EFFECT OF FARMERS ORGANIZATION ON AGRICULTURAL TECHNOLOGIES DEVELOPMENT IN AFIJIO LOCAL GOVERNMENT AREAS OF OYO STATE, NIGERIA

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Abstract
The study assessed the influence of farmers cooperative organizations on agricultural technologies in Afijio Local Governments Areas, of Oyo State, Nigeria. Data were collected through a multi stage random sampling technique from one hundred cooperatives farmers with the used of questionnaire. Result of the study revealed that majority of the members and non – members of the farmers organizations (63.3%) were young and middle age persons ranging from 21 – 40 years old with a very few old men (6.7%). Most of the members 46.7% had formal education while 67.5% of the non – members had no formal education. The findings also revealed that the level of agricultural production (yield) of members of the farmers organizations 53.3% was higher than that of non – members 27.5%. Hypotheses testing on the personal characteristics of members and non – members of farmers organization at ($P \geq 0.05$) significant level showed that there were no significant relationships between members personal characteristics and membership in farmer cooperatives, however significant relationship exist between the level of production (yield),education,social participation and membership of cooperative organizations at ($P > 0.05$). The study recommends among other things that the government should take into cognizance the morale booster for cooperative organizations through low interest rate on loan facilities, empowering the farmers cooperatives to perform through legislative control and reaching out to the Nigeria small farmers through their organizations, this will ensure greater involvement and participation of more rural farmers in agricultural development programmes.

Keywords: Assessment, Farmers, Cooperative, Agriculture, Development

Introduction

For several decades ago, African leaders have repeatedly made policy pronouncement on the key role of agriculture in the continent economic and development, and African policy makers have recognized that the road to effective agricultural development goes through rural development. Indeed, development programmes in agricultural sector have often used agricultural development and rural development as synonyms. Agricultural development programmes usually aim at increasing production and therefore growth oriented, with the understanding that such growth will eventually induce rural development, C.T.A (1995).

Federal Ministry of Agriculture and Rural Development of Nigeria (2003), sees rural development as "a system of services, multipurpose in nature and all embracing in scope, which is directed at a number of targets. It involves the sequential and simultaneous of all cooperant variables which rural communities need for their mobilization and well being. The pertinent variables include the level of employment, income resources inputs, infrastructures, information and communications, marketing and accommodation.

The cooperative movement stressed the ideology of self – help through communal efforts by the members in promoting their social cultural and economic interest cooperative organization, especial that of agriculture is used as a means of social and economic development at the rural area. Farmers organizations among other things have always been in the fore front of providing the peasant farmers the technical know how and improved methods of farming through the provision of modern technology and the required support that will enhance agricultural production and the development of the rural areas (Samavia, 2002).

Alao (1981) posited that farmers organizations helped to transformed the traditional agriculture to elicit the desired improvement on agricultural production.

In recent years, considerable efforts and interest have been shown by people from all walks of life in the economic development of the rural areas through cooperative organization. As a matter of fact, the government, international organizations and research scientist have shown increasing concerns that are culminating in a crusade for solving the problems of agricultural technology (Abell, 2004). It has also been established that food production problems is not expanding fast enough to supply the growing population of the country. This calls for a proper attention to food production problems which can be solved through cooperative activities (Gertler, 2001). This local governments area has a large number of cooperative organizations which aims among others include the improvement of the living standard of members and their production capacity (Oyeyinka and Fapojuwo, 2011). It is in this context that the study intend to assess the role performance of cooperative organizations to agricultural technology in the study area.

Objective of the study

The general objective of this study is to determine the effect of farmers organizations on agricultural technologies in Afijio Local Government Area of Oyo State, Nigeria.

Specifically the study attempted to, (1) describe the personal characteristics of farmers organizations members and non – members. (2) determine the effect of membership of farmers organization on the level of production (3) ascertain the effect of membership of farmers organizations on agricultural technologies. (4) generate data and findings that will serve as a frame – work for formulating new and better policies for farmers organizations in the study area.

Hypotheses of the study

The hypotheses of the study is stated in the null form, as follows:

Ho_1 There is no significant relationship between some selected personal characteristics and membership in farmers organizations.

