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AGRICULTURAL COOPERATIVES AND RICE PRODUCTION TECHNOLOGIES IN INI LOCAL GOVERNMENT AREA, AKWA IBOM STATE, NIGERIA

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Abstract

The increasing demand for rice by a large population of Africans requires that rice production must improve. In Ini Local Government Area, Akwa Ibom State, Nigeria the natural endowments support rice production such that every farmer produces rice at least at subsistent level over decades ago. This necessitates a study to assess the extent to which Agricultural cooperatives carryout the training of farmers on improved rice production technologies in Ini Local Government Area of Akwa Ibom State, Nigeria in 2012. Research questions and hypotheses were formulated to guide the study. A descriptive survey design was adopted for the study. The study population comprised 2500 male and female rice farmer cooperators in the study area. Simple random sampling technique was used in selecting 1600 members of rice farmer cooperators. The instrument used for data collection was questionnaire. The instrument was subjected to reliability test using split-half

approach and reliability coefficient of 0.76 was obtained. Mean was used to answer the research questions. The results showed that rice farmers were not properly trained on rice production, processing and storage technologies by Agricultural cooperatives. Hence, Agricultural cooperatives should train rice farmers on rice production, processing and storage in the study area. The findings would also help the Agricultural cooperatives to incorporate relevant instructional strategies that would enhance sustainable rice production in local rice producing areas in Africa.

Rice is the most rapid growing food source in Africa. It is essential for food security, poverty alleviation and improved livelihoods by enhancing the socio-economic profile status. Today, rice availability and acceptability cut across all cultural boundaries and is a food item that many people count on for their daily meals. In some areas, there is a long tradition of rice cultivation and certainly become part of everyday diet of many Nigerians of all ages. However, commercial production of rice is facing many constraints in many parts of Africa. Among the constraints are levels of production and processing technology, poor soil fertility, natural and human disasters such as drought, flood and land degradation.

These account for high import magnitude and dependence on food aid by most African countries thereby posting a huge problem on food security (Iheke et al, 2010). Moreover, rice policy in Nigeria is characterized by inconsistency, shifting between open and protectionist trade policy and such change hinder the ability of stakeholders to develop long term strategies for the growth of the sector. Hence (WARDA, 2008) noted that Nigeria is the world's second largest importer of rice in the world after Philippines. Import of this magnitude reflects a major hindrance to the sustainable development in the rice sector in Nigeria.

Yet, Nigeria has the potential to improve rice production and processing technologies through adoption of modern rice technologies. And also the motivation of rice farmers by providing loans, provision of subsidized farm inputs, intensify training through Agricultural extension officers and assistance from Women in Agriculture and Agricultural co-operative societies.

Agricultural co-operatives exist across a broad membership in Nigeria with some having less than twenty members and others with over 10,000 (Delman, 2011). Most of the assistance by agricultural co-operatives do not seem to assist the farmers to gain the required knowledge and skills across rice growing areas in Nigeria. The study carried out in Nigeria by Akpokodje, Lancon and Ernestian (2003) in 42 villages showed that rice producing households typically had a limited capital base and 83% of

the households owned no significant agriculture equipment. At present Agricultural education experts and the members of Rice Farmers Association are concerned about training for improving rice production capacity.

So far rice production in Ini Local Government Area is characterized by low level of inputs supply, poor grain quality, low yield, pests and diseases.
Hence, this study was undertaken with the following objectives;

(1)' Determination of the extent to which agricultural cooperatives carryout the training of farmers on rice nursery preparation technologies for improved production in Ini Local Government Area. (L.G.A).

(2) Assessment of the extent to which agricultural cooperatives carryout the training of Farmers on rice field management technologies in Ini. (L.G.A).

(3) Evaluation of the extent to which Agricultural cooperative carryout the training of farmers on rice processing technologies in Ini (L.G.A).

(4) Determination of the extent to which Agricultural cooperatives carryout the training of farmers on rice storage technologies in Ini. (L.G.A).

Statement of the Problem

Imported rice is increasingly demanded by a large population of Africa because of its relatively high quality. This could be discouraged by training the local farmers to embark on both quality and large scale production of rice since rice production demands that farmers acquire basic rice production, processing and storage technologies.

However, Agricultural cooperatives apparently offer limited training to rice farmers in the study area but focus more on acquisition of loan and credit facilities to their members. Currently, the rice farmers in Ini Local Government Area embark on small scale production with attendance poor grain quality despite decades of their involvement in rice production in south –south zone Nigeria. Hence, the farmers need training in scientific rice husbandry methods. On this background this study becomes necessary.

