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Factors Influencing Adoption of Agronomic Practices of sweet Potato Production among Farmers in Two Local Government Areas of Benue State, Nigeria

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Abstract
This study assessed factors influencing adoption of agronomic practices of sweet potato production among small scale farmers in two Local Government area of Benue State, Nigeria. Data were collected from a sample of 110 respondents using questionnaire. Frequency, percentage and mean score were used for data analysis. Results revealed that majority were in their middle age(47.2%) 31-40 years; (83.6%) were male, (79.1%) married, (90.9%) had formal education while farming experience was between 11-20year. Farmers' adoption index indicated majority on relatively high scale adoption of seedbed preparation (85.0%), planting depth (92.3%), compatible cropping (85.0%), timely harvesting (76.0%), stand geometry (72.0%), correct time planting (70.0), fertilizer application (68.2%) and earthening-up (69.0%).The relatively low adopted practices were plant spacing (34.0%) and use of insecticides (46.0%)respectively.Major constraints faced by sweet potato farmers in the study areas were farmers-herders conflict (80%), poor access to input (66.4%), inadequate capital (66.4%), poor market (64.5%), poor credit facilities (61.8%), among others.Based on the findings of the study, it is recommended that, elements of compromise and arbitration should be devised to resolve conflicts however, extension agents should help farmers to increase adoption of agronomic practices of sweet potato by intensifying campaigns through practical oriented trainings with emphasis on plant spacing and use of insecticides. More so, government should intervene in the problems of high cost and unavailability of such farm inputs by strengthening the input delivery system of the extension service in order to increase farmer's production and income.

Keywords: Adoption, Agronomic practices, Sweet potato, production, farmers

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I. Introduction

Sweet potatois grown and consumed worldwide. The share of the production that is traded on the world market is relatively small(CIP, 2013). Sweet potato (Ipomoea batatas) is an important food, feed and vegetable crop in most developing countries, which account for about 97 percent of the world production (FAOSTAT, 2013). Sweet potato is one of the world's most important staple carbohydrate foods. It is thefifth most important food crop on a freshweight basis in developing countries after rice,maize, cassava and wheat(CIP, 2013). Sweet potato is highly adaptable to relatively marginal soils and erratic rainfall and has high productivity per unit land and labour, and guarantees some yield even under the most adverse conditions. It does well in a relatively low pH, and although it is not as highly tolerant to drought as cassava, it does have good drought tolerance Ekwe*et al.*(2006).It is highly nutritive and it supersedes most carbohydrate foods in vitamins, minerals, dietary fibre and protein contents. It contains vitamin A rich in beta-carotene. Therefore, it is a cheaper and rich source of vitamin A for children, pregnant and lactating women especially among the rural poor Odebode, *et al.*(2008)These inherent nutrition and health potentials in sweet potato comfortablyplace it as a crop that can help address foodinsecurity and reduce poverty which isalmost endemic in sub-Saharan Africa(Mwakanyamale *et al.*(2015).According to (UNICEF, 2012) sweetpotato is an important root crop in Nigeria, notjust because of its adaptability in slightly loosesoil (marginal soil), but also its broad agro-ecologicaladaptability.Despite the excellent qualities and potential of sweet potato in achieving household food security, levels of production and consumption remains very low. Onunka *et al (*2000).Although, there has been considerable progress in development of improved sweet potato varieties and production practices otherwise known as agronomic practices.These recommended practices have the potential of doubling the yield of farmers if adopted. Such as; site selection, land preparation,improved varieties,correct planting time, correct spacing

(30cm x 100cm on ridges; 25cm x 100cm on mounds); intercropping, use of correct length of vine cuttings (2.5 nodes); use of insecticides/fungicides and herbicides; stand geometry, fertilizer type (45kg N, 15kg P, 40kg K - 400kg or 8 bags of NPK 20:10:10) , earthening up (at weeding, 4-6 weeks after planting);weeds control, pest and disease controland time of harvest of 3 – 4 months after planting, (FARA, 2018; FARTS, 2015 and NRCRI, 2010).

However, with the introductions of recommended agronomic practices through research and extension services the use of local varieties and indigenous technique was prevalent among sweet potato farmers,most farmers still use traditional methods of sweet potato production which is highly drudgery and inimical to the farmer's economic development. Agili, *et al*. (2012).

