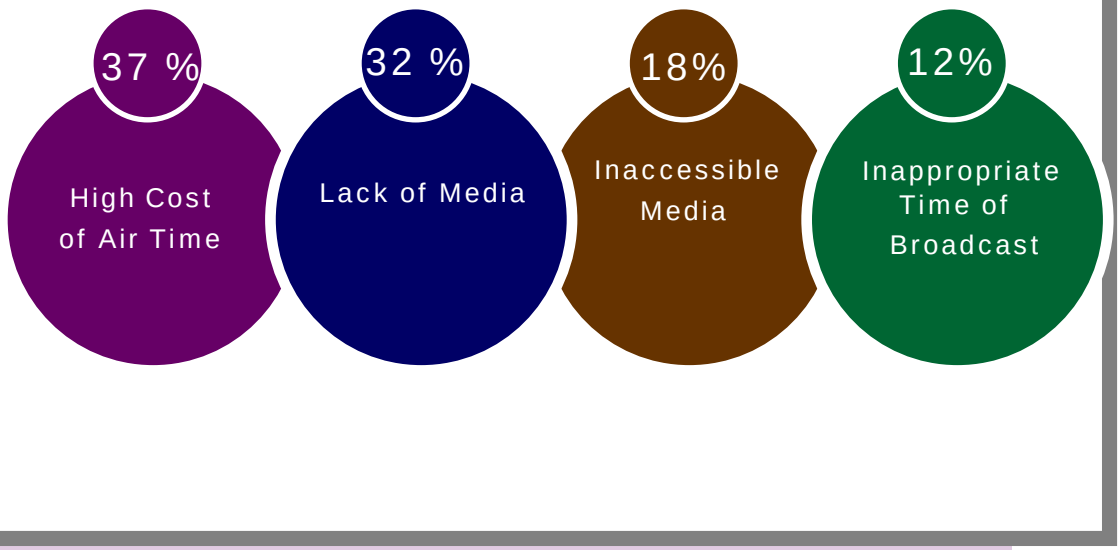


Farm Mechanization (2017-2019)

For farm mechanization, non-availability of tractors and high cost of tractor hiring continue to increase while poor irrigation facilities has decreased from 8% within the period

