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Effect of Agricultural Extension Services on Crop Farmers in Jigawa State, Nigeria

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ABSTRACT

This study analyses the effectiveness of agricultural extension services on crop farmers in Jigawa State. Two objectives and two research questions were formulated. Five Local Government Areas (LGAs) from eight LGAs that make up Jigawa East senatorial zone were randomly selected. A village each was purposively selected based on their level of involvement in agricultural crop production. A total of 235 farmers (household heads) constituted the sample size of the study. Questionnaire was used to collect data from the respondents. Data were analysed using percentages, mean score and t-test. Hypothesis was tested at 0.05 level of significant. The result revealed that significant effect existed on the socio-economic characteristics of the farmers in the State towards increase in crop production also extension services have shown significant effect on farmers crop production thus; the two hypothesis was all rejected. Conclusively, agricultural extension services was found to be effective in the study area and led to increase crop production. Based on the findings it was recommended that the number of extension agents should be increase and adequately motivated. This will enable them to continue rendering their services more effectively and enhance crop production activities in the state.

Keywords: *Agricultural Extension Services, Crop Production, Jigawa State*

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INTRODUCTION

Agricultural extension services have developed around a philosophy of 'helping farmers to help themselves' in the identification and solution of their farm and home problems. Nigeria is basically an agricultural country; about 65% of the population earns their living from agriculture. Majority of the farmers are small scale with landholding generally less than two hectares, fragmented, operated at subsistence level. Mixed cropping is widely practice in which two or more crops are grown together and the system is usually associated with peasant agriculture in the developing countries. Crop production is a science called agronomy which is the branch of agriculture that treat the principle and practice of crop production and field management (John and Warren, 1949). Therefore, better crop production follows application of new discoveries, adoption of new improved machines and breeding of new crop varieties and other input like fertilizers. The level of technology in Nigerian agriculture is relatively low because technologies developed through research and developmental activities are not adequately reaching the peasant farmers (Agbamu, 2005). This situation calls for a virtue extension system that will link the farmers with the research effectively. However, the regular contact required for

achieving this, is highly impaired by very low extension agent (EA) to farm family ratio all over the states across the country (Oladele and Afolayan, 2005). Every aspect of agriculture requires adequate extension services for it to succeed and be sustained. The importance of agricultural extension lies in the teaching of farmers how to raise their own standard of living by adopting innovations and proven technologies in their farming practices. This largely will increase their incomes derivable from farming which subsequently will improve their wellbeing (Van den Ban and Hawkins, 1998). Agriculture in Jigawa State has been predominantly practiced at the traditional level with the majority of the population engaged in that activity. In spite of the new technology of improve farm practices, farmers still make use of simple farm tools which resulted to decrease agricultural output. Despite the fact that a number of Agricultural Development Programmes have been set up by successive Governments in the country, various studies revealed that the rural farmers have not been making use of the recommended new farming practices to its fullest (Omajali, 2001). This is because there has always been a gap between information generation and dissemination to end users. The extension service is a means to fill this gap in communication. The objective of this paper was to determine the effectiveness of agricultural extension services on socioeconomic characteristics of farmers and also determine the effectiveness of extension services on crop farmers in Jigawa State. It is hypothesized that agricultural extension services does not have significant effect on farmers' crop production in the State.

METHODOLOGY

The population for the study comprised all the farmers in Jigawa State. Jigawa State is made up of three senatorial zones namely; Jigawa East, Jigawa West and Jigawa South. Jigawa East senatorial zone was purposively selected based on their level of involvement in agricultural crop production. Five LGAs from eight (8) LGAs that make up the Jigawa East senatorial zone were randomly selected using "hat" drawn random sampling techniques. One village was purposively selected from each of the five selected LGAs. 10% of the respondents were randomly selected for data collection from the population of each village selected for the study. These gave the total sample size of 235 for the study. Data collection was by the use of questionnaire. Farmers responses were rated using four point scale of strongly agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). A mean score of 2.5 and above was taken as an index of acceptance while a mean score below 2.5 was taken as an index of disagreement. Data were analyzed using percentages and mean. Also T-test was used for hypothesis testing at 0.05 level of significant.

RESULTS AND DISCUSSION

The result in table 1 shows 96.1% of farmers agreeing that agricultural extension services encourage younger people to engaged in crop production activities; 95.6% respondents agreed that agricultural extension services led to awareness of improved crop production practices while 94.7% agreed that extension services encourage farmers to expand their crop production activities. Also 92.3% agreed that extension services have led to improvement in agricultural crop production output. This finding agreed with that of Pedro et al. (2008) and Tologbonse et al. (2005) that areas served by extension recorded highest yield in grape production. Farmers responses on the effectiveness on agricultural extension services on crop production indicate mean scores were above 2.5 which is the least level of agreement. This reflected for each of the items in the construct. The aggregate mean score for the items was 3.11 which indicate that respondents were of the opinion that agricultural extension services on farmers socio-economic characteristics in Jigawa State. The observed t-value is 25.701 and it's higher than the critical value which is 1.96 ($P<0.05$). This shows that extension services were effective, positive and significant. Based on this, the stated null hypothesis that agricultural extension services do not have significant effect on farmers' socio-economic characteristics towards increase in crop production in Jigawa State was rejected. In another development, table 2 indicates that 92.2% of farmers agreed that agricultural extension services encouraged farmers to use improved crop varieties; 84.0% respondents agreed that agricultural extension services help them to adopt new innovation related to crop production practices; while 74.3% agreed that extension services encouraged better nutrition, adequate health practices and better housing. Also 88.3% agreed that extension services encourage better use of agricultural input. This finding agreed with Anthony (2007) who argued that agricultural extension covered all areas of agriculture and beyond including techniques of production, farm decision making, marketing, processing, storage, socio-economic as well as cooperatives matters which tended to enhance the status of the farmers. Farmers' responses on the effectiveness of agricultural extension services on crop production revealed that mean score falling above 2.5 which is the least level of agreement. This pattern was reflected for each of the items. The aggregate mean score for the items was 3.04 which indicated that respondents were of the opinion that agricultural extension services on farmers' crop production in Jigawa State were effective and significant. Based on this, the stated hypothesis that agricultural extension services do not have significant effect on

