CHALLENGES AND PROSPECTS OF AGRICULTURAL DATA MANAGEMENT IN KOGI STATE OF NIGERIA

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Abstract

The paper investigated the challenges andprospectsof agro-data and statistics in Nigeria using Kogi State as a case study. The various constraints and factors of prospect in agro-data management were examined. Questionnaires and interview schedules were used to elicit information from 180 farmers and 30 extension agents proportionately and randomly selected from three LGAs in Kogi State. The data was analyzed using Likert scaling, weighted average and ranks, charts and Student t-test distribution. The results showed that there are two kinds of constraints; farmers' related and institutional problems, facing agricultural data collection and processing in Nigeria and there is no significant difference between the influences of the two types constraints. These constraints make collection of agro-data difficult and statistics inaccurate and unreliable. However, there are prospects for overcoming the challenges if certain factors are considered such as increase in budgetary allocation and training of personnel among others. It was recommended that the extension education of farmers should be improved, farmers should be involved in the planning stage of farm survey, and free farm record books might be given to the farmers, Statiastical officers and enumerators should be trained and re-trained and logistics and infrastructures be provided.

Keywords: *Agro-database, Agricultural statistics, Farmers' related Constraints and Institutional Constraints.*

Introduction

Nigeria is an agrarian country. Agriculture therefore, is a major driver of economic growth in Nigeria (Igwe*et al.,* 2013). It does not only provide food, employment, internal demand for other domestic products, and foreign exchange, but also play a critical function in the alleviation of poverty in low- income countries like Nigeria. About 70% of the Nigerian population is involved in agricultural production. In 2008 agriculture contributed 42.07% to the GDP of Nigeria (FAO, 2011). Agriculture sector is a central key to the national food security by providing the largest proportion of the national total food consumption requirement. Based on these indispensable roles play by agriculture in Nigeria, adequate and reliable data on agro-food are of necessity for policy makers.Accurate agricultural data are indispensable for farm planning and organization, planning agricultural extension services, appraisal and evaluation of agricultural projects, government budgetary policies, preparation of food balance sheet, agricultural production forecasting and pricing policy (Adegeye and Dittoh, 1985 and Adegboye, 1982). Other users of agro-food data include private individuals, farmers, planners, researchers, Government ministries and their agencies, universities/polytechnics and international organisations.Agricultural statistics

are useful for research and development. It also promotes investment opportunities. Agro-food data helps to monitor some of the government policies in food security programmes. It provides a broad overview of development in agriculture upon which we can make some broad generalisations about the importance of agriculture. Therefore, agricultural data should meet the needs of users and easy tointerpret and understood in addition to being relevant, reliable and consistent. The key objectives of the agricultural survey include: collection of relevant statistics to compute the contribution of agriculture to the production of GDP and production of data to aid other users. Agricultural sector lacks data for analysis, particularly the food sub-sector. This sector is fraught with serious data problems. Reliable statistics are needed to track the country's need and achievement and accurate government expenditure data on agriculture (Oladuni, 2015). The role of agriculture in economic development and structural change in Nigeria are still drawn from the scanty available statistics (FAO, 2011).Most of the agriculture activities across the different administrative levels of government are not properly captured leading to non-availability of reliable data on agriculture (Adegboye, 1982). Farmers too do not appreciate the role of farm survey. This is against the frequent demands for agricultural data for various uses by institutions and agencies within and without the country. Unavailability of accurate data makes research a more or less guess work or work based on knowledge of local constraints (Adegboye, 1982). Unstable and often inappropriate economic policies as relates to pricing, trade and exchange rate, import and export, etc are as a result of problem of adequate data, particularly information on farm data or production by small scale rural farmers.The peculiarities of agricultural data production, especially with reference to scope, geographical coverage, cost, the need for regular farmer-statistician (enumerator) interaction and multiplicity of participating agencies makes it a difficult task. Again, agricultural statistics ranks very low among government priorities and as a consequence, the National Statistical System has been poorly resourced leading to inadequate supply of statistics to users in terms of quantity and quality.