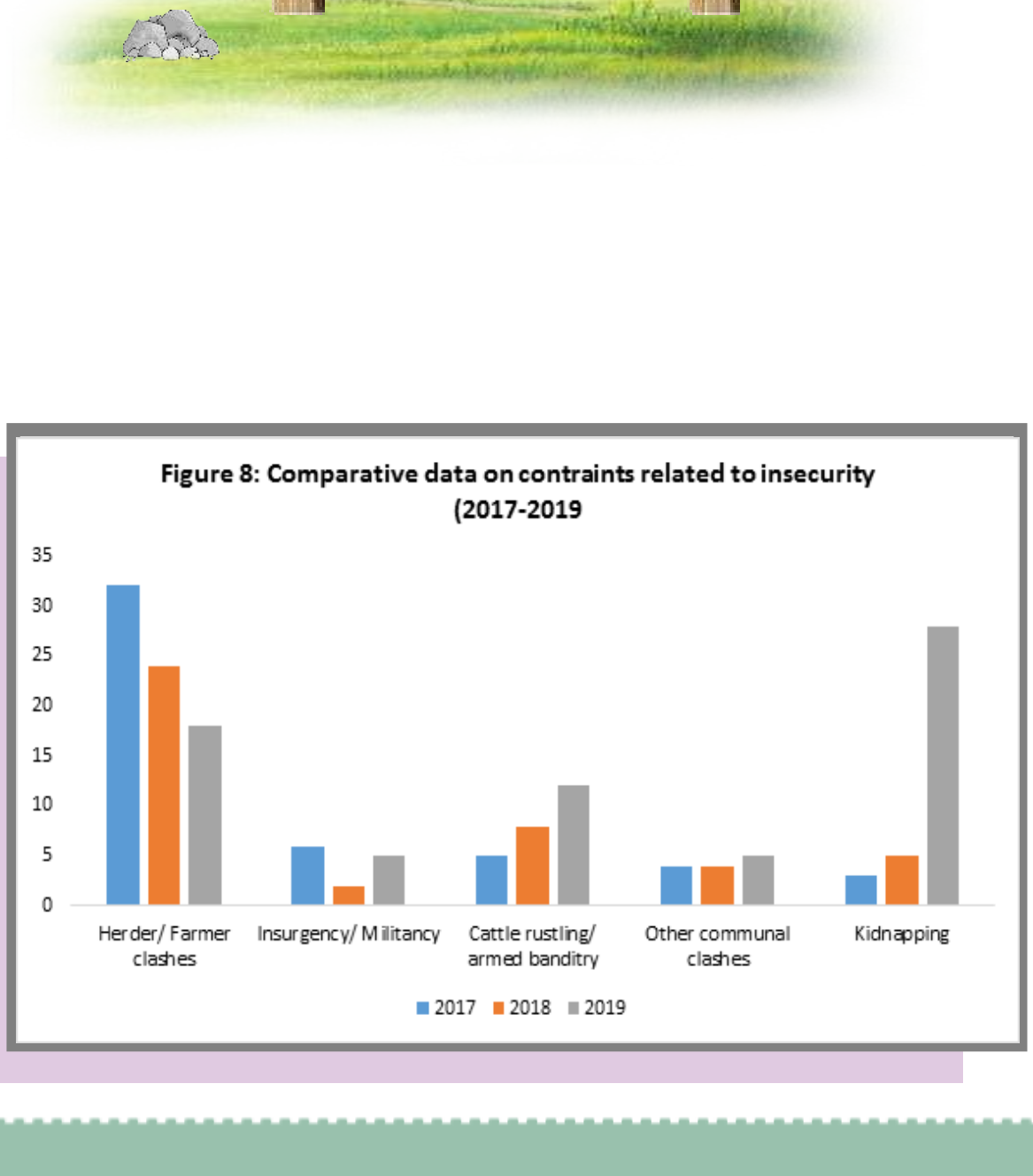


Challenges to Agricultural Broadcasts



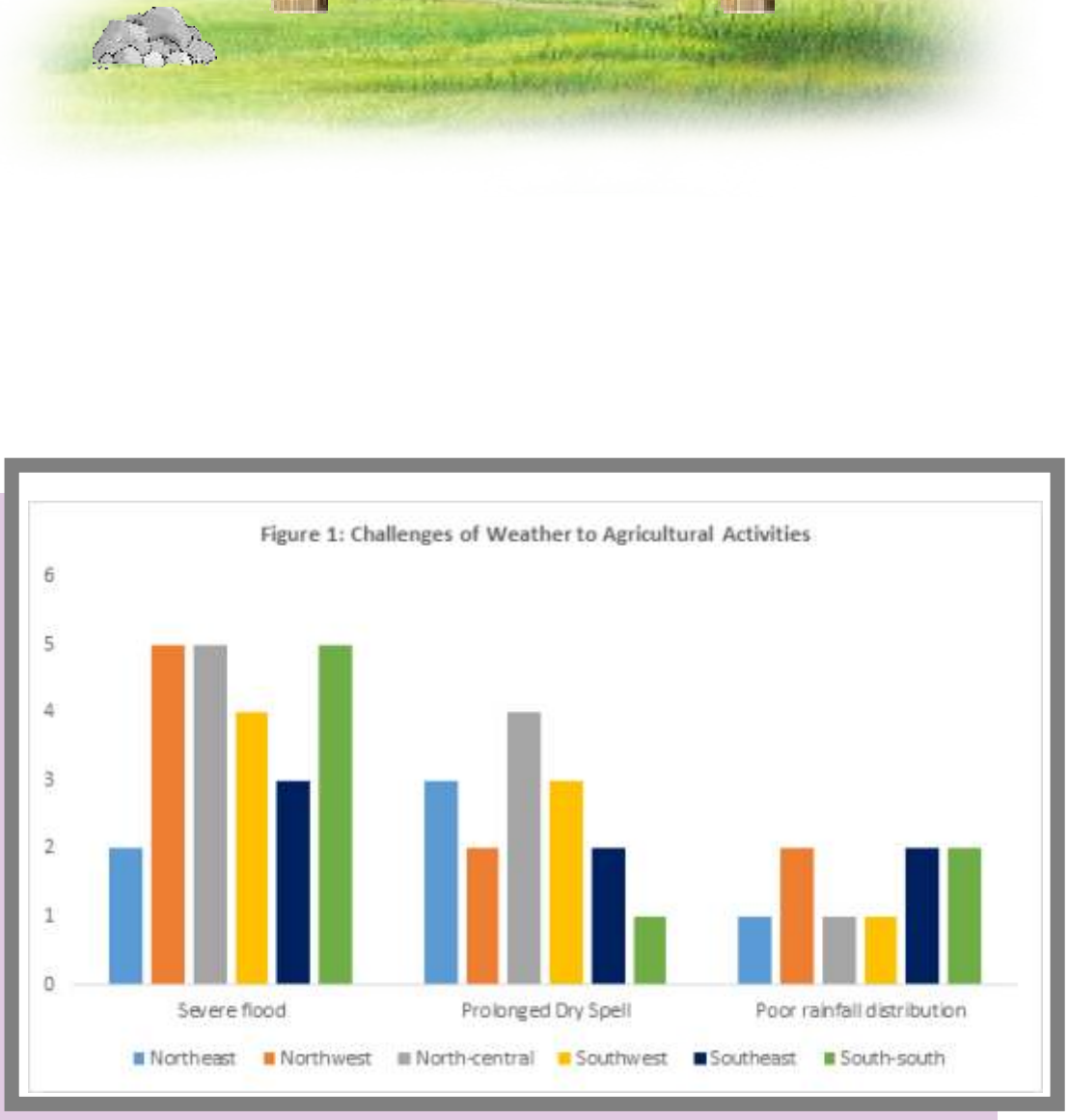
Security Challenges (2017- 2019)

Security situation indicate reduction in herders and farmers clashes in 2019 as against previous years; however, kidnaping incidence was higher in 2019 when compared with 2017 and 2019



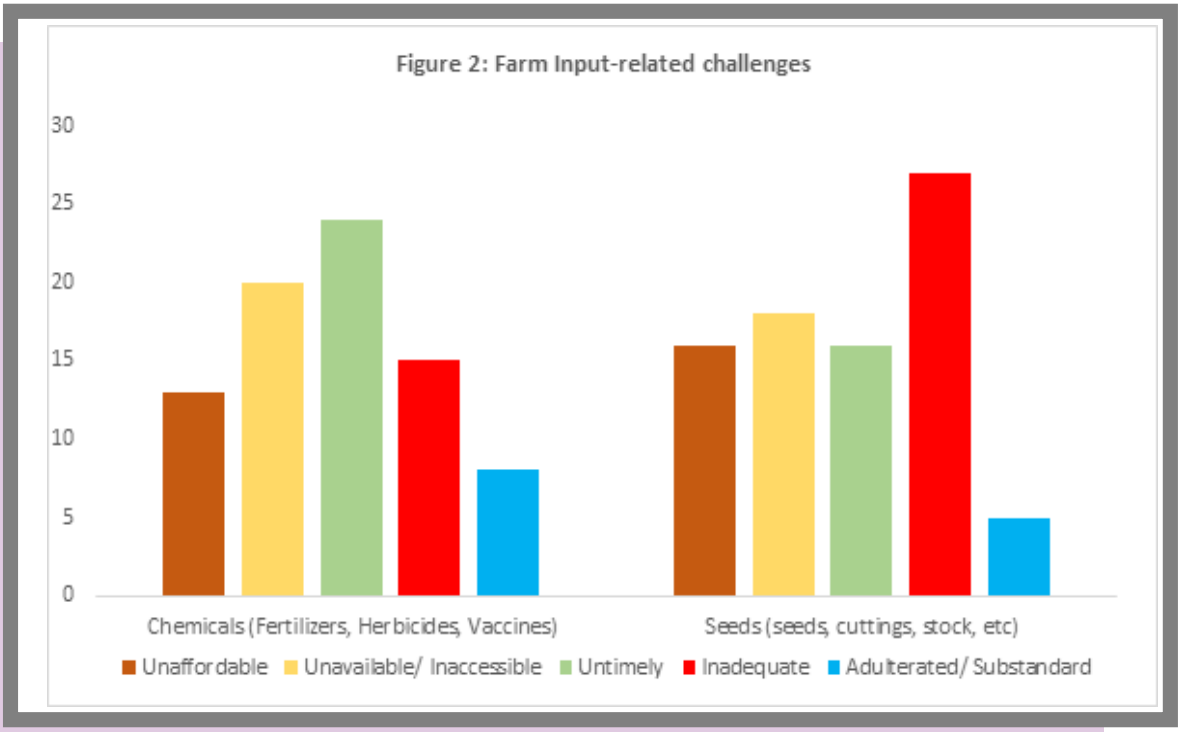
Challenges of Weather to Agricultural Activities

