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Level of Community Participation in National Agriculture Advisory Services (NAADS) Program in Kabale and Ntungamo Districts of Western Uganda

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ABSTRACT

The study examined the level of community participation in National Agriculture Advisory Services program **(**NAADS) in Kabale and Ntungamo Districts of Western Uganda. It was guide by the following hypotheses; a)*Ha1*: There is a positive and significant relationship between marketing of agricultural products and community participation in NAADS program in Kabale and Ntungamo Districts of Western Uganda; b) *Ha2*:There is a positive and significant relationship between coordination in research, technological development and community participation in NAADS program in Kabale and Ntungamo Districts of Western Uganda; c) *Ha4:* There is a positive and significant relationship between delivery of agricultural services and community participation in NAADS program in Kabale and Ntungamo Districts of Western Uganda. The study employed the following methods and research instruments of data collection; Non- probability convenient sampling technique, multi-stage sampling (i.e. cluster sampling), questionnaire and interview guide respectively. The study concludes that; there was a positive and significant relationship between; planning and community participation; capacity building and community participation; decision making and community participation and between agricultural service delivery and community participation in NAADS program in Kabale and Ntungamo districts of Western Uganda.

The study recommends that; government and NAADS officials generally should always involve the farmers in decisions about determining the type of crops they want to plant and which they think can be easily favored by their soil moisture. This can be achieved if people are invited to participate to attend meetings and be allowed to suggest.

Keywords: Level, Community, Participation, National, Agriculture, Advisory, Services (NAADS), Program, Kabale, Ntungamo and Districts.

1. Introduction

Community participation is an evolutionary process in which activities at the program or macro level can create the conditions for increased popular participation in the planning and implementation of development programs at the local, regional and national level. In the context of development, community participation refers to an active process whereby community participation influences the reduction and execution of development programs rather than receiving a share of development programs benefits. Community participation has got several roles to play in national development. It is believed that for true change to be achieved, the people themselves must participate in national development programs. An increasing number of development practitioners agree that participation of the intended beneficiaries improve program performance. In addition, as stake holders, sometimes community members should be involved in the mobilization of funds, and other resources for proper implementation of the development programs. When participants contribute resources, they generate a lot of stake, loyalty and commitment to the program. Therefore, the subsequent sections presents related literature, methods, Sampling Techniques, hypotheses which guided the study, results, discussion, conclusions and recommendations.

2. Review of related literature

This section presents relevant literature drawn from journals, dissertations and books.

Level of community participation in National Agriculture Advisory Services (NAADS) Program

The level at which community members are involved in the planning and implementation processes of NAADS Program helps in the monitoring and constant communication between all stakeholders (Tweheyo and Katushemererwe, 2006). NAADS Program will succeed only when there is involvement of farmers in identifying enterprises, planning for them, implementation, monitoring and evaluation of its progress. The ideas of Tweheyo and Katushemererwe (2006) are in congruent with those of Asian Productivity Organization- APO (2001), which asserted that agricultural support services for small farmers demand the participation of all stakeholders including farmers and agricultural development agents. In this case, the government is expected to play the role of facilitator and be responsible for regulation, guidance and control. The community will carry out the production process,

marketing and distribution. It was also reported that governments should also create an enabling environment for agricultural developments. Empowerment of the farming community can be ensured through decentralization of decision-making to local government as well as through the active participation of the community in the planning and implementation of programs and projects. The report undoubtedly showed that people's participation and their involvement in the planning, implementation and monitoring of agricultural programs can enhance sustainability of such programs and promote ownership and commitment.

The above ideas are also in agreement with those of Njuki *et al.* (2005) who observed that in an attempt to put farmers first, the use of participatory learning approaches have been very crucial for building the capacity of farmers themselves to understand and analyze markets, to identify challenges and opportunities and deal with them using participatory research that draws on new information and indigenous knowledge. Farmer participatory research has provided an avenue for feeding in new ideas and technologies from research into the process without a top down technology dissemination. Using participatory approaches also has strengthened the prospects of sustainability in new interventions as the farmers become part of the learning and decision making process, rather than just being farmers.

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Whereas Chirwa and Daward (2005) noted that farmers' organizations are given a key role or farmers are organized to participate in 'farmers' fora' for articulating the demand for agricultural services. Farmers' organizations are expected to follow an empowerment procedure when providing agricultural services, which go from; effective influence, over planning and monitoring and evaluation; effective influence over the allocation for services; and directly being involved in service provision.

However, Albury Wondonga Health Community Participation Plan, 2011-2012) argued that, one of the major strategies for ensuring the development of effective community involvement is through development of the Community Development and Resourcing Committee (CAC) to plan for community participation in any developmental activity. Community participation explains the overall planning process and presents the plan for engaging members, business members and other stakeholders with varying interests and perspectives.

