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Factors Affecting Farmers' Participation in Agricultural Projects in Mkhondo Municipality of Mpumalanga Province, South Africa

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ABSTRACT The study examines factors affecting farmer participation in agricultural projects in Mpumalanga. A simple random sampling technique was used in selecting 150 farmers from the selected communities. Data was gathered through the use of structured questionnaire and analyzed using frequency counts, percentages and multiple regression analysis was used to identify the determinants of household welfare. The findings of the study show that 33 percent of farmers range from 50 to 60 years, 41 percent of farmers obtained primary education, 46 percent of the farmers have a family size of between 6 to 10 people with 67.3 percent receiving information from radio and 58.7 percent are willing to participate in agricultural projects. Significant determinants of farmers participation in agricultural programmes are effectiveness of CASP (t =3.34), effectiveness of CRDP (t = 1.81), attitude (t = 2.60), household headship (t = -1.96), livestock enterprise (t = 2.39), and income (t = 2.10).

INTRODUCTION

More than 60 percent of the world's population lives in rural areas. For many, maintaining even a subsistence-level lifestyle is a daily concern. Many international organisations are attempting to help these rural families by increasing their agricultural output. A way to bolster agricultural production is to develop agricultural education systems. The Department of Agriculture, Forestry and Fisheries is one of the departments of the South African government. It is responsible for overseeing and supporting South Africa's agricultural sector, as well as ensuring access to sufficient, safe and nutritious food by the country's population. Agricultural extension in many countries is being reoriented to provide more demand-based and sustainable services, taking account of the diversity, perceptions, knowledge and resources of users.

The options governments are pursuing include full commercialisation, devolving control to local government units, cost sharing between extensionists and farmers, contracting service delivery to private firms, NGOs and/or technicians from cooperatives and farmers' organisations, and supporting farmers' self help groups (DAFF 2009). The agricultural sector is crucial to rural development and contributes significantly to any initiative to alleviate poverty. For this reason, there is a great need for strong extension and advisory services led by government's operations in partnership with relevant role-players (DoA 2005). During the past ten years, agricultural extension in South Africa has undergone fundamental changes from a dualistic service (separate services for commercial and small-scale farmers) to a single amalgamated service, focusing on the needs of both the previously disadvantaged small-scale farmers and large-scale commercial farmers. Traditionally, extension programmes have been directed towards meeting the needs of farmers, families and communities. Societal changes are opening new arenas for people oriented information and education. Extension's redefined mission indicates extension helps people improve their lives through an educational process that uses scientific knowledge focused on issues and needs. The effectiveness of extension services in achieving its goal is however dependent on the participation of beneficiaries of such programmes.

The Concept of Participation in Agricultural Extension

According to the Department of Community and Local Government (2011), participation in Agricultural Extension means putting responsibility in the hands of farmers to determine agricultural extension programmes, can make services more responsive to the local conditions, more accountable, more effective and more

sustainable. To realise the benefits, the role of the public sector has to be refined to permit multiple approaches which account for user diversity, and to develop partnership with farmer organisations, NGOs and the private sector for service delivery. It has been defined as an act of sharing activities of a group. Principle of participation in extension helps people to help themselves. Participation in development is defined as a process of equitable and active involvement of all stakeholders in the formulation of development policies and strategies and in the analysis, planning, implementation, monitoring and evaluation of development activities. Participation in development is also seen as an organised effort within institutions and organisations to increase stakeholder access and control over resources and related decision-making that contributes to sustainable livelihoods. Participation is further viewed as an iterative process involving the continuous re-adjustment of relationships between different stakeholders in a society in order to increase stakeholder control and influence over development initiatives that affect their lives. There are various levels or degrees of participation ranging from simple consultation to joint decision-making to self-management by stakeholders themselves. The specific degree of participation of different stakeholders is determined through a negotiation process. Our vision is to increase the degree of participation in FAO programmes and projects. Ideally, this means putting the beneficiaries at the centre of a development process that they will drive and continuously adjust, according to their own learning processes and needs (FAO 2000).