Flooding incidences were recorded in many states in Nigeria in 2019 as predicted by the NIMET and related agencies; though there was poor rain distribution and dry spell in some zones



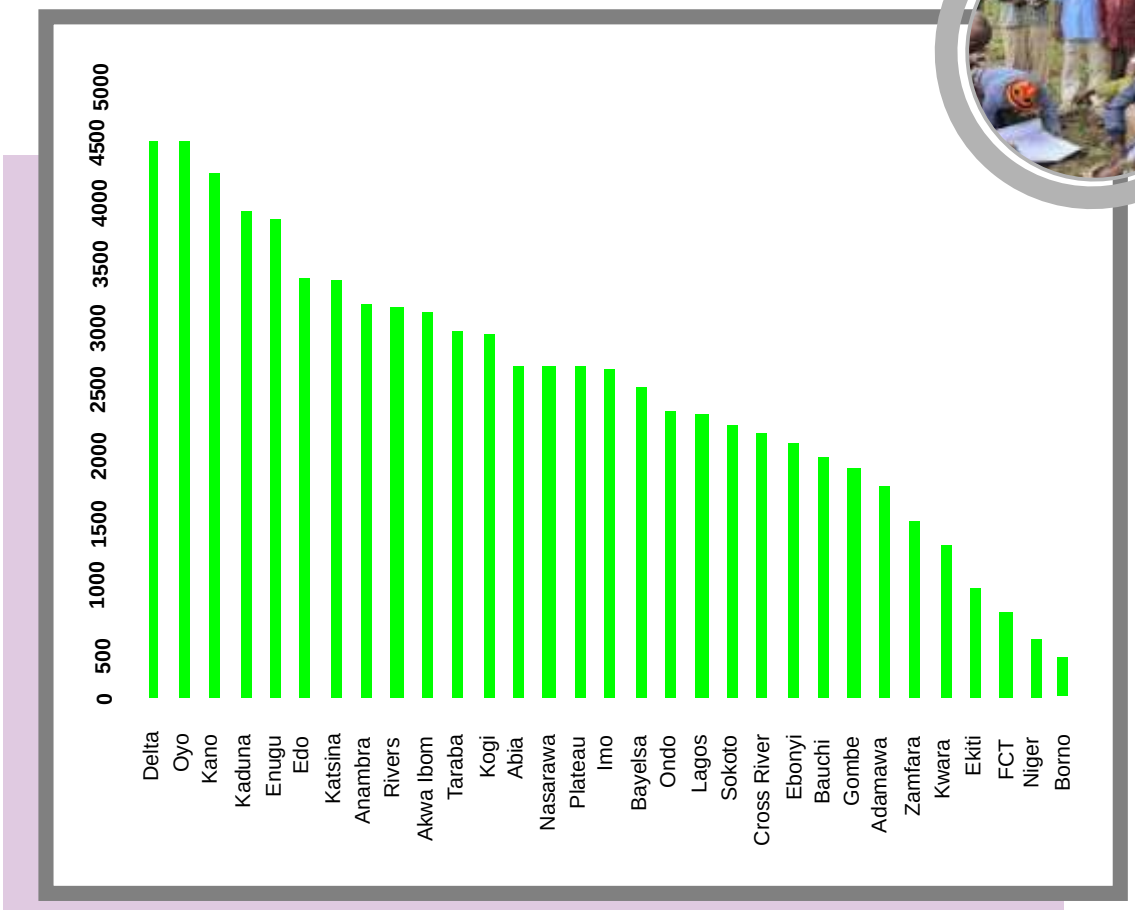
Farm Input Related Challenges

Challenges on access to farm inputs by farmers in 2019 include inadequate agro- chemicals (especially fertilizers and seeds), adulterated inputs and weak market regulation in farm inputs quality

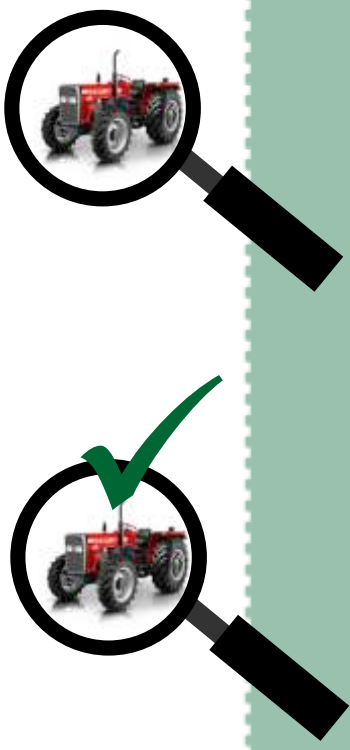


11.0 Number of N-Power Agro Beneficiaries

There was an additional 100,000 participant beneficiaries to the – Power (Agro) scheme in 2019. All states had beneficiaries. Delta had the highest number while Borno had the least



