# Assessing Vocational Training Needs in the Ugandan Oilseed Sub-Sector

# FINAL REPORT


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# Acknowledgements

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# Acronyms

| | |
|---|---|
| BTVET | Bureau for Technical Vocational Education and Training |
| CAP | UN Consolidated Appeals Process |
| DRC | Democratic Republic of the Congo |
| FAO | Food and Agricultural Organization |
| FGD | Focus Group Discussion |
| FFS | Farmer Field School |
| GER | Gross Enrollment Ratio |
| GTZ | German Agency for Technical Cooperation |
| LC III | Local Government Level III |
| LRA | Lord's Resistance Army |
| NAADs | Uganda National Agricultural Advisory Services |
| NER | Net Enrollment Ratio |
| NGO | Non-Governmental Organizations |
| P (1-4) | Primary Education (levels 1 to 7) |
| PLE | Primary Leaving Examination |
| PEOVT | Promotion of Employment Oriented Vocational and Technical Training |
| S (1-6) | Secondary Education (levels 1 to 6) |
| SIPA | The School of International and Public Affairs, Columbia University |
| SNV | The Netherlands Development Organization |
| UGAPRIVI | Uganda Association of Private Vocational Institutes |
| UBS | Ugandan Bureau of Standards |
| UNEB | Uganda National Examination Board |
| UNICEF | United Nations Children's Fund |
| UOSPA | Uganda Oilseed Producers and Processors Association |
| UPE | Universal Primary Education |
| USE | Universal Secondary Education |
| VC | Value Chain |
| VT | Vocational Training |

# I. Executive Summary

Despite clear progress toward poverty alleviation in recent years, rural poverty remains a paramount problem in Uganda today. Two major factors that contribute to this issue include high drop out rates from the formal educational system among youth and low economic returns to agriculture. Considering that such a large proportion of Ugandans engage in agriculture and how few of them have the skills to move from subsistence to commercial farming, there is a need to think through educational platforms to teach unemployed youth who are out of school how to improve their livelihoods as agriculturalists. As a result, SNV Uganda contracted a team of graduate students from Columbia University's School of International and Public Affairs (SIPA) to assess vocational training (VT) opportunities in one especially profitable sub-sector, oilseed, in eastern and northern Uganda.

The SIPA team formulated five main research questions to determine: (1) whether youth who drop out of school are interested in attending agricultural VT; (2) what agricultural skills dropouts need to improve their livelihoods; (3) the skill gaps in the oilseed value chain; (4) the existing supply of agricultural VT; and (5) how agricultural VT can meet the educational needs of dropouts. In addition to an extensive literature review, the team conducted two rounds of field research in Uganda and found that:

- While agricultural VT is not the first choice for most rural youth who have dropped out of school and become agriculturalists by default, it is still a sensible an desirable education alternative that can improve their incomes as farmers.
- Youth dropouts want improved production skills most, but also see the value in other skills throughout the value chain, especially processing. Business and marketing skills are also critical to ensure their success as agro-entrepreneurs.
- There are skill gaps at almost all levels of the oilseed value chain, including production, post-harvest handling, small-scale processing and agro-machinery.
- There are very few VT Centers in eastern and northern Uganda that offer agricultural curricula, and those that do focus almost exclusively on production.
- Youth dropouts are attracted to the practical yet structured format of VT. However, courses must be shorter, cheaper and closer to home to retain them.

Based on these findings, the team recommends that SNV first distribute this report to all relevant stakeholders and convene a round table discussion to determine next steps. On a policy level, the team recommends that SNV work with the government to establish certification requirements and agricultural and education specialists to design short courses for different segments of the value chain. Programmatically, the team advises SNV to work with NGOs to form rural youth groups and VT Centers to recruit qualified trainers, possibly from the Agricultural Colleges and Polytechnics. VT providers should offer these short courses in the villages to organized youth groups, who pay a small fee for the service. In the short term, agricultural VT should focus on improved production, followed by post-harvest handling, business and marketing skills. In the long-term, agro-machinery in the oilseed sub-sectors should be promoted.

# II. Introduction

Uganda has made remarkable strides in poverty reduction in recent years. The proportion of Ugandans living below the poverty line dropped by 25 percent between 1992/93 and 2005/06 (UNDP 47) and GDP per capita increased from $1,448 PPP in 2005 to $1,600 PPP in 2007 (Economist Intelligence Unit). However, widespread rural poverty remains a serious problem in Uganda, as evidenced by the data in the 2004/5 – 2007/8 Poverty Eradication Action Plan. While urban poverty has declined to 12 percent, more than 40 percent of rural Ugandans live below the poverty line (Ministry of Finance 13). Considering that close to 90 percent of the population of Uganda is rural, this unequal distribution takes on additional importance (UNDP 19).

Rural poverty is caused and compounded by many factors. Two important ones include low post-primary school attendance and low economic returns to agriculture. Regarding education, in 1997 the Government of Uganda introduced a policy of Universal Primary Education (UPE), which largely explains why in Uganda today, more than 100 percent of school age children are enrolled in primary school, and over 80 percent attend (UNICEF).[i] Equally impressive is the fact that 84 percent of female youth and 88 percent of male youth are literate (UNICEF). However, roughly less than 20 percent of youth are enrolled in traditional secondary school (UNICEF). This is despite the fact that in 2007 the Government of Uganda instituted Universal Secondary Education (USE). In terms of agriculture, Uganda has substantial natural resources, including fertile soils, regular rainfall, and sizable mineral deposits. Moreover, agriculture is the most important sector of the economy, employing over 80 percent of the work force in 2007 (EIU). Unfortunately, most people engaged in agriculture are subsistence farmers just trying to earn enough to live from day to day.

With these problems in mind, SNV, the Netherlands Development Organization in Uganda, contracted a team of graduate students at Columbia University's School of International and Public Affairs to assess vocational training (VT) opportunities in the oilseed sub-sector in four districts located in eastern and northern Uganda: Bukedea, Lira, Mbale and Soroti. The objective of the project is to identify gaps between the demand for and supply of this type of agricultural VT for youth between the ages of 15 and 28 who have dropped out of the formal education system. More specifically, this paper will explore the following research questions:

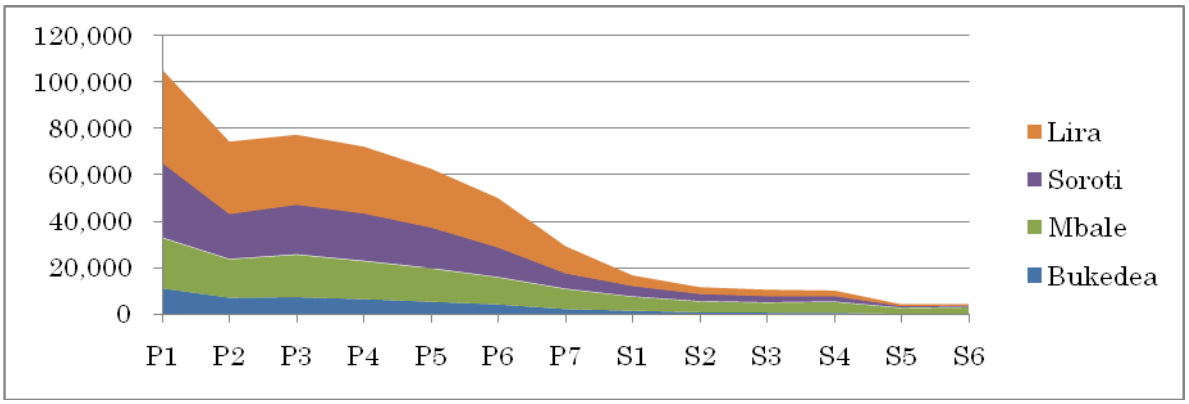
1. Are youth who drop out of school interested in attending agricultural VT?
2. What agricultural skills do dropouts need to improve their livelihoods?
3. What are the skill gaps in the oilseed value chain?
4. What is the existing supply of agricultural VT?
5. How can agricultural VT meet the educational needs of dropouts?

## A. Primary School Dropouts

Despite the government's efforts to promote primary education through UPE, primary school dropouts remain an important issue in a country where more than half of the population is comprised of youth below the age of 15. According to UNICEF, although primary school enrollment achieved over 100 percent by 2006, when it comes to secondary enrollment, the rates deteriorate to 21 percent for male and 17 percent for female students, indicating that the vast majority drop out during or after primary school.

In the four districts where this research is targeted, the situation is similar to that seen nationwide. The total 2007 statistics for the four districts show that about 105,000 students were enrolled in primary 1 (P1), while only 29,000 were in primary 7 (P7). This huge contrast in the number of students enrolled in P1 and in P7 far exceeds the rate of expected decline in the number of students of about 17 percent, which corresponds to natural decrease of population of the targeted group according to the country's population structure. Furthermore, the number of students that go to secondary school drops significantly after graduating from primary school. While there were about 29,000 students in P7 across the four districts, only 16,000 students were enrolled in secondary 1 (S1). In addition, only about 4,200 pupils remain in secondary 5 (S5), which comprise only 0.8 percent of all the students from P1 to S6 in the four districts. Therefore, the beginning and end of UPE are critical periods in terms of equality of learning and learning outcomes.

*Figure 1: Number of Students by School Grade*

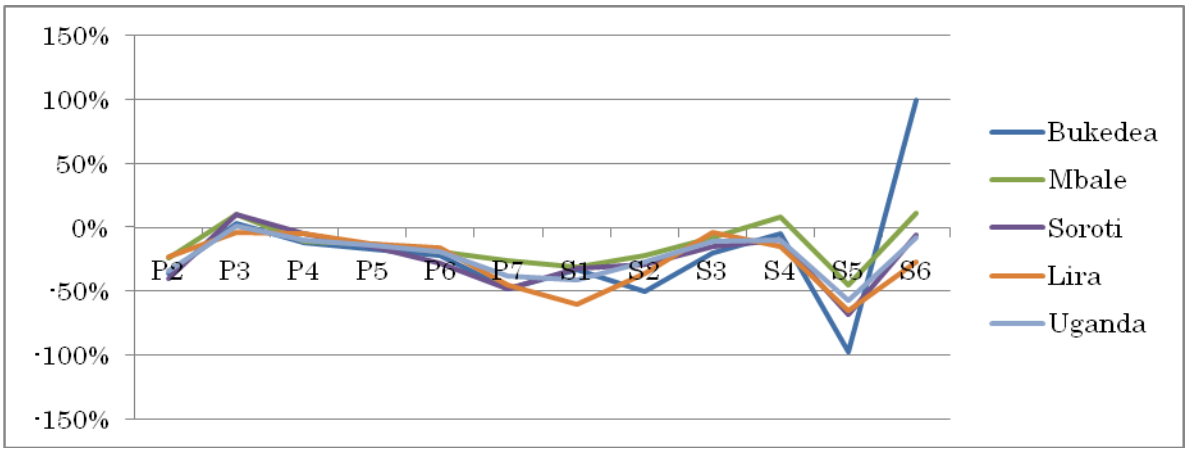



Source: Ministry of Education and Sports

Several reasons are behind the drop out rates, including insufficient supply of school infrastructure, teachers, the quality of teaching and teacher absenteeism. However, the two main hurdles seem to be the cost, and the universal examination upon the completion of schools. Although UPE has made education free for up to four children in the household, the cost of sending kids to school remains an obstacle, especially for poor families. In rural areas, female pupils in particular lose the opportunity to attend school in the face of early marriage or young pregnancy. Upon finishing P7, the students are required to sit for a Primary Leaving Examination (PLE), which is

conducted by Uganda National Examination Board (UNEB). The exam is necessary not only for graduation, but also for determining which secondary school the student could attend. If the school fee is in arrears, the student will not be allowed to take the test and, therefore, his/her path to secondary school is closed. Even if the student takes the test, he or she is required to repeat the grade if the grade is not satisfactory. Consequently, as shown in the graph, a huge number of students drop out in years between P6 and S1, and also in S4, or at times when additional funding or examination requirement is needed.

*Figure 2: Percentage of Decline in Student Enrollment*




Source: Ministry of Education and Sports

In response to the above-mentioned situation, the government has sought policies to provide dropouts with support. In fact, the government established ambitious policies to set up at least one secondary school in every sub-county, and also to build 850 community polytechnics. However, neither of policies has been achieved as of March 2009. The government has also put emphasis on promoting vocational training as an alternative. In 2008, a Business, Technical and Vocational Education and Training (BTVET) act was passed in parliament that stressed shorter, modularized vocational training to make the courses more accessible to those students in need. Though this is certainly a positive development, its implementation is still in progress.

Educational options are limited for dropout students in Uganda. Those fortunate students that can afford vocational training, often chose to participate in “traditional” courses such as carpentry, tailoring and brick making. But the majority, especially in rural areas, either stays at their home and farm or move into town in search of work. Support to school dropouts is a critical issue in these four districts.

## B. Oilseed

Uganda has a well-suited environment for agriculture, but its production is fragmented with small-scale subsistence growers, who operate small farms of 1 to 3 hectares, making up the majority. Traditional farming is commonly practiced, with less than 10 percent of the farmers using fertilizer, and the share is even lower among small farmers. An estimated 60,000 more commercially oriented individual farmers produce on a larger scale, use somewhat more modern production techniques, and sell a larger share of their production. Problems of access to land, modern inputs, and markets, wide fluctuations in commodity prices, and erratic weather patterns constrain agricultural modernization and contribute to rural poverty (Johnston 7). The sector is further constrained by generally low quality seeds, disorganized farmers and unsustainable market access systems (Coulter 6).

Conditions in eastern and northern Uganda are particularly suitable for oilseed production. Six different types of oilseed crops are cultivated and/or processed:

- Groundnut
- Cotton
- Sesame
- Soybean
- Sunflower
- Sheanut

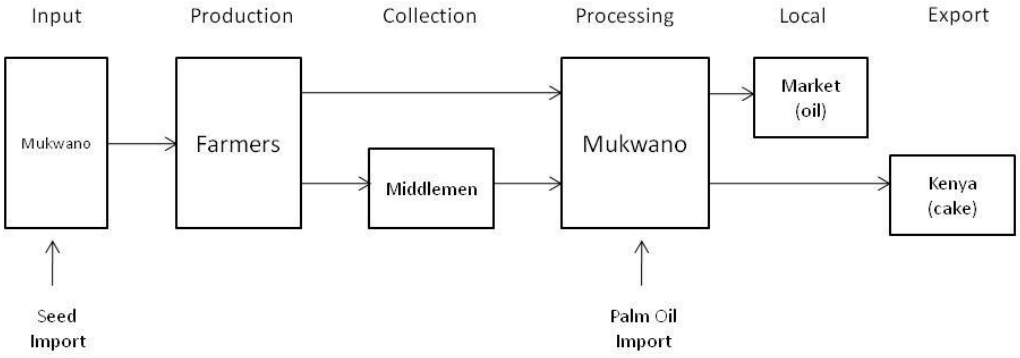
For the purposes of this study, the focus will be on groundnut, sesame, soybean and sunflower. One reason oilseed is so attractive is because it has many uses: the raw nuts/seeds are roasted and consumed; they are also processed into edible oil and paste; the seedcake is used for animal feed; the crop is converted into biofuel; oilseed is used to make soap and as an essential ingredient for medicinal oils; and the crop helps make bee forage used to improve honey production (SNV E&S Africa 26). Other reasons oilseeds are attractive include the facts that they are profitable and require as little as three months to complete one growing cycle. Considering their suitability and profitability, the Ugandan government has selected the oilseed sector as one to help move Ugandan agriculture from subsistence farming to market-driven (Otimodoch 1).

