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ASSESSMENT OF THE EFFECTIVENESS OF LINKAGES BETWEEN THE MAIN ACTORS IN EXTENSION DELIVERY SYSTEM IN DELTA STATE, NIGERIA

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ABSTRACT

The study was designed to test the effectiveness of the linkages between the main actors in the extension delivery system in Delta State. The study sampled 120 farmers. Two cells were selected from five extension blocks making a total of 10 cells and six each from contact and non contact farmers were randomly selected from each of the ten cells. All the 81 extension Administration operating in the Delta North ADP zone were sampled, while Ten (10) administrators were randomly sampled from two innovation centres at five per centre. Descriptive statistical tools were employed in the study. The study found that farmers generally had a low rating for the effectiveness of linkages with the ADP services. About 57% of the farmers scored the extension agents services less than 68% on contact rating. The study concluded that there was no strong linkage that exists among researchers, extension agents and farmers.

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INTRODUCTION

Agriculture remains the bedrock of Nigeria's economic and nutritional development with an estimated 70% of the country's over 140 million people living in rural areas and engaged in agricultural related activities (Chidiadi, 2009). Thus, agriculture provides employment for a large percentage of the nation's population, food for the populace and raw materials for agro-based industries. However, despite the involvement of large percentage of the population in agriculture, the country continues to experience perpetual food shortage and continue to spend the lean foreign reserve on importation of food. The perpetual food shortage is often blamed on ineffective agricultural research policies; lack of continuity in agricultural policies and programmes when there is a change of hand in government, poor implementations by administrators, low quality of extension system and poor linkage system of research, extension and farmers. For agro-technologies to be relevant to local needs, researchers, extension workers, farmers and farm inputs suppliers must play crucial roles in identifying research problems, adapting

the recommendations to local conditions and providing feedback to researchers about innovations that have been developed (Faborode and Laogun, 2008). The lack of close working relationship between national agricultural research and extension organizations, and with different categories of farmers and farm organizations is one of the most difficult institutional problems confronting ministries of agriculture in many developing nations (Swanson, 1998). Research and extension organizations generally compete over the same scarce government resources and frequently, leaders of these institutions do not see themselves as part of a broader system - the Agricultural Technology System (ATS). Instead, they try to increase the flow of resources coming to their respective institutions and to solve day-to-day management problems, rather than ensuring that their respective organizations contribute to the broader goal of getting improved agricultural technology to all major categories of farmers. In addition, the leadership and staff of many research and extension organizations do not appreciate the important roles that farmers and farmers' organizations can play, both in disseminating technology as well as effective feedback mechanisms (Swanson, 1998). The poor inter-organizational relationship between the extension agency and research organization almost guarantees that research results will not reach farmers and if they do, farmers will not be able to use

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them (Adesoji *et al.*, 2006). It is against this backdrop that this study assesses the effectiveness of linkages between the main actors in extension delivery system in Delta State, Nigeria.

Objectives of the study

The broad objective of this study was to assess the effectiveness of the linkages between the extension agency and innovation centres in extension delivery system in Delta State. The specific objectives of the study were to.

- (a) Assess the effectiveness of the linkage between the ADP and innovation centres in the development and dissemination of agricultural technology in the state.
- (b) Examine the communication channels within the service agencies in state
- (c) Identify characteristics of beneficiaries of linkage System

Methodology

This study was carried out in Delta State of Nigeria. The population of the study consists of researchers from two Research institute at five per centre. The centers are Department of Economics and Extension Delta State University (Asaba campus) and Moore plantation, Ibadan, and extension personnel in extension agencies in Delta state and arable farmers.

Sampling procedures and technique

Two research institutes were randomly selected for the study because their mandate covers agricultural activities. Simple random sampling technique was used to select 10 researchers. They cover various categories of researchers in the research institutes that have been involved in linkage activities. Simple random sampling technique was used to select 80 extension agents from the ADP in the state. There were numerous farmers groups in the study area, only 120 of the groups were considered viable among those registered with the ADP because they meet on regular basis. Questionnaires and interview schedule were used to elicit information from researchers/extension agents and farmers respectively

Measurement of variables

Linkage services: Respondents indicated the names of collaborators involved in the linkages, the kind of relationship existing between them and the collaborators as well as the farmers.