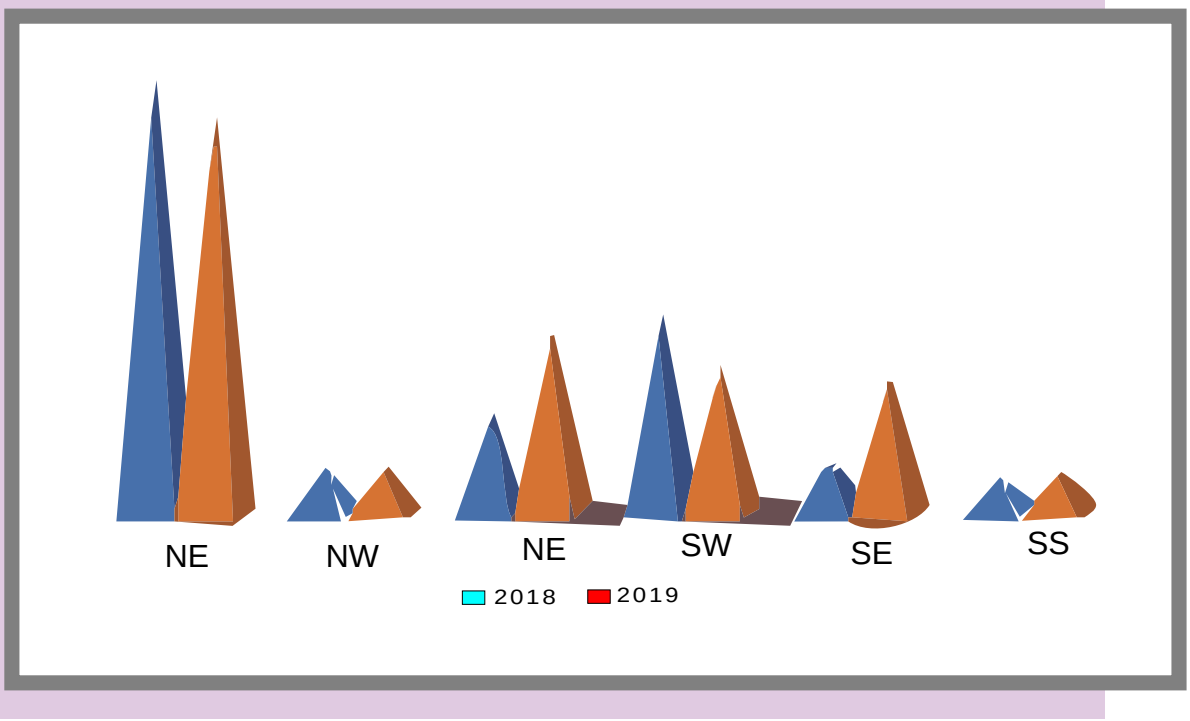
12.0 Government Tractor Availability in Nigeria



Functional Tractors

The number of non- functional tractors are still high across the zones. The NC and SE zones reported increase in the numbers above 2018 figures

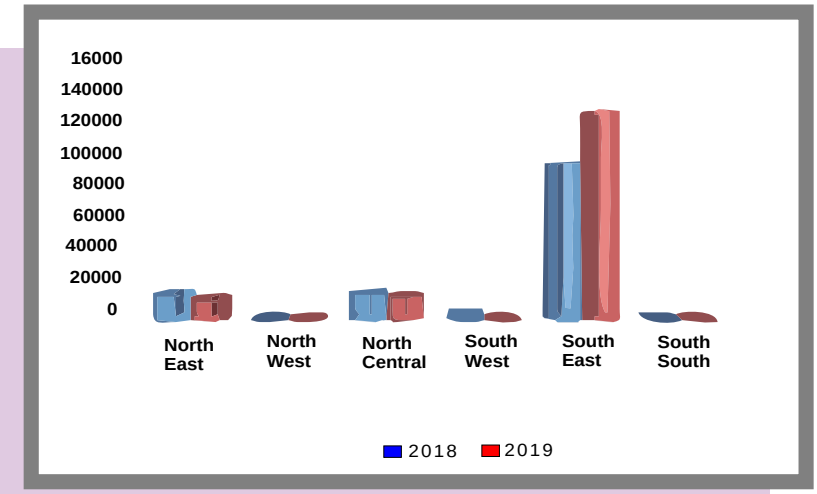
Non - Functional Tractors

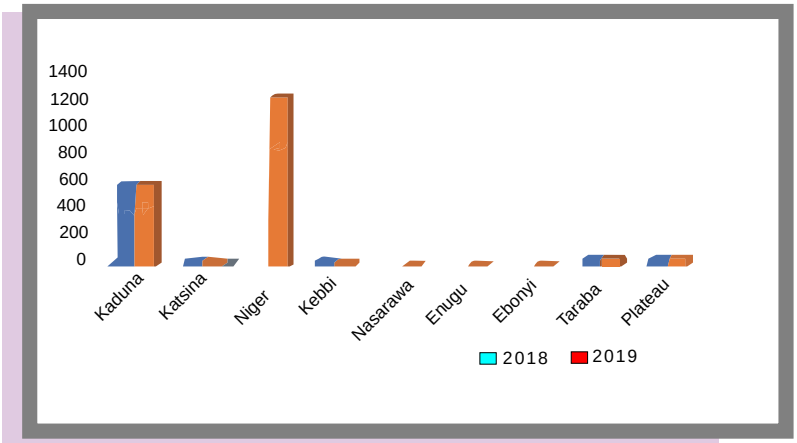


Area Cultivated by Government Agencies

The land cultivated by government tractors remained largely the same between 2018 and 2019. Only Niger state reported a significant increase