Historically, the oilseed sector grew from the 1950s through the mid-1970s, as Uganda developed the capacity to process seeds and extract oil in addition to producing oilseed. However, the economic breakdown caused by the exile of Asian (Indian) entrepreneurs in the early 1970s, combined with political unrest during this same period led to the decline of the oilseed sector (SNV Oilseed Report). In recent years, the oilseed sector has grown again, partially due to the formation of producer associations such as the Uganda Oilseed Producers and Processors Association (UOSPA), which has helped increase seed supplies, improve processing capacity, and bargain for better prices for all members within the oilseed value chain (UOSPA). Also, many farmers have developed new marketing relationships with large retailers such as Bidco and Mukwano (SNV Oilseed Report). Currently, there are an estimated 74,000 oilseed farmers in the northeastern region of Uganda (Otimodoch 1).

While generally the same, there are differences within the Ugandan oilseed value chain that depend primarily upon the associations/companies farmers work with: Bidco, Mukwano or UOSPA. Bidco, an East Africa edible oil manufacturer, entered the Ugandan oilseed market in June 2005. Bidco has its own Ugandan processing plant, but like Mukwano, also sells imported palm oil after a refining process. Bidco's production capacity is still low, but has a large future potential, as Bidco plans to plant a significant amount of palm oil to be utilized in 7 years (Bidco; SNV Oilseed Report).

Figure 3 below depicts the value chain for farmers that sell to Mukwano, a group of Sub-Saharan African industries involved in manufacturing, transport, and logistics:

*Figure 3. Mukwano oilseed value chain*

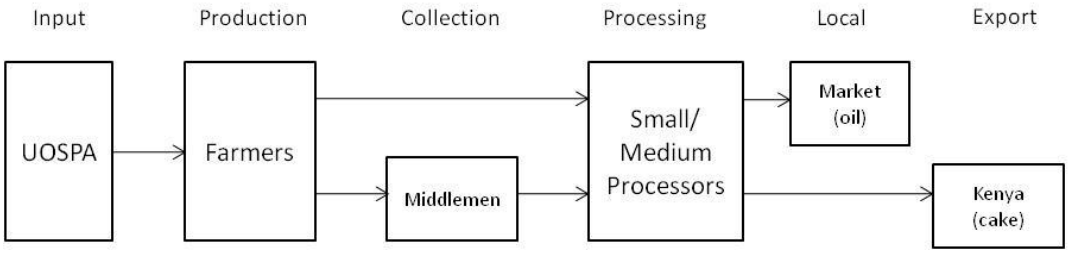



Source: Mukwano; SNV Oilseed Report

Reportedly, Mukwano is currently working with 50,000 small-scale sunflower farmers in and around Lira, where their processing plant is located. They provide seeds and training, and in return they receive raw input for edible oil and seedcake processing. Mukwano has plans scale up to work with 100,000 farmers in the future.

For oilseed farmers who are UOSPA members, the value chain is slightly different, as depicted by figure 4:

*Figure 4. UOSPA oilseed value chain*




Source: UOSPA; SNV Oilseed Report

UOSPA is currently working with 947 oilseed producer groups, comprised of 30 to 50 households for a total of approximately 40,000 families. In addition, UOSPA supports 62 oilseed millers, including 5 large mills and 57 medium- and small-scale mills.

In terms of general agricultural training, there are a number of actors and methods. First, the Uganda National Agricultural Advisory Services (NAADS), which sits within the Ministry of Agriculture, is responsible for providing extension services to farmers. Next, the UN Food and Agricultural Organization (FAO) organizes Farmer Field Schools (FFS) to provide information through the use of demonstration plots. Finally, UOSPA trains contact farmers to train other oilseed farmers in improved techniques. Overall, this paper will refer to all of these types of informal educational opportunities for farmers as agricultural training. Agricultural VT, while still a fairly nascent concept, will refer to training that is more formal and structured.

## Supply & Demand

Uganda produced between 165,000 and 190,000 tons of each of the four main types of oilseed in 2007, totaling nearly 700,000 tons. While production is increasing across all cases, sunflower production is clearly growing the most aggressively. Interestingly, it has one of the smallest areas, measured by the number of hectares planted.

*Figure 5: Oilseed Area in Uganda*

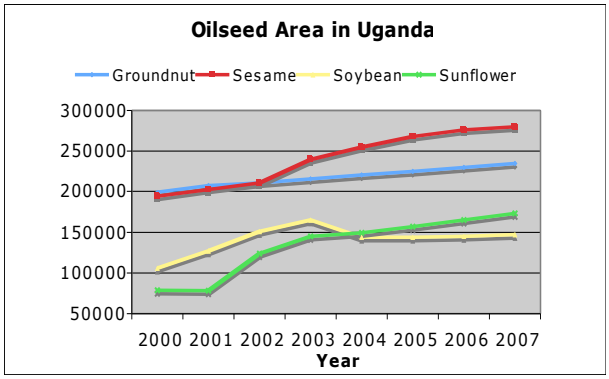
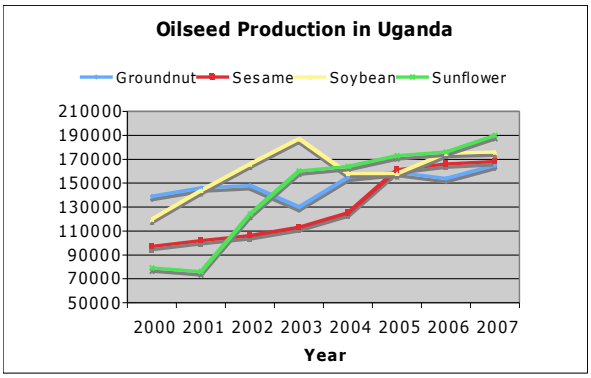


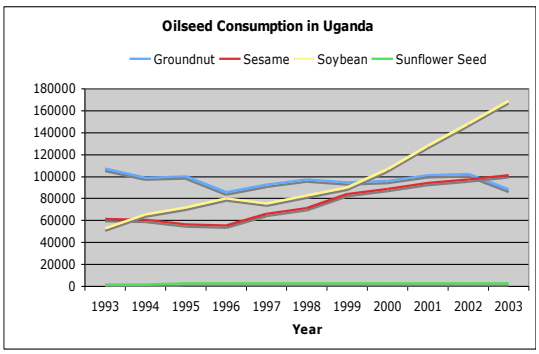

*Figure 6: Oilseed Production in Uganda*




Source: FAOSTAT | © FAO Statistics Division 2009 | 04 March 2009

The graph below shows that most of the groundnut, sesame and soybean produced in Uganda is purchased raw in domestic markets, and consumed raw or as paste.

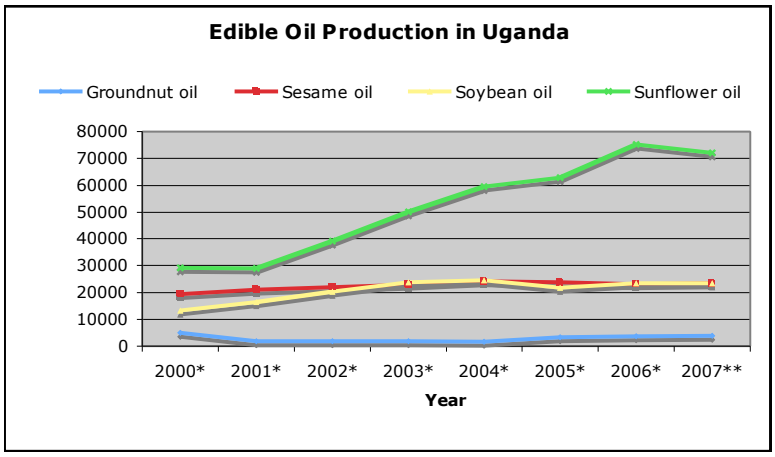
*Figure 7: Oilseed Consumption in Uganda*




Source: FAOSTAT | © FAO Statistics Division 2009 | 28 March 2009

In terms of processing the oilseed crops into oil, groundnut, sesame and soy are not good candidates for a number of reasons. Sunflower seed, on the other hand, is regularly converted to oil, as demonstrated by the following graph.

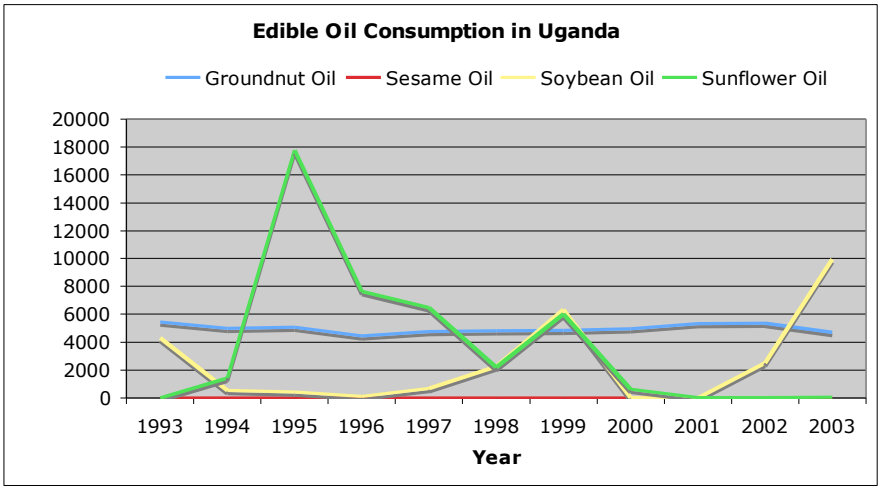
*Figure 8: Edible Oil Production in Uganda*




*Unofficial Figure **FAO Estimate
Source: FAOSTAT | © FAO Statistics Division 2009 | 28 March 2009

Domestic consumers of sunflower oil fall into one of two categories: (1) residents of northern Uganda who enjoy the taste or unrefined sunflower oil; or (2) wealthy city dwellers who appreciate the health benefits associated with refined sunflower oil. Since sunflower oil only reaches these small niche markets, consumption rates are low. Soybean oil consumption seems to have risen in recent years.

*Figure 9: Edible Oil Consumption in Uganda*

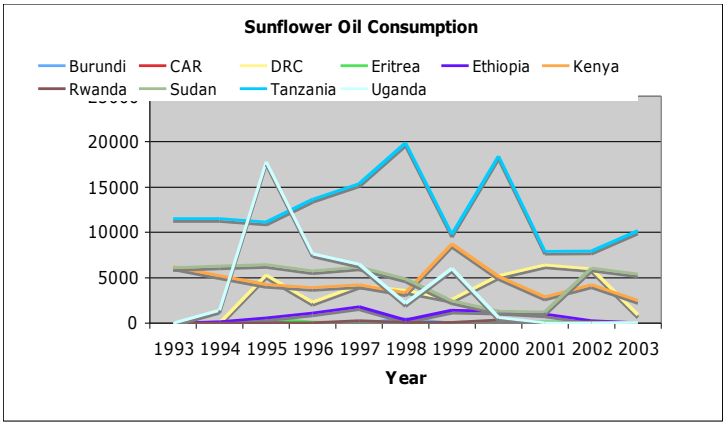



Source: FAOSTAT | © FAO Statistics Division 2009 | 28 March 2009

Most markets, especially those in rural parts of Uganda, are highly price sensitive. Therefore, consumers eat blended or pure palm oil because it is more affordable.

Considering the mismatch between sunflower oil production (190,000 tons in 2007) and domestic consumption (71 tons in 2003), Uganda is theoretically exporting a substantial quantity of what it produces and processes. Having said this, the team was led to believe that domestic consumption of sunflower oil, particularly the unrefined variety among northern Ugandans, has risen since FAO data was last collected in 2003. This makes sense since exporting opportunities are severely limited due to the limited refining capacity in Uganda. Regionally, the primary consumers of sunflower oil in 2003 were (in order): Tanzania, Sudan, Kenya and DRC.

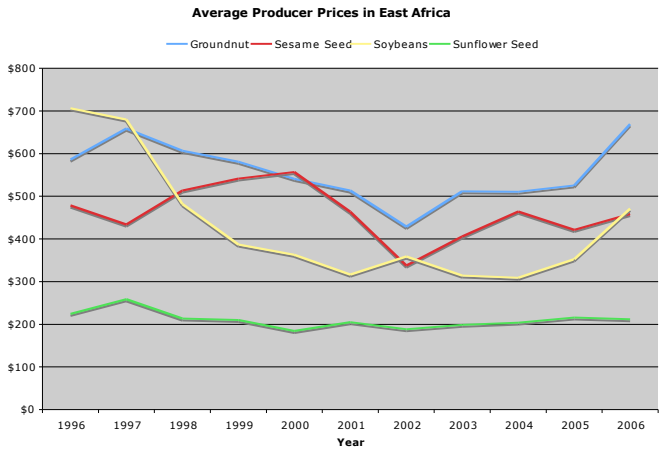
*Figure 10: Regional Sunflower Oil Consumption*




Source: FAOSTAT | © FAO Statistics Division 2009 | 28 March 2009

Unfortunately, as with many cash crops, the producer price for oilseeds is volatile. The following chart shows the average prices from 1996 to 2006 in East African countries for which FAO reports. Notably, sunflower seed seems to be less volatile than others.

*Figure 11: Regional Average Oilseed Producer Prices*




Source: FAOSTAT | © FAO Statistics Division 2009 | 28 March 2009

## C. Making the Case for Ag VT

Given the conditions in Uganda as described in the previous sections, it makes sense for our team to investigate the feasibility and utility of an agricultural VT program targeted for dropout youth because:

- ✓ Agriculture is the main driver of economic development in Uganda
- ✓ School dropouts have limited opportunities to learn about agriculture
- ✓ Agricultural VT can promote modernization of agriculture
- ✓ Agricultural VT can contribute to private sector growth

First, including agriculture in vocational training is crucial considering 90 percent of the country's population lives in rural areas, and over 80 percent work in the sector. In addition, because 40 percent of these rural inhabitants live below the poverty line, it is therefore imperative to consider the development of the sector to bring economic development, hence to alleviate poverty in the country. In all of our four target districts, agriculture stands out as the main economic activity of the people. Thus, promoting agricultural VT could have an impact on a large portion of the target population.