Data analyses

Data collected were subjected to descriptive statistical analyses. The descriptive statistical analysis includes the use of tables, charts, frequency distribution, percentages and means were used to analyze data collected on the socio-economic characteristics of the respondents, effectiveness and frequency of linkage systems.

RESULTS AND DISCUSSION

Effectiveness of contact between extension agency and farmers in Delta State

Figure 1 shows that 43.3% of the farmers had contact once in 2 weeks, 22.5% of respondents had contact once in 4 weeks,

14.2% had contact once a week, 11.7% had once in 5 weeks, 2.5 % contact once in 3 weeks while 5.8% of the respondents never saw the agents for a long time. This implies that the contact level was poor. This is because ideally under the training and visit (T&V) arrangement, farmers are expected to be visited at least once in two weeks.

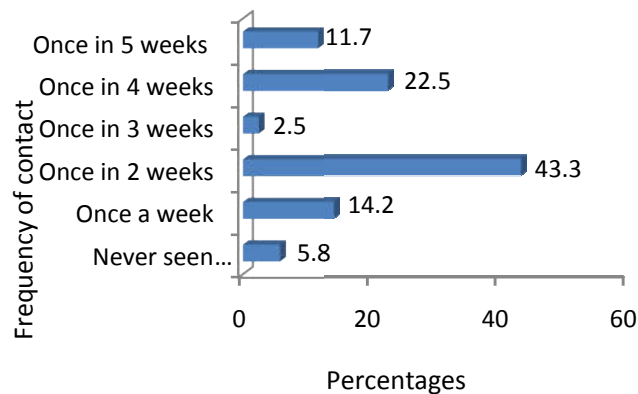


Fig 1. Frequency of contact between extension agents and farmer

Number of visits by extension agents to farmers during 2009 cropping season

Data in Table 1 shows that 32.5% of respondents were visited more than 18 times in the last farming season, 24.2% were visited 16-18 times, 11.7% were visited 10-12 times, 10.8% were visited 4-6 times, 6.7% were visited 7-9 times, 5.8 visited 13-15 times while 6.7% were not visited at all during the last farming season. This implies that the number of visits by the extension agents is very poor. With the T& V system of extension delivery, the extension agents are to educate, train and visits the farmers more often to relate innovations and also help to solve their problems.

Table 1. Number of visits by extension agents to farmers during 2009 cropping season (N =120)

Frequency of visits	Frequency	%
No visits	8	6.7
1-3	2	1.7
4-6	13	10.8
7-9	8	6.7
10-12	14	11.7
13-15	7	5.8
16-18	29	24.2
More than 18	39	32.5

Level of farmers' satisfaction with extension visits

Table 2 shows that 90.9% of the farmers were satisfied with the extension agents contact while 9.1% were unsatisfied. Most of the farmers (90.9%) are satisfied with the level of contact by extension agents. Only 9.9% of the farmers were not satisfied with the contact. The study finds a good level of satisfaction of contact between the farmers and extension agents in the state.

Farmers score of effectiveness of contact with extension agents

Entries in Table 3 show farmers score on the effectiveness of their contact with extension agents. Their scoring of the

effectiveness of the extension agents was obviously skewed in favour of its being effective. About 44.0% of respondents indicated that their contact was effective, 36.7% said it was partially effective while the remaining 19.3% said it was ineffective.

Table 2. Level of farmers satisfaction with extension visits (N =120)

Opinion	Frequency	%
Very Satisfied	56	46.7
Satisfied	53	44.2
Unsatisfied	7	5.8
Very unsatisfied	4	3.3

Table 3. Farmers score of effectiveness of contact with extension agents

Effectiveness of contact	Frequency	%
Effective	52.8	44.0
Partially effective	44.0	36.7
Ineffective	23.2	19.3

Farmers rating of effectiveness of contact with extension agents

The farmers were required to score on a 1-100% scale the effectiveness of their contact with extension agents. The study found a rather low rating of contact between farmers and extension agent in the state (Table 4). The farmers however were satisfied with this level of contact and stated that the contact was effective. The implication of this finding is that an increase in the frequency of contact between farmers and extension agents will definitely translate into increase effectiveness of contact between extension agents and farmers.

