

## Impacts of Agricultural Training on Young Farmers in Uganda

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### Abstract

*The District Agricultural Training and Information Centres (DATICs) component has been providing agricultural production training, information and skills to farmers and out-of-school youths; promoting linkages between farmers, agricultural advisory services and agricultural research. To supplement the financial donor support, the DATICs have been involved in commercial production to transform into autonomous training and information centres. This was a cross-section study that involved interviews, group and key informant discussions and observations utilizing structured questionnaires. Qualitative data were analyzed by frequencies and percentages while quantitative data were subjected to a descriptive statistical analysis. A “before and after” analysis was used to compare what the graduates were doing before and after the training. From the study findings, the following recommendations could be used to address the gaps and challenges in achieving DATICs objectives: The DATICs should identify more and viable income generating avenues; There is need to design Farmer School programs and courses/modules to cater for a diversity of clients including opening up to other clients who may not be members of youth clubs but able to pay the fees.; A day-scholars option could be explored and more females should be encouraged to attend the training; The offered courses/modules could be formalized to be recognized by the Ministry of Education and Sports; and national offices need to work closely with DATICs to identify and plan viable projects/program for sustainability of the DATICs.*

**Key words:** Rural Development, Out of School Youth, Agricultural Training Impacts, Training Curriculum, Value-Added Processing

### Introduction

The District Agricultural Training and Information Centres (DATICs) Component is one of the six Agricultural Sector Programme Support (ASPS) II components whose development objective is “increased productivity and increased share of marketed production for economically active low income small farmers” in Uganda. The immediate objective is providing agricultural training, information and education services in support of low income female and male farmers, and specifically out-of-school youths.. Since 2000, the component has been implemented in five districts in Uganda namely: Kabarole, Rakai, Masaka, Pallisa and Tororo.

These DATICs promote linkages between farmers, agricultural advisory services and agricultural research in their respective districts in Uganda. The funding for these 5 centers in the southern region of Uganda has been provided by DANIDA through 2008 but are expected to become economically self sufficient through the provision of training and agricultural services. Additionally, these centers have been tasked with the provision of agricultural training to out-of-school youth.

The out-of-school youth programs are designed to provide equal access to training for both young male and female farmers who have dropped out of school. Youth clubs are established in the districts and young farmers are recruited from these clubs for the year long training program. Most of the financial support for this training is provided by the donor and the students are allowed to work off their part of the cost of the training provided.

### Purpose and Objectives

Although previous assessments have been conducted of the DATIC trainings, it was not well understood what impact the training has had on the young farmers and on their youth clubs and communities after leaving the program.

To establish the impact that could be attributed to agricultural training provided at the DATICs over the years, a study was conducted in January-February 2007. This was to explore whether the trained youths (graduates) became farmers and how the training influenced the way they carry out farming; whether those who did not become farmers are using the knowledge and skills they acquired for any other purposes that improve their lives; and whether there are any benefits that may have been realized in the *parent* communities as a result of donor support to the DATICs. Additionally, the study examined the effectiveness of the DATICs’ supported activities, identify and analyze factors that have affected the observed performance and impact, and document lessons learned and recommendations for addressing gaps and challenges in achieving DATICs immediate and development objectives.

This study was conducted in all of the five DATIC districts in Uganda and supported by DANIDA. In each district, 40 Farmer School graduates and four youth clubs were targeted. Additionally, 20 clubs largely composed of non-graduates were also interviewed. Discussions were also held with DATIC managers, Farmer School instructors and the District Youth Coordinators.

The primary objectives of the study were to help the DATIC adjust trainings and delivery of services towards becoming autonomous from the donor. Specific research questions included:

- Assess the effectiveness (relevance, impact and value for money) of the DATIC’s supported activities;
- Identify and analyze factors that have affected the observed performance and impact.
- Identify and document lessons learned and recommendations for addressing gaps and challenges in achieving DATIC’s immediate and development objectives.

## Methods

This was a cross-section study that involved interviews, group and key informant discussions and observations utilizing structured questionnaires. It was based on in-depth surveys in all five districts in which the DATIC's are located: Kyembogo in Kabarole district; Kamenyaminggo in Masaka district; Iki-Iki in Pallisa district; Rakai in Rakai district; and Tororo in Tororo district. Qualitative data were analyzed by frequencies and percentages while quantitative data were subjected to a descriptive statistical analysis. A "before and after" analysis was used to compare what the graduates were doing before and after the training.

The focus of the study was to trace and interview "farmers" and "graduates" from youth clubs who have benefited from the training at DATICs as well as some "non-graduated". The "farmers" referred to are those who attend short term training in a specified subject matter; while "graduates" here refers to young farmers who attended a one-year certificate course at DATIC. The "non-graduates" are those youth club members who have not yet attended the one-year course. With the help of District Youth Coordinators, sampling was used to select and trace respondents in each of the five districts. A total of 173 respondents, comprising of Farmer School graduates and farmers, were selected and interviewed. A total of 20 donor-supported youth clubs (4 clubs per district) were visited during which the members comprising of mainly non-graduates were interviewed. It is from these interviews that information from non-graduates (potential Farmer School students) was collected. Initially, it had been proposed that information would also be collected from current students, but at the time of the study this category never existed; recruitment was in progress. Other key informants that were interviewed were DATIC Managers, District Youth Coordinators and Farmer School Instructors.