In an attempt to address this problem, the Federal Ministry of Agriculture had established vibrant agro-food data generation and harmonization structure through which it coordinated primary agricultural data generation from the rural areas where the bulk of the farmers operate. The structures were not active for lack of funding (FAO, 2011). This implies that; it is important for the Government and other funding agencies to appreciate the huge costs involved in data collection, processing and management. Because agricultural Statistics constitute a wide area for which much attention should be given to these processes. The different agricultural agencies should, in conjunction with the National Bureau of Statistics (NBS), produce timely and reliable data relating to their areas of jurisdiction (Oladuni, 2015). Efforts should be made to educate the farmers on the intrinsic use of data and, therefore, the need to liaise effectively with the data collection field officers. It is in this light that this paper examined the constraints of agro-data management in two perspectives namely; constraints emanating from farmers' attitude and problems resulting from Nigerian institutions environment. It also investigated the prospects of building a reliable database for agriculture in Nigeria and analyzed the relationship between farmers' related and institutional constraints. The null hypothesis

(H_0:) proposed in this study is that there is no difference significance between the influences of farmers' related and institutional constraints on agro-data.

Review of related literature on Agricultural Data Management in Nigeria
The National Bureau of Statistics is the apex statistical body in Nigeria charged with the responsibility of coordinating the orderly implementation of all statistical activities under the National Statistical System –NSS. The body was established in 2004 following the merger of the Federal Office of Statistics (FOS) and the National Data Bank (ADB). The current enabling legislative framework under which the NBS operates is the National Statistical Act of 2007. The rights, obligations and limitations of all the other stakeholders within the NSS are subsumed in the Act. Therefore, the current legal framework is anchored on the Statistical Act of 2007 which conferred regulatory powers over the NSS on the National Bureau of Statistics as well as provided the guidelines for consistent, sustainable and orderly production, management and dissemination of statistical information in Nigeria. The key players in the production of food and agriculture statistics are the Federal Ministry of Agriculture and Rural Resources, Federal Ministry of Water Resources, National Bureau of Statistics, Central Bank of Nigeria, Federal Ministry of Commerce and Industry and the National Population Commission. These agencies undertake separate as well as collaborative surveys to generate various aspects of agro-food data. Through the National Strategy for the Development of Statistics (NSDS), these collaborating agencies are empowered to generate data specific to their sub-sector and contribute same to the central basket being managed by the NBS. Nigeria has not conducted a conclusive agricultural census (NASC) in the last two decades. The result of some survey-census exercises were not analyzed while another attempts ended at the pilot level. The federal and state governments' counterpart funding for the exercise was not released even after donor agencies and development partners had redeemed theirs. After many years of data gap, the Ministry is to collaborate with the NBS to conduct the 2010 National Agricultural Sample Survey (FAO, 2010).
Nigeria agriculture produces a diverse numbers of products which in most cases are regional specific. On its diversity, Nigerian agriculture features tree and food crops, forestry, livestock and fisheries.The main sources ofagricultural statistics are censuses, administrative and other sources. Statistics from these sources are generated on routine basis such as day-to-day execution of the functions of the ministries, research institutes, Nigerian Institute for Oceanography and Marine Research, the River Basin Development Authorities, Fisheries Departments of State Ministries of Agriculture and Natural Resources, Nigerian Lakes Research Instituteand international agencies. The surveys are conducted at the household level and corporate farm level.
Crops and Livestock Statistics include statistical information on all the primary activities in this sub-sector as they are carried out on farms belonging to households or corporate bodies. Attributes of crop and livestock husbandry covered by crop and livestock statistics include: farm practices and characteristics, farm equipment and infrastructure, crop production, manpower, income and expenditure in crop production, education, extension services, research and development.Forestry and wildlife statistics cover data on management, utilisation and conservation of forest and wildlife resources. The items

covered by forestry and wildlife statistics include land resources data; forestry manpower; forestry finance; timber production statistics; prices; wood-based industry data; international trade data; areas of games reserves, parks and zoological gardens; distribution of animals in zoological gardens and games reserves by species, gender and age and statistics of endangered species of animals and plants. Fisheries statistics include all statistical information on the business activities of Artisinal fishermen, aqua culturists, commercial in-shore trawler operators and importers of fish. In addition to landings of different species of fishes, the sector's statistics also include quantity and price data on inputs, equipment and facilities in fish production as well as prices of different categories of fish (FAO, 2011).