The adoption of agronomic practices of sweet potato can lead to greater yield and improved food security. Adoption according to (Rogers, 2015) is a decision to make full use of an innovation or technology as the best course of action available. It is the decision of an individual or group of people to use or apply an innovation. Nmadu *et al*. (2015) submitted that innovation uptake is a function of the capacity of the user to access innovation and utilize it.Farmers make choices of what to grow and which technologies to adopt with the goal to maximize their expected utility. Before any technology is adopted, it must pass through a process of adoption, which involved awareness stage (when an individual's first heard about improved practice/innovation): the interest stage (an individual start having interest in the new practice, hence gathering more information about it); evaluation stage (an individual's start judgment, normally on small scale) and adoption stage (an individual decide to continue the full use of the new practice.). Newinnovations are of little or no value unless they are put to use.This study assesses the factorsinfluencingadoption of agronomic practices of sweet potato productionamong small rural farmers in two Local Government areas of Benue State.

The specific objectives of the study are to:

i. describe the socio-economic characteristics of sweet potato farmers;

ii. determine the level of adoption of agronomic practices of sweet potato production by the farmers in the study area;

iii. identify constraints encountered by farmers in adoption of agronomic practices of sweet potato production.

II. Methodology

This study was conducted in Benue State.It is located in the middle belt region of Nigeria. The State is made up of 23 Local Government Areas (LGAs), out of which Vandeikya and Ushongo Local Governments were chosen for this study.

Vandeikya is located between longitude 8^0 30^1 to 9^0 00^1East and latitude $6^0 3^0$ -$7^0 00$North. It has a land mass of 183,939 square meters (0.7 Squaremiles) with a population of well over 80,288. Vandeikya is the southern Eastern part of Benue State and shares boundaries withObudu and Bekwara in Cross river State to the East, Ushongo to the North and Konshisha to the West. The Climate is tropical with the mean annual rainfall of between 1,200 and 2000mm (47^0 and 79^0) averaging seven month in a year. The LGAs is made up of twelve administrative wards namely - Mbayough,Mbakange,Mbanyongo,Ningev and Nyumangbagh (making up tyev development areas) other wards include: Mbadede, Mbagbiam, Mbagbara, Mbajon, Mbakyaha and Tsambe (making up Kyan development Area). Vandeikya township wards carved out from Mbagbera, Mbakaange and Ningev wards is the Vandeikya LGA headquarters.(BNARDA, 2012). The terrain is undulating, low lying and is drained mainly by River Aya, Sambe, Be and Uaghshu.

The population of the study areas projected from 2006 census figures in 2009 is 256,308. (Federal Office of Statistics, 1996).

Ushongo LGA in Benue state with is Headquarters in Lessel town, with an area of 1,228km^2 (474sqmiles) and a population of about 91,935 (census, 2006). It shares boundaries with Gboko to the North, Vandeikya to the South, Kwande to East and Konshisha to the west. It has 158 council wards.The dry season is witnessed between April and October. The climate is the tropical humid type with the very hightemperatures between March and April. The cool, dry harmattan weather is witnessed between December and February.

Agriculture is the mainstay of the people in both LGAs. Over 80% of the population are directly engaged in peasant farming of virtually all major food crops with concentration on sweet potato, rice cassava, citrus, bambara nuts and groundnuts.

Indeed, just as Benue State is regarded as the food basket of the nation, Ushongo may well pass as the food basket of Benue State.

Sampling technique and Sample size

A multistage sampling method was employed for the study. In the first stage, one district was purposively selected from each Local Government (Mbaka-Ange in Vandeikya and Ushongo district in Ushongo LGAs) based on their production status and concentration of sweet potato farmers in these

areas.Second stage, three villages were randomly selected from each of the two selected districts to make a total of six villages. The third stage involved random selection of sweet potato farmers drawn by 10% proportionate to size in each of the six villages. A total of 110 sweet potato farmers were used for the study.The primary data were collected through the use of structured and questionnaire administeredto the 110 respondents.

The data for this study were analyzed using descriptive statistics. Descriptive statistics such as frequency distribution, percentages and mean were used to analyze data to realize the objectives.