According to Rolling and van der Fliet (1994), extension work is directed towards assisting rural families to work out their own problems rather than giving them ready-made solutions. Actual participation and experience of people in these programmes creates self-confidence in them and also, they learn more by doing. Participation is defined as a process that involves grassroots extension programme planning, national extension policy formulation, improvement of extension organisational structure for more effectiveness, organisation of famers for empowerment and group extension approach, methodologies for training extension staff band farmers, development of gender, age, culture and religion sensitive extension and training materials, monitoring and evaluation of extension activities, economic and social impact assessment of extension interventions, use of indigenous communication methods, media and modern information technology tools, preparation of researchers, original extension approaches and methodologies to be developed within specific situation context, establishment of farm-to-market-chain-links.

With changing environment of agricultural extension, institutional pluralism and bottom- up participatory approaches are necessary to address new challenges. The public sector may still need to play an important role in providing agricultural extension services due to its 'public good' nature, but its role should be changing in the face of increasing role of private and NGO sector and additional responsibilities of extension services. Entry of actors such as the private sector and NGOs in delivery of such services should be relaxed and creation of innovative public-private partnerships (PPP) in extension should be facilitated and promoted (Department of Agriculture and Limpopo Provincial Government 2010).

The democratisation of South Africa since 1994 introduced fundamental changes in the policy, administrative and delivery mechanisms and systems for government services to conform to the new Constitution. In the agricultural sector, this process led to the development of a White Paper on Agriculture (1995), which encapsulates the strategic transformation imperatives through the captivating simple acronym of BATAT (Broadening Access to Agriculture Thrust). The objectives of BATAT are to design and establish mechanisms for broadening access to agriculture for previously underserved farmers in terms of their needs for financial services, human resource development, technology development, delivery systems and marketing services. The BATAT continues to be the agricultural sector's guiding perspective, and is the foundation of a vision of 'equitable access and participation in a globally competitive sector that contributes to community development, income generation, employment creation, food security and a better life for all in a sustainable manner'. Through BATAT, the need for total re-orientation of agricultural extension services was recognised by the realisation that: The delivery system is the key to the transformation of the small-scale disadvantaged agricultural sector of South

Africa, and appropriate advice must be offered to farmers efficiently and regularly (DoA 2008).

In 2007, an extension model called Extension Recovery Plan which aimed at addressing all challenges identified in the norms and standards of extension by DoA was introduced. The main objectives of the Extension Recovery Plan were as follows: (1) to ensure accountability and visibility of extension; (2) to promote professionalism and improve the image; (3) re-skilling and reorientation of extension; (4) provision of ICT infrastructure; and other resources and (5) recruitment of 1000 personnel over the MTEF. In 2008, DoA finalised an extension recovery plan and is currently under implementation in all nine provinces**.** It is government policy to broaden access to services, including access to agricultural extension services. Several agricultural projects introduced across South Africa include Comprehensive Agricultural Support Programme (CASP), Integrated Food Security and Nutrition Programme (IFSNP), Land Redistribution for Agricultural Development (LRAD), National Land Care Programme (NLCP), Land and Agrarian Reform Programme (LARP), Veterinary Services Programme (VET), Compre-hensive Rural Development Programme (CRDP), and Agricultural Broad Based Black Economic Empowerment (ABBBEE). Central to the success and the achievement of the goals of these programmes, is the participation of farmers who are the targeted beneficiaries of the programme. Anecdotal evidences suggest that the low farmers' participation has been attributed to certain factors. This study attempts to determine the factors associated with farmers' participation in agricultural projects.

Objectives of the Study

The main objective of this study is to determine the factors that affect farmers' participation in agricultural programmes in Mpumalanga Province, South Africa. The specific objectives were to identify demographic characteristics of farmers; determine farmers' attitude towards agricultural programmes; ascertain farmers' willingness to participate in future agricultural programmes; and determine constraints to participation in agricultural programmes. The study also explores significant relationship between socio-economic characteristics of farmers and participation in agricultural programmes.