There are three types of data and these are basic data, current data and survey data. The basic data are collected at ten years intervals, current data is continuously collected on yearly basis while survey data is collected by researchers or government agencies once for a particular project or at 2 or 3 years intervals for a particular purpose (Adegeye and Dittoh, 1985). The most important source of survey-census-based official statistics on crops is the National Bureau of Statistics (NBS). The agricultural surveys conducted by the NBS are: Rural Agriculture Sample Survey (RASS), Census of Modern Agricultural Holdings (CMAH) and the National Agricultural Outlook (NAO). The objectives of these inquires are to collect data on agricultural holdings in the rural and modern sectors of the economy and also to provide benchmark data on farm practices and agricultural production at Local Government, State and National levels respectively(FAO, 2011).

The objectives of Agricultural Data Bank Project of Federal and State Ministries of Agriculture which took off in 1989 were to establish and develop in-house professional expertise and build up capacity and facilities for data collection, processing, reporting, and banking.It was to carry out a nationwide sample census of agriculture and to coordinating data storage and retrieval activities at Federal and State levels (FAO,2011).This exercise was faced with a number of logistics constraints: distance from the NBS, inadequate counterpart funding, and uncoordinated data production activities of numerous units.

In 1992 a conference on the establishment of Agriculture Information Management System was held and consequently, two coordinating bodies were proposed. These are the National Agricultural Statistics Coordinating Committee (NASCCO) to provide policy guidelines on the contents, production and the activities of producers of agricultural statistics in Nigeria and the State Agro-Statistics Coordinating Committee (SASCCO) to coordinate the production of agricultural statistics at the State level according to directives received from the NASCCO. The members of the NASCCO were drawn from the FMANR, National Bureau of Statistics (NBS) CBN, Universities of Agriculture, Agro-Meteorological Services Department (AMSD), National Planning Commission (NPC), Agricultural Research Institutesand National Agricultural Data Bank (Secretary). Members of SASCCO were drawn from State counterparts of some of the agencies listed under the membership of NASCCO, including the River Basin Development Authorities (RBDAs), ADPs, and State Offices of other agencies.The manpower, funding and organisational requirements for successful implementation are numerous, hence reliance on the nationwide network of the NBS, at least in the initial period, was inevitable for a successful take-off of the production of agricultural data by the FMANR.The available time-series data of this sub-sector generated

through the above efforts are in hard copies published by the Planning, Research and Statistics Department (PRSD) of the FMANR in Digest of Agricultural Statistics. However, statistical information on wildlife and forestry were very scanty and not available in any regular publication.Data transfer and dissemination are in the form of hard copies (FAO, 2011). Relevant authorities must better ways to collate agricultural data for better prediction of future of farming (Oladuni, 2015)

The production, analysis and dissemination of survey- and census-based crops and livestock statistics are the most elaborate single subject-matter activity undertaken on a fairly regular basis by the NBS and other agencies. The FMARD and the State ministries of agriculture and natural resources also make substantial contributions to the gathering, collation and publication of largely administrative statistics on crops and livestock. In 1991, efforts made by the Federal Department of Livestock yielded some results (FAO, 2011). The Federal Ministry of Agriculture and Natural Resources also organised several workshops, seminars and conferences in which the themes focused on the harmonisation of the production of agricultural statistics. These efforts have resulted in the production and publication of numerous items of time- series data on agriculture. National Bureau of Statistics (NBS) ensure data storage, output processing and direct access retrieval through the use of a relational database of agricultural statistics.