For examining level of adoption of agronomic practices of sweet potato, farmers responded to seven adoption stages modeled by Okoye *et al*, (2009) of Not aware = 0, Aware = 1, Interest = 2, Evaluation =3, Trial = 4, Adoption = 5, and Rejection = 6. Hence scores for adoption level of each technology was obtained by multiplying out accrued number of respondent by the point attached to each adoption stage and then divide by the total number of respondents. This can be summarized with the below.

$$X = \frac{\Sigma fn}{n}$$

Where X = Mean score
Σ = Summation

N = frequency
n = likert nominal value

$$X = \frac{0 + 1 + 2 + 3 + 4 + 5 + 6 = 21}{7} = 3.0$$

III. Results and Discussion

Socio-economic characteristics of the respondents

Age: The findings showed that (16.4%) of the farmers were between 21-30 years old, (47.2%) were between the ages of 31-40 years old while (36.4%) were aged 41years and above. The study revealed that the mean age is 36 years. This is an advantage since they are supposed to be physically and mentally alert in learning and adoption of new innovations than the older farmers. This further revealed that majority of the respondent are still in their mid-age an implication that more young people are now into agriculture. These young people are opened to new ideas, with a wide embrace of agricultural innovations disseminated to them. This is corroborated by the findings of Chikezie *et al.* (2012) which reported that the relatively young age of respondents in a study on cassava adoption affect their receptivity of innovations. It was further discovered that middle aged had significant influence on decision making process of farmers with respect to risk aversion of adoption of improved agricultural innovation.

Gender: Table 1 also revealed that (83.6%) of the respondents are male while theremaining(16.4%) are female. This distribution in the sex of respondents indicated that more male farmers are involved in sweet potato production in the study area. (Ekwe and Onunka,2006) reported that naturally, male farmers exert authority over females and that they are more likely to adopt innovations faster than their female counterparts who would first seek permission from their husband before taking any serious farm decisions. Nmadu *et al.* (2015) reported male domination in cocoa farming in Ondo State of Nigeria.

Marital status: Majority (79.1%)of were married,(11.8%) were single while (9.1%} of them were divorced. This implies that majority of the respondents are breadwinners who will want to adopt innovation to boost production so as to meet up with the demand of meeting the food needs of their families. This is in line with Bawa *et al.*(2015) observed that married people frequently seek information about improved agricultural innovations/technologies so as to enhance the welfare of their families Adopting innovation by these categories of farmers will further boost their production which can increase their income through sales of produce.

Educational level: It was found that (30%) of the respondents had secondary education, (20.9%) tertiary education, (40%) primary education and (9.1%) had no formal education. This implies that (90.9%) of the respondent had formal education**.** Acquisition of formal education could enhance decision making ability among farmers. Educated farmers can access agricultural information from an array of sources. This is in line with Kanu, *et al*. 2016) who opinedthat the level of education attended by a farmer not only increases his/ her farm productivity butalso enhances his/her ability to understand and evaluate new production/ processing technologies.

Land ownership: Majority(61.8%) purchased their land, (28.2 %)inherited while (10%)leased. Thisimplied that the producers cultivated majorly on their purchased farms. This could be attributed to land tenure system and nature of land acquisition that encourages land fragmentation.

Farm experience: It was also observed that (40%) of the respondents have 11-20 years of farming experience, (24.6%) have between 21-30 years of farming experience, and (23.6%) have been in farming between 10-20

years. This distribution shows that the majority of the respondents are not new entrants into farming, but have had many years of farming experience. Their many years of interactions with the farming environment, might have translated into familiarity with improved knowledge of growth performance of crops, common challenges and approaches to yield may enhance their adoption decision process. However,Chikezie *et al*. (2012) reported that longer years of farming experience enhances sound decisions in resource allocation and management which in turn facilitates adoption of innovation of improved cassava production technology.

Farm size: Results in Table 1 indicated that half (50.0%) of the respondents had farm holdings of 0.1-1.0 hectares, 33.6% of them had 1.1-2.0 hectares, 16.4% of the producers had 2.1-3.0 hectares. This implied that the producers cultivated small hectares of land in the study area. This finding concurred with that of (Ajani and Igbokwe, 2012) who reported that the majority of the farmers in Nigeria cultivated between 0.8 and 1.3 hectares of land scattered and small for mechanization. This is confirmed by (BNARDA, 2012) which reported that several improved systems of small holder farmers in Benue State with approximately 212,840 hectares were subjected to sweet potato production. Furthermore,(FAO,2013)report that African male dominate on matters concerning land making it impossible for women to own land in their own right. Similarly, small land holding could negatively influence farmers' productivity resulting in reduced profit, culminating in inability to adopt innovations.