Ho_2 There is no significant relationship between membership in farmers organizations and level of production.

Ho_3 There is no significant difference between members of farms organizations and non – members in their level of agricultural technologies.

Significance of the study

There is need to improve agricultural productivity beyond the present traditional means, to achieve this require, the provision of complementary services which act as a pre – requisites for sustainable agricultural development. Farmers organizations can be used for instance to tackle efficiently the problems of agricultural technologies and guaranteed higher yield through improved production practices (Royer, 2005).

This research work will give us an indepth study of the farmers organizations and their effect on agricultural innovations in Afijio Local government areas of Oyo State, Nigeria. It is also hoped that this findings will revealed the degree of government assistance to farmer organizations on agricultural technologies in the area of study.

Methodology

The study was conducted in Afijio Local Government Area of Oyo State, Nigeria. The local government came into being in the year 1989, with its administrative headquarters located at Jobele. The strategic location of the local government which is within the thick forest zone in the central part of Oyo State, makes it one of the most viable in the conduct of research work on agricultural production (Oyeyinka and Fapojuwo, 2011). Afijio Local Government Areas have a population of 42,805 (2006 provision census) figure, and it covers a land mass of about 800 square kilometer. The local government in bounded in the North by Oyo East local government area, to the South by Akinyele, to the West by Iseyin and to the East by Ejigbo and Iwo local government areas of Osun State. The local government area can

be said to be both semi – urban and rural based council. This necessitate the choice of the area because of the agrarian and rural nature of the community. The local government comprise of about ten (10) communities. Some of the communities are Awe, Akinmoorin, Ilora, Imini and Jobele etc. Many of these communities lack social amenities like pipe borne water, electricity, health centres, good road network to mention but just a few.

Afijio local government area has been selected for this study because of its contribution to agricultural development in Oyo State due to its vast and enormous fertile land. Farmers in this area of study were among the pioneer of cooperative organization in Oyo State. Today, the farmers organizations have been intensified in the area of study to produce agricultural crops like maize, melon, ground nut etc.A multi – stage random sampling techniques was used in the selection of the sample size for the study. The first stage involved the selection of four (4) communities randomly from the ten (10) communities into which the local government is divided into, that is (Awe, Ilora, Jobele and Fiditi), second, four (4) farmers organisations were purposively selected from each of the communities and thirdly five (5) members from each groups in the area, making a total of eight (80) members for the study. To select the sample for the non – members ten (10) respondents was purposively selected from each of the four (4) communities into which the study area was divided into, this gives a total of forty (40) respondents. A total of 120 respondents was interviewed, however 100 participated in this study, this gave a response rate of 83.3%.Primary data were collected through structured questionnaires and interviews schedule which was administered to members and non – members of farmers organizations. The secondary source of data was collected from records, books, journals from the ministry of commerce, industry and cooperatives in the study area. A test re – test reliability co efficient of r = 0.78 was obtained when the instrument was tested for reliability. Also the instrument was subjected to cogent validity test to show the representativeness of the various items used. Data collected were analyzed using chi – square and t – test.

Results and Discussion

Personal characteristics of the respondents.

Table 1 indicates that a higher percentage of the members of farmers organization (70%) and non – members (72.5%) were males, while the female constitutes (30%) of members and (27.5%) of non – members. This justified the fact that males, are the head of the household, and they have more time for associative activities than the females who are engaged in domestic activities in the home. The table also shows that, there is a normal age distribution among members and non – members. The modal class of 30 – 40 years, accounts for 50 % of members and 45% of non – members. The implication of having many youths as a member of farmer's organizations was that young people are needed in the agricultural activities of the organization which older people will not be able to perform. The result further revealed that a fairly high percentage of both members (75%) and non – members (50%) were married. This shows that married people were more committed to the agricultural activities of farmer's organization. The table shows that Islam has the highest population of both members and non – members (66.7%) and (55%) respectively. This is followed by Christianity with (23.3%) members and (30%) non – members. The traditionalist has the least population of (10%) members and (15%) of non – members. This result supports the principle of cooperative society which stated that cooperatives are religiously neutral. The educational background shows that (16.7%) of members and (42.5%) of non – members have no formal education. The table also shows that most of the members (46.7%), had primary, secondary and tertiary education, while (32.5%) of the non – members had similar level of education. The results further shows that (41.7%) of members and (50 %) of non – members have between 6 – 10 family members. The implication of this is that members and non – members with a large number of children may contend with the problem of labour supply, since they can use the labour provided by their children and spend less on hired labour. However, such members would commit a large amount of farm produce which ought to have been sold for money to family use and this will reduce their income level and make them poorer. The significance of group membership for this study accounts for the realization that groups are possible avenue for mobilizing the farmers for effective role on agricultural technologies adoption.