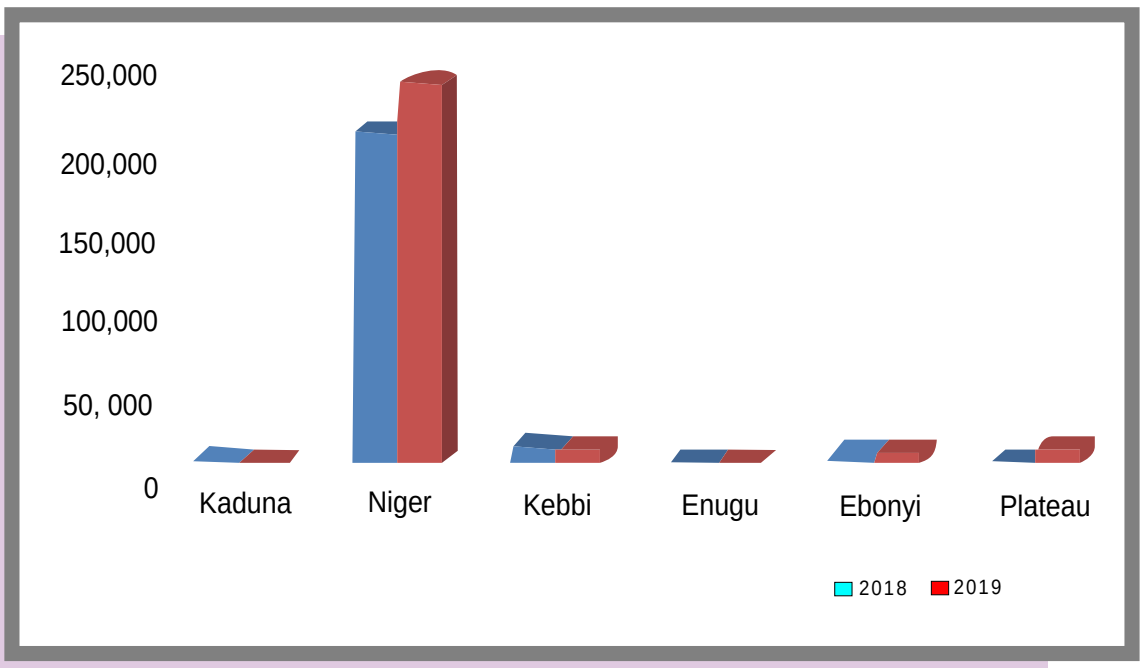
Area Cultivated





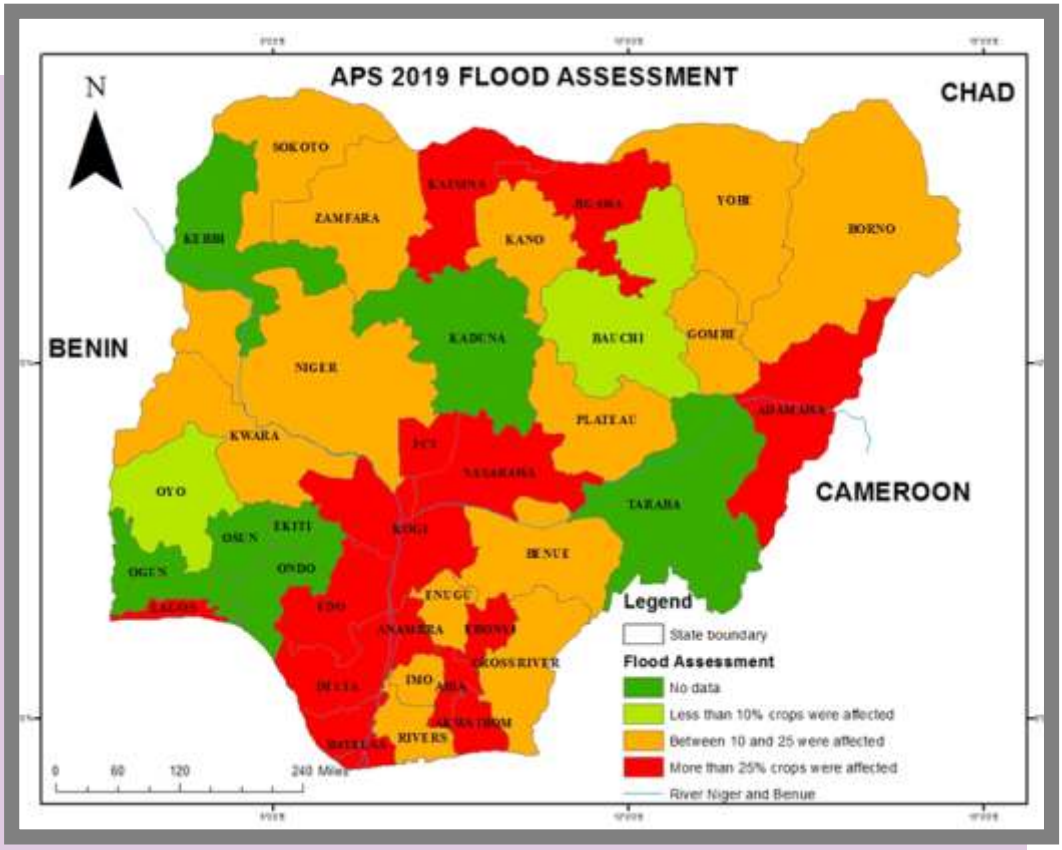
Area cultivated by Private Tractor

Data on area cultivated by private tractors in 2019 was generally scanty. Only six states- Niger, Kaduna, Kebbi, Ebonyi, Enugu and Plateau provided data