farmers' crop production in Jigawa State is rejected. Pedro et al. (2008) observed that areas served by extension recorded highest in yield in grape production. Furthermore, result of t-test in revealed that agricultural extension services had significant effect on farmers' crop production in Jigawa State. The observed t-value is 17.579 while the critical value is 1.96 ($P<0.05$). The result indicated that extension services have significant effect on farmers' crop production. Thus the hypothesis that agricultural extension services are not effective on farmers' crop production in Jigawa State was therefore rejected. Ayanwuyi et al. (2010) reported that, there was significant in crop yield before and after extension service linked to introduce agricultural practices that assist farmers to effectively use both land and other resources.

Conclusion and Recommendations

Based on the findings of this study, it is concluded that extension services had significant effects on the socio-economic characteristic of the farmers towards increase in crop production because it encourage younger people to engaged in crop production activities, encourage older people to continue crop production practices and the adoption of new innovation. Extension service had significant effects on farmers' crop production in Jigawa State because it helps to increase farmers' income, better nutrition. Better houses and the use of improved crop varieties. Therefore, the following recommendations were made:

1. The extension agents should be adequately motivated through regular payment of their salaries, allowances and provision of mobility among others. This will enable them to render their services to farmers more effectively and enhance crop production activities in the State.
2. More extension agents should be employed to enhance farmers' education and increase the staff strength. As a result of these yield of crops and farmers' incomes would be increased.
3. Extension agents should be given regular training on the improved farm practices so that their knowledge will be improved and be provided with other supportive facilities to enhance their effort in rendering their services.

Table 1 Opinions of the Farmers on the Effectiveness of Agricultural Extension Services on their Socio-economic Characteristics.

S/N	Items	Response Categories				TA (%)	TD (%)	Mean	SD	Remark
		SA	A	D	SD					
1.	Agricultural extension services have encouraged younger people to engage in crop production activities in Jigawa state	89	109	5	3	198 (96.1)	8 (3.9)	3.38	0.625	S
2.	Agricultural extension services have encouraged the older people to continue crop production activities in Jigawa state	45	150	10	1	195 (94.6)	11 (5.4)	3.11	0.581	S
3.	Agricultural extension services has encouraged more families to engage in an agricultural crop production to large labour	130	33	1	1	163 (79.1)	35 (17)	2.96	0.898	S
4.	Agricultural extension have encouraged farmers to pursue literacy programme	59	112	34	1	171 (83.0)	35 (17)	2.96	0.898	S
5.	Agricultural extension services led to awareness to improve crop production practices	80	117	6	3	197	9	3.19	0.862	S
6.	Agricultural extension services have encouraged farmers to expand their crop production activities	64	131	9	2	195 (94.0)	11 (5.4)	3.17	0.704	S
7.	Agricultural extension services have improved the standard of living of farmers in Jigawa state	45	146	12	4	191 (92.2)	16 (7.7)	3.06	0.749	S
8.	Agricultural extension services have encouraged farmers to adopt new innovations in Jigawa state	47	141	12	6	188 (91.3)	18 (8.7)	2.93	0.989	S
9.	Agricultural extension services have led to improvement in agricultural crop production output	63	127	14	2	190 (92.3)	16 (7.8)	3.16	0.716	S

Aggregate Mean Score = 3.11 Field survey 202

Table 2: Farmers opinions on Effectiveness of Agricultural Extension Services on their Crop Production in the State.

S/N	Items	Response Categories				TA (%)	TD (%)	Mean	SD	Remark
		SA	A	D	SD					
1.	Agricultural extension services help farmers to adopt new innovation on their crop production practices in Jigawa state	62	111	30	3	173 (84.0)	33 (16.0)	3.16	0.689	S
2.	Agricultural extension services help to increase the farmers income derived from farming	58	117	18	13	175 (85.0)	31 (15.0)	3.04	0.874	S
3.	Agricultural extension services have encouraged better nutrition, adequate health facilities and better houses	36	117	44	7	153 (74.3)	51 (24.8)	2.85	0.775	S
4.	Agricultural extension helped increase number of farmers crop production	84	106	14	2	190 (92.3)	16 (7.8)	3.25	0.761	S
5.	Agricultural extension services have led to increase in yield of crops	56	136	12	2	192 (93.2)	14 (6.8)	3.06	0.862	S
6.	Agricultural extension services help farmers to make decision on how to use agricultural inputs	38	145	22	2	183 (88.3)	24 (11.7)	3.00	0.637	S
7.	Agricultural extension services have encouraged the use of improved crop varieties	38	152	15	1	190 (92.2)	16 (7.8)	3.06	0.651	S
8.	Agricultural extension services have trained farmers to be leaders in Jigawa state	71	103	27	5	174 (84.5)	32 (15.5)	3.26	0.219	S
9.	Agricultural extension services have helped to trained farmers to be progressive farmers	35	147	21	3	182 (88.3)	24 (11.7)	2.96	0.712	S
10.	Agricultural extension services have encouraged high level of awareness	39	134	27	6	173 (84.0)	33 (16.0)	2.93	0.787	S
11.	Agricultural extension services have encouraged adoption of improved farm practices in large scale production	27	159	18	2	186 (90.3)	20 (9.7)	2.82	0.98	S

Aggregate Mean Score = 3.04, Field survey

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