This report is based mainly on primary data which were collected using structured questionnaires for farmers and clubs, and a checklist for DATIC officials. The information of interest was socio-demographic characteristics of the Farmer School graduate farmers; period when they undertook training; achievements they had realized and setbacks experienced in farming, off-farming, family, parent clubs and communities during the last eight years spelling out those attributed to DATICs training; major economic enterprises engaged in and changes made in the enterprises over the last 5 years, and those that can be attributed training; ownership of and changes in assets such as land, radio and bicycles; extent of and changes in using the acquired knowledge and skills; roles played in parent clubs after training; and contributions to clubs and communities after training.

From the youth club members who were mainly non-graduate farmers, information collected included club's major activities of the club over the years and changes experienced and whether such changes are attributed to training; assets possessed by the club and period when they were acquired; roles played by the graduates, benefits to individual members and communities; linkages with other institutions; and willingness to attend and pay for Farmer School training.

In addition information was collected from Centre Managers, District Youth Coordinators (DYCs) and Farmer School Instructors. The information included nature and level of support given to youth clubs; changes in student numbers and curricula used in the training over the years; indicators of client satisfaction of services offered and benefits of the training and DATICs to communities. Other relevant information included monitoring of the supported clubs, achievements of the clubs over the years, comparison of graduates and non-graduates and existence of collaborative linkages with other institutions. In order to gauge the potential of the DATICs to sustain themselves, an inquiry was made of the revenue generating capacity and how

they plan to survive without donor support. To supplement the field survey data, some information was gathered from ASPS I and II documents.

Data were processed using SPSS computer software. Qualitative data were analyzed using frequencies and percentages, while quantitative data were subjected to descriptive statistical analysis to get means and ranges. Being a tracer and impact assessment study, a “with and without” as well as a before and after analysis was used. The “with and without” analysis was used while comparing what the Farmer School graduates were doing with what the non-graduates (but also belonging to youth clubs) were doing. The “before and after” analysis was used to compare what the graduates were doing before and after the training.

### **Results and Conclusions**

The DATIC component is in line with the national philosophy of improved agricultural education and training as one of the strategies for transforming the agricultural sector away from subsistence towards market orientation.

Results of the study are presented on topics such as: trends in membership of donor supported youth clubs; major activities of the youth clubs; support given to the youth clubs and individual young farmers; training curriculum; selection of young farmers; roles that youth clubs assign the training graduates; levels of satisfaction; willingness to participate in farmer training; and issues related to adoption of improved agricultural practices.

The study found out that club membership has been dynamic; some members leaving and new ones joining, but maintaining reasonably good group sizes. Different clubs and individuals (graduates and non-graduates) are involved in different projects, with the majority (60-85%) engaged in agricultural projects.

Almost all members who go for Farmer School training successfully complete and over 74% return to and participate in the activities of their parent clubs. Over 80% of the graduates retained in their clubs are assigned different roles including serving as chairperson, secretary, treasurer, and technical adviser. In their individual projects, the graduates reportedly use relatively better/modern agronomic practices as mentioned by 61.5% of their parent clubs, are more food secure (23.1%), use better inputs (7.7%) and are more hardworking (7.7%). To the community, they offer technical advice and train farmers in different agricultural aspects at no cost, and their behavior has positively changed. Some are being used as Contact Farmers, while others have been employed by other farmers.

However, not all the graduates use all the knowledge they acquired from the agricultural production training. About 45% claim to be applying all the skills, while 48% apply only some of them. The major reason that hinders them from using all the skills is inadequate capital (reported by 63%) and other inputs (land and time/labor) and drought.

Results show that the level of using improved agricultural practices and modern inputs among the graduates was higher after training than before training. The level among the graduates is also higher than among the participants/non-graduates. Before training, the percentage of farmers applying improved agricultural practices ranged from 10% to 28.6% for those who trained between 2002 and 2005, and 44.4% for those who trained in 2006. After training, the percentage gradually rose annually to over 80%. However, the percentage of the non-graduates who applied improved practices ranged from 16.7% to 41.2% for the period considered (2002-2006, hence attributing these differences to the training).

The study found that the level of commercialization or selling of student grown produce has generally been high. Over 70% of what the young farmers produce is marketed, irrespective

of whether one is a graduate or non-graduate. Consequently, farmers reported that their welfare had improved resulting from application of the knowledge and skills they received. They reported that they were more knowledgeable (by 44.4%) and realized higher yields; hence more food and nutrition secure (25.9%). They also reportedly realized increased income (18.5%) because of using improved farming practices (11.1%), and were better at decision making for agricultural production practices.