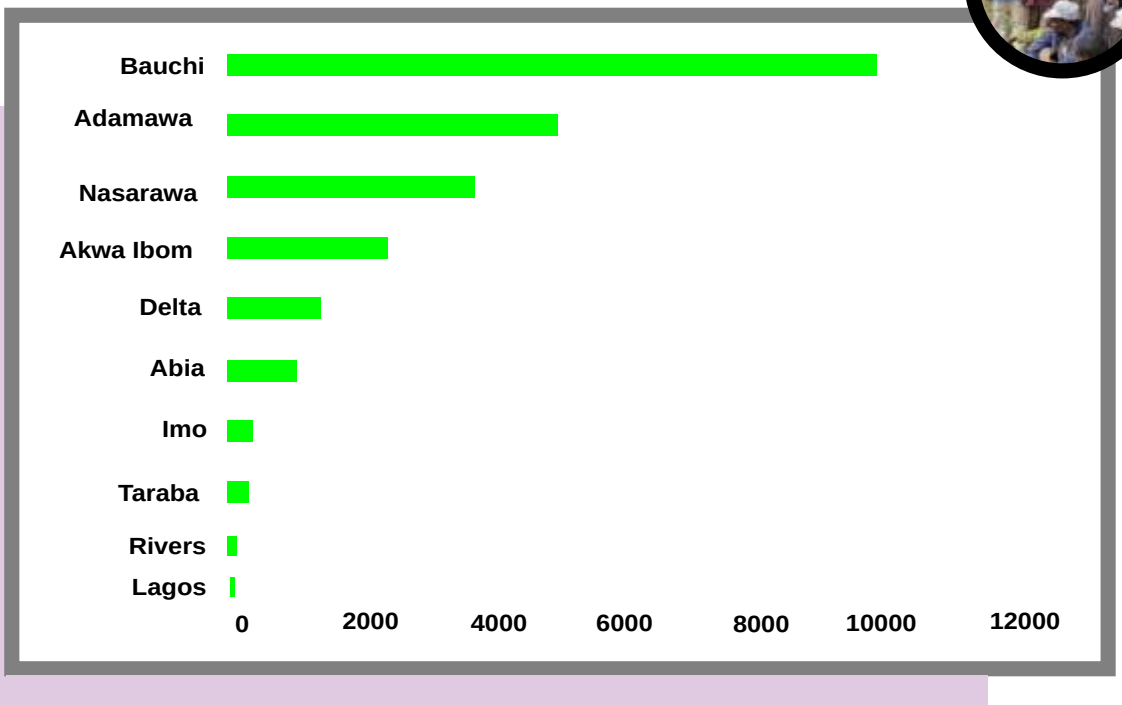
13.0 2019 Flood Assessment

Averagely, across the states with flood incidences not less than 25% of crops were affected

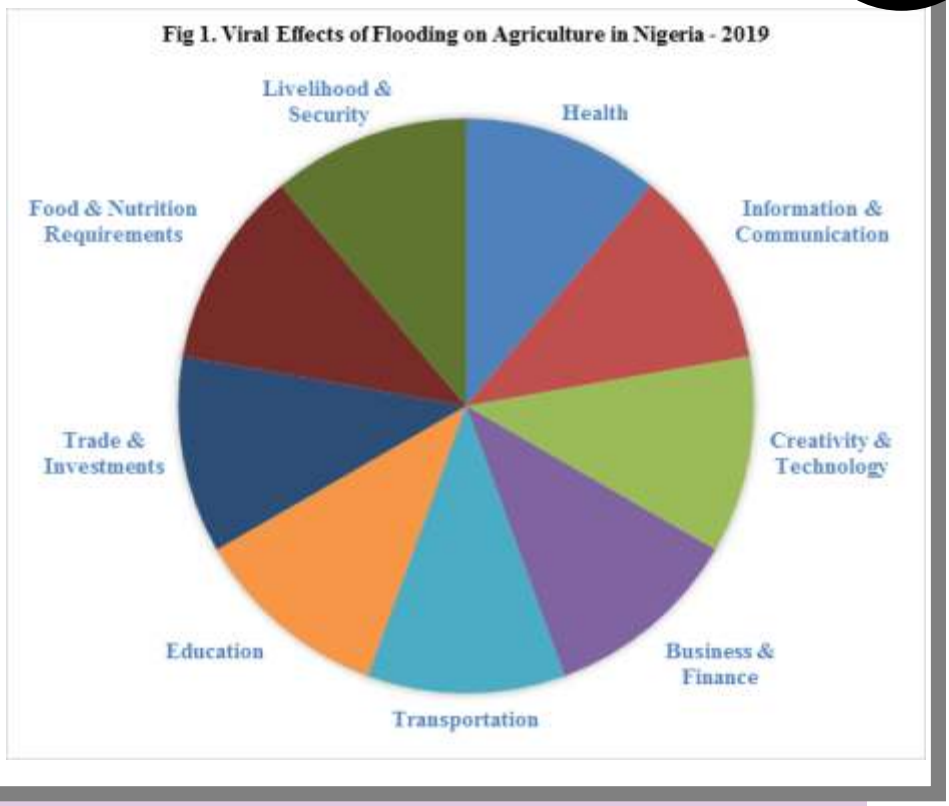


Number of Anchor - Borrower Beneficiary

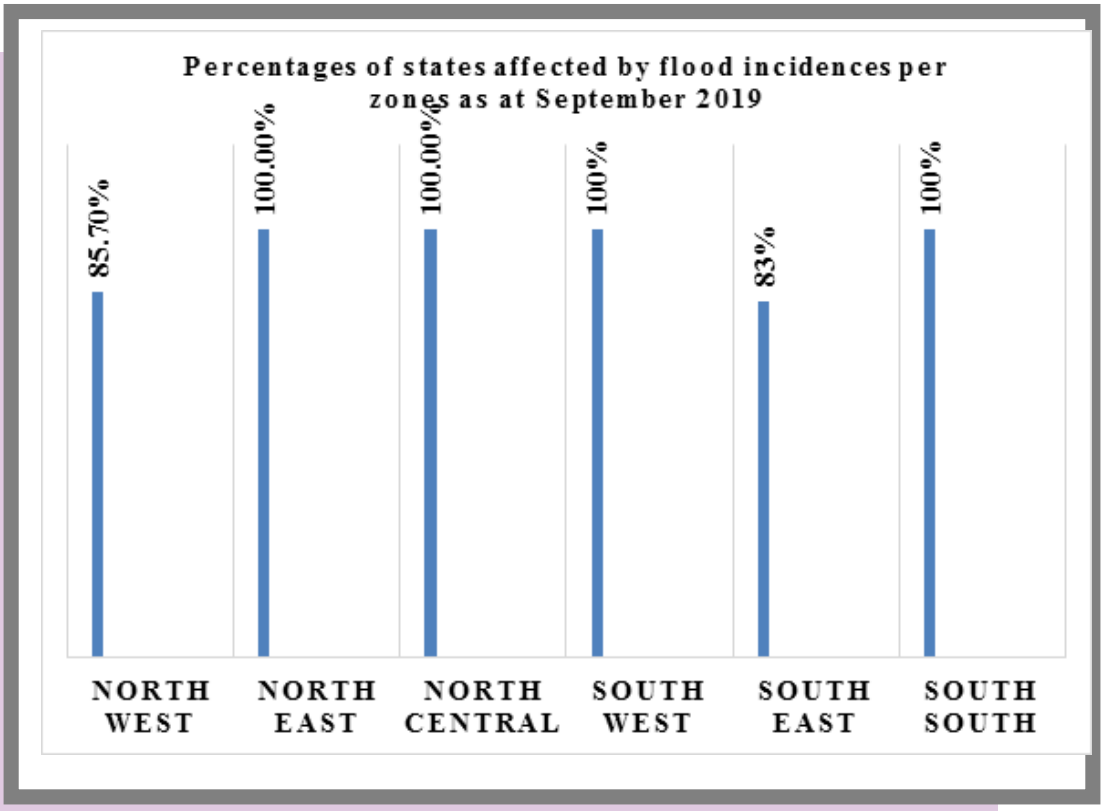
The highest number of Anchor Borrower beneficiaries were in Bauchi state (above 10,000) in 2019, while Lagos had the least (below 2,000).