Second, as mentioned earlier, there are large shares of the population who have dropped out of school, and have no educational or training opportunities available to them. The majority of those people seem to be engaging in the agriculture sector to make a living. Although there are governmental and other programs that provide training to farmers, it is uncertain to what level any kind of training program specifically targets youth, especially those who have dropped out of school. Since the youth constitute the majority of the country's population and is the founding block of the country's future, special attention should be taken in providing them with adequate training.

Third, agricultural VT is consistent with the government policy to promote modernization in agriculture (The Plan for the Modernization of Agriculture or PMA). The aim of the policy is to reorient farming from traditional subsistence to market driven agriculture in the hopes of increasing rural income by improving production and creating employment (UNDP 100). As most rural farmers are currently engaging in subsistence farming, agricultural VT can provide young farmers with skills to grow and market cash crops in a more profitable way. Successful agricultural VT can bring about this change in rural communities.

Lastly, agricultural VT can provide farmers with the practical skills they need to be entrepreneurs. As there has been a change in labor demand from the public sector to the private sector, much attention should be given to non-production related skills, such as management, income-generation and entrepreneurship. Since most of traditional technical and vocational education and training do not adequately address the needs of current and future labor markets, agricultural VT can be used to help farmers meet private sector needs.

Although the concept of offering agricultural training to primary dropouts as post-primary education is somewhat young, some programs have already tried in other sub-Saharan African countries. (Please see Appendix nine for examples.) Having similar economic and demographic features as other African countries, Uganda can possibly draw upon those regional experiences to conceptualize and design their own coursework.

## D. Eastern & Northern Uganda

As stated above, the focus on this research project is on four districts in eastern and northern Uganda: Bukedea, Lira, Mbale and Soroti.

*Figure 12: Map of Uganda*


Source: Uganda Demographic & Health Survey 2006

The main challenges facing the districts in eastern and northern Uganda are inadequate infrastructure and the poor quality of service delivery. In the recent past, these problems were exacerbated by the prolonged civil strife in the region. The Lord's Resistance Army (LRA) has been active along the border with Sudan and the Democratic Republic of Congo since the mid 1980s. Reportedly, slightly less than one million people remain internally displaced in Uganda today (UNCAP 39). While the humanitarian situation remains complex, the UN Consolidated Appeal Process (CAP) for 2009 notes the beginning of a period of recovery and development (UNCAP 38).

Most socio-economic indicators in eastern and northern Uganda are worse than the national averages. For example, the district in this region with the highest literacy rate (Mbale) still underperforms compared to the national average. In terms of economic opportunities, the most widely suggested enterprises in order of importance are ground nuts, passion fruit, cabbages, carrots, sunflower, citrus, tomatoes, onions, mangoes, honey, simsim (sesame) and pineapples. In terms of groups of enterprises, all districts are suitable for horticulture, oilseeds and honey. But in order for economic development activities to be implemented, there will be a need for focused and sustained delivery of advisory services to the local farmers (SNV NE Portfolio Report).

# III. Methodology

*Overview*

The research was conducted in three main stages: (1) extensive desk research and literature review; (2) one field visit to the eastern and northern regions of Uganda to understand the supply of agricultural VT and; (3) another field visit to determine demand for agricultural VT.

*Desk Research/Literature Review*

In order to gain an understanding of agriculture/oilseed sub-sector and the educational system in Uganda, the team conducted a literature review of books, journal articles, and reports by reputable international and multilateral actors, and Internet sources before the field visits. Further, the team collected statistical data, including census data and other quantifiable information related to VT and oilseed crops. The information obtained through this method helped inform the development of research instruments and supplemented the findings from the field visit.

*Field Visits and Participant Selection*

There were two field research visits by the team. The first trip, taken in January 2009, was intended to ascertain the demand for skills at different levels within the oilseed value chain and the current supply of training offered by public and private institutions whereas the second trip, taken in March 2009 focused on assessing youth dropout demand for agricultural VT. Figures 13 & 14 below summarize all of the stakeholders whom the team met with during both the January and March field visits.

*Figure 13.*

**Number of Interviewees(participants) by methodology**

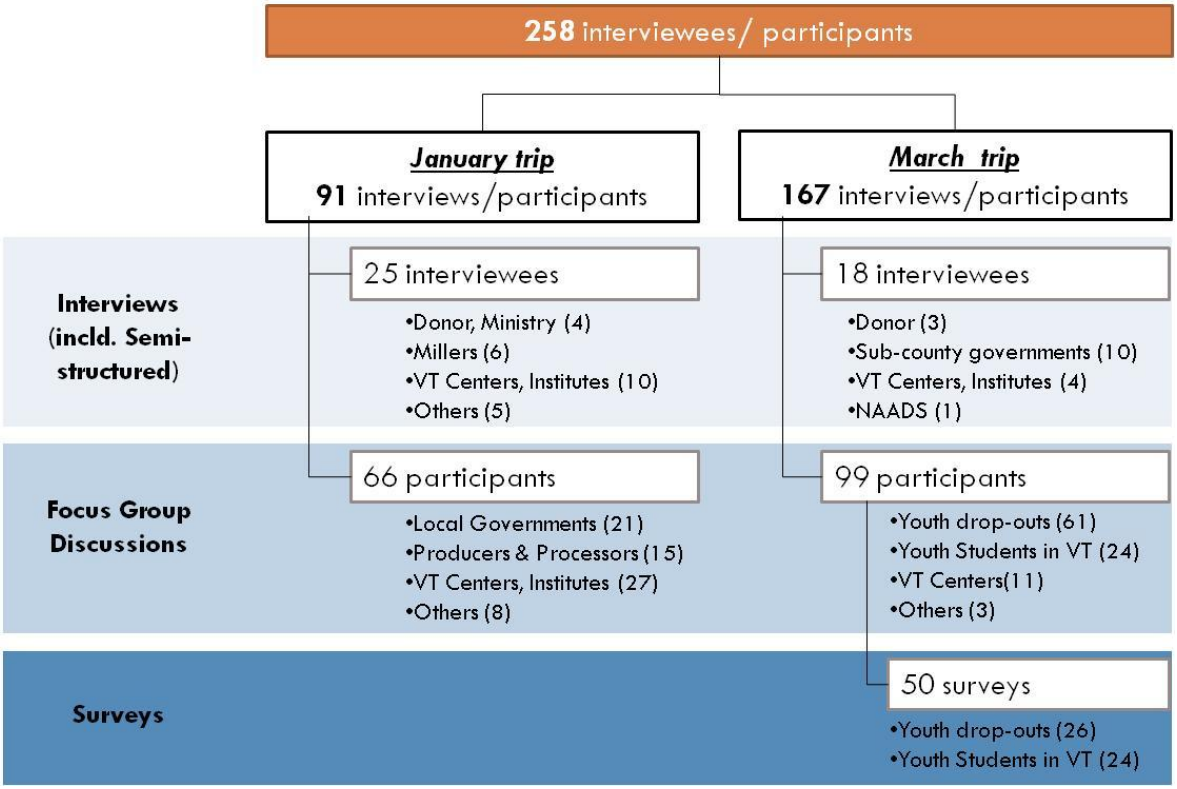



*Figure 14.*

**Number of Interviewees(participants) by region**

| | Interviews (includ. Semi-structured) | Focus group discussions | Surveys |
|---|---|---|---|
| **Kampala (14)** | Sector Associations (5)<br>Donor (4)<br>VT Institutes (4)<br>Government (1) | | |
| **Mbale (71)** | Seed supplyer (3)<br>Sub-county Gov. (3)<br>VT Center (3) | Local Gov. (6)<br>Producer Assoc. (7)<br>VT center (15)<br>Drop-out Youth (9)<br>VT students (9) | Drop-out Youth (8)<br>VT Students(8) |
| **Bukedea (44)** | Miller (1)<br>Sub-county Gov. (2) | Local Gov. (11)<br>Producer Assoc. (1)<br>Drop-out Youth (17)<br>VT students (3) | Drop-out Youth (6)<br>VT Students(3) |
| **Soroti (61)** | Miller (1)<br>VT Center (3)<br>Sub-county Gov. (1)<br>VT center (1) | Local Gov. (5)<br>VT Center (13)<br>Drop-out Youth (15)<br>VT Students (12) | Drop-out Youth (4)<br>VT Students(6) |
| **Lira (67)** | Ag trainers (2)<br>Int'l Org (1)<br>Sub-county Gov. (4)<br>Miller (4) | Donor, Int'l Org (2)<br>VT Center, Provider (10)<br>Producer & Processer (6)<br>Drop-out Youth (20)<br>Local Gov (3) | Drop-out Youth (8)<br>VT Students(7) |

*Data Collection During the Jan. Field Visit:* The team selected focus group discussions (FGDs) and semi-structured interviews as research tools to collect qualitative data on the state of agricultural VT in Uganda. With the help of SNV, the team met with a range of stakeholders including: local government officials, vocational training center staff, NGOs implementing vocational training, private sector actors involved in vocational training, cooperatives in oilseed production, major processors of oilseed products, and intermediate associations of oilseed and vocational training. Meetings took place in Kampala as well as in the four districts of research selected by SNV: Mbale, Bukedea, Soroti, and Lira. SNV has been actively promoting oilseed crops and education support programs in these four eastern and northern districts, so all FGD participants and interviewees were chosen by SNV based on existing relationships.

Based on the findings of the January trip, the team conducted a stakeholder and institutional analysis of actors involved in the oilseed sub-sector and VT, as well as a problem-tree analysis, in order to determine whom to meet with and develop appropriate research strategies/tools for the second field visit. The team developed research tools—including FGD guides for youth (dropouts and VT students), interview guides for VT instructors/principals, agricultural trainers, and a youth survey—that would help clarify questions of demand and supply of agricultural VT. Most of the tools were designed with intention of collecting additional qualitative data to supplement the information collected in January and contextualize the quantitative data collected through the survey. The survey was designed to help quantify the demand for agricultural VT and skills within the oilseed sub-sector. Also during this time, the SIPA Team contacted regional Uganda Association of Private Vocational Institutes (UGAPRIVI) offices to obtain complete lists of VT providers in the districts covered by this research and emailed VT providers to get information, most importantly about whether or not they offered agricultural courses.

During the March field visit, the SIPA research team traveled to six sub-counties within the four districts, all selected by SNV or their partners based on existing relationships. The goal was to quantify the level of demand and gain a more meaningful understanding of the supply of agricultural training.

*Data collection during the Mar. field visit:* During the second field research visit, the team conducted focus group discussions (FGDs) and interviews with remaining stakeholders, and voluntary individual surveys with youth FGD participants. The survey inclusion criteria was that youth had to be: 1) between the ages of 15 to 28; (2) drop outs of primary or secondary school or primary school graduates who did not go on to secondary school; and (3) out of school for 6 months or longer.

In every sub-county, the team first met with the Local Council (LC) Level III Chairperson in order to gather relevant sub-county demographics information and then conducted a FGD with youth dropouts selected by the sub-county government officials. Additionally, the team met with one agricultural and one technical college. All together, the team conducted 12 FGDs, with an average of 8 participants per group.

*Data Analysis*

FGDs: The information collected by the team was analyzed systematically using matrix tables to summarize the main findings according to the research questions. Once the information was collected, the team identified main themes that emerged from discussions with youth, government officials, oilseed actors, agricultural trainers and VT centers and put them into a matrix. This allowed the team to assess commonalities and differences among the actors and across districts.

Surveys: For the analysis of surveys conducted during the March trip, the team focused on descriptive statistics and distributions due to the small sample size. The sample includes 26 youth dropouts and 24 youth who attend either agricultural or technical colleges, all who volunteered from the FGDs. As indicated in figures 15-18 below, the average age for the dropouts was 20.4 years old, approximately 3 years less than that of VT students. Difference among gender is noticeable as the average age of women is lower that for men. For both male and female, the majority of dropouts sampled are concentrated around P6 to P7.

*Figure 15. Survey Participant Demographics*

| | **Drop-out Youth** | **Students in VT** | **Total** |
|---|---|---|---|
| **Sample size (n)** | 26 | 24 | 50 |
| **Age Distribution** | | | |
| Average | 20.4 | 23.3 | 21.8 |
| Median | 20.0 | 23.0 | 22 |
| Range | 15-28 | 20-27 | 15-28 |

*Figure 16. Survey Participant Demographics by Gender*

| **Gender** | **Drop-out Youth** | **Students in VT** | **Total** |
|---|---|---|---|
| Female (n) | 10 | 8 | 18 |
| **Age** | | | |
| Average | 19.4 | 22.3 | 20.7 |
| Median | 18.0 | 22.0 | 21.0 |
| Range | 15-26 | 20-26 | 15-26 |

*Figure 17. Survey Participants: Year of Dropping Out*

| **Last Year in School: All** | **Drop-out Youth** | | **Students in VT** | | **Total** | |
|---|---|---|---|---|---|---|
| Grade | # | % | # | % | # | % |
| P1 – P6 | 1 | 4% | 0 | 0% | 1 | 2% |
| P7 | 13 | 50% | 0 | 0% | 13 | 26% |
| S1 | 2 | 8% | 0 | 0% | 2 | 4% |
| S2 | 3 | 12% | 0 | 0% | 3 | 6% |
| S3 | 1 | 4% | 0 | 0% | 1 | 2% |
| S4 | 4 | 15% | 0 | 0% | 4 | 8% |
| S5 | 0 | 0% | 0 | 0% | 0 | 0% |
| S6 | 1 | 4% | 0 | 0% | 1 | 2% |
| Currently in school | 0 | 0% | 24 | 100% | 24 | 48% |
| **Total** | **26** | **100%** | **24** | **100%** | **50** | **100%** |

*Figure 18. Survey Participants: Year of Dropping Out by Gender*

| **Last Year: Female** | **Drop-out Youth** | | **Students in VT** | | **Total** | |
|---|---|---|---|---|---|---|
| Grade | # | % | # | % | # | % |
| P7 | 6 | 60% | 0 | 0% | 6 | 33% |
| S1 | 2 | 20% | 0 | 0% | 2 | 11% |
| S2 | 0 | 0% | 0 | 0% | 0 | 0% |
| S3 | 0 | 0% | 0 | 0% | 0 | 0% |
| S4 | 2 | 20% | 0 | 0% | 2 | 11% |
| S5 | 0 | 0% | 0 | 0% | 0 | 0% |
| S6 | 0 | 0% | 0 | 0% | 0 | 0% |
| Currently in school | 0 | 0% | 8 | 100% | 8 | 44% |
| **Total** | **10** | **100%** | **8** | **100%** | **18** | **100%** |

# IV. Findings

All results (quantitative and qualitative) presented below are summarized in Appendices seven and eight. Findings are organized to address each of the team's research questions.