To supplement the declining donor support, the DATICs are engaged in commercial production activities including crop production, milling and tractor hire services. They have established linkages with some research institutions and organizations through which DATICs undertake such activities as training for the organizations, and multiplying and distributing improved crop varieties and animal breeds. However, no DATIC has reached a level of self sustainability despite the increasing revenues generated because the revenues fall short of the budgets and the costs involved in production are increasingly high. Further work is being conducted to explore means of increasing viability of the commercialization of training activities, especially value-added agricultural activities such as process, packaging and marketing.

This section also discusses the field study results. The discussion is made with special focus to the some projected outputs of the DATICs component. These are: (1) DATICs transformed into autonomous Training and Information Centres; (2) Agricultural Education at the DATICs expanded and improved; (3) Linkages with Research and Extension developed; and (4) Commercial production and sustainability enhanced. Discussion is largely based on the information gathered through interviews and discussions with DATICs officials and field observations.

One of the main visions of this donor project is that the development of DATICs as fully-fledged autonomous institutions. Although this output has not yet been fully achieved in all the DATICs, there are indications that all DATICs are striving for financial sustainability. This is mainly based on their commercial activities and initiatives such as grain production, milling of maize, out-grower production of specialty crops, livestock production and fee for service training courses. Such initiatives are only possible with existence of adequate facilities such as land (Kyembogo occupies 540ha; others have a minimum of 60 acres). Most DATICs have hammer mills and tractors that are not fully utilized for income generation. It was expected that the internally generated funds would be able to cover the implementation cost shortfall. However, the DATICs have not yet fully become financially sustainable to fund the programs.

As to the second output, provision of Agricultural Education to young farmers (mainly school drop-outs) at Farmer Schools is proceeding well. School drop-outs have been annually recruited and trained with gender considerations to target boys and girls in the ratio of one to one. In some cases, however, there are more boys admitted than girls due to family and social obligations for the girls.

Results show that many young farmers have been equipped with agricultural knowledge and skills, which they have, in turn, used not only to improve their welfare but also serve fellow farmers in their youth clubs and communities. The training makes the graduates more confident, better behaved and more useful to their clubs and communities. With support from DATICs and other institutions, demonstration units have been established which have helped other farmers. These are claimed to have improved the clubs and communities of the graduates in terms of livelihood. Better yields, food and nutritional security and improved incomes have been reported, hence contributing to ASPs's development and immediate objectives. Testimonies indicate that

the trained farmers are able to raise more income if conditions are good, as one Kyembogo trainee said:

*“I had not expected such high profits from my egg plants and I am going to continue farming when I complete this course”.*

Another one reported:

*“...I have learnt that people make a living out of farming. I will grow vegetables when I leave this place”.*

### **Implications/Educational Importance**

Curriculum needs to be realigned to meet the young farmers' needs to improve their incomes from farming and to also cater for the diversity of clients, including the Ministry of Education and Sports. Selection of participants should be opened to young farmers who are not members of the youth clubs and allow for day-scholars who can not afford the boarding costs. Youth clubs should be supported to develop a culture of savings and investment in agricultural enterprises. To promote sustainability of the DATIC centers, more efforts should be made to establish linkages with other institutions. Commercial production of the DATIC centers needs to be expanded and should be focused around the needs of the farmers in the districts.

Another sign of improvement is regular curriculum review aimed at making it more tailor-made and client-responsive; taking into account the changing of society in the respective DATIC areas. The recent development of a module approach curriculum, from the original too general curriculum, has attracted interest of different organizations to sponsor their beneficiaries. For example, at the Kyembogo DATIC, a new course on value-added agriculture has been added focusing on maize/grain production and the processing/marketing of bread produced in brick ovens.

In regards to the agricultural education at the DATICs, the one-year “Young Farmers Commercial Certificate” course training (Farmer School) has been effective in terms of the target group (school drop-outs of 15-25 years old) and their selection (participatory and gender sensitive), and curriculum development and delivery. Its effectiveness is also evident from the benefits realized by the graduates of the training, and the overall impact of the training to rural youth clubs and communities, mainly in terms of improved agricultural yields and share of marketed production, incomes, and human and social capital accumulation.

There is need to design the farmer School training courses/modules and upgrade some to cater for a diversity of clients, including formalizing courses/modules to be recognized or certified by the Ministry of Education and Sports. Examples and modalities could be borrowed from Agricultural Colleges in Uganda. With the advent of the National Agricultural Education Policy under the Plan for Modernization of Agriculture (PMA), the DATICs are recognized among providers of non-formal education. A possibility of registering the Farmer Schools under the Directorate of Industrial Training under which most Vocational Training Institutions are registered could also be pursued. The curriculum should be regularly reviewed in liaison with beneficiaries to keep it client-oriented.

The training should open up to allow youths who may not be members of any club but who may be able to pay the fees. Such students may be allowed to be day-scholars to reduce on the amount of money required for their training. Recognizing that there is low female enrolment and yet females dominate agriculture in Uganda, it is pertinent to have advocates of gender to sensitize the masses about the importance of training females.

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