METHODOLOGY

The study was conducted between June and July 2010 in Mkhondo Municipality in Gert Sibande District of Mpumalanga Province in South Africa. The Province was formerly known as Eastern Transvaal and literally, means "the place where the sun rises". It lies in the eastern part of South Africa, north of KwaZulu-Natal and bordering Swaziland and Mozambique. It constitutes 6.5% of South Africa's land area which is equivalent to 76 495 square kilometres. The share of total SA GDP is 6.8 percent. More than 60 percent of the people of Mpumalanga live in rural areas. About 36 percent of the economically active population in the province is unemployed (CS, 2007). In the north, it is bordered by Limpopo, to the west by Gauteng, to the southwest by the Free State and to the south by KwaZulu-Natal. The capital is Mbombela previously known as Nelspruit. According to mid-2007 estimates by Statistics South Africa, the total population of Mpumalanga is 3.6-million, 92 percent are Africans, 0.4 percent Asians and 6.8 percent White. About 50.5 percent of the provincial population are females and 49.5 percent are males. Some 30.8 percent of the population speak siSwati, the language of neighbouring Swaziland, with 26.4 percent speaking isiZulu and 12.1 percent is Ndebele. The population density of the province is 46 people per kilometre. About 32 percent of Mpumalanga population lives in urban areas while 40 percent of the population reside in the former Bantustans. The average household size has been decreasing over time to 3.9 persons in 2009. It has been broken down into three (3) district municipalities and 17 local municipalities; with each local municipality controlling a certain number of towns and cities.

The population of the study is all farmers in the Mkhondo municipality of the Mpumalanga province of South Africa. From 3 districts in and 17 municipalities in Mpumalanga province, Mkhondo municipality was randomly selected. Five communities were selected from Mkhondo municipality and a random sampling technique was used in selecting 30 farmers from each of the selected communities, giving a total of 150 farmers that used for the study. Data for this study was gathered with the use of copies of questionnaire administered as an interview schedule due to the low level of education of

the farmers. The instrument had seven sections; in section 1, respondents were asked to provide demographic information, while other sections on the effectiveness of the programmes, willingness to participate, factors determining participation, attitudes of farmers on participation towards agricultural projects and constraints on farmers to participate on agricultural projects on where farmers consisted of close ended questions on a 5-point scale anchored as (a) Yes=2, No=1, (b) Very Effective(VE)=3, Effective(E)=2, Note Effective(E)=1, (c) High=4, Medium=3, Low=2 and No=1, (d) Strongly agree=5, Agree=4, Undecided=3, Disagree=2 and Strongly agree=1, (e) High/Severity=3, Moderate=2 and Low=1. Content validity of the instrument was established by an Extension Officer/researcher within the Department of Agriculture, Rural Development and Land Administration in Mpumalanga Province and reliability was established using a split-half technique. Descriptive statistics was used to analyse the responses. The questionnaire was designed and validated by lecturers, and the senior extension officer in agricultural studies. A split half technique was used to test the reliability of the instrument; an r coefficient of 0.82 was obtained from the reliability test.

The Probit regression model was used to determine factors affecting farmer participation in agricultural projects. In the Probit model, the discrete dependent variable Y is a rough categorisation of a continuous, but unobserved variable Y^*. If Y^* could be directly observed, then standard regression methods would be used (such as assuming that Y^* is a linear function of some independent variables, for example:

$$Y^* = \beta_1 X_{1i} + \ldots\ldots\ldots \beta_j X_{ji} + ui \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

In this study, Y^* is the participation in agricultural programme which is used as a proxy for Y^*. The actual model specification is: participation in agricultural programme.

$= \beta_0 + \beta_1$ Effectiveness of CASP
$+ \beta_2$ Effectiveness of CRDP
$+ \beta_3$ Effectiveness of Food Security
$+ \beta_4$ Effectiveness of Land Care
$+ \beta_5$ Attitude
$+ \beta_6$ Constraints
$+ \beta_7$ farmers' age
$+ \beta_8$ Household headship
$+ \beta_9$ Number of dependants
$+ \beta_{10}$ farming experience
$+ \beta_{11}$ Livestock enterprise
$+ \beta_{12}$ Grain enterprise
$+ \beta_{13}$ Horticulture enterprise
$+ \beta_{14}$ Income
$+ \beta_{15}$ Information sources
$+ u$