Significance of the Study

The findings of the study would help adult farmers in the study area be exposed to different training programmes in rice production, processing and storage. Most importantly, the study would provide data and information to trainers of cooperative members who will incorporate relevant instructional strategies to enhance meaningful acquisition of training skills by members. Similarly, the findings would hopefully benefit the extension agent and subject matter specialists in agricultural cooperatives to ensure improvement upon rice production, processing and storage therefore making Nigerian rice adequate and attractive to consumers.

Research Questions

i.   To what extent do Agricultural cooperatives train farmers on rice nursery preparation technologies in Ini Local Government Area (L.G.A).

ii.   To what extent do Agricultural cooperative train farmers on rice seedlings transplanting technologies in Ini L.G.A.

iii.   To what extent do Agricultural cooperatives train farmers on rice field management technologies in Ini L.G.A.

iv.   To what extent do Agricultural cooperatives train farmers on rice processing technologies in Ini L.G.A.

Research Method

Design of the Study: The ex-post factor survey design was used for this study.

Area of Study: The study was Ini local Government Area of Akwa Ibom State. The state lies within (04^0 50^1 - 05^0 20^1S: 07^0 16^1 - 08^0 10^1E). The study area has a long history of rice cultivation. Over 90% of the inhabitants have a plot of either upland or swamp type rice or both. Above all, rice production in the study area is enhanced through farmer cooperatives society by way of assisting the farmers to procure inputs and have assess to loans.

Population of the Study: A population size of 2500 cooperative members was involved in the study (Membership Register of cooperators 2010).

Sample and Sampling Technique: Stratified random sampling technique was used to select respondents for the study. The sample size consisted of 1600 rice farmers (64% of the population). Equal number of male and female rice cooperators (800 males and 800 females) was used.

The clans and the sample size under study were Itu Mbonuso (339), Ikpe (408), Nkari (329), Iwere (292), and Odoro Ikono (232). A total of fifteen villages were sampled acrossed the five clans.

Instrumentation

A structured questionnaire comprised of six sections A to F. The values attached to the response scale of the questionnaire were very great extent (4), great extent (3), low extent (2) and not at all (1). The mean for the value = 4+3+2+1 = 10/4 =2.50.

Decision Rule

Any item with weighted means below 2.50 was regarded as low extent indicating that the farmers are not trained by the Agricultural cooperatives.

Reliability of the Instrument

The reliability of the instrument was calculated using Cronbach Alpha coefficient and a reliability index of 0.70 was obtained.

Administration of the Instrument

The instrument was administered to the respondents with the help of Agricultural extension workers and Research assistants. A total of 1600 questionnaire were administered and retrieved in March 2012.

Method of Data Analysis

The research questions were answered using mean statistic.

Results

Table 1: Mean Rating of the Extent of Influence of Agricultural Cooperatives on the Training of Adult Farmers on Rice Nursery Preparation Technologies in Ini Local Government Area

S/N	Training of adult farmers on rice nursery preparation technologies	$\overline{X}$	Remarks
1.	Exposing farmers to the technique of nursery seed preparation	2.48	L. E
2.	Assisting farmers in broadcasting of pre-germinated seed	2.42	L. E
3.	Exposing the farmer to the techniques of seed soaking.	2.41	L. E
4.	Training the farmers on different methods of manure and chemical fertilizer application.	2.36	L. E
	Total	2.42	

LE = Less Extent

The above table 1 addresses research question that seeks to find out the extent of training carried out by Agricultural cooperatives to the adult farmers on rice preparation technologies for improved production in Ini Local Government Area.

The mean values for item 1-4 are less than average rating point of 2.50. This implies that adult farmers are not properly trained by Agricultural cooperatives on rice nursery preparation technologies for improved production in Ini Local Government Area.

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Table 2: Mean Rating of the Extent of Influence of Agricultural Cooperatives in the Training of Farmers on Rice Seedling Transplanting Technologies in Ini L.G.A.