In spite of all these efforts, Nigeria's crops and livestock statistics are still characterised by untimeliness, lacunae or incompleteness (space-and time- wise) and absence of information on reliability of estimates. Data timeliness and punctuality are still real challenges to the Nigerian statistical system. And indispensability of data depends very much on the degree of accuracy and reliability (Adegeye and Dittoh, 1985). The agro-food statistical system in Nigeria is uncoordinated and weak due to duplication of mandates, poor funding, lack of equipment and physical infrastructure, as well as few and poorly motivated personnel. The consequence is that the system could not sustain regular surveys and therefore unable to produce reliable, complete, consistent and timely statistics to meet the needs and expectations of the users. Data generated from such process is not detailed enough to be useful (Oladuni, 2015). The problems which affect the production of crops and livestock data in the country can be grouped into those resulting from resource limitations as well as from methodological and non-response problems. In Nigeria, data production is yet to be recognised as a costly venture. Every agency involved in production of crops and livestock data are inadequately funded and lack of other resources, especially vehicles and equipment (NBS, 2015). The interval between data production, data release and the effective date of dissemination varies significantly. The reason is that the conduct of agricultural surveys is not regulated, but subject to availability of funds. Other factors include shortage of trained manpower and inadequate physical infrastructure. The delay of three to four years in publishing results of data collected is partly due to these problemstoo(FAO, 2011).

In executing data production plans in Nigeria, non-response at household farms, corporate farms and agencies are the constraints of the producers of administrative statistics and all pose a serious problem. Due to some weaknesses in the National Statistical System and the poor implementation of the NSDS, many organizations are known to embark on agricultural data collection exercises and come up with varying data sets on similar subjects.Much of

the State-based data on crops and livestock are published with numerous blank cells for several years. This makes nonsense of any national aggregate that may be computed for the reporting States. Coupled with the fact that not all the Zones or LGAs in the reporting States have actually made returns to the agency, the reliability of the national aggregate is even more doubtful. Most of the estimates of parameters such as production, area, yield obtained from surveys and censuses have no standard errors and the reliability of such estimates cannot be assessed (FAO, 2011).These are some of the problems which render some estimates of key parameters for example; crop yields, inconsistent with peer country data, and compel international agencies to search for non-domestic sources. Data producers lack the culture of properly documenting the methods and procedures leading to the generation of their data. Data production should be user focused. Generally, users appreciate data that are reliable, consistent, complete, timely and sufficiently disaggregated. This intends to suggest solutions to these myriad agricultural data collection and processing problems and as a case study is drawn from Kogi State, Nigeria.

Methodology
Kogi State has a population of 3,314,043 (NPC, 2006). The State is located between latitude $6^o30'N$ and $8^o30'N$ of equator and longitude $5^o51'E$ and $8^o00'E$ of Greenwich Meridian. Kogi State has an area of 30,554.74 square kilometres (Wikipedia, 2012; KOSEEDS, 2004). The state has two main seasons, viz; rainy season (March to October) and dry season (November to February).The state is regarded as confluence state and found in the Guinea forest-savanna ecological zone of Nigeria. Kogi State is bordered by other states as follows: to the North East by Nasarawa State, East by Benue State, South East by Enugu State, South by Anambra State, West by Ondo and Ekiti States, North East by Kwara State and North by Niger State and Federal Capital Territory, Abuja (Wikipedia, 2012). Kogi State has an average of 172,000 farm families. Over 70% of this population live in rural areas and engage in agricultural production (Kogi ADP, 1995). The farmers produce such crops as yam, cocoyam, cassava, maize, soybean, melon, sorghum, rice, cowpea, groundnut, and benne seed among others. Tree crops of various varieties thrive in the state while the climate supports rearing of animals of various breeds.
Data was collected from180 farmers and 30 extension agents proportionately selected from Adavi, Okene and Okehi Local Government Areas (LGAs)in Kogi State using multi-stage proportional random sampling techniques. Questionnaires and interview schedules were the instruments used for data collection.Thirty (30) respondents each was randomly selected from six farm centres from the three selected LGAs. The selected farm centres are Osara and Irepeni, Ogunda and Achoze and Utoro and Abobo from Adavi, Okene and Okehi respectively. Ten (10) extension agents each were selected from the headquarters of each LGA. The collected data was analyzed using descriptive and inferential statistics.
Likert scale degree: very important = 5 points, important = 4 points, undecided = 3 points, not important =2 points and not very important = 1 point.

