

AN EVALUATION OF THE IMPACTS OF COOPERATIVE MEMBERSHIP AND FARMERS' LEVEL OF EDUCATION ON ACCESS TO LAND IN ABUJA, NIGERIA

Ajah Julius

Department of Agricultural Economics/Extension, Faculty of Agriculture, University of Abuja, Nigeria

ABSTRACT

Farmers' access to land is a key to sustainable agricultural development hence this study examined the impacts of cooperative membership and farmers' level of education on access to land in Abuja, Nigeria. A purposive technique was adopted for sample selection while structured questionnaires were used for data collection. A sample of 240 respondents made up of 8 categories of farmers was used for the study. The 8 categories of farmers comprise 30 cooperative and 30 non-cooperative farmers who had post secondary, secondary, primary school education and those who had no formal school education. Two-way independent analysis of variance (ANOVA) was used for data analysis. Results indicated that irrespective of the farmers' level of education, there was no significant difference ($p > 0.05$) in the cooperative (2.92) and non-cooperative (3.06) farmers' mean responses on access to land. On the contrary, irrespective of cooperative membership, farmers' level of education significantly ($p < 0.05$) affected access to land. Farmers who had at most secondary school education had more access to land than farmers who had post secondary school education. Furthermore, there was no significant ($p > 0.05$) interaction effect of cooperative membership and education on farmers' access to land. Based on the result of the interaction effect, the paper concluded that the level of education of cooperative or non-cooperative farmers was not a major determinant of access to land in the area.

Keywords: Cooperative Farmers, Non-Cooperative Farmers, Primary School, Secondary School, Post-Secondary School, No Formal School Education,

INTRODUCTION

Nigeria is one of the countries in Sub-Saharan Africa that operates an agrarian economy with low agricultural productivity. The economy is agrarian because an estimated 76 percent of her population lives in the rural areas and about 90 percent of the rural dwellers are engaged in agricultural production (UNICEF, 2008). Apart from crude oil, agriculture is the second major contributor to her Gross Domestic Product (GDP) (National Bureau of Statistics, 2012, Rahji and Fakayode, 2009). It is also the major source of raw materials for her growing industries. As an agrarian economy, one of the most important factors of production that must be adequate and accessible to farmers for sustainable agricultural development is land. According to FAO (2002), land is an asset for food production and a key factor for shelter and community development. This is a fact because according to FAO (2006), access to land connotes access to other factors of production including, among other things, the right to use land as a security for loan and other resources related to land. Although, other factors of production like labour, capital and entrepreneur are very important in the production process but it is difficult, if not impossible, for any meaningful agricultural production to take place, and be sustainable, without land. Unlike other vital natural resources like air, water (rainfall) and sun (sunlight) that are needed in agricultural production, land is under the control of man thereby making it relatively more scarce than other natural resources. As a scarce resource, the quantity and quality of land available to individuals, families, communities, states and countries vary from one geographical location to another. The ownership, use and control of land determine to a large extent who benefits from agricultural production (Ekong and Olowu, 2002).

Whether in the developing or developed economics, land has so many uses. Deininger and Binswanger (1999) stated that land is not only the primary means for generating a livelihood and sustainable agricultural and rural development but often the main vehicle for investing, accumulating wealth and transferring it between generations. Other authors (Fatou Diop Sall, 2010; FAO, 2002; FAO 2006) also agree that land has economic, social, cultural and political values. IFAD (2008) reported that sustainable economic growth tends to be higher and more broadly shared when people have equitable and secure access to land. As an essential factor of production, it is expected that farmers should have adequate access to land to enable them embark on large scale production but the reverse is the case in Nigeria. Among the factors that influence farmers' access to land in Nigeria and other parts of the world, land tenure system has been extensively studied (FAO, 2002; FAO, 2006; IFAD, 2008). Another important factor that has been proved to influence access to land is gender. It has been posited and demonstrated that women do not have access to land compared to their male counterparts (Adeyemo, 1991; FAO, 2006; Peterman, Quisumbing, Behrman & Nkonya, 2010). The legislation of a country is also a vital issue affecting access to land (Deininger and Binswanger, 1999). Apart from land tenure system, gender, the legislation of a country and other factors, the question is: Do farmers' level of education and cooperative membership affect access to land?