Nevertheless, Haight and Held (2011) asserted that one of the biggest challenges in engaging the public in planning for agriculture is conveying the message that farms should not be taken for granted. To them, motivating people to take action before community's farms are lost is challenging but very important. This is attributed to the fact that planning efforts can elicit varying reactions from farmers and rural landowners. For some farmers, local planning is an opportunity to directly influence the future of the community. For other landowners, local planning brings uncertainty, anger and mistrust. By developing compelling answers to the questions and concerns that residents and farmers may have about planning for agriculture, communities can increase the likelihood that their local planning efforts will be a success. Haight and Held (2011) emphasized that those involved in planning for agriculture need to develop compelling arguments that can be used to motivate local officials and residents. They also added that, in order to build local farmers and landowners support, it is crucial that you engage them early in the planning process.

Whereas Khwaja (2004) asserted that community participation is cardinal in improving project outcomes in non-technical decisions. Principally, he emphasized that community participation has a real influence on the decision that is; greater community participation makes it less likely that the decision made is determined by external agency (Khwaja, 2004). Khwaja further observed that it is indeed true, higher community participation in a decision implies a lower possibility that the external organization rather than the community is identified as the main decision maker. Participation of community members is very important at each stage of project cycle. Under community participation theory, focus is put on participation of beneficiaries but not participation of government personnel in the development project. Collaborative involvement of beneficiaries in groups is a landmark of community participation, and community participation refers to a process and not a product in the sense of sharing project benefits. Participation of people is of utmost essence while identifying a project. If participation of people is ensured, then they can best fit the needs, nature and type of a project according to their own needs as well as challenges and problems. People's participation in project identification leads to the sense of ownership among them which will help during the implementation of the project in question. Whereas, Mansuri and Rao (2003) argued that community participation leads to development projects that are more responsive to the needs of the poor, more responsive government and better delivery of public goods and services, better maintained community assets, and a more informed and involved citizenry. Khwaja pointed out that participation of beneficiaries in an activity results into greater influence in the activity since it allows such beneficiaries to get involved in the planning, decision making, and capacity building as well access to other services.

However, it should be noted that, for community participation to have maximum impact, local governments are obliged to create an enabling environment for participation which includes amongst others addressing the institutional obstacles and the capacity gaps within the community. In addition, the development practitioners should be ready to experience challenges (e.g. disagreements, time and probably conflict) which are as a result of community participation in any developmental project and should be ready to address them if community participation is to be successful.

3. Methods and sampling techniques

Research design

The researcher employed the descriptive correlation survey design. The descriptive correlation survey design was used since the study involved determining as well as examining the strengths and direction of the relationship between constructs of community participation- the dependent variable. Ary *et al*. (2002), contends that correlation research is used to determine and also examine the strengths and direction of the relationship between two or more variables.

The study adopted a combination of qualitative and quantitative research approaches (triangulation method) which was preferred because data regardings community participation in NAADS program was collected by using both questionnaires and interview guides. Triangulation is a powerful technique that assists in the validation of data through cross verification from two and/or more sources.

Target population

The population of the study included rural community members and NAADS officials from the two (2) selected Sub-Counties (i.e. 11 NAADS officials and 6640 community members from Kitumba sub-county in Kabale District and 11 NAADS officials and 7010 community members from Ntungamo sub-county in Ntungamo district) within Western Uganda. Basically, the target population in this study included 22 NAADS officials and 13650 community members who were farmers at the same time. These altogether made a total target population of 13672 respondents.

Sample size

The total sample size was 411 respondents (i.e. 22 NAADS officials and 389 community members. The researcher administered 420 questionnaires and out of these, 389 questionnaires were considered in this study as per the sampling procedures and techniques (i.e. non- probability convenient sampling). These questionnaires were administered to Community members who were the farmers. The minimum sample size was computed using Yamane's formula. Yamane (1967) provides a simplified formula to calculate sample size. This formula was used to calculate the sample size as shown in table 1 below.

$$n = \frac{N}{1+Ne^2} \quad (1)$$

Where:

Where n is the sample size, N is the population size, and e is the level of precision. A 95% confidence level and P = 0.5 is assumed. When this formula was applied to the above population, the subsequent sample sizes were generated:

$$n = \frac{22}{1+22\,(0.5)^2} = 22 \text{ NAADS officials} \quad (2)$$

$$n = \frac{13650}{1+13650\,(0.5)^2} = 389 \text{ community members}$$

Table 1: Shows population and sample size distribution

Categories	Target Population	Sample size	Sampling procedures
NAADS Officials Ntungamo Kabale	 11 11	 11 11	Non-probability or convenient sampling
Community members (Farmers) Ntungamo Kabale	7010 6640	200 189	Multi-stage sampling (i.e. cluster sampling)
Over all total	**13672**	**411**	

Source: Kabale and Ntungamo Districts NAADS Beneficiaries Checklist. (2012-2013).