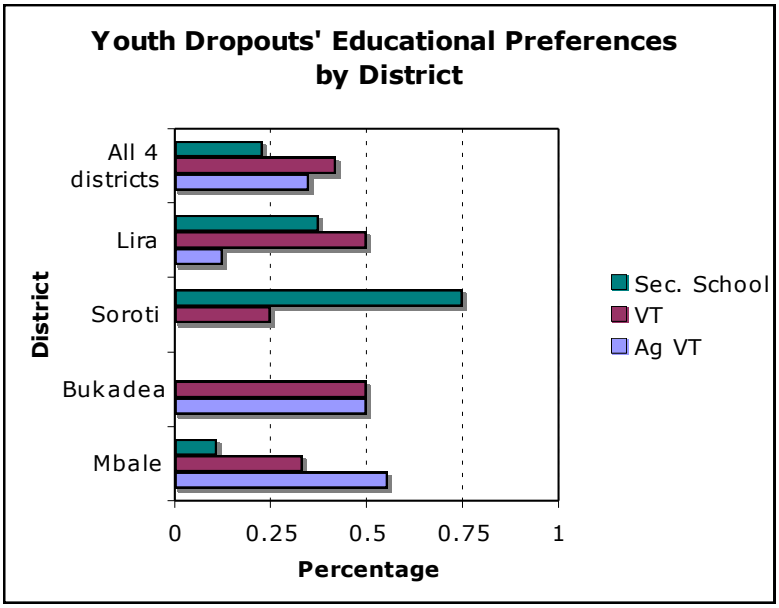
## 1. Are youth who drop out of school interested in attending agricultural VT?

***1.1 Although agricultural VT may not be the first option of study, youth dropouts consider it to be a sensible option largely because it provides opportunities for self-sustainable income generation.*** Of the youth dropouts surveyed, when given the option between agricultural VT, (traditional) VT and secondary school:

- 42 percent chose VT
- 35 percent chose agricultural VT
- 23 percent chose secondary school

Figure 19 below shows the differences in youth dropouts' education preferences, broken down by district:

*Figure 19: Educational Preferences for Youth Dropouts by District*




Agricultural VT may not be the first option for youth dropouts for two reasons. First, because agricultural VT is still a new concept, there is no market and a limited understanding of what it entails and therefore, youth dropouts may be reluctant to choose an agricultural VT program over other educational options that they are already familiar with. Second, an agricultural VT program may be useful to youth dropouts only if they have land and so, in districts such as Soroti where land is severely limited, youth dropouts have no interest in agricultural VT.

While agricultural VT may not be the first educational preference for youth dropouts, *92 percent* of those surveyed felt that they would benefit from further agricultural training. Agricultural VT makes sense for youth dropouts because it has the potential to permanently increase the income-earning potential of a large proportion of them:

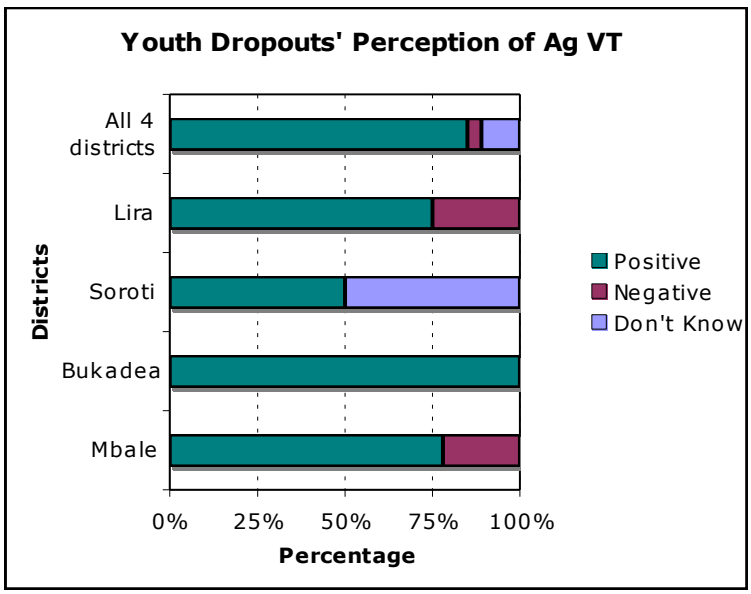
- 57 percent of youth dropouts surveyed work in agriculture
- 85 percent of youth dropouts engage in some kind of agricultural activity
- 79 percent of youth enrolled in an agricultural college continue to do agriculture work at home

***1.2 Agricultural work and VT are seen more favorably now than in the past.*** While agriculture is "the backbone of Uganda," many do not want to engage in agricultural work because of its labor/time requirements and historically negative social stigma (weeding used to be a form of punishment for students.)

The perception of VT has also become more positive (85 percent of youth dropouts surveyed shared this view). Uganda's history may have negatively impacted the perception of VT amongst youth, since the value of and preference for 'white collar' jobs had been instilled during colonial times and agricultural work was reserved for 'academic dwarves' and punishment purposes. Now, however, the perception of agricultural work and VT amongst youth dropouts, and the population more generally, is more positive. This is largely due to the fact that people are starting to understand the potential that training in agriculture and agricultural work have in providing a steady income-stream.

Figure 20 below compares the perception of agricultural VT amongst youth dropouts:

*Figure 20: Youth Dropouts' Perception of Ag VT*



***1.3 While women have been perceived to be the primary beneficiaries of agricultural VT, there does not appear to be a significant demand differential between men and women for agricultural VT.*** The majority of rural women and women engage in agricultural production work as a means to provide food and income for the family. Figure 21 shows that, based on the team's survey results:

*Figure 21. Gender Demand Differences*

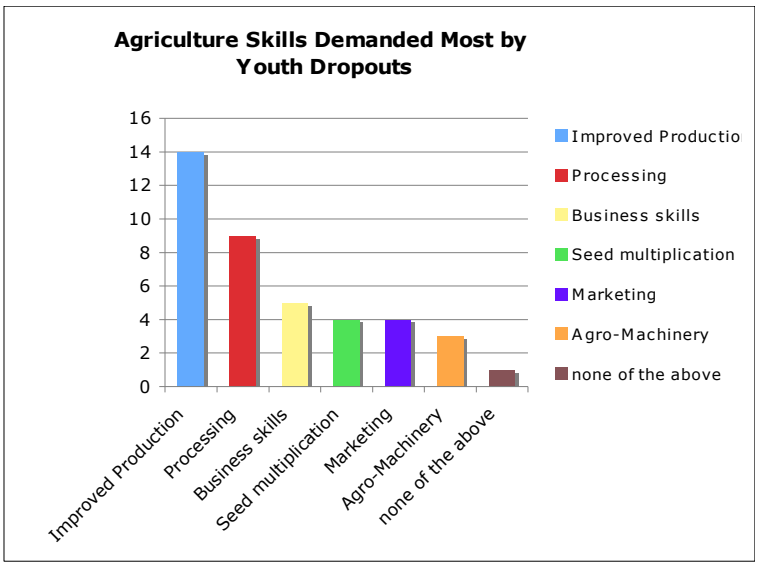
| | % Work in agriculture | % Demand Ag VT for the improvement of skills |
|---|---|---|
| Males | 81 | 69 |
| Females | 83 | 83 |

While the percentage of males and females working in agriculture is similar, the range of agricultural activity is far greater amongst the males than females. That is to say, males also engage in processing and post-harvesting activities in food and cash crops, whereas females tend to work in production-related activities in food crops only.

## 2. What agricultural skills do dropouts need to improve their livelihoods?

***2.1 Most youth dropouts want training in agricultural production, but see the long-term value of training in skills across the entire value chain.***

*Figure 22: Agriculture Skills Demanded by Youth Dropouts*




When given the choice of training at different stages of the value chain, youth dropouts prefer learning skills in production because they want to increase their income potential with a higher quality product, in greater quantity. Youth dropouts also demand processing, business, seed multiplication and marketing training in order to increase the value-addition they would receive and to improve their profitability in the long run.

Those who have received more extensive agricultural training through extension services, such as the youth dropouts surveyed in Bukedea, prefer to learn skills outside of production within the agricultural value chain, such as processing and bee-keeping. Reasons cited include increased sustainability of income and lowered vulnerability to market price volatility.

In terms of gender, women do not generally have access to higher segments of the value chain that have greater returns associated with them. While the percentage of men and women who work in production are similar, more men also work in other segments of the value chain. Figure 23 shows our survey results that support this finding:

*Figure 23. Work Distribution within agricultural VC by Gender*

| | % Work in Production | % Work in Other VC segments |
|---|---|---|
| Males | 46.9 | 34.1 |
| Females | 55 | 22 |

***2.2 Youth dropouts have limited formal employment opportunities and so, need to develop the skills to become successfully self-employed.*** Formal employment in agriculture, and oilseed in particular, is limited for youth dropouts. For example, large-scale processors such as Mukwano do not recruit youth below the age of 20. Since there are few non-production related jobs for youth dropout farmers, graduates of an agricultural VT program would most likely need to be able to become self-employed. This is confirmed by our finding that 58 percent of youth dropouts surveyed responded that, upon graduating from an agricultural VT program, they would want to become self-employed. Interestingly, more females want to become self-employed than males:

*Figure 24: Male Plans after Ag VT*

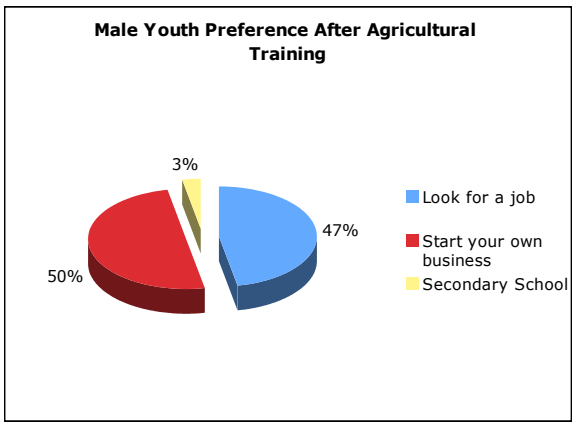
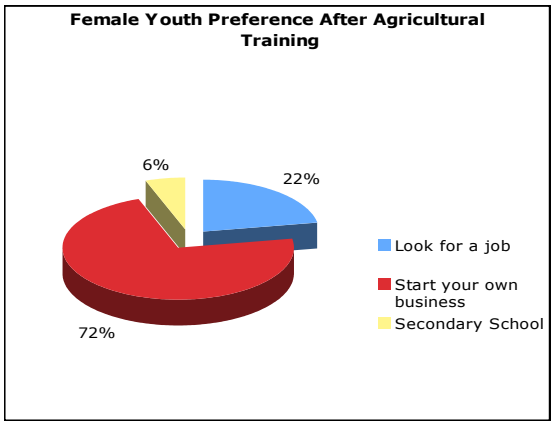


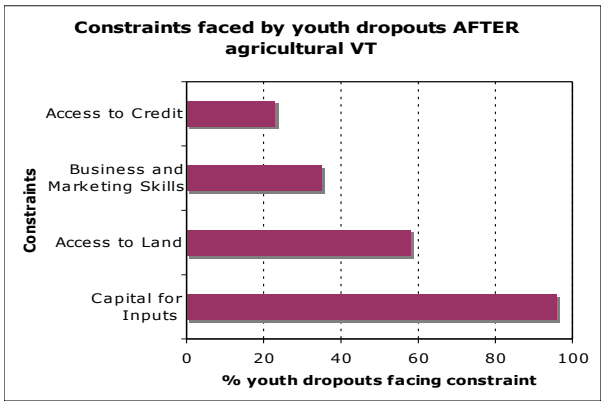

*Figure 25: Female Plans after Ag VT*




There are limited employment opportunities within the oilseed value chain other than at a small-scale production level. Both small and large millers employ a small number of individuals. For example, small mills only need 3 employees to maintain and operate their machinery. Therefore, according to the Northern Ugandan Millers' Association, in an area like Lira where 20 small millers exist, there are only 60 jobs

available. Further, the large millers do not provide a significantly greater number of jobs to youth dropouts because they hire anywhere from 15 to 40 employees, many of whom must be educated and are often hired from other parts of Uganda or abroad as specialists. To be clear, dropouts who work in agriculture will most likely become self-employed. However, youth dropouts face serious self-employment constraints, as demonstrated by survey results summarized in figure 26 below:

*Figure 26. Constraints Faced by Youth Dropouts Post-Agricultural VT*




If these constraints are not comprehensively addressed, any agricultural skills training will not have its intended outcome of improving the livelihoods of youth dropouts.

***2.3 To improve income, youth dropouts need the skills to grow cash crops like oilseed; however, to maintain food security, they also need to grow food crops.*** Oilseed crops are considered a potential growth market for farmers in the northern and eastern regions of Uganda***.*** Eighty-five percent of dropouts surveyed said that oilseed crops had the highest profit potential—of these, sunflower has the greatest income-generating potential because of its multiple yields (as many as 3 times in a "good" year) and numerous product markets, as described in the introduction to oilseed. However, since food security is also an issue, especially in the north where the security situation is just stabilizing, youth dropouts' livelihood cannot depend entirely on cash crops. Thus, there must be a balance between cash and food crops when possible.

## 3. What are the skill gaps within the oilseed value chain?

***3.1 There still is a need to improve the quantity and quality of oilseed production, thereby strengthening the entire value chain.*** A number of farmers' associations and millers reported they want to increase production. P'KWI and Busiu Marketing Association both expressed willingness to increase sunflower production and Mukwano is planning to increase purchasing capacity. Specifically, soil management techniques, planting, and harvesting skills were all cited as production constraints. Since sunflower requires a lot of nutrients, proper application of fertilizer and crop rotation methods are also important skills for the farmers. For the sector to grow and become even more successful, and to preserve quality soil for food crop production, farmers must learn improved production methodologies.

***3.2 Oilseed farmers lack knowledge of proper post-harvest handling techniques.*** The use of storage is not widespread in the area, leading to the loss of crop value and reduction in the farm gate price. One agriculture officer indicated that 30 percent of the production is being lost due to improper handling after the harvest. And many farmers sell their entire crop immediately after the harvest, which decreases the price due to increased supply. UOSPA recognizes the need to mobilize farmers to bulk their harvest together so they are seeking ways to implement warehouse financing, which could improve the price paid to farmers and protect the harvested products. Though this type of large-scale intervention is not yet an option for individual farmers, improving post-harvest skills is one of the main opportunities for oilseed farmers to increase income.

***3.3 Oilseed farmers need marketing skills to increase their profits.*** Many farmers indicate the need for marketing skills to sell harvested crops. And a large majority of those interviewed, including youth, farmers, teachers and local government officials, voiced strong concerns about price fluctuations of oilseed crops, especially sunflower. Currently, farmers sell at whatever price is given by the middleman or contracted with the processor (usually set by Mukwano since it is the largest processor of sunflower). Many view the middlemen and the private sector as 'cheaters' who purchase sunflower at a lower price in order to increase their profit margins. Lack of access to market information seems to be a key challenge for producers when marketing oilseed crops. At a higher segment of the value chain, UOSPA believes there are a need for better labeling and packaging, and perhaps a branding strategy for Ugandan oilseed products.