Total Weighted score= X1W1+X2W2+X3W3+X4W4+X5W5----(i)

Weighted mean= total weigted score$N$----------------(ii)

Critical mean=5+4+3+2+1$5$=$\frac{15}{5}$=3.0------------(iii)

Where; X = no of respondents, W = no of ranks, N = total number of sample
Test of hypothesis: to compare the significance difference between the mean scores of farmers' related and institutional parameters student t-test distribution was used to carry out the significance test.
The formula is stated as:

$$t_{cal} = \frac{X_1 - X_2}{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}} \quad \text{--} \quad (iv)$$

Where; X_1 = the mean scores of farmers' related parameters.

X_2 = the mean score of institutional parameters.

σ_1^2 = standard deviation of farmers' related parameters

σ_2^2 = standard deviation of institutional parameters.

n_1 = number of farmers.
n_2 = number of extension agents (institutional agents)

Decision rule: the null hypothesis is rejected when the t-calculated statistic is greater than the t-critical value at 5% alpha level. The critical value of the means difference was obtained from the table developed by Neave (1979).

Results and Discussion
Socio-economic-educational Characteristics of the Respondents
Majority of the farmer respondents as shown in Table 1 had no formal education (38%) and few had primary (27%) and secondary (19.4%). This may influence the nature and accuracy of records kept by them which is one of the fundamental issues in agricultural data collection. This confirms the assertion of FAO (2015) that training personnel on data collection is very necessary as farmers are not educated and kept no record. More than seventy-six percent of the farmers had more than 10 years of farming experience which shows that they may be knowledgeable in the data they gave to the enumerators in the course of this study. The farmers' extension contact was poor; about 68.7% of them had no or one contact through a farming season. This implies poor education of the farmers and invariably poor record keeping.This conforms to the findings of Simpa (2011), Nwaru *et al.,* (2011) and Olayide (1981). Eighty-three percent of the extension agent respondents had OND certificate and above with about 17% holding school certificate. This shows that they are educated enough to give good responses in the course of this study. Sixty-eight percent of the extension agents had more than 10 years of working experience. About 87% of the extension agents had not attended seminar in the past one year. This indicates that they might have lost touch with current issues in agriculture.

Socio-economic-educational characteristics of respondents

Variables	Frequency	Percentage	Variables	Frequency	Percentage
Farmers			**Extension Agents**		
Formal education			**Formal education level**		
No education	70	38.9	O'level	5	16.7
Primary	50	27.8	OND	15	50.0
Secondary	35	19.4	HND	8	26.6
Tertiary	25	13.9	First degree	2	6.7
Total	**180**	**100**	**Total**	**30**	**100**
Mean	6.0		**Mean**		
			Mean		
Farming experience (years)			**Years of experience**		
<10 years	42	23.3	<10 years	10	33.3
11 -20	74	41.1	11 -20	14	46.7

>20	64	35.6	>20	6	20.0
Total	**180**	**100**	**Total**	**30**	**100**
Mean	16.7		**Mean**	14.2	
Extension contact			**Seminar Attendance (at least once a year)**		
0 – 1	120	66.7	**Yes**	**4**	**13.3**
2 – 3	45	25.0	**NO**	**26**	**86.7**
< 3	15	8.3	**Total**	**30**	**100**
Total	**180**	**100**			
Mean	0.9				