Sampling Procedures / Techniques

Non- probability or convenient sampling technique was used to select the respondents utilizing the following inclusion criteria; (1) male or female and (2) NAADS officials while multi-stage sampling (i.e. cluster sampling) was employed in selecting farmers. According to Amin (2005 p.249), cluster sampling is a sampling methodology in which elements of a population are grouped into clusters and simple random sampling or other types of sampling then performed on the clusters. Cluster sampling was considered by Amin as a multi - stage sampling method whereby the sampling is carried out in stages using smaller and smaller sampling units at each stage. Under this study, the sample size per cluster was obtained by using the Yamane's formula.

The choice of multi-stage sampling was done because it is easier to implement and it creates a more representative sample of the population than a single sampling technique.

Data was gathered from the community members who were farmers from Ntungamo and Kabale districts of Western Uganda. Within these districts, data was gathered from Ntungamo and Kitumba Sub-Counties by considering parishes and villages. For Ntungamo Sub-County, the parishes included were; Nyaburiza, Butare and Kizara, then the villages included; Ibanga, Kabira, Kyangara, Buhandagazi, Enkondo, Nyaburiza, Karambi, Karegyeya, Butare, Kitembe and then Mugwanjura. Within Kabale district, data was gathered from Kitumba Sub-County in the following parishes; Bushuro, Kabindi and Kitumba, then villages were; Nkombe A, and B, Omumihanga, Kitumba, Rushambya, Kabindi, Mucumba, Kitembe, Kirwa, Keitankombe and Rushambya.

The choice of these two districts was made because right from the inception of the NAADS program, Kabale district and her neighbor, Ntungamo district were among the first districts to witness piloting of the NAADS program (Tweheyo and Katushemererwe, 2006). Reports that followed the first phase of implementation of NAADS program indicated that there had been misuse of funds (Uganda NAADS Secretariat, 2007 in Samuel and Ephraim, 2011). Tweheyo and Katushemererwe's report (2006 pg.3) further indicated that rural farmers in Kabale were not having technical or professional connection to participate and take advantage of the new NAADS initiatives.

Research instruments

The researcher used researcher-made questionnaires entailing items on community participation patterned with the related literature. The instrument had 1part, which dealt with the Community Participation with 24 items (or questions), categorized into the following: (Participation in marketing of agriculture products 1-14) (Participation in agriculture training 1-10) (Participation in coordination 1-10) (Participation in agriculture research and technology development 1-14). The rating system included these response modes and corresponding scores: Strongly Agree (4); Agree (3); (Disagree (2); Strongly Disagree (1).

Interview guides were used to collect data from the 22 NAADS officials which data was then thematically analyzed and this backed up the results from the quantitative analysis.

Validity and Reliability of the Instruments

The researcher put into consideration the validity and reliability of the instruments in order to get the required results for the study.

The researcher ensured construct validity of the two instruments through use of valid concepts and/or words which measured the study variables as cited in the literature. Construct validity test was conducted to ensure that the questionnaire was valid. The questionnaire on community participation was analyzed using the Statistical Package for Social Scientists (SPSS). Accordingly, the construct validity index of 94.75 was generated and used as a basis for the reasonable use of the questionnaire.

The reliability of the questionnaire was established using the internal consistence method. The internal consistency method indicates how well different items on a scale measure the concepts which they are supposed to measure. Such a method provides a unique test of reliability from only a single administration. Internal consistency is calculated by measuring a statistic known as the Cronbach's alpha which reflects the homogeneity of a scale (Turyasingura, 2011; Haertel, 2006; Nunally, 1978 and Cronbach, 1951). According to Nunally (1978), Cronbach's alpha is considered as a good measure of reliability in social science research when it is found to be .70 or above. The higher the Cronbach's alpha (close to 1) in relation to an instrument is found to be, the more reliable the instrument concerned is. The reliability of the questionnaires was established using the Chronbach Alpha coefficient. Using SPSS, the reliability coefficient of 0.79 was generated.

4. Presentation, Interpretation and Discussion of findings

The objective of this study was; to determine the level of community participation in NAADS program in Kabale and Ntungamo districts of Western Uganda.

This objective was intended to determine the level of community participation in NAADS program in Kabale and Ntungamo districts of Western Uganda under the constructs; participation in marketing of agricultural products, participation in training, participation in coordination and participation in agriculture research and technology development. The level of participation in marketing of agricultural products had 7 items; participation in agricultural training had 5 items; participation in coordination had 5 items while participation in research and technological development had 7 items. Interpretation of mean scores in the subsequent tables was based on the following mean ranges:

Mean range	Interpretation
3.26-4.00	Very good
2.51-3.25	Good
1.76-2.50	Fair
1.00-1.75	Poor

Table 2: Shows the level of community participation in NAADS program in Kabale District (Participation in Marketing of agricultural products and Agricultural Training)