S/N	Training of adult farmers on rice nursery preparation technologies	X	Remarks
1.	Exposing farmers to the technique of seedling uprooting.	2.34	L. E
2.	Training farmers on the techniques of seedling handling.	2.47	L. E
3.	Training farmer on the recommended seedling stage for transplanting.	2.43	L. E
4.	Training farmers on the pre field operations prior to transplanting.	2.39	L. E
	Total	**2.41**	

LE = Less Extent

Table 3: Mean Rating of the Extent of Agricultural Cooperatives on the Training of Farmers on Rice Field Management Skills in Ini L.G.A

S/N	Training of adult farmers on rice nursery preparation technologies	X	Remarks
1.	Exposing the farmers to different water management techniques.	2.34	L. E
2.	Enlightening the farmers on the proper rate of fertilizer application.	2.49	L. E
3.	Training the farmers on the different methods of weed control.	1.99	L. E
4.	Assisting the farmers in the techniques of thinning	2.50	L. E
	Total	2.33	

LE =Less Extent

Table 3: shows that the mean values are less than the average rating point of 2.50. This indicates that Agricultural cooperatives influence the training of adult farmers on rice field management skills on less extent

Table 4: Mean Rating of the Extent of Agricultural Cooperatives on the Training of Adult Farmer's on Rice Processing Skills

S/N	Training of adult farmers on rice processing skills.	X	Remarks
1.	Exposing the farmers to the techniques if winnowing.	2.37	L. E
2.	Enlightening the farmers on the different parboiling techniques	2.42	L. E
3.	Exposing farmer to the different techniques in drying.	2.48	L. E
4.	Enlightening the farmers on the usage of common milling machines	2.38	L. E
	Total	2.41	

LE = Less Extent

Table 4: This shows that agricultural cooperatives influence the training of farmers on rice processing skills for improved production on less extent. This means theat farmers are not properly trained by Agricultural cooperatives on rice processing skills for improved production in Ini Local Government Area.

Discussion

Results of data analyses revealed that adult farmers are not properly trained by Agricultural cooperatives on rice nursery preparation, transplanting of seedlings techniques, field management skills and processing in Ini Local Government Area.

The findings of the study go in line with that of Morris (2001) that a farmer who fails to raise rice seedlings properly incurs losses especially when the swamp rice variety is used. Agricultural cooperatives can invite extention officers and other personnel to teach the farmers as a group on this method.

Furthermore, the rice farmers are not adequately trained by Agricultural cooperatives on rice seedling transplanting skills for improved production in Ini Local Government Area. In support of this finding, Varamani (2010) contended that in the rice intensification system proper spacing in the planting of seedling is one of the most essential principles although farmers often find it difficult to mark the recommended spacing of 25cm by 25cm. Agricultural cooperatives can equally invite qualified personnel to train their members in the skills required of proper transplanting of rice seedlings.

Rice field management suffers a great deal in the study area. Influence of Agricultural cooperative is not felt in this direction. The findings also go in line with the work of Kebbeth, Haefele and Fagade (2003) that only a fraction of the farmers in Nigeria were reported to use modern techniques in rice production. Although, method of growing rice differ greatly in different localities but in most developing countries the traditional hand methods cultivating and harvesting rice are still practised (Ward, 2008). The study also goes with the findings of Castillo, Sinohin, Guerra, Berg, Pampolino and Buresh (2010) that one of the most important yet very expensive inputs on rice farming after land preparation is fertilizer; Yet fertilizer use by farmers is often inefficient and inadequate.

Agricultural cooperatives are well placed to help farmers learn the relevant skills in field management by inviting Agricultural personnel to teach the rice farmers with cost collectively paid by the farmers. Rice processing skill acquired by the farmers is still inadequate. This is explained by Udo et al (2005) that many farmers still use traditional method of processing rice instead of using machines available at the nearest rice mill as the hand method is tedious. Agricultural cooperatives should play a great role not only helping farmers to jointly purchase the facilities needed but also to acquire the skills needed in operating the machines.

In addition, rice storage skill is not properly acquired by the farmers. The findings of the study support that of Ajakaije (2009) that absence of storage facilities is as disastrous as a crop failure in the field.

Agricultural cooperatives can train the members in the skills of setting their rice product to have minimum moisture content, remove all impurities, have acceptable appearance as well as marketing them in attractive bags. All these help in improving the acceptability of the Nigerian rice.

Education Implications of the Findings

The implication of the findings to Agricultural education is that rice production, processing and storage can be improved through adequate training by the Agricultural cooperatives. Such training will boost the economic development of African states and minimize dependency on imported rice.

Conclusion

It is concluded that Agricultural cooperatives contributed inadequately to the training of adult farmers on rice production, processing and storage in Ini Local Government Area, Akwa Ibom State, Nigeria.

Recommendations

(1)   Agricultural cooperatives in Akwa Ibom State, Nigeria should train farmers on improved rice production, processing and storage.

(2)   The Government of African states and other organizations should encourage and support Agricultural cooperatives by providing modern materials and adequate funding under strict supervision to enable them perform their Primary assignment creditably.

(3)   Extension Agents should check regularly the activities of the farmers while rice farmers should be registered liberally as Agricultural cooperators.

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