Household size: Majority (67.3%) of the respondent had householdsize of 6-10 persons, (24.5%) had 1-5 persons and (8.2%) had 11-15 persons. The mean household size was 7 persons. This implied that the producers have relatively large household size. Household size have proved to be a source of cheap farm labor to farmers thereby reducing costs incurred in farming operations, also, enabling them to easily adopt new practices and extension packages. This is in line with (Nwaobiala, 2014) who indicated that rural households are characterized by large household size with high dependency ratio.

Membership of association: It was furtherfound that (80%) of the respondentsbelonged to association while (20%) were not part of any association. This implies that farmers that belong to social organization could get access to information on new practices such as the sweet potato production and processing technologies. This result is supported by Olawande *et al.*(2011) that farmers' social organizations enable farmers to have access to many opportunities such as credit, shared labor, joint input purchase, group marketing, and group training philosophy

.**Extension contact**: The result revealed that greater proportion (72.7%) of the farmers had extension contact while (27.3%) did not have contact. interactions between farmers and extension agent is one of the most important factors more likely to influence sweet potato agronomic practices adoption.This is in line with (Nwachukwu, 2014) who noted that it is only through an effective communicationpattern that the behaviour of the receiver will change to the desire of the source. A farmer whose contact with extension agents have very high expectation to be more familiar and more knowledgeable about the use of improved agricultural innovations

Access to credit and sources: The findings showed that majority of the respondents did not have access to credit. (44.5%) said they had accessed credit in the year preceding this study while (55.5%) reported lack of access to credit. Considering the role of credit in agricultural production, this lack of access to credit could bea limiting factor to enhanced production. Accessibility to credit determines enhancement of the farmer's level of productivity (Ekong, 2003).

Estimated annual income:A greater proportion (36.4%) of the producers earned ₦301,000- ₦400,000 as annual income from sale of produce while (21.8%) indicated ₦201,000- ₦300,000, (20.9%) indicated ₦100,000- ₦200,000, (13.6%) got between ₦401,000 - ₦500,000 and (7.3%) of the respondents indicated ₦501,000-₦ 600,000. The mean annual income was ₦250,500This implies that the more income realized by the producer, the higher the productivity leading to high adoption rate of sweet potato production innovations provided that all things being equal. On the other hand, it also shows that the lesser the annual income, the lower the productivity of the crop, thus low adoption of the technologies. Similarly, the positive relationship was in agreement with (Alinor, 2002) because as capital increases, the scales of production are also being enlarged and this translates to more increase in output.

Table 1: Distribution of Sweet potato farmers by their socio-economic characteristics

Socio-economic characteristics	Frequency	Percentage (%)
Age		
21-30	18	16.4
31-40	52	47.2
41- 50	28	25.4
50 and above	12	11
Mean= 35.5		
Total	**110**	**100**

Gender		
Male	92	83.6.
Female	18	16.4.
Total	**110**	**100**
Marital Status		
Single	13	11.8
Married	8779.1	
Widowed 10	9.1	
Total	**110100**	
Educational level		
Non formal education	10	9.1
Primary education	44	40
Secondary education	33	30
Tertiary institutions	23	20.9
Total	**110100**	
Land ownership		
Inheritance	31	28.2
Purchase	68	61.8
Lease 11 10		
Total	**110100**	
Farming experience		
1-10	26	23.6
11-20	44	40
21—30	27	24.6
Non-response 13	11.8	
Total	**110100**	
Farm size		
0.1- 1.0	55	50
1.1- 2.0	37	33.6
2.1- 3.0	18	16.4
Total	**110100**	
Household size		
1- 5	27	24.5
6-10	74	67.4
11-15	9	8.2
Total	**110100**	
Membership of Association		
Member 88	80	
Non-member	22	20
Total	**110100**	
Extension Contact		
Yes	80	77.3
No	30	22.7
Total	**110**	**100**
Access to Credit		
Yes	49	44.5
No	61	55.5
Total	**110100**	
Estimated Annual Income (₦)		
1,000- 100,000	23	20.9
101,000- 200,000	24	21.8
201,000 – 300,000	40	36.4
301,000- 400,000	15	13.6
501 and above	8	7.3
Mean =250,500		
Total	**110**	**100**

Source: field data, 2021

Adoption levels ofagronomic practices of sweet potato production

Table 2Showed the adoption level of agronomic practices of sweet potato production in two L/Gareas of benue State.