Participation in Marketing of Agricultural products	**Mean**	**Std. Deviation**	**t-statistic**	**Interpretation**
You usually take your agricultural products for processing before sell	3.37	0.71	4.746***	Very good
You usually produce enough food for home consumption.	3.37	0.71	4.746***	Very good
You usually transport your agricultural Products to the market centers using trucks, bicycles and pickups.	3.25	0.71	4.577***	Very good
You usually sell your agricultural products in international and regional markets.	3.25	0.71	4.577***	Very good
You always sell agricultural products to small scale buyer	3.15	0.78	4.038***	Good
Most community members in your area sell their products to medium and large size buyers.	3.05	0.59	5.169***	Good
You usually produce enough agriculture products for sale.	3.05	0.51	5.980***	Good
Average mean	**3.21**	**0.67**	**4.791*** **	Good
Participation in Agricultural Training				
You usually attend all agricultural education programs as organized By NAADS.	3.37	0.71	4.746***	Very good
You usually attend agricultural training programs organized in your area.	3.37	0.71	4.746***	Very good
You have ever studied in technical institutions teaching about agriculture development in your sub- county.	3.25	0.71	4.577***	Very good
You usually try to get adequate information on agriculture education programs in your area	3.05	0.59	5.169***	Good
You usually attend adult literacy programs organized by NAADS in your area.	3.05	0.59	5.169***	Good
Average mean	**3.21**	**0.66**	**4.864*** **	Good

Source: Primary data. (2013). ***Significant at 0.01 **Significant at 0.05 *Significant at 0.1

Table 2 shows the level of Community participation in NAADS program with respect to marketing of agricultural products and participation in agricultural training in Kabale District. Marketing of agricultural products was interpreted as being good (average mean of 3.21; t = 4.791). Processing of agricultural products before sell by community members was rated the highest with a mean score of 3.37 being interpreted as very good while production of adequate agricultural products for sell by community members had the lowest mean score of 3.05 of which basing on the mean legend was also interpreted as being good. Results in table 4.3A further indicated that the level of participation of community members in agricultural training in Kabale District was rated as being good (average mean = 3.21; t_s= 4.864). Attendance of community members in agricultural education programs organized by NAADS officials had the highest mean score of 3.37 being interpreted as very good. The item with the lowest mean score was concerned with access to adequate agricultural information with a mean score of 3.05 although this was still interpreted as being good.

Table 3: Shows the level of community participation in NAADS program in Kabale District (Participation in Coordination and in Research and Technological Development)

Participation in Coordination	**Mean**	**Std. Deviation**	**t-statistic**	**Interpretation**
You adequately coordinate with NAADS officials about agricultural development activities	3.37	0.71	4.746***	Very good
You usually provide agricultural information to NAADS officials whenever needed (e.g. for agricultural research purpose).	3.25	0.71	4.577***	Very good
You always allow NAADS officials to monitor and evaluate your agricultural activities.	3.15	0.78	4.038***	Good
You usually consult NAADS officials and fellow farmers to advice you on how to improve on agricultural production.	3.05	0.59	5.169***	Good
You usually co-ordinate with NAADS officials to mobilize farmers for agricultural training services	1.98	0.88	2.250***	Good
Average mean	**2.96**	**0.73**	**4.055*** **	**Good**

Participation in Research and Technological Development				
You usually visit the agriculture development centre in your area	3.37	0.71	4.746***	Very good
You currently use new and high yielding crops/or seeds	3.25	0.71	4.577***	Very good
You have introduced better animal breeds on your farm	3.15	0.78	4.038***	Good
You usually consult the members of research and development for agricultural advice.	3.05	0.59	5.169***	Good
You currently practice modern soil management methods (e.g. digging terraces, mulching etc).	3.02	0.99	3.051***	Good
You usually attend orientation programs on better methods of preserving agricultural produce	2.75	1.02	2.696***	Good
You currently use modern agriculture technologies	2.33	0.95	2.453**	Good
Average mean	**2.98**	**0.82**	**3.634*** **	**Good**

Source: Primary data. (2013). ***Significant at 0.01 **Significant at 0.05 *Significant at 0.1

Table 3 above shows the level of Community participation in NAADS program with respect to participation in coordination and in research and participation in technological development in Kabale district. Community participation in coordination was interpreted as being good (average mean = 2.96; t = 4.055). The item with the highest mean score was concerned with community members' coordination with NAADS officials in agricultural development activities. Community coordination with NAADS officials in agricultural training services had the lowest mean score of 1.98 which was interpreted as being fair. Results in table 4.3B further indicated that community participation in agricultural research and technological development in Kabale District was rated as being good (average mean = 2.98; t = 3.634). The item concerning visitation to agricultural development centers by community members had the highest mean score of 3.37 being interpreted as very good while the item on use of modern agricultural technologies was rated the lowest with the mean score of 2.33 which was interpreted as being fair.