***3.4 There is very little individual processing of sunflower oil.*** Although many farmers claim processing is a viable value-addition option for them, ram presses, the only technology available for processing at the individual level, are losing popularity. For example, one producer association reports that only 20 percent use ram presses. AT Uganda, the NGO who initially promoted their use, acknowledges complaints about the laborious, manual operation and low-quality output, and no longer promotes them. This trend coincides with the fact that more and more millers are opening in the region, and buying farmers' raw output. Currently, most sunflower oil is processed at one of five large mills, such as Mukwano, or at one of 57 medium or small mills. There are major differences in terms of quantity and quality of oil produced at these facilities. Notably, whereas the oil processed in larger mills is refined, the oil produced by small to medium size millers is generally "crude" or "virgin" oil that has not been refined. Refining is an essential process to meet the standard of the Ugandan Bureau of Standards (UBS), which authorizes the products to be sold in the market. Thus, if small millers were to expand their market, access to a refinery would be a challenge.

***3.5 There are a limited number of individuals who know how to operate, maintain and repair oilseed agro-machinery.*** Most of the machines used in the production of processed oilseed goods come from abroad. Local maintenance is one of the big constraints since spare parts and expertise must be brought from Kampala or abroad. In fact, oilseed actors in both Soroti and Lira highlighted operation, maintenance and servicing of equipment as a major skill gap in the oilseed value chain.

## 4. What is the existing supply of agricultural VT?

***4.1 In the six sub-counties surveyed, there are virtually no vocational training opportunities*.** Seventy-three percent of youth dropouts surveyed either do not have a VT center nearby or must travel more than one hour by foot to the nearest center. Three of the six sub-counties surveyed (Kolil, Bukedea Town, Ojur) do not have VT centers and the other three (Busiu, Kyere, Barr) have VT centers that are at least 20 km away. Specifically:

- In Busiu (Mbale), the nearest operational VT center is 26 km away.
- In Kolil (Bukedea), there are no VT centers.
- In Bukedea Town, there is one VT center nearby, but it is not operational.
- In Kyere (Soroti), the closest VT center is 22 km away.
- In Ojur (Lira), there are no VT centers.
- In Barr (Lira), the closest VT Center is more than 20 km away.

It should be noted, however, that the team did find some discrepancies. For example, in Busiu sub-county the team met with the principal of the Busiu VT Center in January. But during the March trip, the local government and youth reported there were no VT centers nearby in operation. Either there is a low awareness of VT opportunities and/or some VT centers are forced to close regularly due to financial insolvency.

***4.2 There are very few vocational training centers that offer agriculture curricula.*** There are 48 VT centers in operation in the four districts but only six offer courses in agriculture. None of the sub-counties surveyed have VT centers that offer agriculture, and no sub-county leader knew of any agriculture VT program. Most VT centers offer more traditional VT courses. For example, of the 21 VT centers that responded to our request for information, the five most offered courses are: (1) tailoring; (2) carpentry; (3) brick laying; (4) mechanics; and (5) concrete. Based on information published on the Ministry of Education website, there are 22 national, publicly funded institutions that provide some form of agricultural training—16 polytechnic schools, four farmer schools, and two agricultural colleges. In the four districts studied here, only Arapai Agricultural College in Soroti and the two Polytechnics in Mbale and Soroti offer coursework in agriculture. But these institutions are expensive and generally not open to dropouts. For the complete list of VT centers, please see Appendix six.

***4.3 There is a limited availability of agricultural training.*** It is NAADS policy to have one extension worker per sub-county, but this goal is far from the reality. Only one of the six sub-counties surveyed has a NAADs extension worker, and the training is in livestock, not agriculture. In Lira, there are 15 extension workers for the district, but eight are veterinarians and not agriculturalists. Further, the quality of the agricultural training may be low because, according to the chief NAADs district coordinator in Lira, while extension workers are trained formally in agriculture, they do not necessarily have the skills to teach. In Kolil sub-county (Bukedea), there is some NGO training, but these training sessions occur infrequently, according to the LC III chairperson.

***4.4 Some oilseed farmers have been trained at the production level, mostly by Mukwano and UOSPA extension workers, or through farmer-to-farmer training.*** One of the primary training providers in the oilseed sector is UOSPA, who provides training via contact farmers and demonstration plots. Currently, UOSPA works with 947 producer groups, composed of 30 to 50 households, countrywide. Anecdotally, however, the team heard that UOSPA membership is declining due to a perception that the services are not worth the fees. The frequency of training varies by region, ranging from once per month to four to five times per year. Other suppliers of training include large millers such as Mukwano, who sends their own extension workers to the field to insure that quality sunflower seeds are grown. Currently, they employ seven permanent and 200 commission-based extension workers to train 50,000 farmers in seven districts. Most of the commission-based extension workers are school dropouts who possess "teaching-ability" determined by Mukwano. While there are training opportunities for oilseed farmers, their frequency and quality is questionable.

***4.5 No existing agricultural training program specifically targets youth.*** Only 19 percent of the dropouts surveyed reported receiving extension services. This makes sense considering that NAADs extension workers work almost exclusively with adults and that there are no FAO farmer field schools (FFS) designed for youth. Similarly, with respect to oilseed, neither UOSPA nor Mukwano has training modules for youth, although they do include youth participants in their general training. Some secondary schools offer basic agriculture courses, but they reportedly do not teach skills necessary for youth to become agro-entrepreneurs or find jobs in the agriculture sector. In a FGD with conducted with students enrolled at Arapai Agricultural College, they said that many youth are "discouraged from going into farming because there is so little training available." However, there is some evidence that NAADs extension workers have helped form some youth groups. For example, the local council chairperson in Busiu sub-county recruited youth for two groups that have received training on improved production techniques. Furthermore, UOSPA reports that 50 percent of its members are youth, between 15 and 35.

***4.6 Of the few VT centers that offer agriculture courses, training focuses mostly on production skills and not other parts of the agriculture/oilseed value chains.***

- Six of the 48 VT centers in the four districts teach improved production.
- NAADs and FFS target training at the production level.

The focus on production made sense to most of the youth interviewed since they believe that it is most important to refine the basic skills at the lower end of the value chain before learning about the more sophisticated aspects higher up the value chain. According to Chief NAADs district coordinator in Lira, "production skills are most important to develop because many farmers do not even know basic [production] skills." Having said this, there is a clear training gap at other levels of the value chain. Regarding the skills needed to become a successful agricultural entrepreneur, only two of the 48 VT centers in the four districts studied offer business courses. While there are other training centers that focus specifically on business and entrepreneurial skills, most notably in Mbale and Soroti, they are not

oriented toward agriculture or youth.

***4.7 Even specialized agriculture education at technical colleges and polytechnics lack the proper resources to provide high quality agricultural education to youth.*** While the demand for agricultural training at agricultural colleges has been on the rise (in 2009 Arapai Agricultural College had to decline admission to 200 students), both teachers and students voiced concerns about the lack of resources. The equipment used to teach farming skills is out-dated, there are a limited number of books available, and schools may not have access to certain types of seeds, thereby undermining the students' ability to learn proper production techniques and prepare for the job market. Furthermore, at Mt. Elgon Technical College and Arapai Agricultural College, most teachers work part-time because the schools cannot afford to keep them on a full-time basis. This dissuades a lot of qualified instructors, who can find better paying jobs in urban areas, to continue teaching. Thus, the supply of teachers is limited and, according to principals and department heads, the quality of teaching is compromised.

## 5. How can agricultural VT meet the educational needs of dropouts?

The aim of this research question is to understand why youth do not attend school and, moreover, why they do not participate in existing VT programs. In essence, we want to know what features agricultural VT must have to attract and retain youth dropouts.

***5.1 Most youth surveyed dropped out of school because it was too expensive.*** Dropouts surveyed cited the following reasons for dropping out of school:

- Cost (64%)
- Distance (10%)
- Life Event* (8%)
- Insecurity (5%)

*Defined as death of a parent, illness of pregnancy

Major reasons solely affecting female attendance include early marriages, pregnancies and safety, since, according to FGD participants in Ojur and Kyere, *young women risk being raped when they travel to and from school*. In addition, considering that 73% of dropouts left school between the ages of 15 and 19, the opportunity cost associate with not working, especially for poor households, certainly plays a role in the decision to quit school.

***5.2 The cost of vocational training, while in some cases cheaper than public secondary school, remains unaffordable to dropouts.*** Of the youth drop outs surveyed, 92 percent have never attended a VT course. As stated above, the majority of youth surveyed dropped out of school because they could not afford the high fees. Thus, it is not surprising that 50 percent of those respondents also cited cost as the reason why VT was not an attractive option for them. Based on VT center interviews, figure 24 shows estimates of how much it costs to attend one term at these institutions:

*Figure 27: Cost of One Term of Education*
[Exchange rate: $1 = 1997.5 UGX]

| District | School | Cost (Sh) | Cost (US$) |
|---|---|---|---|
| Mbale | Mt Elgon Tech College | 533,333 | 267 |
| Kampala | Nakagawa VTI | 333,333 | 167 |
| Kampala | Lugogo VTI | 225,000 | 113 |
| North | Secondary School | 200,000 | 100 |
| Lira | Private VT | 75,000 | 38 |
| Mbale | Busiu VT Center | 40,000 | 20 |

Technical colleges and public VT Institutes are the most expensive, reflecting in part how costly it is to offer courses that require expensive equipment and space. While the private VT centers here seem cheaper than secondary school, they are often still out of reach since, like their more expensive counterparts, they can last two to three years.

***5.3 The majority of youth feel that VT is the best way for them to learn about agriculture.*** Sixty-nine percent of youth dropouts learned farming techniques from family members, and 12 percent learned from friends. But as some youth pointed out, skills taught by family and friends may not help them produce the highest quality agricultural outputs. Other youth dropouts have attended informal trainings offered by extension workers (19 percent) and have learned on demonstration plots (12 percent), but most expressed dissatisfaction with the depth and frequency of these trainings. As a result, 96 percent of dropouts surveyed want a specialized agricultural focus in VT. An agricultural VT course is appealing because it offers students a structured learning environment while still teaching practical skills through learning by doing. Most youth dropouts prefer a structured course format, as opposed to informal agricultural training, because it offers certification upon successful completion the program and recognition, or improved status, within the community as an educated individual. Overall, 61 percent of youth dropouts responded that agricultural VT was an attractive option because it teaches skills that improve job opportunities and income earning potential.

# V. Conclusions

Based on the set of above-mentioned findings, the SIPA team draws the following conclusions in response to its research questions:

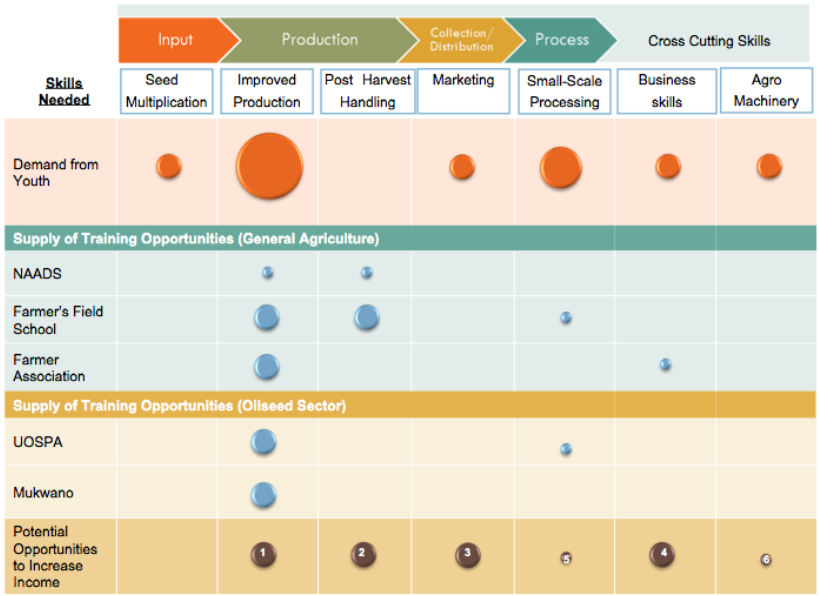
***Are youth who drop out of school interested in attending agricultural VT?***

Yes, youth dropouts are interested in attending agricultural VT because it is the best educational option for school dropouts to enhance their skills, improve their livelihoods and increase their income. Since the majority of youth dropouts in the rural northern and eastern regions of Uganda end up working in agriculture, the implementation of agricultural VT programs to properly train the youth makes sense. This is evidenced by the fact that an overwhelming majority of youth dropouts surveyed demanded agricultural VT. In fact, *both* youth dropouts *and* youth students feel that an agricultural VT program would boost farming income to youth dropouts in rural areas. Furthermore, government officials at the sub-county level, NGOs and educators at agricultural and technical colleges also expressed great interest in agricultural VT programs for youth dropouts because they see the potential this kind of training has to simultaneously boost income and morale of youth dropouts and reduce rural poverty. However, while VT may help improve skills and income, the high costs and somewhat negative perception are two obstacles preventing dropouts from attending and graduating from agricultural VT programs.

***What agricultural skills do dropouts need to improve their livelihoods?***

Figure 25 depicts skills demanded by youth dropouts within the general value chain for agriculture and more specifically for oilseed, the supply of training at different levels, and perceived opportunities for additional agricultural VT.

*Figure 28: Demand & Supply of Agriculture/Oilseed Skills*



Based on our FGD and survey results, youth dropouts have the greatest demand for production skills. Most feel that they are not able to grow quality products (quantity and quality yields are not the same as what they see in the market) because they have not received formal agricultural training—the majority of youth dropout farmers have learned their skills from family and friends. In addition to an interest in developing production skills, youth dropout farmers also expressed a desire to develop processing skill, business skills and marketing skills (access price information). For those youth who have had some agricultural training, there is an even greater demand for processing and other various post-production skills like storage. Also, in the long run, as youth farmers gain more knowledge and experience in improved production, there will be a need for them to learn how to add value to their harvested crops, thereby minimizing exposure to market volatility, increasing their income and establishing a more sustainable livelihood. Finally, although there was no demand for training in post-harvest handling, the team believes this is a low cost opportunity to help youth farmers increase the value of what they sell.

***What are the skill gaps within the oilseed value chain?***

The majority of youth dropouts involved in agriculture feel that oilseed crops are most profitable, so agricultural VT targeted toward this value chain makes sense as a means to alleviate poverty. Most actors in the oilseed value chain are farmers who lack a complete understanding of appropriate production techniques as well as methods to add value to their harvested crop. At the processing level of the oilseed value chain, there is a lack of appropriate small-scale technology and missing expertise surrounding how to manufacture and maintain machinery. At all levels of the oilseed value chain, actors lack strong business skills. This supports the need for further development of skills within the oilseed value chain.