Table 2 showed that seed bed preparation had adoption mean score of 3.85 with adoption index of 0.85. This implied that 85% of sweet potato farmers had adopted the recommended seed bed preparation of either using ridges or mounds and not flat bed. It also shows that planting depth had adoption mean score of 4.30 while the adoption index was 0.92. This meant that majority (92%) of sweet potato farmers have adopted the recommended planting.Result on the table 2 shows that correct time planting had adoption mean score of 3.62 with adoption index of 0.70 meaning majority (70%) of the sweet potato farmers adopted the recommended time of planting of sweet potato around late May to June. Table 2 showed that the adoption mean score of 3.48 for recommended 2-node and 5/6-node cuttings technology, while the adoption index was 0.62 this meant that (62%) of them were involved in the adoption process of vine cutting. This was an indication that the majority of the producers are aware of the benefits of using accurate/ adequate sweet potato vine cutting technique. This is in line with (onunka,2011)] who notes that processing vine at both 6 and 10 weeks after planting was recommended for increased generation of planting material and is a worthwhile venture for sweet potato farmers.Table 3 revealed plant spacing had adoption mean score of 1.58 with adoption index of 0.34. This implied (34%) of sweet potato farmers were involved in the adoption process. However, this result showsgreater proportion of the farmers rejected the plant spacing recommended for sweet potato production. The correct spacing is 30cm x 100cm on ridges and 25cm x 100cm on mounds for both sole and intercropped systems. The reason for rejecting this technology by the farmers was that it was too wide and did not enable them to get their envisaged plant population. It is evident from (Mbanaso et al., 2012) who examined the extent of adoption of modern or improved sweet potato production technologies in southeastern Nigeria and found that 79.63% of the sweet potato farmers were aware of the technologies (ranging from land preparation methods like ridging and mounding to timely harvesting), while 20.37% were not. The majority of the farmers had adopted all the improved sweet potato production practices except plant spacing. The use of insecticide on sweet potato for controlling weed had adoption score of 1.90 with adoption index of 0.46 indicating that (46%) were at the adoption stage. Most of the farmers had not widely adopted the use of insecticide on their farms after planting. The reason for not adopting was as a result of high cost of chemicals. Fertilizer application (400 kg/ha, NPK 15:15:15) table 2 also showed that the adoption mean score of fertilizer application at 4-6 weeks of planting was 3.16 while the adoption index was 0.68. This implied that (68%) of them were involved in the adoption process of the fertilizer application. The is an indication that the majority of the producers apply fertilizers in their farms even though farmers may apply different dosages of fertilizer as a result of unavailability and high cost of fertilizer. This is in line with the findings of Tewe, et al. (2012) who reported that all the respondents apply chemical fertilizers to their sweet potato. Earthening-up practice, had adoption mean score of 3.29 with adoption index of 0.72 which revealed that (72%) of sweet potato farmers were at adoption stage. However, stand geometry method had adoption mean score of 3.05 with adoption index of 0.72.this implied (72%) of sweet potato farmers adopted stand geometry. The adoption mean score on pest and disease control measures among sweet potato farmers was 3.58 while adoption index was 0.69 this revealed that majority (69%) of the sweet potato farmers adopted the recommended pest and disease control measures on their sweet potato farm. This corresponds with the findings of Anukworji, *et al.* (2012) that the major economic losses of crops (roots and tubers) occur from plant diseases.Furthermore table 2revealed 4.04 as the adoption mean score of compatible cropping with adoption index of 0.85 thus implied (85%) of sweet potato farmers had adopted the recommended compatible cropping practices. Timely harvest of sweet potato had adoption mean score of 3.64 while the adoption index was 0.76 this implied that majority (76%) of sweet potato farmers had adopted timely harvest of sweet potato root tubers as soon as they mature. This is within the period of 3 to 4 months after planting. However, the main reasons given by farmers for adoption of these agronomic practices include, profitability, easy to handle, cultural acceptance, and it is not labor intensive.

Distribution of respondents according to level of adoption of agronomic practices of sweet potato production

S/No	Sweet potato Agronomic practices	Unaware	Aware	Interest	Evaluation	Trial	Adoption	Rejection	Adoption Mean score
1.	Land preparation	11	8	11	6	0	68	6	3.85
2.	Planting depth	0	13	6	0	0	88	3	4.30
3.	Correct planting	0	20	17	10	0	63	0	3.62
4.	Vine cutting	10	19	11	4	2	42	12	3.48
5.	Plant spacing	13	70	12	0	0	11	4	1.58
6.	Use of insecticides	20	43	12	12	12	8	3	1.90
7.	Pest control	0	30	14	0	0	60	6	3.58
8.	Fertilizer application	8	35	0	8	13	39	7	3.16
9.	Earthening –up	0	37	0	18	10	39	6	3.29
10.	Stand geometry	23	16	4	9	14	36	8	3.05
11.	Compatible cropping	11	8	4	6	0	75	6	4.04
12.	Timely harvesting	0	23	10	14	0	63	0	3.64