The dependent variable Pi is a dichotomous variable which is 1 when a farmer participates in agricultural programme and 0 if otherwise. The explanatory variables are: X_1 = Effectiveness of CASP, X_2 = Effectiveness of CRDP, X_3 = Effectiveness of Food Security, X_4 = Effectiveness of Land Care, X_5 = Attitude, X_6 = Constraints, X_7 = Age in Years, X_8 dummy variable for Household Headship (male = 1, 0 = otherwise), X_9 = Number of Dependants as Number of Persons, X_{10} Farming Experience in Years, X_{11} dummy variable for Livestock Enterprise (Yes = 1, No = 0), X_{12} dummy variable for Grain Enterprise (Yes = 1, No = 0) X_{13} dummy variable for Horticulture Enterprise (Yes = 1, No = 0), X_{14} = Income in Rands, X_{15} = dummy variable for Information Sources (extension office = 1, other = 0)

RESULTS AND DISCUSSION

Figure 1 shows percentage on the household's characteristics of farmers which indicates that 33 percent of farmers' ages range from 50 to 60 which is the largest group. The active participants range from 41-50 years. This group of farmers are still hoping that since the government bought farms through the LRAD programme, the government still needs to provide post- settlement support to the labour tenants through various programmes in order to improve farmer's livelihood. The findings of Anyanwu (1992) confirm that younger men are losing interest in agricultural activities. However, one will find youth within rural areas or farms flocking to big cities in South Africa to look for better lives and jobs that will sustain their lives.

According to Figure 1, gender shows that 54.7% of women as dominating and do not participate much in agricultural projects. This is in line with the findings of Kongolo and Bamgose (2002) who reported that most women in rural areas are illiterate, lack innovations, self-reliance attitude, are isolated, confined and marginalised through the non-interactive government policies in rural areas. However, the findings should not be over-generalised, due to the changing composition of women farmers who are involved in slow cash generating activities than men and remain over-represented among the poor. The South African Women Entrepre-

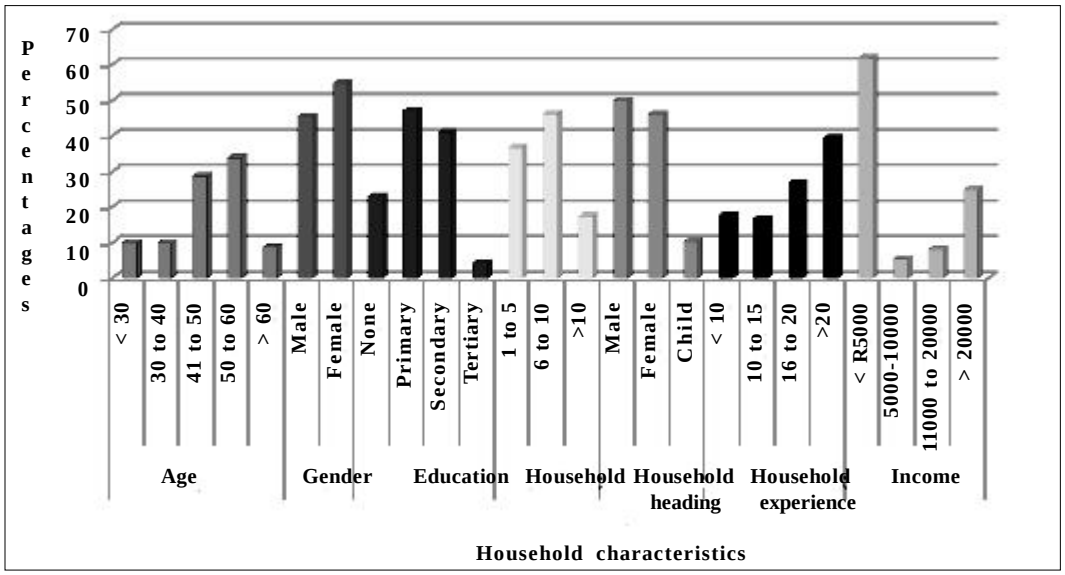

Fig. 1. Percentage distribution of farmers' household characteristics

neur Network aims at providing a national vehicle that brings women together and addresses the challenges faced by females in the country and to lobby government, public and private institutions on such issues as Female Farmer of the Year Awards instituted by the former Department of Agriculture in 1999 to encourage and increase the participation of women in agricultural activities. The event itself rewarded the efforts and contribution of women in matters of food security through backyard and large-scale production as well as value-chain activities.