***What is the existing supply of agricultural VT?***

There is a definite gap between the demand for agricultural VT and the supply of agricultural VT for youth dropouts. The demand amongst youth dropouts for agricultural VT greatly exceeds the supply of agricultural VT opportunities, and the supply of non-production-related agricultural VT courses is not enough to meet long term demand for agricultural skills in other parts of the agricultural/oilseed value chain. There are no VT centers near the youth dropouts and, of the VT centers in the northern and eastern regions, there are very few that even offer agricultural VT courses. Current vocational training centers offer courses in more “traditional” areas, such as mechanics or tailoring, even though there may be limited demand (and job opportunities) for these skills in the villages. Of the six VT centers that offer agricultural training, most do not necessarily target youth dropouts (although some of them do admit dropouts). Further, four out of the six agriculture VT programs offer training in production only, so for those youth dropouts who want to develop skills at other levels of the value chain, they have extremely limited options.

The supply of a more general agricultural education for youth dropouts is also very limited. Agricultural training is already limited, as budget constraints dictate the amount of extension workers NAADs sends out into the rural villages, for example.

Moreover, NAADs extension workers work primarily with middle-aged farmers to develop production skills and FAO FFS have school groups that are comprised mostly of adults. In order to qualify/form a FFS, farmers must form a group of 25-30, which is difficult for uneducated youth to do, making it unlikely they will receive training. Outside of NAADs and FFS, there is limited agricultural training available, especially for youth. For example, youth dropouts may not attend either of the two agricultural colleges because they have not completed secondary school (S4 or S6).

There are two main demand-supply gaps: (1) between youth dropout demand for agricultural VT and the supply of agricultural VT available to dropouts; and (2) between the agricultural skills demanded by youth (production, processing, business, etc.) and the supply of training in those skills by existing VT providers (production).

***How can agricultural VT meet the educational needs of dropouts?***

A carefully tailored agricultural VT program can meet the educational needs of dropouts by providing them with practical skills training focused at the production level, with options to learn other aspects of the oilseed/agricultural value chain. Agricultural VT programs that are shorter, thus more affordable, and closer to home are better suited than traditional schooling to meet the lifestyle needs of youth dropouts. However, it should be noted that even if youth do receive agricultural VT, there still remain a number of obstacles to increase their incomes and improve their livelihoods. Notably, many interviewees mentioned land, credit and quality inputs. Therefore, training should not be done in isolation.

# VI. Recommendations

Based on its findings and conclusions, the SIPA team makes the following recommendations to SNV in response to its initial research questions. Recommendations should be discussed and carried out by both the SNV Education and Economic Development departments in order to utilize their valuable resources, however one should be selected to take the lead on the implementation process.

First, SNV should distribute this report and convene, as planned, a round table discussion of the findings with all relevant agricultural VT stakeholders in Uganda. Next, SNV should consider the suggested responses to the issues outlined below.

***Issue 1:*** There is no standardized agriculture curriculum or clear definition of agricultural VT; and dropouts are thus not aware of agricultural VT opportunities.

1.1 SNV should coordinate with BTVET to establish certification requirements for agricultural VT courses at different levels of the value chain.
1.2 SNV should contract agricultural and educational specialists to design short VT courses that meet the national requirements established by BTVET.
1.3 SNV should coordinate with VT centers and BTVET to advertise/market agricultural VT programs so that youth can know about this educational option. Advertising can begin with students in primary and secondary schools.

***Issue 2:*** There is an extremely limited supply of agricultural VT programs.

2.1 VT Centers should recruit agricultural experts, possibly through apprenticeships with Agriculture Colleges and Polytechnics, who can teach courses in production, as well as other aspects of the value chain highlighted below.
2.2 SNV should work with local government actors at the district level and regional UGAPRIVI staff to create a roster of potential trainers skilled in particular crops, or aspects of the value chain. The list should be made available to VT centers.
2.3 As more youth dropouts are trained in improved agricultural practices, they could share their knowledge with others as “peer trainers” or through field visits.
2.4 SNV should support NGOs to facilitate the formation of youth groups in rural villages. This will improve the ability of implementers to access dropouts. Additionally, it will increase youth bargaining power with middlemen and buyers. Membership in these groups should be contingent upon access to land.

***Issue 3:*** The major constraint to agricultural VT for youth dropouts is the cost; but free agricultural training services can be low quality.

3.1 Implementing organizations should teach agricultural VT courses in the rural villages. The courses should be practical in nature but also highly structured. This should reduce the importance of cost and distance as major obstacles.
3.2 Also to reduce the cost, courses should be designed to be as short as possible, ranging from one week to three months.

3.3 To ensure high quality training and sustainability, youth groups should pay a modest fee for the agricultural VT course(s) they receive. This modest payment can also ensure ownership and seriousness about the agriculture education participants receive. Hopefully with the financial and opportunity cost savings from offering the course in the villages, families will be able to afford it. However, if the cost of agricultural VT were not affordable, another possibility would be for youth groups to form savings associations.

***Issue 4:*** Youth farmers miss value added opportunities in the oilseed value chain.

4.1 In the short-term, agricultural VT courses should focus on improved production. While we recognize that this does not immediately help farmers capture more value, the SIPA teams feels it is necessary before moving to higher parts of the value chain. Training at this level can incorporate many different crop varieties.
4.2 In the medium-term, agricultural VT should promote post-harvest handling, business and marketing skills, also applicable to all types of crops.
4.3 Finally, in the long-term, SNV should work with BTVET and VT Institutes to expand traditional VT programs to include manufacturing, maintenance and repair of agro-processing machinery. Once the appropriate technology exists, oilseed producers will need small-scale processing skills and training.
4.4 SNV should suggest the establishment of more community/group/public owned oilseed processing facilities in the interim, and perhaps oil refining facilities.
4.5 SNV should lobby the Ugandan Bureau of Standards (UBS) to formulate quality standards for agricultural products to mitigate market risk exposure.

***Issue 5:*** Youth lack skills to become successful agro-entrepreneurs.

5.1 Implementers should allow youth groups to choose the agricultural VT course that best meets their skill needs. However, special emphasis should be placed on promoting business and marketing skills.
5.2 SNV should improve publicity of market prices among rural youth farmers via continued development of its rural information system. SNV could further support local government initiatives to improve information exchange by posting current prices in a visible area and/or advertising via radio and newspapers.
5.3 Agricultural VT cannot be done in isolation. To ensure the success of graduates, SNV should establish linkages with input suppliers and microfinance institutions, so that youth have access to improved inputs and credit.
5.4 To increase income but not compromise food security, agricultural VT courses should train youth how to grow a healthy balance of food and cash crops.

***Issue 6:*** Women are "stuck" at the production level of the value chain.

6.1 SNV should research women's roles within the oilseed value chain further and identify ways to engage female farmers in segments other than production, thereby empowering them to access to income generating activities associated with cash crops.

# VII. Limitations & Risks

*Limitations of the Research*

*Overall*
• Conceptually, most people in Uganda do not consider agriculture part of vocational training. Overcoming this mindset took time in some interviews.

*Demand-Side*
• We were unable to meet with a random or large sample of youth, thus our survey results are not entirely representative and must be interpreted accordingly.
• The SIPA Team had difficultly finding primary school dropouts to interview. Perhaps this is due to the success of Universal Primary Education. Or the fact that LCIII Chairmen selected slightly more educated youth with English skills to be surveyed. Therefore, we expanded the inclusion criteria to include secondary school dropouts.
• Even with the secondary school dropouts our survey sample size is below 30 (n=24). As a result, in the report we refer only to descriptive statistics.
• The number of youth who answered that they would benefit from additional agricultural training may be inflated due to the fact that, despite all our efforts, some respondents might have thought they would receive services if they answered yes.

*Supply-Side*
• A comprehensive list of VT providers was difficult to assemble. Even with the help of UGAPRIVI, we could not contact all the VT centers in the four districts.
• There are a limited number of VT providers who offer agricultural courses. Thus, our understanding of the supply of this type of training is narrow.

Despite these limitations, the findings and conclusions of this research are still relevant. Almost all of the main stakeholders we identified were consulted. Furthermore, over the course of four weeks of research conducted in the target area, the SIPA team spoke with over 200 stakeholders, exposing a multitude of different perspectives and allowing common ideas and perceptions to emerge.

*Figure 29. Risks of Implementing Agricultural VT*

| Risk | Potential Impact | Likelihood | Mitigation |
|---|---|---|---|
| Graduates of VT may face other obstacles that prevent them from using the skills and increasing incomes. | High | High | Training cannot be done in isolation. To be truly successful, agricultural VT graduates must have access to land, quality inputs and credit for capital. |
| If results are not immediate, youth will lose interest in agricultural VT. | High | Medium | The image of agriculture and VT is beginning to change. But if youth do not improve their income after attending VT they will become disinterested. Thus, VT must focus on marketable skills. |
| Downward trends in international commodity prices affect incomes. | High | Low | The recommendation to offer VT at the village level should lower the financial and opportunity cost and make agricultural VT affordable to rural youth dropouts. |
| Emphasizing cash crops may result in fewer food crops, thus harming food security. | High | Medium | While commodity prices may be volatile, groundnut, sesame, soy and sunflower are all relatively profitable crops. Cash crops will never be risk-free investments, but the expectation is that they will help increase incomes. |
| Youth cannot afford agricultural VT. | High | Low | Oilseed does not have to be an all or nothing proposition. Intercropping and crop rotation should address this problem. |
| The negative image of agriculture and VT may prevent some youth from attending courses. | Medium | Low | Since this problem seemed to be less important in the highly rural areas, targeting youth there should minimize the problem. |
| Rural youth leave formal education institutions. | Medium | Low | Agricultural VT is meant to meet the needs of youth who cannot attend traditional secondary school. However, if it is successful it may attract youth away from secondary school, which would work against the Universal Secondary Education policy. |

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# IX. Appendix

## Appendix 1 – Terms of Reference

**COLUMBIA UNIVERSITY**
**Workshop in Development Practice**
**Terms of Reference**
**Spring 2009**

**Title:** Assessing Vocational Training Needs in the Ugandan Oilseed Sub-Sector

**Client:** SNV Uganda

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**Background:**

Over its 45-year history, SNV (the Netherlands Development Organization) has evolved from an organization of Dutch volunteers to a professional organization of development advisors. Over 1,500 SNV professionals are now active in over 30 developing countries, providing advisory services and other support to improve basic services and production, income and employment.

SNV has worked in Uganda for over 20 years and is active in about 30 districts. In its latest program cycle, SNV has focused its efforts mainly on primary education and economic development. Some of SNV Uganda's most successful interventions in the years 2006 to 2008 have been through "multi-stakeholder platforms," whereby key public, private and civil society actors in a given sector meet at a district, sub-regional and national level to address key issues and bottlenecks in service delivery and economic growth. Based on the outcomes of these stakeholder dialogues, SNV Uganda is now focusing a portion of its strategic interventions on linking education with economic activity for rural-based youth, women and marginalized groups and those not in a position to attend secondary school.

SNV Uganda has a clear focus under its economic development strategy on increasing production, income and employment opportunities for the rural poor and thereby contributing to more equitable economic growth.

SNV Uganda is also keen to link the education sector to the economic development sector by aligning vocational training programs with job opportunities in promising sub-sectors. To this end, SNV recently carried out a value chain analysis of the oilseed sub-sector.

**Objective:** SNV would like a SIPA team to assess vocational training needs in the oilseed sub-sector in eastern and northern Uganda, and identify existing and potential opportunities for vocational training to meet these needs.

**Tasks:** Based on SNV's existing value chain analysis of the oilseed sub-sector (including sunflower, sesame and groundnut) in Uganda:

1. Map and assess vocational training needs for youth who have dropped out of primary school at each level of the value chain.

2. Map and assess the existing vocational training service providers for each segment in four selected districts in Uganda, including
   a) Where are they based (at district level) and
   b) The type of services offered (compared with industry needs)

3. Assess private sector contributions to vocational training relevant to the oilseed sub-sector, including
   a) What private sector actors are actively supporting vocational training relevant to the sub-sector?
   b) Do they offer industrial placements or apprenticeships?
   c) Are private sectors actors willing to invest in vocational training in the oilseed sub-sector?

4. To fill any gaps in the vocational training now being provided, what other actors are supporting vocational training in Uganda (including government, donors, NGOs and private firms or associations)?

5. If time permits, identify any key constraints or policy issues that need to be addressed in order for the oilseed sub-sector to expand.

In carrying out these tasks, the SIPA team should draw on the *Market Assessment Toolkit for Vocational Training Providers and Youth* developed by a 2007-2008 team in Northern Uganda for the Women's Commission on Refugee Women and Children (available at http://womenscommission.org/pdf/ug_ysl_toolkit.pdf).