Source: field data, 2021

Constraints encountered by farmers in the adoption of agronomic practicesof sweet potato production

Table 3 shows the constraints of adopting agronomic practices of sweet potato productionby farmers. Percentage and ranks order were employed. The findings revealed the most critical constraints was identified as farmers-herders conflict which ranked first.Respondents (80%) identified farmers-herders conflicta as constraint which has caused loss of lives leading to displacement of farmers, destruction of vast expanse of crop farmlands, thereby posing serious threat to food security. (Kasarachi, 2016).While (66.4 %) were constrained by poor access to input and lack of capital which were ranked secondrespectively. This may be due to high cost of inputs and the non -availability of these inputs especially the case of fertilizer which due to the diversion of allocation meant to be distributed to the farmers have made the commodity not to be available for farmers' use and where they are accessed they are sold at very exorbitant prices which most times, are beyond the reach of an average farmer.Majority (64.5%) also identifiedpoor market which ranked third asconstraint. Most farmers do not have available market to sell their produce, thereby selling at a very low price. Farmers were also constrained with poor credit facilities, (61.8%)which ranked fourth, this was because most farmers do not have access to finance or loans, and as a result, depend on their personal finance to carry out farm activities. Thus may be because of the stringent conditions rolled out by loaning institutions like commercial banks and other microfinance agencies, particularly as it borders on the provision of collaterals and the high interest rate charged on loans. This is corroborated by (Okoro and Ajieh, 2015) that inadequate fund, high cost of inputs, poor market and limited access to credit among others hinders farmers from getting the necessary resources and technologies which assist them to produce efficiently and remain in production. Land tenure system ranked fifth with (39.1%) while inadequate contact with extension agents and high cost of labor ranked sixth (34.5%) and seventh (30%) respectively. Over flooding(24.5%) ranked eighth while poor knowledge of sweet potato agronomic practices revealed by (18%) of the respondents as a constraints ranking ninth and least for limitation of the adoption of sweet potato agronomic practice.This is in line with (Ayoola, 2012) who noted that there is poor knowledge of improved production techniques which was caused by inactive extension system. These constraints are believed to have serious negative implication on farmer's production efforts and farm income due to their discouraging effects.

Table 3: DistribEution of Respondents based on Constraints to Adoption of Agronomic Practices of Sweet Potato Production among Rural Farmers in Two Local Government Areas of Benue State, Nigeria

Constraints	Frequency	Percentage	Rank Order
Farmers -herders conflict	88	80	1st
Poor access to input	73	66.4	2nd
Lack of capital	73	66.4	2nd
Poor market	71	64.5	3rd
Poor credit facilities	68	61.8	4th
Land tenure system	43	39.1	5th
Inadequate extension contact	38	34.5	6th
High cost of labor	33	30	7th
Over flooding	27	24.5	8th

Poor knowledge of sweet potato agronomic practices	18	16.4	9th

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*****Multiple responses
Source: Field Survey Data 2021

IV. Conclusion and Recommendations

The adoption of agronomic practices of sweet potato production is a means of improving farmers yield and leading to constant socio-economic development. Majority of the sweet potato farmers have adopted the recommended agronomic practices as a result of high level of education.Out of the 12 agronomic practices listed to the farmers, 10 had means score (X) above 3.0 except for plant spacing and use of insecticides which was not quite impressive. Constraints identified as slowing down adoption of agronomic practices in sweet potato production include farmers-herders conflict, poor access to inputs, lack of capital and poor extension coverage among others. Based on the findings of the study, it is recommended that amicable arrangement should be devised between both parties by seasonally swerving and shifting grounds from time to time.Alternatively, seasonal conferences at the governmental level (local and state) that would encourage dialogue and understanding between farmers, cattle rearer and government. However, extension agents should help farmers to increase adoption of agronomic practices of sweet potato by intensifying sensitization through practical oriented trainings with emphasis on plant spacing and use of insecticides. More so, government should intervene in the problems of high cost and unavailability of farm inputs such as fertilizer and agrochemicals by strengthening the input delivery system of the extension service in order to increase farmer's production and income.

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