Figure 1 shows that 41 percent of farmers obtained primary education which agrees with Akinbile et al. (2007) which confirms that majority of farmers always have primary level of education and this may be considered as a low level of literacy in many rural areas of the country. Furthermore, the figure shows that 46 percent of the farmers have a family size of between 6 to 10 people with 46 percent having 1-5ha of arable land for maize and vegetable production. This is regarded as small-scale farming for food security. The figure indicates that 50 percent of households are male- headed, followed by 46 percent of female-headed households which confirms the report by Apantaku et al. (2006) and that they are also engaged in maize, vegetables and cattle production. It is true as the aforementioned enterprises are easily manageable at a very small scale and are highly considered as food security projects.

The figure also indicates that 67.3 percent of farmers depend on the government social grant for household support. This is the result of high unemployment experienced in the country and low level of education. 67.3 percent of farmers receive information from the radio as they do not have good signals or reception in their geographical locations. Low level of literacy within the rural areas also limits farmers to adopt new technologies, hence, use of technological machines like computers, cell phones (internet, reading newspapers and SMS alerts).

Farmers' Willingness to Participate in Agricultural Programmes

Figure 2 shows that 58.7 percent of farmers are willing to participate in agricultural projects. Chambers (1994) agree with both collaborative and partnership on view of participation as a linear continuum reaching from projects with a low level of participation to projects with high degree of participation, implying that it is possible, desirable and necessary to move across this continuum to the most intense form of participation.

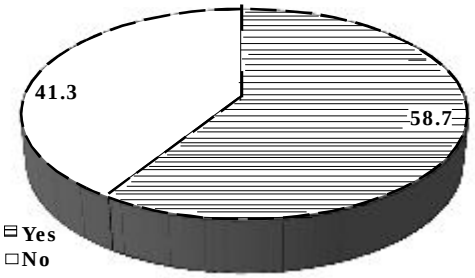

Fig. 2. Percentage distribution of farmers' willingness to participate in agricultural programs

Attitude of Farmers towards Agricultural Programmes

Table 1 indicates that 72.7 percent of farmers agree or are showing positive attitudes towards participation in projects to enhance food security. Hence, the programme in Mpumalanga Province, Masibuyele Emasimini where food security is ensured by providing seeds, fertilizers, machinery to farmers to ensure food is secured within poverty stricken families. Seventy-six percent show that participation in projects will improve adoption status as local farmers are starting to believe in how the department is assisting to ensure food security. Table 1 also indicates that 74.4 percent agree that participation will enhance access to land as currently potential/subsistence farmers are able to access land through the government programme Pro-active Land Acquisition Strategy (PLAS) which ensures that potential farmers have access to lease state land to continue with their agricultural activities within the leased portions of land.

Seventy-two percent indicate that farmers are agreeing that extension officers are available though there is still a shortage of staff in the area. Zwane (2009) reports that a large percentage of extension staff are under-qualified. However, the department has introduced an extension recovery plan which will ensure upgrading extension officers' qualifications and their standard of rendering service to the communities. Table 1 indicates that 79.3 percent of farmers have positive attitudes that capacity building will enhance participation. Table 1 also shows that farmers (94%) have hope that are able to access market and 61.3% indicate that participation will eventually increase investment in the field of agriculture and 74.7 percent of farmers strongly agree that participation will attract investors. About 79 percent of respondents strongly agree that participation in agricultural projects enhance job creation, while 54.7 percent of farmers are undecided that participation could increase diversification of livelihood among the communities. Table 1 indicates that 80 percent of respondents are undecided that participation in agricultural projects is political or not, while 51.3% agree that projects are bureaucratic hence the top-down approach which is the most applicable approach in South Africa and other SADC countries.