Table 4. Farmers rating of effectiveness of contact with extension agents (N =120)

Category	Frequency	%	Mean
1-9	25	20.8	
10-19	0	0	
20-29	8	6.7	
40-49	24	20.0	64.5
50-59	20	16.7	
60-69	8	6.7	
70-79	27	22.5	
80 and over	8	6.7	

Frequency of contact between extension agents and research centres

From Table 5, few (22.2%) of the extension agents visited research centres 10-12 times during the last farming season, 11.1% visited 1-3 times, 7.4 % visited 4-6 times, 7.4 also visited more than 18 times, and 4.9 visited 7-9 times, while majority of the respondents (46.9%) had no visits. This implies that the extension personnel visits to research centre are not enough so there is need for frequent visits in order to be informed and educated on new technology development.

Extension agents perception of being involved in programme design at the Research Centre

Table 6 shows that 82.7% of the respondents are willing to get involved in programme design at the research institute if contacted while 17.3% of the respondents shows no interest in

their involvement in programme design at the research centres. This implies that majority of them are willing to get involved if contacted, also if distance and cost of travelling down to the centre constraints is solved.

Table 5. Frequency of contact between Extension Agents and research centres (N =81)

Categories	Frequency	%
No visits	38	46.9
1-3	9	11.1
4-6	6	7.4
7-9	4	4.9
10-12	18	22.2
13-15	0	00.0
More than 16	6	7.4

Table 6. Extension agents perception of being involved in programme design at the research centre (N =81)

Categories	Frequency	%
Very important	37	45.7
Important	30	37.0
Not important	6	7.4
Not necessary	8	9.9

Effectiveness of contact between EA and research centres centre

Table 7 shows that 16.0% of the respondents believed their contact with the research centres was ineffective with their score ranging from (1-9). 14.8% shows their effectiveness of contact falls from 20-29, 29.6% also indicated their effectiveness to be 40-59, and 14.8% also indicated the effectiveness of contact with the research centres. 6.2% scored 10-19, while 11.1% scored their effectiveness of contact within 60-79. This indicated that their contact with the research centres was insufficient. It implies that without a close link between agricultural extension and research, feedback from the field, research becomes excessively academic and does not relate to farmers real problem (Benor and Harrison, 1984).

Table 7. Effectiveness of contact between EA and research centres centre (N =81)

Categories	Frequency	%	Mean
1-9	13	16.0	
10-19	5	6.2	
20-29	12	14.8	
30-39	6	7.4	
40-49	12	14.8	44.5
50-59	12	14.8	
60-69	3	3.7	
70-79	6	7.4	
80 and above	12	14.8	

Extension agents rating of contact with research centres (N =81)

The scoring of effectiveness of contact was obviously skewed in favour of it being effective with majority of them (40.7%) indicating that it was effective (Table 8). This was, however expected. The reason for this was not far-fetched. No individual given the opportunity would rate his performance low for whatever reason. This is often one of the limitations of self-rating instruments. The conclusion was that the agents felt against evidence suggesting to the contrary, that their contact

was effective. Given the fear often expressed by workers usually that of loss of job and that information provided will be used against them.

Table 8. Extension agents rating of contact with research centres (N =81)

Categories	Frequency	%
Excellent	33	40.7
Very excellent	19	23.5
Only marginally effective	17	21.0
Ineffective	0	00.0
Very weak	0	00.0
Non-existent	12	14.8

Researcher's rating of contact with extension agents

As done with the extension agents, the research centres were also asked to rate their contact with the extension agents in the state. The responses are presented in Table 9. As the data in the Table show, 30% of the respondents were of the opinion that it was effective, while 60% had a contrary view. In fact, 10% indicated the non-existence of contact with the extension agents. This implies that their contact is very weak. The study finds that there is a gap between the extension agency and the research centres. This implies that without a close link between agricultural extension and research, feedback from the field, research becomes excessively academic and does not relate to farmers real problem (Benor and Harrison, 1984). This implication is that they need a situation where the arrangement is restructured.