**Deliverables:** The expected deliverables include:

- Workplan
- Final Report
  - Map of VT needs for the oilseed value chain
  - Comprehensive list of current vocational training providers
  - Analysis of gaps between demand for and supply of vocational training in the oilseed sub-sector, at every level of the value chain
  - Recommendations regarding opportunities for SNV Uganda to address vocational training gaps in the oilseed sub-sector
- Presentations
  - One de-brief presentation following each field trip
  - Final presentation to SIPA community

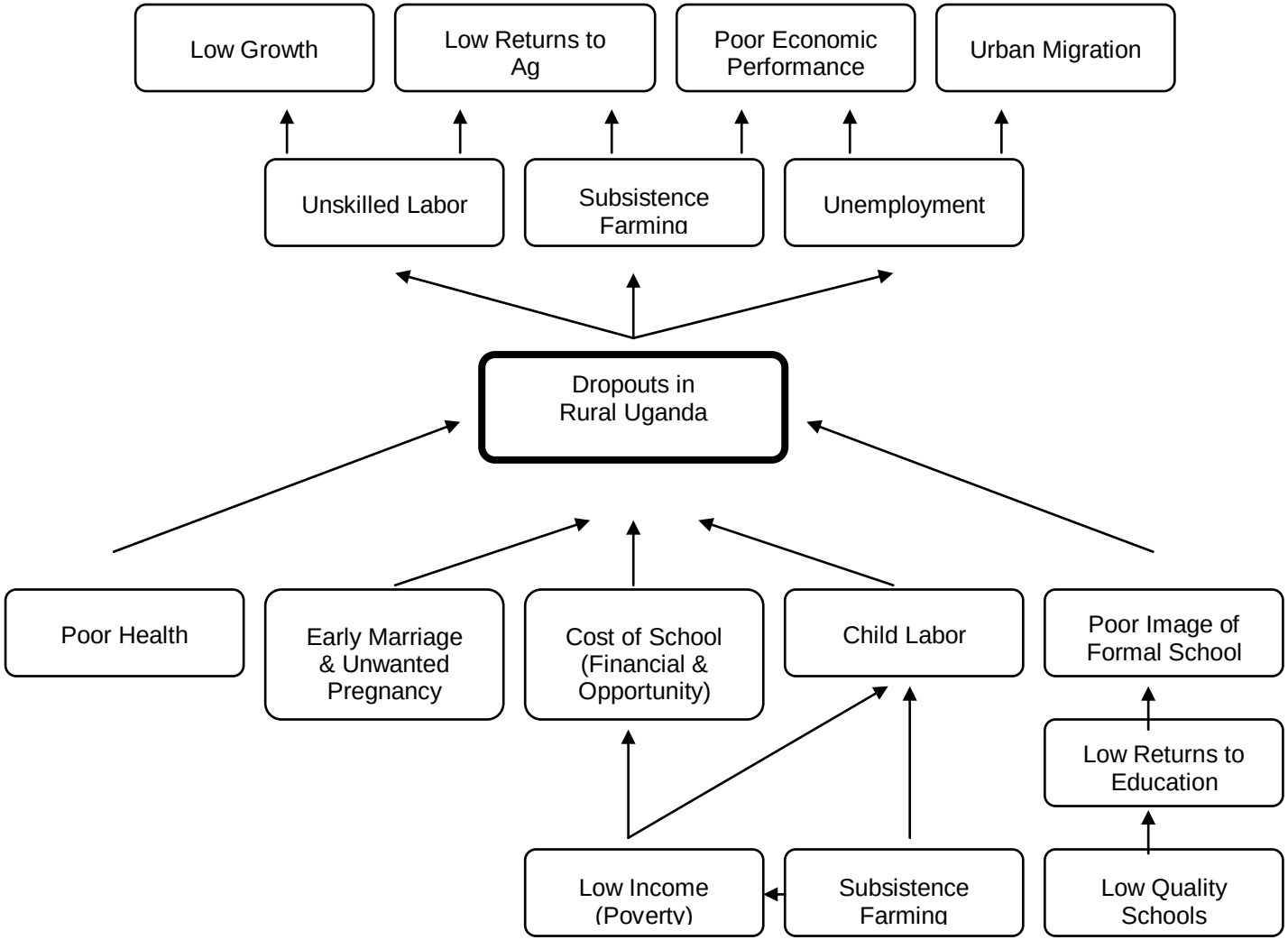
**Requirements:** Ideal candidates for the project should possess the following skills:

- Strong proficiency in English;
- Understanding of value chains;
- Regional or country experience; and
- High quality analytical and writing skills.

**Logistics:** The team will conduct field research in four districts in eastern and northern Uganda (Mbale, Bukedea, Soroti and Lira) in January and March 2009. The team will complete its final report by the end of April 2009.

SNV Uganda will provide the team with relevant background documents and logistical support for their fieldwork (including travel, local accommodation, and miscellaneous services).

## Appendix 2 – Problem Tree



# Appendix 3 – Stakeholder Analysis

| Stakeholder | Status/Role | Likely Interest | Attitude toward Project | Capacity/Resources & Constraints | Strategy to Involve Stakeholders | Interview Priority (March) |
|---|---|---|---|---|---|---|
| **Individual** | | | | | | |
| **Youth** | Primary School Dropouts; NE Region | High | Potentially negative due to VT and Farming image issues in certain areas; Depends on post-VT job opportunities | No funding available (VT fees sometimes exceeds secondary school); Often limited basic skills (ex: English & Math) | Certification; Job Placement; Mechanized Agriculture; Start-up Kits/Capital; More Profitable Ventures | High |
| **Farmers** | Potential Beneficiaries | High | Interested in the project because they want to add value to their products and increase their incomes. | Farmers have limited financial resources, and lack access to credit, high quality inputs, machinery, storage and markets. | Improve Crop Profitability, Value-Added Products, Upgrade Value Chain, Increase Income, Market-Driven Agriculture | High |
| **Processors** | Small # Individuals | High | Could be interested in increasing the quality of final products | Limited indiv. resources, ram-press technology increasingly unpopular | Improved Technology, Information on Standards, Coordinated Marketing | Medium |
| **Teachers/Principals** | Teach/manage VT programs | Medium | Open-minded toward incorporating agriculture into existing VT programs (especially at private VT centers in the North region) | Limited funding; VT programs are expensive to run (land, machines, etc.); Difficult to recruit & retain quality teachers | Teacher Training, Competitive Benefits | Medium/ Low |
| **Middle Men** | Unknown # | Low | Likely disinterested in farmers gaining more market (fair price) information | Relatively higher level of resources (compared to farmers & processors) | Warehouse Management | Low |

| Stakeholder | Status/Role | Likely Interest | Attitude toward Project | Capacity/Resources & Constraints | Strategy to Involve Stakeholders | Interview Priority (March) |
|---|---|---|---|---|---|---|
| **Community** | | | | | | |
| **Local Government (Village Leaders)** | Concerned about high dropout rates | High | Positive attitudes toward VT programs | No funding | Possibly involve local government Ag staff in curriculum development | Medium |
| **Farmers' Associations** | Represents producers and processors. Often involved in seed provision, bulking and marketing. | High | Positive attitude correlates to high interest in oilseeds (many requests for sunflower seed). Especially interested in value-added opportunities (processing). | Capacity is limited, but much greater than individual farmers. Especially those that have received oil press machines from FAO. | Enable them to add value to crops, move up the value chain and increase income. | High |
| **Farmer Field Schools (FAO)** | Agriculture training provider that has extensive experience, although somewhat limited outreach. | Medium | Hesitant about focus on oilseed. Want farmers to choose crops. No current focus on youth/dropouts. | Currently serving a small proportion of clients perhaps due to funding constraints. | Identify opportunities to train farmers in general (not specific to oilseed) skills. | High |
| **VT Centers** | Train students; Popular programs are construction & tailoring; Some have Ag | High | Positive, but limited b/c of bureaucratic challenges to changing the curriculum | Limited - balancing charging enough to cover costs while keeping fees low to entice students; High dropout rates; Insufficient space | Outside funding to increase interest and feasibility of implementing Ag VT? | High |

| Stakeholder | Status/Role | Likely Interest | Attitude toward Project | Capacity/Resources & Constraints | Strategy to Involve Stakeholders | Interview Priority (March) |
|---|---|---|---|---|---|---|
| **District Level** | | | | | | |
| **Local Government** | Concerned about high dropout rates | High | Positive attitudes toward VT programs | No funding | Possibly involve local government Ag staff in curriculum development | Low |
| **Input Suppliers** | Provide seeds & fertilizer | Medium | Interest in well-educated farmers who understand the value of high quality seeds. | Hybrid sunflower seed (preferred variety) is imported primarily from South Africa. Plans are underway to develop a Ugandan grown hybrid variety (NARO). | Well-educated farmers understand the value of high quality seed. | Low |
| **Millers** | Increasing number in northern Uganda (Lira) | Medium | Interest in oilseed because sunflower oil can be sold for a premium. | Limited refining capacity (only in Kampala) results in low quality oil. Also, processing machines are foreign so repair is difficult and expensive. | Promote usefulness of well-trained staff for medium- and large-scale processing facilities. Also, possibility of domestically produced agro-processing machines. | Medium |
| **VT Institutes** | Provide Traditional VT | Low | Supportive of idea of including Ag in VT | Currently limited to traditional VT skills (not Ag) | Promote partnerships with private sector actors; Production & Maintenance of Agro-Processing Machinery | Low |
| **Agricultural Colleges** | Alternative to tertiary ed.; High level math/science required for admissions | Medium | Indifferent unless it is Ag VT, because potential increase in student base | Land for students to learn on, students housing, funding from government | Propose ideas for continuing education opportunities in Ag (post VT students) | Low |
| **Polytechnics** | Includes Agriculture | High | Positive attitude; Could be an asset in implementing Ag VT programs | Subject to Ministry of Education approval for curriculum changes; Limited government funding | Address curriculum flexibility & funding issues | Medium/High |
| **UGAPRIVI** | Regional Offices throughout Uganda | Medium | Positive | Already supporting some VT Centers to provide Agricultural training | Already Involved | Medium |

| Stakeholder | Status/Role | Likely Interest | Attitude toward Project | Capacity/Resources & Constraints | Strategy to Involve Stakeholders | Interview Priority (March) |
|---|---|---|---|---|---|---|
| **National** | | | | | | |
| **Ministry of Agriculture** | Government body responsible for developing and implement national policies on agriculture | High | Positive. Highly supportive of initiatives that will help Ugandan farmers improve farming techniques, add value to products and promote commercial Ag. | Have the political and authoritative influence however lack financial resources. | Use existing government platforms to improve quality of service for farmers. | Medium |
| **BTVET** | Under MoES; New law incorporates Ag & Modularized Training | High | Positive, although no Ag experience (confused re: Ag vs. more traditional VT) | Could be powerful in mobilizing people. Lack of experience with agriculture | Educate BTVET on the importance of Agricultural sector and engage MoAg | Medium |
| **NARO** | A public research Institute responsible for developing and promoting new seed varieties. | Medium | Interested in producing high yield variety of sunflower seed. [Confirm others: soy, sesame and groundnut.] | Good capacity | Involve NARO in training curriculum on seed varieties and planting techniques. | Low |
| **NAADS** | Branch of Ministry of Ag responsible for providing extension services | Medium | Interest in working with large numbers of small-holder farmers; Unclear if oilseed crops are an explicit priority | Only reaches a small number of farmers on a regular basis | Any additional training at the production level should complement NAADS work | High |
| **VODP (Vegetable Oil Development Project)** | National level program, operated by the Ministry of Ag and FAO, to promote oilseed processing. | High | Unknown | Unknown | Already involved. | High |

| | | | | | | |
|---|---|---|---|---|---|---|
| **UOSPA (Ugandan Oilseed Producers & Processors Association)** | Working towards improvement in farming techniques, knowledge and profitability of oilseed. | High | Interest in improving the skill-set of members and future members. | Problem of declining membership (some farmers' groups feel they aren't getting their money's worth) | | Medium |
| **Mukwano** | Largest processor of sunflower oil in Uganda. Also has plans to manufacture animal feed. Trains small-scale farmers (50,000). | Low | Mukwano seems to be working independently of other Agriculture interventions (like NAADS, Farmer Field Schools, etc.). However, plans to work with 100,000 oilseed farmers in northern Uganda. | Financial resources, expertise, access to markets and reputation. There are limitations because of the competition from palm oil, which due to the lower price is able to capture market share. | Emphasizing gains from coordinated labeling, branding and marketing of end products. | Low |
| **RAFIKI** | Important processor of oil, soap and other value-added products in the oilseed VC. Located in Mbale. | Low | Neutral but may be more engaged once they see the benefits of having trained workers and an improved quality in inputs | Has been affected by recent increase in cost of fuel and utilities. Business slowed. | Advertise benefit of well-trained staff and good quality inputs (oilseeds) | Low |
| **Microfinance Institutions** | Providing financial assistance to farmers to improve their profitability. | Low | Always looking for more clients. Unclear interest in the Agriculture sector. Would likely prefer to help entrepreneurial farmers. | Have the financial resources. Need to investigate interest in working with farmers further. | Oilseed is profitable. If loan terms are well designed, farmers should have no problem repaying. | Medium |
| **Uganda National Bureau of Statistics** | Government agency responsible for collecting data and statistics in the country | Low | Neutral not related to their daily work but important for collecting further information on agriculture and vocational training | Limited funding from government, data and other information | Useful in the sense that they can collect relevant data on youth drop-outs | Medium |

| Stakeholder | Status/Role | Likely Interest | Attitude toward Project | Capacity/Resources & Constraints | Strategy to Involve Stakeholders | Interview Priority (March) |
|---|---|---|---|---|---|---|
| **International** | | | | | | |
| **Food and Agricultural Organization (FAO)** | Role is to support to actors in the agricultural sector. | High | Positive. Always looking for ways to improve farmer income & alleviate poverty. Currently, distributing oil press machined to groups in the north. | Have the networks and access to main government partners. Perhaps have funding sources that could be directed towards successful projects. | Maybe interested in partnering if the project proves to be successful. | High (w/FFS) |
| **SNV** | Researcher: Ag/VT Opportunities | High | Positive & hopeful to alleviate poverty & high drop out rate amongst youth | Research funding; ability to consult with other stakeholders on how to implement programs based on research findings | Already involved | High |
| **GTZ** | German Donor Agency | High | Positive; Already engaged in training in value-added Agriculture. | Available Resources | Tap into interest and resource base perhaps at more regional/local levels to determine possible Ag VT opportunities | Low |
| **ACDI/VOCA** | NGO | Low | Currently focused on food crops & food security. | | Once food security improves, interest in cash crops? | Low |
| **Oxfam** | Provide support to rural agricultural workers. Desire for bringing farmers out of poverty and helping them build profitable businesses. | High | Positive. Always looking for ways to improve farmer capacity & alleviate poverty. Interested in improving farmers access to markets. | Have experience in what works in the field. May be able to provide sound feedback in creating a successful project. Also may have access to financial resources. | Maybe interested in partnering if the project proves to be successful. | Medium |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Save the Children** | Provide support to rural agricultural workers. Desire for bringing farmers out of poverty and helping them build profitable businesses. | High | Positive. Always looking for ways to improve farmer capacity & alleviate poverty. Interested in improving farmers access to local, regional and national markets. | Have experience in what works in the field. May be able to provide sound feedback in creating a successful project. Also may have access to financial resources. | Maybe interested in partnering if the project proves to be successful. | Medium |
| **IFAD (International Organization for Food and Agriculture Development)** | Provide support to rural agricultural workers. Desire for bringing farmers out of poverty and helping them build profitable businesses. | High | Positive. Always looking for ways to improve farmer capacity & alleviate poverty. Interested in improving farmers access to local, regional and national markets. | Have experience in what works in the field. May be able to provide sound feedback in creating a successful project. Also may have access to financial resources. | Maybe interested in partnering if the project proves to be successful. | Medium |

# Appendix 4 – Research Tools

## *4.1 Survey Questionnaire for Youth*

33 Questions: about 30 minutes

*Remember to introduce ourselves and explain the following:*

a. *Graduate students in international/public affairs from a university in NYC.*
b. *Working with SNV Uganda.*
c. *Purpose of research is to understand current & possible VT opportunities in the oilseed sub-sector.*
d. *Make clear that participation in research does not mean they will receive VT.*
e. *Ask permission to use a tape recorder.*

Questionnaire Number: _____
Interviewer Name: _____
Date: _____
Name of Participant: _____
District: _____
Sub-District: _____
Village: _____

**A. General Information:**

1. What is your age? _____
2. What is your gender? _____

3. What is your marital status?

a) Single b) Married c) Divorced d) Widow/Widower

4. What is your current occupation(s)?

a) student b) self-employed c) farmer
d) agricultural trainer (which organization _____ )
e) government employee f) educator (teacher, principal, professor, at which education level) _____
g) Other _____ h) Other _____
i) Other _____ j) Other _____