Table 1 indicates that 80.7 percent of farmers agree that participation in projects are a prerequisite for other project-related activities and 76 percent agree that though projects are bureaucratic, they are still people-oriented. 74 percent indicate in this table that farmers agree project mobilisation strategy encourages farmers participation and 60 percent also indicate that farmers agree that participation enhance project sustainability and 76.7 percent farmers agree that participation enhances agricultural development. Table 1 indicates that the majority of farmers (71.3 percent) are undecided about participation determining impact while 43.3 percent of farmers disagree that awareness increase government popularity. Johnson et al. (2003) found similar result in the study of impact of user participation in agricultural and natural resource management research in developing countries.

Constraints towards Farmer Participation in Agricultural Programmes

Table 2 indicates that 46 percent of farmers are facing land issues as a constraint while 35.3 percent do not consider this factor as highly severe. Furthermore, this table indicates that 52 percent of farmers cannot farm productively because of lack of funds. Freman (2001) reported that farmers also complained about lack of capital to undertake farming. Table 2 indicates that 74 percent of farmers are still underdeveloped or lacking in terms of farm infrastructure and human resources.However, the Department of Agriculture, DoA (2005) introduced a programme called Comprehensive Agricultural Support Programme (CASP) to provide post-settlement support to the targeted beneficiaries of land reform and other producers who are engaged in value-adding enterprises domestically or for export. Table 2

Table 1: Farmers attitudes towards agricultural programmes*

Attitudes of farmers towards agricultural projects	*Strongly agree*	*Agree*	*Undecided*	*Disagree*	*Strongly disagree*
Participation in projects enhance household food security	41(27.3)	109(72.7)	0(0)	0(0)	0(0)
Participation in projects improve adoption status	35(23.3)	114 (76.0)	1(0.7)	0(0)	0(0)
Participation in projects enhances access to land	34(22.7)	112(74.7)	4(0.7)	0(0)	0(0)
Access to extension services	37(24.7)	108(72.0)	4(2.7)	1(0.7)	0(0)
Capacity building	21(14.0)	119(79.3)	6(4.0)	4(2.7)	0(0)
Access to market	39(26.0)	96(64.0)	15(10.0)	0(0)	0(0)
Participation improve investment in agriculture	38(25.3)	92(61.3)	20(13.3)	0(0)	0(0)
Participation attracts investors	112(74.7)	38(25.3)		0(0)	0(0)
Participation enhance job creation	119(79.3)	28(18.7)	3(2.0)	0(0)	0(0)
Participation increases diversification of livelihood	22(14.7)	17(11.3)	82(54.7)	19(12.7)	10(6.7)
Participation in projects is political	3(2.0)	21(14.0)	120(80.0)	3(2.0)	3(2.0)
Participation in projects is bureaucratic	50(33.3)	77(51.3)	23(15.3)	0(0)	0(0)
Participation in projects are perquisite for some other projects related activities	25(16.7)	121(80.7)	2(1.3)	1(0.7)	1(0.7)
Projects are peoples oriented	34(22)	114(76.0)	0(0)	1(0.7)	1(0.7)
Project mobilisation strategy encourages farmer participation	38(25.3)	111(74.0)	1(0.7)	0(0)	0(0)
Participation enhance project sustainability	58(38.7)	90(60.0)	0(0)	1(0.7)	0(0)
Participation enhance agricultural development	33(22.0)	115(76.7)	0(0)	1(0.7)	1(0.7)
Participation determine project impact	2(1.3)	28(18.7)	107(71.3)	12(8.0)	1(0.7)
Awareness increase government popularity	0(0)	5(3.3)	30(20.0)	65(43.3)	50(33.3)

*Figures in parentheses are percentages while those outside are frequency

further shows that 57.3 percent of farmers consider the market as a moderate factor.