The answer to the question formed the basis for the study because reports (Otunaiya and Akinleye, 2008; Ironkwe, Ekwe, Okeye and Chukwu, 2009; Imonikhe, 2010; Ezeibe, 2011) have shown that for sustainable agricultural production, farmers' level of education plays significant roles in agricultural development. Mareila (1991) stated that education facilitates a change in attitude that encourages increased production. In fact, Ukoha, Okoye and Emetu (2010) reported that a 1 percent increase in education would lead to a 0.7 percent increase in total factor productivity of cassava farmers in the positive direction. On the other hand, studies (Adeyemo, 1994; Holloway, Nicholson, Delgado, Staal and Ehui, 2000; Agbo, 2009) also indicated that cooperative societies are social capital organizations and have contributed immensely to agricultural

and rural transformation. In view of the importance of education and cooperative membership in agricultural development the study questions are:

- (1) Do cooperative farmers who have no formal school education have more access to land than their counterparts who do not belong to any cooperative society?
- (2) Do cooperative farmers who have primary school education have more access to land than their counterparts who do not belong to any cooperative society?
- (3) Do cooperative farmers who have secondary school education have more access to land than their counterparts who do not belong to any cooperative society?
- (4) Do cooperative farmers who have post secondary school education have more access to land than their counterparts who do not belong to any cooperative society?

OBJECTIVES OF THE STUDY

The broad objective of the study is to determine the impacts of cooperative membership and farmers' level of education on access to land in Abuja Nigeria. Specific objectives are to determine if:

- 1) There is a significant difference in the cooperative and non-cooperative farmers' access to land.
- 2) There are significant differences in access to land by farmers who have no formal school education, primary school education, secondary school education and post secondary school education.
- 3) Cooperative membership and farmers' level of education interact to affect access to land.

HYPOTHESES

- 1) Ho: There is no significant difference in the cooperative and non-cooperative farmers' access to land ($\mu_{\text{cooperative}} = \mu_{\text{non-cooperative}}$).
- 2) Ho: There is no significant difference in access to land by farmers who have no formal school education, primary school education, secondary school education and post secondary school education ($\mu_{\text{no-formal}} = \mu_{\text{primary}} = \mu_{\text{secondary}} = \mu_{\text{post-secondary}}$).
- 3) Ho: There is no significant interaction effect of cooperative membership and farmers' level of education on access to land ($\mu_{\text{GP1}} = \mu_{\text{GP2}} = \mu_{\text{GP3}} = \mu_{\text{GP4}} = \mu_{\text{GP5}} = \mu_{\text{GP6}} = \mu_{\text{GP7}} = \mu_{\text{GP8}}$)

RESEARCH METHODOLOGY

This study was conducted in Abuja, Nigeria located between latitudes 8°25' and 9°25' N and longitudes 6°45' and 7°45' E. The territory covers an area of 8,000 square kilometers, lying in the centre of the country and is bordered on all sides by four States namely: Niger, Nasarawa, Kogi and Kadunna (Dawan, 2000). Abuja lies in the transitional zone between the grain dominated agriculture of the North and the predominantly root crop farming of the forest zone. In other words, it lies in the transitional zone between the savannah in the North and forest vegetation in the South which is endowed with tremendous potentials for supporting agricultural production (Adakayi, 2000). The population for the study comprised 8 categories of farmers namely: 1) farmers who had no formal school education but were members of cooperative societies (GP1), 2) farmers who had primary school education and were members of cooperative societies (GP2), 3) farmers who had secondary school education and were members of cooperative societies (GP3), 4) farmers who had post secondary school education and were members of cooperative societies (GP4), 5) farmers who had no formal school education and were not members of cooperative societies (GP5), 6) farmers who had primary school education but were not members of cooperative societies (GP6), 7) farmers who had secondary school education but were not members of cooperative societies

(GP7), and 8) farmers who had post secondary school education but were not members of cooperative societies (GP8). A total of 30 farmers from each of these 8 farmer-categories were interviewed for the study giving a total of 240 respondents. To access these 8 farmer-categories, a purposive technique was adopted for sample selection while structured questionnaires were used for data collection. Abuja has 4 agricultural zones - namely, central, eastern, northern and western with 12 agricultural blocks and 93 cells. Agricultural extension agents from the four agricultural zones assisted in the data collection. Equal number (30 farmers) from each of the 8 farmer-categories was used to minimize biasness that may arise as a result of having more respondents from any of the farmer-categories. The farmers' level of access to land was verified using: very highly accessible (4), highly accessible (3), fairly accessible (2), very low access (1) and not accessible at all (0). The above scores were used to run the analysis in line with the method adopted by David (2004), Fredrick and Wallnau (2004), Shah and Madden (2004), Andy (2005), Robert (2011), Ajah (2012) and Gray and Kinnear (2011). SPSS 15.00 was used to run the analysis and it was tested at 5% probability level. The model for data analysis is expressed mathematically as:

$$Y_{ij} = \mu + C_i + E_j + CE_{ij} + e_{ij}$$

Where:

Y_{ij} = Individual farmer's response on his/her access to land

μ = General mean (population mean)

C_i = Refers to the impact of cooperative membership (cooperative or non-cooperative farmer) on access to land

E_j = Refers to the impact of education (no formal school education, primary school education, secondary school education and post secondary school education) on access to land

CE_{ij} = Interaction effects of cooperative membership and farmers' level of education on access to land

e_{ij} = error term.

This is a two-way independent analysis of variance (ANOVA) (Andy, 2005). The two independent factors captured in the model are cooperative membership and farmers' educational status while the dependent variable is access to land. The cooperative membership has two levels (cooperative and non-cooperative farmers) while educational status has 4 levels (no formal school education, primary school education, secondary school education and post secondary school education). The combination gave 2x4 independent ANOVA with 8 treatment conditions (the 8 farmer-categories). By interpretation, the model tests the hypotheses that farmers' access to land (Y_{ij}) depends on cooperative membership (C_i), the educational status of the farmer (E_j) and the interaction effect of cooperative membership and farmers' level of education (CE_{ij}). The μ (population mean) is the grand mean of the scores empirically obtained and it does not contribute to any variation in the observed differences (Aggarwal, 2002) while e_{ij} is the error term. The post secondary school education includes Ordinary National Diploma (OND), Higher School Certificate (HSC), Nigerian Certificate of Education (NCE), Higher National Diploma (HND) and Bachelor degrees (B.Sc).

RESULTS AND DISCUSSION

Table 1 shows the analysis of variance result of the small-scale farmers' access to land. The "cooperative membership" row of the ANOVA table reveals the effect of cooperative membership on farmers' access to land (the main effect of cooperative membership). It tests the hypothesis which states that "there is no significant difference in the cooperative and non-cooperative farmers' access to land ($\mu_{\text{cooperative}} = \mu_{\text{non-cooperative}}$)". The result, $F(1, 232) = 1.21, p = 0.27$, indicated that there was no significant difference ($p > 0.05$) in the mean responses of the cooperative and non-cooperative farmers' on

access to land. The implication of this is that cooperative membership is not a major determinant of the farmers' access to land hence the null hypothesis was accepted. This result is contrary to the findings of Ekong and Olowu (2002) which showed that 47.60 percent of cooperative members had access to land against 38.60 percent of non-cooperative members in Akwa Ibom State, Nigeria. Also, the "educational status" row of the ANOVA Table 1 shows the impact of farmers' level of education on access to land (the main effect of education). The result, $F(3, 232) = 7.01, p = 0.00$, indicated that there was significant difference ($p < 0.01$) in the effect of farmers' level of education on access to land. In other words, the hypothesis which states that "there is no significant difference in access to land by farmers who had no formal school education, primary school education, secondary school education and post secondary school education ($\mu_{\text{no-formal}} = \mu_{\text{primary}} = \mu_{\text{secondary}} = \mu_{\text{post-secondary}}$)" was rejected. The result is in line with the studies by Agbarevo and Obinne (2010), Anyachonkey (2000) and Ezeibe (2011) which suggest that education is one of the most important factors in agricultural and sustainable rural development. Furthermore, the "coop membership*education" row of the ANOVA Table 1 contains the result of the interaction effects of cooperative membership and farmers' level of education. It tests the hypothesis that "there is no significant interaction effect of cooperative membership and farmers' level of education on access to land ($\mu_{\text{GP1}} = \mu_{\text{GP2}} = \mu_{\text{GP3}} = \mu_{\text{GP4}} = \mu_{\text{GP5}} = \mu_{\text{GP6}} = \mu_{\text{GP7}} = \mu_{\text{GP8}}$)". The result, $F(3, 232) = 2.06, p = 0.11$, revealed that there was no significant ($p > 0.05$) interaction effects of cooperative membership and farmers' level of education on access to land. The result of the interaction effects of cooperative membership and farmers' level of education shows that belonging to any of the eight farmer-categories did not significantly ($p > 0.05$) affects the small scale farmers' access to land in the study area. Specifically, the result revealed that: 1) there was no significant difference ($p > 0.05$) in access to land by cooperative farmers who had no formal school education and their counterparts who did not belong to any cooperative society ($\mu_{\text{GP1}} = \mu_{\text{GP5}}$), 2) there was no significant difference ($p > 0.05$) in access to land by cooperative farmers who had primary school education and their counterparts who did not belong to any cooperative society ($\mu_{\text{GP2}} = \mu_{\text{GP6}}$), 3) there was no significant difference ($p > 0.05$) in access to land by cooperative farmers who had secondary school education and their counterparts who did not belong to any cooperative society ($\mu_{\text{GP3}} = \mu_{\text{GP7}}$), and 4) there was no significant difference ($p > 0.05$) in access to land by cooperative farmers who had post secondary school education and their counterparts who did not belong to any cooperative society ($\mu_{\text{GP4}} = \mu_{\text{GP8}}$).