Sources of Income and mode of sales of agricultural produce

Table 2 indicates that members of the farmers organization (66.7%) secured loan from their organization for their agricultural activities while non – members (62.5%) depended highly on money lenders, who exploited their ignorance. However financial assistance from government was dwinlled for members (3.3%) and non members (12.5%). This affects the productivity of the farmers generally, since funds were needed for the purchase of input and chemicals for the general up keeping of the farms.

Table 1: Distribution of Respondents by their Personal Characteristics, n = 100

	Members of Farmers Organization		**Non – members of Farmers Organization**	
Variables	**Frequency**	**Percentage**	**Frequency**	**Percentage**
* **Gender**				
Male	42	70	29	72.5
Female	18	30	11	27.5
* Age				
Below 20	2	3.3	3	7.5
20 – 30	8	13.3	6	15
31 – 40	30	50	18	45
41 – 50	16	26.7	10	25
Above 50	4	6.7	3	7
* **Marital Status**				
Single	10	16.7	12	30
Married	45	75.0	20	50
Widowed	05	8.3	06	20
* **Religion**				
Christianity	14	23.3	12	30
Islam	40	66.7	22	55
Traditionalist	06	10	06	15
* **Educational Level**				
No formal education	10	16.7	17	42.5
Adult Literacy	22	36.7	10	25
Primary Education	20	33.3	08	20
Secondary Education	04	6.7	03	7.5
Tertiary Education	04	6.7	02	6.0
* **Family Size**				
5 and below	13	21.7	06	15
6 – 10	25	41.7	20	50
11 – 15	15	25	07	17.5
16 – 20	04	6.7	4	10
Above 20	03	5.0	03	7.5
* **Membership of Social Organizations**				
Yes	50	83.3	10	25
No	10	16.7	30	75
* Social Participation				
Office holder	18	30	10	25
Committee members	40	66.7	12	30
Participation in group activities	46	76.7	16	40
Attend meetings				
* Multiple response	48	80	14	35

Source: - Field Survey, 2011

Table 2: Distribution of Respondents by their sources of Income for farming and mode of sales of agricultural produce, n = 100

	Members of Farmers Organization		**Non – members of Farmers Organization**	
Variables	**Frequency**	**Percentage**	**Frequency**	**Percentage**
* **Sources of farm Income**				
Personal savings				
Money lenders	06	10	10	25
Farmers organization	12	20	25	62.5
Government agencies	40	66.7	0	0
	02	3.3	05	12.5
* **Mode of sales of farm produce**				
Local market	35	58.3	22	55
Market women	10	16.7	18	45
Farmers organization	15	25	0	0

Source: - Field Survey, 2011

Table 3: Distribution of Respondents by their level of production, n = 100

	Members of Farmers Organization		**Non – members of Farmers Organization**	
Variables	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Output (yield) of maize melon & co-nut				
1 – 20 bags (low)				
21–40bags (Medium)	17	28.3	22	55
41-60 bags (High)	32	53.2	11	27.5
	11	18.3	07	17.5

Table 4: Distribution of Respondents by their adoption of agricultural technologies, n = 100

		Members of Farmers Organization		Non – members of Farmers Organization	
Category	**Score**	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Low	Below30	20	33.3	30	75
High	30-60	40	66.7	10	25

Source: Field Survey, 2011

Table 5: Chi – square analysis of effect of selected personal characteristics and membership of farmers organizations