Source: Field Survey, 2015

Constraints to Agricultural Data Production and Statistics from Farmers

Table 2 shows the constraints facing agro-data collection as enumerated and Likert scaled by the farmer respondents. The individual weighted averages obtained from the weighted scores were used to rank the problems of data collection. For the ranking; illiteracy and lack of skills was ranked 1st with weighted mean of 4.7. Lack of formal education and skills in record keeping affect the accuracy of the data produced by illiterate rural farmers who are the key players in Nigerian agriculture (Awoyemi, 1981 and Stock, 2009, Simpa and Peter, 2015). This implies that the agro-data collected from farmers are doubtful and this would affect the aggregate of Nigeria agro-food data which are used in policy formulation and decision making. This would invariably affect the quality of Government policies. Farmers' quest for motivation before giving out their farm data was ranked 2nd. The popular jargon of; 'nothing goes for nothing;' is usually applied and more so; they strongly feel that the enumerators stand to gain from the information they would give them and as such they request for their share. Readiness of Nigerian small-scale farmers to disclose information to agro-data enumerators was ranked 3rd. The farmer does not see the need to disclose data concerning his farm to third party. Inaccuracy of information disclosed by farmers was ranked 4th. This again affects the aggregate data collected (FAO, 2011). The scantiness of information available to farmers was ranked 5th. This too affects the quality of data collected and invariably statistics derived from them and this conforms to the finding of Paul(1988).Fear taxation by farmers affects the quantity of information disclosed by farmers and this was ranked 6th. The farmers might felt that the purpose of any agricultural survey is for taxation (Carkner, 2000)and thus conceal some information in order to pay less tax. Lack of farm records was ranked 7th. Majority of the farmers do not keep written and as such they depend on their mental recalling ability whenever data is required from them (Adegeye and Dittoh, 1985). Fear of enemy by the farmers was ranked 8th. The farmer fears that if he discloses information about his farm his enemies may envy him and use it against him. The scattered farm plots was ranked 9th. The farmers' plots are small and scattered(Reddy et. al, 2007) and this makes farm data collection tiresome and cumbersome.

Table 2: Farmers' Related Constraints to Agricultural Data Production and Statistics

Likert items	No of Respondents	Weighted score (X)	Weighted Average	Remark
Illiteracy/lack of skills	180	860	4.7	1st **
Motivation required to give information	180	820	4.5	2nd **
Readiness of the farmers to disclose information	180	655	3.6	3rd **
Inaccuracy of information disclosed	180	620	3.4	4th **
Scanty information	180	560	3.1	5th **
Fear of taxation	180	540	3.0	6th *
Lack of farm records	180	520	2.8	7th *
Fear of enemy	180	460	2.5	8th *
Small scattered farm plots	180	380	2.1	9th *
Total (X)		**5415**		
Average of weighted score (all)		**601.7**		
Standard Deviation		**2701.7**		
Max		**860**		
Min		**380**		
Critical mean				≥3.0 =**
				<3.0 =*

Source: Field Survey, 2015, **Accepted as a serious constraint, *Not a serious constraint.

Institutional Related Constraints Facing Agricultural Data Production and Statistics
Just as in Table 2, Table 3 was also Likert scaled and ranked using the individual weighted averages of the weighted scores. Underdevelopment of agriculture was ranked 1st, because every other problems stems from this (Olayide, 1981). Lack of government trained personnel in agro-data collection and production was ranked 2nd. This justifiesAdegeye and Dittoh, (1985). Unenforced company tax on farm firm (corporate farms) was ranked 3rd. If farms are taxed based on their output, the farmers would be force to keep records to determine or for calculation of appropriate income tax (Carkner, 2000). Inadequacy of extension programme in educating farmers about farm data affect agricultural statistics and it was ranked 4th. Lack of facilities from banks does not motivate the farmers to keep record and ranked 5th. If banks were to inspect their records and give them loan, the farmers would haveknown the importance of farm data and then keep them accordingly. Lack of association of farm managers was ranked 6th. Through association, members would have been motivating each other to keep accurate record and disclose them when demanded. Inefficient marketing system of agricultural product also affects agro-data and this ranked 7th. Efficient marketing system would have kept the record of all products that pass through it, but this is not obtainable in Nigerian agricultural marketing system. Farm record books are expensive and this was ranked 8th.Some farmers could not afford the record books for record keeping. Nigerian farms are not registered and was ranked 9th and

as such they could traced for data collection. The unregistered small and scattered farms found over all the rural and remote areas make data collection difficult and capital intensive.