Table 4: Shows the level of community participation in NAADS program in Ntungamo District (Participation in Marketing of agricultural products and in Agricultural Training)

Participation in Marketing of Agricultural products	**Mean**	**Std. Deviation**	**t-statistic**	**Interpretation**
You usually transport your agricultural Products to the market centers using trucks, bicycles and pickups.	3.29	0.58	5.672***	Very good
You usually sell your agricultural products in international and regional markets.	3.29	0.58	5.672***	Very good
You usually take your agricultural products for processing before sell	3.2	0.53	6.038***	Good
You usually produce enough food for home consumption.	3.2	0.53	6.038***	Good
Most Community members in your area sell their products to medium and large size buyers.	3.16	0.61	5.180***	Good
You usually produce enough agriculture products for sale.	3.16	0.61	5.180***	Good
You always sell agricultural products to small scale buyer	3.11	0.69	4.507***	Good
Average Mean	**3.20**	**0.59**	**5.424*** **	**Good**
Participation in Agricultural Training				
You have ever studied in technical institutions teaching about agriculture development in your sub- county.	3.29	0.58	5.672***	Very good
You usually attend all agricultural education programs as organized By NAADS.	3.2	0.53	6.038***	Good
You usually attend agricultural training programs organized in your area.	3.2	0.53	6.038***	Good
You usually try to get adequate information on agriculture education programs in your area	3.16	0.61	5.180***	Good
You usually attend adult literacy programs organized by NAADS in your area.	3.16	0.61	5.180***	Good
Average Mean	**3.20**	**0.57**	**5.614*** **	**Good**

Source: Primary data. (2013). ***Significant at 0.01 **Significant at 0.05 *Significant at 0.1

Table 4 above shows the level of Community participation in NAADS program with respect to marketing of agricultural products and agricultural training in Ntungamo District. The average mean for marketing of agricultural products was interpreted as being good (Average Mean = 3.20; t = 5.424). The item with the highest man score was that which was concerned with the transportation of Agricultural products to market Centers using trucks, bicycles and pick-up with a mean score of 3.29 and this was interpreted as very good. The sale of agricultural products to small scale buyers by the Community members had the lowest mean score of 3.11 which was interpreted as being good.

Results in table 4 further indicated that community participation in Agricultural training in Ntungamo District was rated as being good (Average Mean = 3.20; t = 5.614). Attendance of community members in Agricultural technical institutions was rated the highest with a mean score of 3.29. Attendance of adult literacy programs by community members being organized by the NAADS officials in Ntungamo had the lowest mean score of 3.16 of which basing on the mean legend it was still interpreted as being good.

Table 5: Shows the level of community participation in NAADS program in Ntungamo District (Participation in Coordination and in Research and Technological Development)

Participation in Coordination	**Mean**	**Std. Deviation**	**t-statistic**	**Interpretation**
You usually provide agricultural information to NAADS officials whenever needed (e.g. for agricultural research purpose).	3.29	0.58	5.672***	Very good
You adequately coordinate with NAADS officials about agricultural development activities (e.g. implementation activities and management, looking for markets of agricultural products, sensitization about food security and storage etc).	3.2	0.53	6.038***	Good
You usually consult NAADS officials and fellow farmers to advice you on how to improve on agricultural production. (e.g on how to increase on yields using modern methods of farming).	3.16	0.61	5.180***	Good
You always allow NAADS officials to monitor and evaluate your agricultural activities.	3.11	0.69	4.507***	Good
You usually co-ordinate with NAADS officials to mobilize farmers for agricultural training services	3.03	0.77	3.935***	Good
Average Mean	**3.15**	**0.63**	**5.00*** **	**Good**
Participation in Research and Technological Development				
You currently using new and high yielding crops/or seeds (e.g. beans, coffee, cassava, bananas, maize, sweet potatoes, Irish potatoes etc.)	3.29	0.58	5.672***	Very good
You usually visit the agriculture development centre in your area	3.2	0.53	6.038***	Good
You usually consult the members of research and development for agricultural advice.	3.16	0.61	5.180***	Good
You have introduced better animal breeds on your farm (e.g. fresian cows, goats etc).	3.11	0.69	4.507***	Good
You currently practice modern soil management methods e.g. digging terraces, mulching etc).	2.8	0.8	3.50***	Good
You currently use modern agriculture technologies (e.g. Use of Ox-ploughs, tractors etc).	2.43	0.81	3.00***	Good
You usually attend orientation programs on better methods of preserving agricultural produce (e.g. keeping dried bananas, sweet potatoes, cassava etc).	2.18	0.81	2.691***	Good
Average Mean	**2.88**	**0.69**	**4.174*** **	**Good**

Source: Primary data. (2013). ***Significant at 0.01 **Significant at 0.05 *Significant at 0.1

Results in table 5 indicated level of community participation in NAADS program with respect to participation in coordination and participation in research and technological development in Ntungamo District. The average mean for participation in coordination was interpreted as being good (average mean = 3.15; t = 5.00). Provision of agricultural information by community members to the NAADS officials was rated the highest with a mean score of 3.29 which was interpreted as being very good. Community coordination with NAADS officials for Agricultural training services was having the lowest mean score in Ntungamo District of 3.03 which still then was being interpreted as being good.

Results in table 5 further indicated that community participation in research and technological development in Ntungamo District was interpreted as being good (average mean = 2.88; t = 4.174). The item concerned with the use of new and high yielding seeds had the highest mean score of 3.29 which was interpreted as being very good while attendance of community members to orientation programs regarding better methods of preserving agricultural products had the lowest mean score of 2.18 which basing on the mean legend was still being interpreted as being good.