Variables	X^2 cal	df	X^2 tab	Configency coefficient	Decision
Gender	0.07	1	3.84	0.26	NS
Age	1.05	3	8.39	0.31	NS
Marital status	0.03	2	3.84	0.24	NS
Religion	1.44	2	5.99	0.19	NS
Educational level	8.61	3	7.84	0.53	S
Family size	2.13	4	9.49	0.54	NS
Membership of social organization	0.91	1	4.02	0.31	NS
Social participation	8.64	3	8.39	0.21	S
Level of production, yield	8.11	2	5.99	0.23	S

Source: - Field Survey, 2011

Level of Production (Farm Output / Yield)

Table 3 shows that (53.3%) of members and (27.5%) of non – members produced at a medium. The percentage of the farmers in high level of production is very low (18%). The implication of this finding was that members who supposed to produce at a very high level could not do so, because most of the inputs needed for agricultural production were not available to farmers, and when they were likely to have them, they were usually supplied to them at a very late time. The result shows that the output of members was more than,that of non – members, however, the level of production was still small and low when compared with the influence farmers organization have had on agricultural production in developed countries of the world.

Adoption of Agricultural Technologies

Table 4 indicates, the results of the study, on the respondents adoption of agricultural technologies. It is a generally recognized fact, that modern agriculture requires a large disbursement of credit for the adoption of necessary inputs and modern farming techniques, which can readily supply by farmers organizations. The table shows that, (33.3%) of members and 75% of non – members were categorized low adopters, while 66.7% and 25% respectively were

Table 6: T – test Analysis of the Adoption scores of Respondents

Variables	No of cases	Mean	Standard deviation	Standard error	Mean Diff	T-test	P	Dec.
Adoption scores of members of farmers organization	60	27.462	17.741	3.112				
Adoption scores of non – members of farmers organizations	40	20.919	10.459	3.201	6.543	2.07	0.40	S

Source: Field Survey, 2012

classified as high adopters. The implication of this findings is that farmers organization has created an enabling environment for their members to enhance their adoption of improved agricultural technologies.

Chi – square analysis of selected personal characteristics and membership of farmers organization.

The chi – square analysis in table 5 reveals that there were significant relationship between farmers membership of farmers organization and educational level ($X^2 = 8.61$, $P < 0.05$) and social participation ($X^2 = 8.64$, $P < 0.05$).

However there were no significant relationship between membership of farmers organization and gender ($X^2 = 0.07$, $P > 0.05$), age ($X^2 = 1.05$, $P > 0.05$), marital status ($X^2 = 0.03$, $P > 0.05$), family size ($X^2 = 2.13$, $P > 0.05$) among others.

T – test Analysis of the Adoption Scores of Respondents

Table 6 shows that, there is significant difference between members and non – members, in terms of their adoption of agricultural technologies (t – test = 2.07 and P = 0.40), which is less than 0.05. Members have a higher mean of (27.462) and standard deviation of (17.741) compared with the non – members means of (20.919) and standard deviation of (10.459). This was significant. The implication of this finding is that farmers membership of farmers organization, has enable them to purchase improved technology such as seeds, herbicides, insecticides, fertilizers etc; which has enable them to expand and improved on their level of farm production. It is posited that farmers organization is capable of enabling the small scale farmers to adopt improved agricultural technologies.

Conclusion and Recommendations

Based on the findings of the study, it is conducted that most of the respondents were males with majority of them between 30 – 40 years of age. The study revealed that many of the personal characteristics had no significant relationship with membership of farmers organization. These are gender, age, marital status, religion, family size among others. However significant relationship existed in the level of education, social participation and level of production.

The findings also revealed that farmers cooperative association offered a good approach to rural and agricultural development, if managed by competent and dedicated personnel with the assistance of the government in terms of credit and inputs supply. Farmers organization possess the potentialities to solve the problems of rural areas especially in the areas of agricultural production, credit facilities, marketing of agricultural produce and agricultural technologies adoption. Therefore concerted efforts must be made to address the issue of low agricultural productivity in the area of study. Such effort must start from making sound agricultural development policies through farmers organization which must go beyond paper work. Publicity should be given to farmers in the study area about the importance of farmers organization. This is to attract more members and to convince them that as individual, they can not solve their agricultural problems alone, but by pooling resources together as a group, much more problems can be solved. There should be a sound extension and training programme to ensure that

farmers learn how to benefit through the use of new agricultural technologies.

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