Figure 1 shows the magnitude and intensity of the effects of the two types of constraints facing agro-data production and statistics in Nigeria using the weighted means of the ranked constraints. The chart indicates that the two types of constraints have almost the same effects on quality and quantity of agro-data produced and the emerging statistics.

Table 3: Institutional Related Constraints Facing Agricultural Data Production and Statistics

Likert items	No of Respondents	Weighted score (X)	Weighted Average	Remark
Under development of agriculture	30	126	4.2	1st **
Lack of government trained personnel	30	124	4.1	2nd **
Unenforced company taxes on farm firms (corporate farm)	30	119	3.9	3rd **
Inadequate extension programmes	30	115	3.8	4th **
Lack of facilities from banks.	30	100	3.3	5th **
Lack of association of farm managers	30	88	2.9	6th *
Inefficient marketing systems	30	86	2.8	7th *
Farm record books are expensive	30	76	2.5	8th *
Unregistered farms	30	70	2.3	9th *
Total (X)		**904**		
Average of weighted score (all)		**100.4**		
Standard Deviation		**466.1**		
Max		**126**		
Min		**70**		
Critical mean			3.0	≥3.0 =** <3.0 =*

Source: Field Survey, 2015, **Accepted as a serious constraint, *Not a serious constraint.

Prospects of Agro-data Production and Statistics in Nigeria

Figure 2 depicts the factors that can result in accurate and reliable data management in Nigeria and how they are Likert scaled and ranked by extension agent respondents. The Likert scaled factors were reduced to percentages and charted. All the factors were importance, but increase in budgetary allocation to the course of farm data production, involvement of the farmers at the planning stage, provision of logistics, provision of infrastructures and farmers' education took the lead. Others are manpower development, farm records as a subject/course in the school curriculum, free farm records and ensuring

data representativeness would give hope to accurate and reliable data collection and management in Nigeria.

Test of Hypothesis

The result in Table 4shows the hypothesis test of the weighted means of the two sets of constraints using student t-teststatistical distribution. The analysis indicates that the computed t-$_{calculated}$ was smaller than t-$_{critical}$ value. That is t-$_{critical}$(16) = 0.9159>t-$_{critical}$(16, 0.05) = 1.746. The null hypothesis was therefore, not rejected. It could be concluded that there is no significant difference between the influences of the two types of constraints.

Table 4:Hypothesis test of the mean differential of the weighted parametersof data Production constraints in Kogi State

Null hypothesis	Degree of freedom	t-Statistic	Critical value	Decision
	16	0.9159	1.746	H$_o$ not Rejected
Ho:X1-X2=0				

Source: Field survey, 2015 *%% level of Probability, critical value from Neave (1979)

Conclusion

The respondents of this study are well experienced, but the farmers are poorly contacted. Agricultural data production and statistics in Nigeria face problems which could be classified into farmers' related such as illiteracy, lack of skills and readiness to disclose information and institutional related such as under development of agriculture, lack of trained of personnel and unenforced farm firm company taxes, inadequate extension programmes; and these make collection of agro-data difficult and agricultural statistics inaccurate and unreliable. However, these problems are surmountable, if certain factors are considered such as increase in budgetary allocation for the bodies saddled with collection and processing of agro- data, involvement of the farmers at the planning stage, provision of equipment and infrastructures and making samples of datato a true representative of the population in which they are drawn from. There is no significance difference between the influence of the two set constraints on agro-data production and quality. In view of this, it is recommended that extension education should be intensified by increasing the number of extension contacts and convincing the farmers on the need for accurate record keeping and disclosure of same for reliable data collection and production. In addition, farmers should be involved in the planning of farm surveys as a way of building data collection and processing skills in them. Finally, capacity building of the statistical officers and enumerators, increased budgetary allocation for data management and sensitisation of farmers with free farm record books could be used to enhance data management in Nigeria.

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