Table 6: Shows summary of the level of community participation in NAADS Program in Kabale and Ntungamo Districts in Western Uganda

Construct	Ntungamo			Kabale			Average mean for Two districts	Interpretation based on Average mean for Two districts
	Mean	Std. Deviation	t-statistic	Mean	Std. Deviation	t-statistic		
Participation in Marketing	3.2	0.59	5.423***	3.21	0.67	4.791***	3.21	Good
Participation in Training	3.2	0.57	5.614***	3.21	0.66	4.864***	3.21	Good
Participation in Coordination	3.15	0.63	5.00***	2.96	0.73	4.055***	3.05	Good
Participation in Research	2.88	0.69	4.174***	2.98	0.82	3.634***	2,93	Good
Overall mean for Community participation	**3.09**							**Good**

Source: Primary data. (2013). ***Significant at 0.01 **Significant at 0.05 *Significant at 0.1

Results in table 6 indicated that the level of community participation was rated as being good with an overall average mean of 3.09. All the coefficients of t-statistics were significant at 0.01 or 99% conventional level justifying that the average mean scores for all the constructs of community participation were significant. The results from the quantitative analysis were supported by the findings from the thematic analysis- an outcome of qualitative analysis. From the interviews held with the key informants from both Kabale and Ntungamo districts regarding the extent of community participation, it was revealed that;

a) "community members were being encouraged to grow crops like apples, sorghum which could earn them enough income; b) community members were always involved in decision making about implementation of NAADS program although they were not adequately involved in participating in agricultural activities for example in agricultural education, marketing of agricultural products and coordination. However, the chief for Ntungamo Sub County was also quoted to have lamented":

"Unfortunately, however, some of the farmers in Ntungamo get attracted by money to the extent that they can sell all their produce and later be affected by famine".

In another closely related challenge, the CAO (Chief Administrative Officer) for Kitumba Sub- County located in Kabale district also reported that:

"Whereas some community members had responded to capacity building services positively, others had not and that whenever they could be called for training programs, they could not turn up".

This however does not rule out the fact that those community members who had taken NAADs program with a high level of seriousness were reported to have benefited a lot since their welfare had grown tremendously.

Table 7: Shows Relationship between Delivery of Agricultural Services and Community Participation in NAADS Program in Kabale and Ntungamo Districts of Western Uganda

Constructs Correlated	Pearson Correlation (r)	P-value	Interpretation	Decision on Ho
Agricultural Service delivery Vs. Community participation	0.026	0.000	Significant relationship	Rejected

Source: Primary data. (2013).

Results from table 7 above indicated a positive and significant relationship between agricultural service delivery and community participation ($r = 0.028$, $p<0.05$). Such findings implied that when agricultural service delivery improves, community participation also improves. However, since the correlation coefficient was in the ranges of 0 to 0.20 Bartz (1999), this implied a weak correlation between agricultural service delivery and community participation in NAADS Program.

4.1 Discussion

The researcher intended to correlate the empowerment approach and community participation in NAADS program in Kabale and Ntungamo districts in Western Uganda. The researcher also wanted to bridge the gaps identified from the existing studies, validate information in order to prove or disagree with Khwaja's theory of community participation which formed the basis of this study and to come up with new knowledge that would help other researchers and stakeholders in NAADS program in Kabale and Ntungamo districts in Western Uganda. The study was guided by three hypotheses namely:

Ha1: There is a positive and significant relationship between marketing of agricultural products and community participation in NAADS program in Kabale and Ntungamo Districts of Western Uganda.

Ha2: There is a positive and significant relationship between coordination in Research, Technological Development and community participation in NAADS program in Kabale and Ntungamo Districts of Western Uganda

Ha3: There is a positive and significant relationship between delivery of agricultural services and community participation in NAADS program in Kabale and Ntungamo Districts of Western Uganda

The discussion of the findings under this study was done with reference to the related and relevant literature of the topic under study.

Hypothesis One:

In the first hypothesis, the study postulated that Marketing of agricultural products and agricultural training was interpreted as being positively and significantly related to community participation in NAADS program in Kabale and Ntungamo Districts of Western Uganda and the findings presented in table 4.3.A confirm this assumption. Such findings implied that when marketing of agricultural products improves, community participation in NAADS program could also be improved. The results of the current study were also analyzed alongside the observations of other scholar in other research settings and revealed related situations. For instance, the findings are in congruence with College Grad (2013) who asserted that some small-scale farmers are involved in plans which make them belong to collectively owned marketing cooperatives that process and sell their products. Other farmers participate in community supported agriculture cooperatives that allow consumers to directly buy a share of the farmer's harvest. It is important for the community members and government to make plans of establishing markets for agricultural products because markets are fundamental in the livelihood strategy of most rural households, the rich and the poor. It is in the markets that producers buy their inputs and sell their products and it's where consumers spend their incomes by buying their food requirements and other consumption goods (International Fund for Agriculture Development-IFAD, 2013).