The farmers' mean responses on access to land are shown on Table 2. First, irrespective of education, the mean responses indicated that the non-cooperative farmers had relatively more access to land (3.06) than the cooperative farmers (2.92). This is contrary to apriori expectation because it was expected that cooperative farmers should have more access to land than non-cooperative farmers. This could be attributed to the land tenure system in the area because FAO (2006) stated that land tenure systems in an area determine what rights can exist and how the rights are distributed among individuals and groups. FAO (2002) further added that land tenure systems determine who can use what resources, for how long, and under what conditions. Second, irrespective of cooperative membership, the mean responses shows that farmers who had no formal school education (3.10^a), primary school education (3.23^a) and secondary school education (3.13^a) had more access to land than those who had post secondary school education (2.49^b). It should be noted that there was no significant difference ($p < 0.05$) in the mean responses of farmers who had no formal school education (3.10^a), primary school education (3.23^a) and secondary school education (3.13^a) in access to land but the mean responses were significantly higher than those with post secondary school education (2.49^b). In other words, the mean responses by farmers who had at most secondary school education was significantly ($p < 0.05$) higher than farmers who had post secondary school education. The difference in access to land between farmers who had post secondary school education and those who had at most secondary

school education may be attributed to the fact that farmers who had post secondary school education may be requesting for large hectares of land for agricultural production as opposed to those who have at most secondary school education.

The farmer-categories' mean responses regarding access to land (Table 3) revealed that farmers who had primary school education but were not members of cooperative societies had more access to land (3.50) compared with farmers in other categories. On the other hand, farmers who had post secondary school education and were members of cooperative societies had the least access to land (2.33). Generally, the results revealed that irrespective of cooperative membership, farmers who had at least post secondary school education had least access to land.

Furthermore, Table 4 shows the distribution of the farmers based on the source of land cultivated. The result indicated that most (42.08%) of the farmers cultivated the land inherited from the parents followed by those who cultivated their family lands (27.09%). This could be one of the reasons why there was no significant difference in cooperative and non-cooperative farmers' access to land (see Table 3) because it may be difficult for families to release their land to cooperative societies. Only 5 % of the farmers indicated that they cultivated land allocated to them by government. Those who cultivated government land may be government staff members who were interested in farming as a hobby.

CONCLUSION

Land is one of the natural gifts from God that man cannot do without because it is the most essential resource for agriculture. It is one of the most important factors of production because hardly can any agricultural activity take place without land. Because land is indispensable in sustainable agricultural production and rural development, every farmer desires to have access to enough quantity of it for different uses. With the increasing pressure on land due to its multiple uses and government policies in addition to increasing population, this study was conducted to determine the impact of cooperative membership and farmers' level of education on access to land. Cooperative membership and education were purposefully chosen because they have been demonstrated to be very useful in sustainable agricultural production and rural development. The main objective is to determine if cooperative membership and farmers' level of education influence access to land. The study is very important because for sustainable agricultural production to take place, all the variables that interact and influence (directly or indirectly) agricultural productivity must be identified and addressed. Results of the analysis indicated that irrespective of education, there was no significant difference ($p > 0.05$) in the mean responses of the cooperative and non-cooperative farmers regarding access to land. On the contrary, irrespective of cooperative membership, farmers' level of education significantly ($p < 0.05$) affected access to land. Furthermore, there was no significant ($p > 0.05$) interaction effect of cooperative membership and education on farmers' access to land. The paper concluded that cooperative membership was not a major determinant of the farmers' access to land but education was an important factor influencing farmers' access to land in the study area. It is recommended that studies should be conducted in other places to see if similar results apply.