The multifaceted impacts of flooding on the larger economy are mainly on health, creative technology, transportation education, trade and investment, business and finance. Such viral impacts must be technically included in the national and state plans for agricultural, environmental sanitation and development .



In 2019, the flooding incidence affected 100% of the states in the NC, SW, SS and the NE. Not less than 70% of states in the NW and SE zones were affected.



14.0 Flood Affected Areas in 2019

STATE	LGA	COMMODITY AFFECTED
DELTA	Oshimili S/N, Ndokwa E. W , Aniocha South,Isoko S.N, Bomadi ii, Warri S.W and North, Patani, Ughelli N.S Ethiope E.W Ika South	Fish, crops and Livestock
EDO	Esan S.E, Etsako Central, Etsako Central,Etsako East,Etsako West	Rice
RIVERS STATE	Obia Akpor, Ahoada West, Ahoada East, Kwere, Onelga, Abua/Odual	Cassava Maize Residential Building
BAYELSA	All LGA except Brass and Nembe	Houses, Farm Structures and Arable Crops
Cross River	Abi, Yarkur Calabar South Akpabuyo, Odubra	Cassava, Maize and Houses

STATE	LGA	COMMODITY AFFECTED
Adamawa	Yola South, Yola North, Shelleng, Fufore	Maize and Rice
Bauchi	Dass, Bogoro Tafawa, Balewa, Alkaleri, Kirfi, Toro, Warji, Jamaare Zaki, Ganjuwa, Katagum, Damban, Misau,	Crops and Residentials
Borno	Bayo, Konduga, Maiduguri, Jere Mafa	All Crops and Farmlands, Poultry, Houses and Livestock
Gombe	Gombe, Akko, Balanga, Nafada,Kwami	Crops and Assets
Yobe	Nguru Potiskum,Fune, ,Nangere,Bursari,Fika,Geidam	Crop, 300 houses, Market, Buildings and Livestock

STATE	LGA	COMMODITY AFFECTED
Nasarawa	Doma, Lafia and Wamba	Maize, Rice Yam and Ground.nut
Kogi	Ibaji LG, Lokoja, Idah	
Plateau	Jos North, Jos South, Jos East, Pankshin, Kanke, Shendam, Qua'anpan, Langtang N.S, Mangu Miang, Bassa	
FCT	Gwagwalada, Kwali and Abaji	Crops, Animals and Houses
Benue	Zone B , Makurdi	
Kwara	Kaiama and Ilorin West	Crops, Animal Building Roads etc
Niger	Mokwa, Katcha, Wushishi and Bosso	Rice and Yam

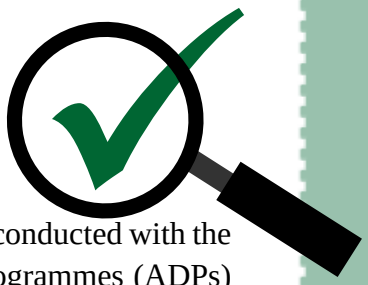
STATE	LGA	COMMODITY AFFECTED
Lagos	Ibeju-Lekki , Ikorodu, Badagry and Agege	Poultry, Aquaculture and crops
Oyo	Egbeda, Ibadan North	Crops and houses
Osun	Obokun	

STATE	LGA	COMMODITY AFFECTED
Abia	Osisioma, Ugwunagbo, Umuahia South, Ohafia ,Aba North Aba South	Crops and Buildings
Enugu	Udi,Nkamu East, Ozeagu	Crops, and Farm Housing
Ebonyi	Afikpo North and South, Abakaliki, Ikwo, Ishielu, Onichi, Ohaozara, Ohaukwu Ivo	Crops and Access Roads
Akwa Ibom	Ikot Ekpene, Itu, Ibiono Ibom, Ikono, Oron, Urue-Offong, Uyo, Essien Udim, Oruk Anam, Abak, Uruan, Eastern Obolo	Buildings, Farmland/Route
Imo	Owerri North, Oru East,Ehime Mbano,Obowp, Onuimo,Ohaji Egbema	Crops, Animal and Houses
Anambra	Akwa North	Rice

STATE	LGA	COMMODITY AFFECTED
Katsina	Jibia, Daura Baure, Charanchi, Katsina	Assets
Zamfara	Gusau, Gummi, Talate Mafara, Maradun and Tsafe	
Jigawa	Nearly all LGA	Crops, Livestock, Land and Buildings
Sokoto	Silame	Millet and Soghum
Kano	Makoda, Kunchi,Bunkure, Dawakin Tofa, Warawa	Crops,Livestock, Infrastructures.

15.0 Conclusion and Recommendation

Conclusion and Recommendations



The 2019 Wet Season Agricultural Performance Survey in Nigeria was conducted with the support and collaboration of all States Agricultural Development Programmes (ADPs) and Ministries of Agriculture, as well as other agencies/organizations.