Whereas Kathleen and Chris (2009) noted that while planning for increased agricultural production, training and skill acquisition cannot be underestimated because skills are needed because they improve on productivity, leads to community participation in agriculture and increase adaptability to deal with change and crisis, and facilitate the diversification of livelihoods to manage risks in rural areas. In many cases, these skills and training are an issue of survival. However, it should be noted that providing agricultural training and skills effectively is one of the key challenges of rural development and this has not always been well met, usually because the contextual factors that prevent small farmers from accessing and applying agricultural training have not been addressed.

In addition, results in table 6 above, further indicated that the level of participation of community members in agricultural training in Kabale District was rated as being good. Attendance of community members in agricultural education programs organized by NAADS officials had the highest mean score of 3.37 being interpreted as very good. The findings of this study are in congruent with the ideas of Davis and Mekasa (2007) who asserted that through training which is aimed at capacity building, farmers can manage the risks involved in introducing comprehensive production. This is so because agricultural training enables farmers acquire the necessary agricultural skills to run the day to day activities of their farms.

Given the findings of the current study and the views expressed by other scholars, it can be concluded that proper community members' participation in marketing of agricultural products and training can improve on NAADS program in Kabale and Ntungamo Districts of Western Uganda.

Hypothesis Two:

The second hypothesis suggested that Coordination in Research, Technological Development and community participation in NAADS program in Kabale and Ntungamo Districts of Western Uganda were positively and significantly related as exhibited by table 4.3D which contain findings on this hypothesis. Such results implied that coordination in research, technological development and community participation in NAADS program had a direct relationship in that as coordination in research, technological development improves, community participation also improves. According to this study, the average mean for participation in coordination was interpreted as being good. These findings corroborate with the ideas of Sam (2004) who asserted that coordination in research and technological redevelopment plus implementation of all projects and programs in the agricultural sector is so important. He further stated that effective coordination is particularly imperative between the development partners, for example at the central level, decentralized level provincial level and district authorities.

The findings of this study are also in line with the ideas of Byerlee and Alex (1998) who pointed out that Ideally, interventions to improve national coordination and participation of stakeholders, enterprises and improved transparency and openness of decisions related to funding and priorities, improve responsiveness and accountability to stakeholders, build consensus, and develop coherent policies, strategies, and activities that reflect a strategic vision of innovation for agriculture. Lack of appropriate coordination for agricultural innovation at the national level is a chronic problem for many countries Byerlee and Alex (1998).

Furthermore, the findings of this study indicated that community participation in agriculture research and technological development in Ntungamo District was interpreted as being good. Implying that this improves community participation in technology and leads to high degree of innovation in future technologies and this can greatly influence the stability and certainly the productivity of agriculture. Technology in the classical sense includes the development and use of nutrients, pest control products, crop cultivators and firm equipments. It also includes the vision of genetically modified crops providing greater nutritional efficiency (more yields) manipulation of natural pest control agents and use of farm management techniques that focus on whole farm productivity over time, not just annual production per hectare. Effective agricultural research must be people centered. Indeed this shows that farmers' participation in decision making leads to significant improvements in terms of both suitability and effectiveness of research solutions, leading to benefits for both rural households and the natural resource base.

These findings concur with the ideas of Leobenstein and Thottapilly (2007) who argued that participation in agriculture research and technology development, involves making decisions to investigate agriculture problems for the purpose of finding solutions to the problems. According to Leobenstein and Thottapilly (2007), agricultural research can be broadly looked at as any research activity aimed at improving productivity and quality of crops by their genetic improvement, better plant protection, irrigation, storage, methods, farm mechanization, efficient marketing, and better management of resources. The mission of agricultural research has always been to improve agricultural practice for the purpose of feeding the ever increasing global protection. The decisions taken by the development practitioners to promote technology and sustainable agriculture in the rural settings cannot be under estimated in view of the needs within the agriculture sector often dominated by the highly differentiated small holder farming systems (Economic and Social Development Department Report, (2009).

Therefore basing on the findings of the current study and the analysis of the views expressed by scholars in other research settings, it can be concluded that coordination in research and technological development proffers a number of benefits to community members who are involved in it. This therefore suggests that community participation in coordination, research and technological development can strengthen the capacity of smallholder farmers to define and express their requirements in terms of services, organize themselves to better access inputs, produce markets and production services and also conduct their own agricultural experimentation.

Hypothesis three:

Table 7 contains findings on the third hypothesis, which assumed that delivery of agricultural services was positively and significantly related to community participation in NAADS program in Kabale and Ntungamo Districts of Western Uganda. The disclosure by the results indicated in table 7 shows that delivery of agricultural services was positively and significantly related to community participation in NAADS program in Kabale and Ntungamo Districts of Western Uganda. Such results implied that by improving agricultural service delivery, community participation in NAADS program could also be improved. Also, from interviews held with the key informants, it was also reported that;

"*through service delivery, farmers were having access to improved crop and animal breeds as well as receiving training services from NAADS Officials".*

The results of the current study were also analyzed along the views of other scholars in other research settings and revealed related situations. For example, in a study conducted by Quisumbing and Pandolfelli (2010), it was reported that adapting service delivery to specific client needs and how these may change over the life cycle should be considered as one of the approaches to increase poor farmers' access to and control of productive resources in Sub-Saharan Africa and South Asia.