REFERENCES

- Adakayi, P.E. 2000. Climate. In: P. D. Dawan, (ed.). Geography of Abuja Federal Capital Territory. Famous/Asanlu publishers, Minna, Niger State, Nigeria, pp. 9-23.
- Adeyemo, O.A. 1991. Women in Development. National Centre for Economic Management and Administration, National Workshop Report, Pp. 211-215.

- Adeyemo, R. 1994. A comprehensive study of cooperative and non-cooperative farmers in the use of resources in Nigeria. *Rural Dev. Admin.* 1:52 – 62.
- Agbarevo, M.N.B. and Obinne C.P.O. 2010. Elements of Rural Sociology and Agricultural Extension. TEO Publishers, pp 17-29.
- Agbo, E.U. 2009. Farmers' perception of cooperative societies in Enugu State, Nigeria. *Journal of Tropical Agriculture, Food, Environment and Extension*, 8(3):169 - 174.
- Aggarwal, Y.P. 2002. Statistical methods, concepts, applications and computations (2nd edition), Sterling Publishers Ltd , New Delhi, India.
- Ajah, J. 2012. Effects of farmers' level of education and cooperative membership on access to agricultural extension services in Abuja, Nigeria. *Trends in Agricultural Economics*, 5 (4): 104 – 114.
- Andy, F., 2005. Discovering Statistics Using SPSS. (2nd edition), SAGE Publications, London, pp. 427- 482.
- Anyachonkey, N. 2000. Socio-Cultural Discriminatory Practices Against Women: Theory and Evidence. *African Journal of Social and Policy Studies*, Vol 1. pp 14–153.
At: <http://siteresources.worldbank.org/EXTARD/>
- David, C.H., 2004. Fundamental Statistics for the Behavioral Sciences. 5th Edn., Thompson Brooks/ Cole, Belmont, CA., USA., pp: 355-437.
- Dawan, P.D. 2000. Brief History of the Creation of Federal Capital Territory (FCT). In: P. D. Dawan, (ed.). Geography of Abuja Federal Capital Territory. Famous/Asanlu Publishers, Minna, Niger State, Nigeria, pp. 1-8.
- Deininger, K and Binswanger, H. 1999. 'The Evolution of the World Bank's Land Policy: Principles, experience and future challenges', *The World Bank Research Observer*, 14, pp 247 – 276.
- Ekong, E.W. and T.A. Olowu, 2002. Women's Access to Agricultural Production Resources in Akwa Ibom State. *Nigerian Journal of Rural Sociology* 4(1):85-89.
- Ezeibe, A.B.C. 2011. Analysis of the Profitability of Brood-and-Sell Broiler Enterprise in Enugu State. *International Journal of Entrepreneurial Studies*. 4 (1):123-143.
- FAO, 2002. Gender and access to land, FAO Land Tenure Studies 4, FAO's Land Tenure Service of the Rural Development Division, FAO, Rome, pp.1-46.
- FAO, 2006. Improving gender equity in access to land, FAO Land Tenure Notes 2, FAO, Rome, pp.1-33
- Fatou Diop SALL, 2010. Gender and access to land in Senegal, ICT4D Participatory Geographic Information Systems (P-GIS) for natural resource management and food security. www.leadinafrica.org/
- Fredrick, G.J. and B.L. Wallnau, 2004. Statistics for the Behavioral Sciences. 6th Edn., The Omson Learning Inc., USA., pp: 395- 471.
- Gray, C.D. and Kinnear R.P. 2011. IBM SPSS Statistics 19 Made Simple, Psychology Press, 27, Church Road, Hove, East Sussex, UK.
- Holloway, G. Nicholson C. Delgado C. Staal S. and Ehui S. 2000. Agroindustrialization through institutional innovation: Transaction costs, cooperatives and milk-market development in the east-African highlands. *Agricultural Economics* 23(3):279-288.
- IFAD, 2008. Improving access to land and tenure security Policy, Palombi e Lanci, Rome, pp 1 – 44
- Imonikhe, G.A. 2010. Impact of Katsina State Agricultural Project (KSACAP) on Income and Productivity. *International Journal of Agricultural and Rural Development*, 1(4):115-124.
- Ironkwe, A.G., Ekwe K.C., Okeye B.C., Chukwu I.I. 2009. Socio-economic determinats of Cassava Production among Women Farmers in Ebonyi State, Nigeria, *Journal of Rural Sociology*, 9 (1): 63-88.