Table 9. Researcher's Rating of contact with Extension Agents Centre (N =81)

Categories	Frequency	%
Excellent	0	00.0
Very excellent	3	30.0
Only marginally effective	0	00.0
Ineffective	4	40.0
Very weak	2	20.0
Non-existent	1	10.0

Contact between farmers and research centres in extension delivery

Several items were included in the instruments administered on the researchers' to elicit valid data that would provide an answer to this research question. Firstly the officers were asked if they would have liked to go directly to farmers to solve their farm problems. Majority (90.0%) of them said yes while (10.0%) of them said no (Figure 2). This implies that the officers are willing to be involved with the farmers if given the opportunity. Therefore if proper arrangement is done in terms of cost of travelling on the area of transportation, the gap will be occupied.

Table 10. Researcher's perception of being involved with farmers at the farm level (N=10)

Categories	Frequency	%
Very important	4	40.0
Important	5	50.0
Not Important	0	00.0
Not necessary	1	10.0

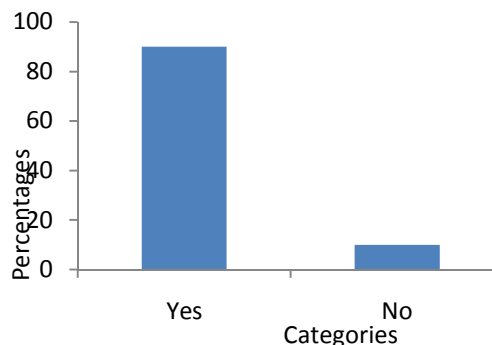


Fig 2. Would you have liked to go directly to the farmers to solve their problems?

Researcher's perception of being involved with farmers at the farm level

Secondly, the officers were requested to provide information on their perception of being involved with farmers at the farm level. Data in Table 10 shows majority (90.0%) of the officers perceived their involvement as very important. Few (10.0%) were of the opinion that their perception was not being necessary while none of them indicated their opinion of not being important.

Researchers' description of contact with the farmers

The officers were required to describe their contact with the farmers; their views are presented in Table 11. Again their responses were as expected: 40.0% were of the view that their contact with the farmers was very weak, 20.0% also indicated that their contact is very effective, 20.0% says it is only marginally effective while 20.0% shows the non-existent of contact between the research centres and farmers in the state. The study finds no contact between the research centres and farmers in the state. The researchers were willing to have contact with the farmers in the state if given the opportunity.

Table 11. Researchers' description of contact with the farmers (N=10)

Categories	Frequency	%
Very effective	2	20.0
Only marginally effective	2	20.0
Ineffective	3	30.0
Very weak	1	10.0
Non-existent	2	20.0

Conclusions and Recommendations

Result on effectiveness of contact reveals a rather low frequency of contact between farmers and extension administrators in the state. It also found that there is gap between the extension agency and the researchers while the researchers had no contact with the farmers. There were no good linkages between researchers and extension agents as well as between the extension agents and farmers. The lackluster performance of agricultural extension in Delta State has been an ongoing concern of researchers and professionals in agriculture. Extension has been in crisis in the state partly because of states contrived fiscal crisis and budget constraints and partly because of the lack of well articulated policy on agriculture that would have given a sense of purpose and direction to the effort of the states Ministry of Agriculture and Natural Resources.

Based on the finding of this study, it is recommended that:

- Government should design policies and form a regulatory and coordinating body that would be monitoring the activities of the researchers and extension administrators. In this role, the ministry would work out linkages and networks with research institutes, universities, donor intervention agencies and NGOs who might be interested in providing funds, staff training programmes, technical assistance logistical support or any form of assistance through collaboration with Ministry of Agriculture and Natural Resources. This will update and up-grade the knowledge, attitude and skills of these extension workers thereby making them remain competent and confident.
- Effort should be made by the ADPs and research centres to have a frequent contact on any new research made.

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