The findings of the current study also agree with Nederlof *et al*, (2010) who asserted that agricultural services are part and parcel of rural services. They address the stakeholders and activities of crop production, both annual and perennial crops, and livestock. Agricultural services they add, facilitate access to and use of factors of production (like land, capital labour, inputs and knowledge) markets access opportunities and technology. Such services target community members who are involved in the agricultural activities, namely; farmers and their organization. Improved community participation in the NAADS program in Kabale and Ntungamo districts of Western Uganda resulting from farmers' ability to access services like training and sensitization is contemporary to the observations made by Nederlof *et al*, (2010).

In support of the findings, the Civil Society Budget Advocacy Group report (2013) showed that when awareness is created, then communities take responsibility of demanding for improved service delivery. Working with the entire community to foster grassroots accountability is crucial and effective in generating results. It was further reported that once energized and equipped with the relevant skills and information, community members are vital in supporting the participatory budget work and demand for effective service delivery. It was conceived that accountability can only be improved if citizen's awareness of government commitments has increased so that they can ask the right questions. When community members have knowledge of government commitments and effectively play their watch dog role and further engage their leaders on key gaps, then misuse of public resources is minimized. With the ongoing sensitization programs, and training of farmers all under the initiative of the NAADS program as evidenced from the interviews held with the respondents of this study, the assertion in the Civil Society Budget Advocacy Group report (2013) turn to be valid.

The findings are also in congruence with the findings by Smith (2002) who suggested that sometimes the actual provision of agricultural services can be delegated to community organizations or private sector. Smith further noted that it is usually crucial for the central government, community members or Non-Governmental Organizations to always involve community members in the plans made to deliver agricultural services because this leads to success of the program, and this makes the community members understand how agricultural services can benefit them. The results more so, from the interviews held with the key informants showed that;

"NAADS program officials had decentralized the activities of the NAADS program from District level up to the lowest level of farmer groups". This renders ideologies of Smith (2002) relevant to this study.

In the final analysis, therefore, the results of the current study and the views expressed by other scholars on the relationship between delivery of agricultural services and community participation in NAADS program, it is revealed that through agricultural service delivery, poor farmers' access to and control of productive resources can be realized which boosts their welfare.

Conclusions

Community participation had four constructs (i.e. participation in marketing, participation in training, participation in coordination and participation in research and technological development). The overall average mean for these four constructs of community participation was rated as being good with an overall average mean score of 3.09 which was also significant at 0.01 or 99% conventional level basing on the t-statistic. Results from interviews held with the key informants also indicated that;

"the level of community participation among community members was good. For example the Chief Administrative Officers as well District and Sub-county NAADS Coordinators revealed that through enterprise selection and meetings, community members were being involved in planning, assessment and implementation of NAADS program. Community members were also reported to have been involved in the decision making about implementation of NAADS program".

Such results cannot however disregard the continuous demand for actual involvement and full participation of community members (particularly farmers) in prioritizing, planning and monitoring of the various activities under the NAADS program.

There was a positive and significant relationship between; marketing of agricultural products and community participation; coordination in research, technological development and community participation; and between agricultural service delivery and community participation in NAADS program in Kabale and Ntungamo districts of Western Uganda.

Recommendations

The government and NAADS officials generally should always involve the farmers in decisions about determining the type of crops they want to plant and which they think can be easily favored by their

Soil moisture. This can be achieved if people are invited to participate to attend meetings and be allowed to suggest.

There is need for improved co-ordination between the various groups and/or stakeholders in the NAADS program. Much as synergy among stakeholders in NAADS program has been reported, NAADS officials and other stakeholders should work towards developing a strong institutional framework that will steer and boost this equally beneficial partnership. In this regard, coordination meetings held between District NAADS Coordinators; Sub County Coordinators; Chief Administrative Officers (CAOs); Farmers-forum community members; Sub County extension workers and Sub County chiefs are important in order to ensure successful implementation of NAADS program.

There is need for provision of information through training and sensitization on how to transform and strengthen pluralistic agricultural extension and advisory systems in moving towards the broader goal of increasing the income of farmers and improving rural livelihoods. The local people through sensitization can be in position to demand for accountability and the value for money can also be strengthened at all levels.

There is need for NAADS program managers and/or officials at all levels (i.e. from District to Sub county level) to focus more support on institutional capacity-building activities so as to reach out, recruit and develop the capacity of more farmers to form and manage their forums. This therefore requires recruitment of competent and dedicated extension workers to offer real-time advisory services to farmers.

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