Mareila, B., 1991. Women in the Labour Force. In: women and Literacy; Women and World Development Series, Zed Press Ltd, London and New Jersey, pp 12-16.

National Bureau of Statistics (NBC), 2012. Social statistics in Nigeria, Federal Republic of Nigeria, pp. 1- 418.

Otunaiya, A.O. and Akinleye S.O. 2008. Adoption of improved Maize Production Technique in Yewa North Local Government Area of Ogun State, Nigeria. Aiyedun, E. A.; Idisi P. O. and Nmadu J. O. (eds.). Proceedings the 10th Annual National Conference of Nigerian Association of Agricultural Economists, 7-10th Oct 2008. University of Abuja, Abuja, pp 395 - 403.

Peterman, A., Quisumbing A., Behrman J., Nkonya E. (2010) Understanding Gender Differences in Agricultural Productivity in Uganda and Nigeria. IFPRI Discussion Paper 01003. IFPRI Poverty, Health and Nutrition Division.

Rahji, M.A.Y. and Fakayode S.A. 2009. A multinomial logit analysis of agricultural credit rationing by commercial banks in Nigeria. *International Research Journal of Finance and Economics*, 24: 91.

Robert, A.Y., 2011. Mixed Analysis of Variance Models with SPSS. Statistics, Social Sciences and Mapping Group. Information Technology Services/Academic Computing Services.
www.myu.edu/its/soc.sci/Docs/spssmixed.ppt

Shah, D.A. and L.V. Madden,. 2004. Nonparametric analysis of ordinal data in designed factorial experiments. *Phytopathology*, 94(1) :33-43.

Ukoha, O.O., Okoye B.C., and Emetu J. 2010. Analysis of the Determinants of total Factor Productivity among Small-holder Cassava Farmers in Ohafia LGA of Abia, *International Journal of Agricultural and Rural Development*1(4):97-101.

UNICEF, 2008. Draft Country Programme Document, Nigeria. E/ICEF/2008/P/L.7, UNICEF, Enugu, Nigeria.

ABOUT THE AUTHORS:

Ajah Julius: Department of Agricultural Economics/Extension, Faculty of Agriculture, University of Abuja, Nigeria.

Table 1: ANOVA results on the impacts of cooperative membership and farmers' level of education on access to land

Sources of Variation	Df	SS	MS	F-cal	P-value	Sig
Cooperative membership	1	1.20	1.20	1.21	0.27	NS
Educational status	3	20.91	6.97	7.01	0.00	S
Coop membership*Education	3	6.15	2.05	2.06	0.11	NS
Error (between factor)	232	230.70	0.99			
Total	239	258.96				

Source: Survey data, 2012

Table 2: Farmers-categories mean responses on access to land

Educational status	Cooperative Membership		Row mean total
	Cooperative farmer	Non-cooperative farmer	
No formal education	3.27	2.93	3.10 ^a
Primary school	2.97	3.50	3.23 ^a
Secondary school	3.10	3.17	3.13 ^a
Post secondary school	2.33	2.63	2.49 ^b
Column mean total	2.92^a	3.06^a	2.99

Note: Mean with the same alphabet did not significantly differ from each other

Source: Survey data, 2012

Table 3: Farmer-categories mean responses arranged in order of access to land

Farmer-categories	Mean access to land
Farmers who had primary school education but were not members of cooperative societies (GP6)	3.50
Farmers who had no formal school education but were members of cooperative societies (GP1)	3.27
Farmers who had secondary school education but were not members of cooperative societies (GP7)	3.17
Farmers who had secondary school education and were members of cooperative societies (GP3)	3.10
Farmers who had primary school education and were members of cooperative societies (GP2)	2.97
Farmers who had no formal school education and were not members of cooperative societies (GP5)	2.93
Farmers who had post secondary school education but were not members of cooperative societies (GP4)	2.63
Farmers who had post secondary school education and were members of cooperative societies (GP8)	2.33

Source Survey data, 2012

Table 4: Distribution of the farmers based on the source of land cultivated

Tenure type	Frequency	Percentage
I inherited the land	101	42.08
I used family land	65	27.09
I used leased (rented) land	35	14.58
I used communal land	21	8.75
I used purchased land	13	5.42
Allocation from government land	5	2.08
Total	240	100

Source Survey data, 2012