Findings presented a vivid picture of agricultural development activities in the country. The results showed, among others, general increases in several economic activities in the agricultural sector, especially cultivated areas and production estimates. The recent government initiatives and policies towards boosting agricultural production in the country, such as the injection of N-Power (Agro) volunteers and the Anchor Borrowers Scheme are already yielding results. These initiatives, among several others, serve as incentives for more engagement in agricultural activities, especially among women, youths and investors. Consequently in 2019, there was improvement in inputs procurement in all states. The field situation in 2019 and production forecasts showed that harvests will be at least 40% above those of 2018 in all areas of agriculture, although this is expected to be marginal for aquaculture. The study also highlighted several constraints, ranging from the challenges of weak extension system, climate change, inadequate input support by government, to insecurity.

Based on these identified constraints, the following recommendations are made:

1. Strengthening of Agricultural Extension System

There is very high Extension Agents /Farm families ratio, as high as 1:15,000, as well as dwindling funding for capital projects, shortage of staff, inadequate training, and lack of mobility as major challenges of extension delivery in the country. There was also the problem of unavailable extension packages (in the form of broadcasts, prints, field demonstrations, or face to face visit). This persistent situation has grossly affected extension activities, especially in the area of extension contacts, technology transfer (MTPs, FNTs, SPATs, OFARs, farmer field school, etc.) and farmers' group formation and management, among others. Governments at both State and Federal levels should develop a strategy for efficient and timely funding of ADPs and other relevant agricultural extension and advisory providers in the country. It is also important to develop a strategy to strengthen extension service delivery in the states and local governments by

providing the needed fund and recruiting more staff to replace . With regard to recruitment, the N-Power (Agro) volunteers can be mainstreamed in each state into full-scale agricultural advisory service provision which is enunciated in the N-Power document. This option of engaging N-Power youths in agricultural extension activities should be explored to accelerate agricultural development in the country.

2. Increased Investment in Climate-Smart Agriculture

The frequency of flash and epidemic floods, crop, livestock and fish diseases and pests, as well as prolonged dry spells across the country is becoming a serious call for concern. There is, therefore, the need for government to increase investment (funding and infrastructure) as a rapid response strategy (involving specialists in agricultural research, extension, and climatologists) to these monumental imbalances in agriculture and the ecosystem. The strategy is to develop and promote such crops, animal and fish stocks that are disease-resistant, drought-tolerant, flood-tolerant, and early maturing.

3. Development and Deployment of Effective Input Subsidization Strategy

The study found some appreciable level of government support and intervention programmes in several states, although these were not accessible to a majority of farmers. The few farmers that had access to inputs could not afford the subsidized prices. There was also the presence of adulterated agro-inputs inputs. Such input challenge limits farm yields and income, thereby making agriculture unattractive to prospective farmers and investors. Therefore, a cost-effective and efficient input distribution strategy/system, especially on seeds/seedlings/breed stock, fertilizers and credit, should be developed through e-Wallet. The inputs so provided should be subsidized and with minimum interference from third parties.

4. Prioritization of Conscientious Agricultural Mechanization Strategy.

It is evident from the study that there was low level of mechanization, as well as inefficient tractor hiring schemes across the country. Farmers had very poor access to tractor services. This situation has led to heavy dependence on manual labour, which has especially affected production costs across the country; yet average yield is still very low for as low as 4 tons (for rice) 3 tons (for maize) per hectare. These costs are unsustainable in plans to achieve food security for the country. Therefore, there is the need for the governments to intensify efforts, using Public- Private Partnership in tractor and input service delivery to boost production and position agriculture in its rightful economic place through a strategy to continuously purchase new tractors and repair dysfunctional ones, so as to increase production.

New trends in agriculture such as hydroponics system and greenhouse technology should be considered to boost productivity and reduce food insecurity in Nigeria.

5. Increased Support to the National Farmers Helpline Centre

The zeal of farmers to expand agricultural activities was not equally matched with the requisite knowledge for improved farm management practices. Besides, the fact that the ratio of extension agent to farm families has remained astronomically low about 1:15,000 for some states, instead of the FAO recommended 1:1000, Nigeria should embrace and strengthen e-extension to cater for the information needs of the growing farming population. Moreover, the enormity of crop, livestock and fisheries losses, occasioned by the absence of effective information linkages between farmers and extension service providers, requires a conscientious determination of government to develop a robust agricultural knowledge and information management system. In this regard, the National Farmers' Helpline Centres should be given all the necessary support (human and material resources, as well as a conducive policy environment) to be fully operational. The Centre needs to secure a short-

code for operation with the help of NCC and FMARD; currently, it uses a SIM bank for its calls. Therefore, to achieve an information-based and ICT-driven agricultural extension system, the Helpline should be in full operation, with subsidized calls to and from farmers. This would strengthen the various production-enhancing indicators, such as market information, disease identification and management, as well as recommended practices along the agricultural value chain activities.

6. Deployment of a Decisive Action Plan to Tackle the Tide of insecurity

A major finding of the study was the threat of insecurity, especially kidnapping, armed banditry, animal rustling and herder/farmer clashes to agriculture business across the country. There were widespread reports of farmlands destruction and sometimes, abandonment by farmers due to activities of kidnappers and herders. A new dimension, especially in the Northwest, is when armed bandits and kidnappers request farmers to pay them monthly/weekly 'dues' so that their farms and workers can be spared. Government has made a lot of headway in containing the activities of militants and insurgents in recent years; although insurgency activities have been largely contained, matters of insecurity seem to be more generally widespread across the country. No doubt, productive economic activities cannot thrive in an atmosphere of fear, chaos and destruction. There is therefore, the need for a more decisive approach to curbing the menace of insecurity across the federation.

Moreover, the Livestock Transformation Plan (LTP) being currently implemented by the government is a welcome development. It will appropriately move pastoralists into clusters and develop them away from the prevailing husbandry system into a more stable and sustainable small and large-scale intensive production enclaves. This will stem, to a large extent, the menace of herders/farmers conflict, as herders would be educated at the entry point on the need to abide by Federal, State and Local Government laws and policies, for conducive agricultural business environment.