Table 2 shows that 90.7 percent are seriously experiencing severity of technological knowhow. Okoedo and Onemolease (2009) report that ignorance is the major constraint limiting farmers to adopt new technology existence (100%), non-availability (46.5%) and high costs (34.6%) of some of the storage technologies. Table 2 further shows that 69.3% of farmers are experiencing high inputs costs. The table also shows that 69.3 percent farmers are moderate about commitment of extension agents. Zwane (2009) reported that extension practitioners need to be grounded in the principles extension practitioners find difficult to motivate and to assist farmers to achieve their food security needs and economic development objectives. About 64 percent of farmers in this table show that lack of leadership skill is moderate, while 53.3 percent of respondents say there is lack of sense of ownership in their own properties or resources especially in the land reform farms.

Table 2: Constraints towards participation in agricultural programmes*

Constraints	*High*	*Moderate*	*Low*
Unavailability of land	69 (46.0)	53(35.3)	28(18.7)
Lack of funds	59(39.3)	78(52.0)	13(8.7)
Lack of resources	18(12.0)	111(74.0)	21(14.0)
Market	7(4.6)	86(57.3)	57(38.0)
Lack of technical knowledge	136(90.7)	9(6.0)	5(3.3)
High inputs costs	5(3.3)	104(69.3)	41(27.3)
Lack of commitment by extension agents	5(3.3)	104(69.3)	41(27.3)
Lack of leadership skills	11(7.3)	96(64.0)	43(28.7)
Lack of sense of ownership	15(10.0)	80(53.3)	55(36.7)

*Figures in parentheses are percentages while those outside are frequency

Determinants of Farmers' Participation in Agricultural Programmes

The results from the Probit model in Table 3 show that the coefficients for 6 variables were significant, these are effectiveness of CASP (t =3.34), effectiveness of CRDP (t = 1.81), attitude (t = 2.60), household headship (t = -1.96), livestock enterprise (t = 2.39), and income (t = 2.10). The sign for each coefficient is consistent with the expectation; that is, the probability of farmers' participation in agricultural programme increases if programme effectiveness increases,

favourable disposition by farmers to the programme, farming household are male-headed, engage in livestock enterprises, increase income variety used for substitution, and long farming experience. The inverse relationship explains the effect of including all male-headed and female headed households in the programme. Frito et al. (2006) found similar results in the study on factors influencing farmers participation in forestry management programmes in Haiti.

Table 3: Parameter estimates of farmers' participation in agricultural programmes

Parameter	*Estimate*	*Std. error*	*t*	*P*
Effectiveness of CASP programme	0.049	0.015	3.34	0.001
Effectiveness of CRD programme	0.010	0.005	1.81	0.07
Effectiveness of food security programme	-0.006	0.008	-0.73	0.46
Effectiveness of LANDCARE programme	0.001	0.006	0.09	0.92
Attitude	0.023	0.009	2.60	0.009
Constraints	-0.015	0.019	-0.77	0.44
Age	0.006	0.004	1.30	0.19
Household headship	-0.137	0.070	-1.96	0.05
Number of dependants	0.013	0.011	1.15	0.25
Farming experience	0.004	0.005	.071	0.47
Livestock enterprise	0.128	0.054	2.39	0.02
Grains enterprise	-0.061	0.050	-1.23	0.22
Horticulture	-0.006	0.049	-0.12	0.91
Income	0.000	0.000	2.10	0.04
Information sources	-0.010	0.016	-0.62	0.54
Intercept	-3.933	0.894	-4.40	0.00
Pearson Goodness-of-Fit Chi Square	772.334			
Df	130			
P	0.00			

CONCLUSION

Participation in Agricultural Extension means putting responsibility in the hands of farmers to determine agricultural extension programmes, can make services more responsive to the local conditions, more accountable, more effective and more sustainable. To realise the benefits, the role of the public sector has to be refined to permit multiple approaches which account for user diversity, and to develop partnership with farmer organisations, NGOs and the private sector for service delivery. The following conclusion can be drawn based on the findings and focusing on the objectives of the study. The higher the educational, income and socio-economic status of the farmers and higher the increase in the number of male-headed households in the projects, the lower the participation in the projects. The top-down approach practiced in the department contributes a lot in participation or non-participation of farmers in the projects as major stakeholders or farmers are only involved in the later stages of all the programmes. Unavailability of funds, natural and physical capital reduces farmer participation within the agricultural projects.

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