5. i) Are you currently in school?
Yes _____ [Skip to Q7]
No _____ [continue on to next Q]

ii) What was the last year of formal schooling that you've completed?

a) primary school (P7 is the last year of primary school)
P1 P2 P3 P4 P5 P6 P7*
[*If completed P7, then ask "Why did you not continue onto secondary school?"]
_____
b) secondary school (S4 is the last year of secondary school)
S1 S2 S3 S4 S5 S6

c) no school completed

iii) How old were you when you finished this last year of formal schooling? _____

6. Why are you not in school?

a) Cost (money associated difficulties) b) Distance c) Quality of School
d) Life Event (illness, marriage, pregnancy) e) Needed to Work at Home f) Difficulty level of course
g) Employment found h) Needed to look for work
i) Other _____ j) Other _____ k) Other _____

Please rank your top three reasons from most to least important:

first: _____

second: _____

third: _____

7. Have you ever attended a Vocational Training course?

a) Yes (if yes, go to questions 8-14)
b) No (if no, go to question 15)

**B. Vocational Training:**

8. If you have attended vocational training course, which subject did you enroll in?

a) Agriculture b) Tailoring c) Hairdressing d) Crafts
e) Sewing/Knitting f) Jewelry g) Hotel management h) Catering
i) Secretarial services j) Nursing k) Driving l) Carpentry/joinery
m) Car mechanic/motor mechanic n) Plumbing o) Electrical installation
p) Business Studies
q) Other _____ r) Other _____
s) Other _____ t) Other _____

9. Why did you select this course?

_____

10. Altogether, how much time did you spend in vocational training in your life?

a) Less that 1 month
b) Less than 6 months
c) One year
d) Two years
e) More than two years

11. Have you graduated from the course?

a) Yes (if yes, continue to question 16)
b) No (continue to question 12)

12. If no, do you expect to graduate from the vocational training course?

a) Yes (if yes, continue to question 16)
b) No (if no, go to question 13)

13. Why did you decide to discontinue your vocational training course?

a) Cost (money associated difficulties)
b) Distance
c) Life event (illness, marriage, pregnancy)
d) Quality of school
e) Needed to work at home
f) Difficulty level of course
g) Employment found
h) Needed to look for work
i) Other_____
j) Other_____
k) Other_____

14. How much of the vocational training course did you complete before deciding to discontinue? [Continue to 16.]

a) Less that 1 month
b) Less than 6 months
c) One year
d) Two years
e) More than two years

**C. Perception of VT (Opportunities, accessibility, costs):**

15. Have you ever considered enrolling in a VT program?

Yes ____
No____

If yes, what are some of the reasons why you find VT to be an attractive option?

a) practical skills (practical learning)
b) increased income
c) better job opportunities
d) other
e) other

If not, why haven't you enrolled in a VT program?

a) Cost
b) Time
c) Distance
d) No Help Finding Job
e) Have other work to do at home
f) Other _____
g) Other _____
h) Other _____
i) Other _____

16. What are people's perceptions about vocational training in your village/district/area?

a) Positive
b) Negative
c) Neither positive or negative
d) I don't know

17. Of these three educational options: agricultural training (extension services), secondary school, and VT, which would you prefer to help increase your income? (Please rank in order of preference.)

a) Agricultural Training.
Reason why? _____

b) Vocational Training
Reason why? _____

c) Secondary School
Reason why? _____

d) None of the above
e) All of the above

18. How long would it take you to get to the nearest vocational training center to your house?

a) 15 minutes or less
b) 15 to 30 minutes
c) 30 to 45 minutes
d) 45 minutes to an 1 hour
e) More than 1 hour
f) other _____
g) other _____
h) other _____

**D. Perception Toward Agriculture:**

19. What do youth in your village do for a living?
a) Street Vendor
b) Bike Taxi Driver
c) Farmer
d) Teacher
e) Government Employee
f) Extension Worker
g) Doctor
h) Nurse
i) Lawyer
j)
k)
l)
m)
n)
o)
p) No opportunities available
q) Cannot think of any opportunities available

20. Do you do any agriculture-related work?

Yes _____ (If yes, continue to Q21)
No _____ (If no, continue to Q28)

21. Which of the following aspects of agriculture are you involved in? [Circle all that apply]

    a) Seed Multiplication
    b) Production (applying fertilizer, planting, spacing, rotating crops, watering, weeding, etc.)
    c) Processing (oil, paste, seedcake, soap, etc.)
    d) Post-Harvest Handling (storage, transportation, etc.)
    e) Marketing (packaging, labeling, branding, pricing, quality standards, etc.)
    f) Business Skills (basic literacy & numeracy, start-up, accounting, book keeping, etc.)
    g) Agro-Machinery (manufacturing, operating, producing spare parts, repairing, etc.)
    h) Other _____
    i) Other _____

22. What crop(s) do you grow?

    _____

23. Is the land you farm on:

    a) family owned land
    b) self-owned
    c) rented land
    d) cooperative owned land
    e) Other_____
    f) Other_____
    g) Other_____

24. From whom did you learn farming techniques?

    a) Family
    b) Friends
    c) Training (List training provider _____)
    d) Self-Taught
    e) School (List type of school_____)
    f) Other _____

25. What types of training are available to people in your village?

    a) demonstration plot/farm
    b) extension worker visit to you/family
    c) NGO-sponsored training course
    d) farmers' association members' training
    e) trained farmer in village
    f) other
    g) other

26. Do you feel that you need more agricultural training?

    Yes _____
    No _____

27. Are you satisfied with the income that you earn from agricultural activities?

    Yes _____
    No _____

**<u>E. Need for Agricultural Skills</u>:**

28. Do you feel there is a need to create a separate course for 'agriculture' in vocational training?

Yes_____
No_____

29. Of the following list of skills, which agriculture related skills interests you the most?
a) Improved Production (applying fertilizer, choosing seed varieties, planting, spacing, rotating crops, watering, weeding, etc.)
b) Seed multiplication
c) Processing (oil, paste, seedcake, soap, etc.)
d) Post-Harvest Handling (storage, transportation, etc.)
e) Marketing (packaging, labeling, branding, pricing, quality standards, etc.)
f) Business Skills (basic literacy & numeracy, start-up, accounting, book keeping, etc.)
g) Agro-Machinery (manufacturing, operating, producing spare parts, repairing, etc.)
h) none of the above
i) all of the above
j) no opinion

31. Do you feel that oilseed crop is a profitable business?
Yes ____
No _____

32. From the following list what oilseed products are most profitable, in your opinion?
a) Sunflower Oil
b) Groundnut Paste
c) Peanut Paste
d) Soap/Detergent
e) Roasted (edible) Nuts
f) Seedcake
g) Soy Products (chips, milk, etc.)
h) Other _____

33. Assuming that you were to receive training in [answer from 32] what would be your next step?
a) Look for a job
b) Start your own business
c) Other

34. Once you finish agricultural VT, what would you need help with most?
a) capital for inputs
b) land
c) loan collateral
d) access to credit (loans)
e) supply (seeds..)
f) business skills
g) market access
h) natural resources (water, climate, weather)
i) none of the above
j) all of the above
k) no opinion
l) other _____
m) other _____

***Thank you for participating in our survey on Vocational Training.***

## *4.2 Dropout Focus Group Discussion Guide*

**Before beginning the focus group discussion, have students fill out a sign-in sheet (assuming that they are literate), where they fill in the following information:

- Demographic (Age, Gender, Marital Status)
- Occupation (choose from a list)
- Last year of school completed (for students who have dropped out)

I. Introduce Ourselves

a. Graduate students in international/public affairs from a university in NYC.
b. Working with SNV Uganda.
c. Research purpose is to assess current & possible VT opportunities in the oilseed sector.
d. Make clear that participation in research does not mean they will receive VT.
e. Ask permission to use a tape recorder.

II. Youth Dropouts' Introductions: Ask them to introduce themselves

III. Questions:

1. In your region, what are some reasons why youth drop out of primary school? Probe: (If not mentioned)

- Too expensive?
- Too far?
- Must work at home?
- Life event (illness, marriage, pregnancy)?
- Low quality of school?

2. If we were to rank the reasons you have given from most common to least common, what would you say is the most common reason why youth drop out of primary school?

3. When people drop out of school, what do they usually do? Probe: (If not mentioned)

- Become farmers?
- Migrate to the nearest city/town?

4. In your opinion, what percentage of dropouts ends up in agriculture?

5. Okay, let's talk about Vocational Training. Are there any VT centers that you are aware of? Are there any VT centers that focus on agriculture? Probe:

- Where are they located?
- How far are they from your village or sub-county?
- Do you know anyone attending such a program/course?
- Would you be interested in attending such a course? Why or Why not?

6. Ok, let's turn to skills training. What skills would someone expect to gain from VT? Agricultural VT?

7. How do people in your sub-county learn skills related to farming/agriculture? Probe: Are there teachers/experts that teach you, or do you learn from your neighbors (unofficially, by word of mouth or observation)?

8. How many of you have attended any of these trainings (the one referred to above)? For those who have attended, how would you evaluate the usefulness of these training activities?

9. Are there any other ways of learning about agriculture/farming without going to VT? What are some useful ways to learn farming/agricultural business skills? If any, what methods do you recommend?

10. Ok, let me ask you another question related to VT.
How many of you would choose to attend an agriculture VT program?

11. What agriculture-related skills would you want to learn most?
Probe: Please select from this list:

- Improved Production (applying fertilizer, planting, spacing, rotating crops, watering, weeding, etc.)
- Seed Multiplication
- Processing (oil, paste, seedcake, soap, etc.)
- Post-Harvest Handling (storage, transportation, etc.)
- Marketing (packaging, labeling, branding, pricing, quality standards, etc.)
- Business Skills (basic literacy, numeracy, start-up, accounting, book-keeping, etc.)
- Agro-Machinery (manufacturing, operating, producing spare parts, repairing, etc.)

12. Would you prefer to learn one skill well or all skills on at least a basic level? (For example, would you prefer to just learn how to process or how to do everything from growing to taking the crop to market?)

13. Would you prefer to learn about one type of crop (ex: oilseed) or many crops?

14. What are some good job opportunities available to youth who have dropped out of primary school?

15. How do these opportunities compare to those for someone who has completed a vocational training program?

16. What kind of jobs do graduates of VT programs have? (What kind of work do they do?)

17. What are the biggest obstacles you would face as a VT graduate?

18. What are some reasons why people drop out of VT programs?
Probe: (If not mentioned)

- Cost?
- Distance?
- Life event?
- Duration?

19. What do you think might be the biggest obstacles of an agricultural VT program graduate?

20. How are agricultural opportunities perceived by the youth in your sub-county (area)? Do people aspire to work in agriculture?

21. Let's talk about the good and bad aspects of working in agriculture. What would you say are positive aspects of working in agriculture? [List them and make sure you have exhausted all that the group can give, then move on to the next question.]

22. OK, let's talk about the negative aspects of working in agriculture?

23. Now, let's talk about oilseeds (sunflower, simsim, ground nuts, soy beans) in specific. What are the benefits to oilseed crops in comparison to other crops?

24. What are the negative aspects to growing oilseed crops in comparison to other crops?

IV. Conclusion

Thank them for their time and participation.

## *4.3 VT Student Focus Group Discussion Guide*

**Before beginning the focus group discussion, have students fill out a sign-in sheet (assuming that they are literate), where they fill in the following information:

- Demographic (Age, Gender, Marital Status)
- Occupation (choose from a box...)
- Last year of school completed (for students who have dropped out)

1) Introduce Ourselves

a. Graduate students in international/public affairs from a university in NYC.
b. Working with SNV Uganda.
c. Research purpose is to assess current & possible VT opportunities in the oilseed sector.
d. Make clear that participation in research does not mean they will receive VT.
e. Ask permission to use a tape recorder.

2) Ask them to introduce themselves.

3) Questions

a. Why would someone be interested in VT?

b. Why did you decide to attend VT? Probe:

a. Why not traditional secondary school/enter the job market directly?
b. Cannot afford other school? Did not pass exams? Want to find a job?

c. What is the perception of VT in Uganda (positive or negative)? Why?

d. What skills would someone expect to gain from VT?

e. What skills did/do you expect to gain from VT?

f. Should Agriculture be offered as a VT training course? Why or why not?

g. How many of you would choose to attend Agriculture VT?

h. What Agriculture related skills would you want to learn most? Why?
Probe: Please select from this list:

- Improved Production (applying fertilizer, choosing seed varieties, planting, spacing, rotating crops, watering, weeding, etc.)
- Processing (oil, paste, seedcake, soap, etc.)
- Post-Harvest Handling (storage, transportation, etc.)
- Marketing (packaging, labeling, branding, pricing, quality standards, etc.)
- Business Skills (basic literacy, numeracy, accounting, book keeping, etc.)
- Agro-Machinery (manufacturing, operating, producing parts, repairing, etc.)

i. Would you prefer to learn one skill well or all skills at a basic level?

j. Would you prefer to learn about one type of crop (ex: oilseed) or many crops?

k. If given the choice between traditional agricultural training (extension services) and agricultural VT, which would you choose and why?

l. How long should an Agriculture VT course last?

m. Why would someone have to drop out of VT?
Probe: (If not mentioned)

- Cost?
- Distance?
- Duration?
- Life event?

n. What job opportunities are available to primary school graduates? Secondary school graduates? VT graduates?

o. What do most graduates do after completing VT?

p. What are your plans after graduation?

q. What are the biggest obstacles VT graduates face?

r. Does VT help graduates find work and increase income? (Is this true in your case? What about with others that you know?)

s. What suggestions do you have to improve VT?

4) Conclusion – thank them for their time.

## *4.4 Interview Guide for VT Centers*

Introduction

a. Graduate students in international/public affairs from a university in NYC.
b. Working with SNV Uganda.
c. Research purpose is to understand current & possible oilseed sub-sector VT opportunities.
d. Make clear that participation in research does not mean they will receive any funding.
e. Ask permission to use a tape recorder.

Socio-Demographic Information

1. How many students are enrolled in your school/center?
2. How many of those students study Agriculture?
3. Are most of your students from rural or urban areas?
4. What percentage of your student body is female?
5. Are most of your students from poor, rich or middle-income families?
6. What level of education have students previously completed?
7. How many teachers do you have?
5. Are there enough qualified VT instructors in your district?

Research Question: What is the current supply of Ag VT?

6. What are the core skills you teach?
7. How do you decide which courses to offer? Probe:
   - Market Analysis?
   - Student Demand?
   - Employer Requirements?
8. Which are the most popular courses you offer?
9. Why do you (or do you not) offer Agriculture VT?
10. What would prevent a VT provider from offering Agriculture courses? Probe:
    - Resource constraints?
    - Other actors (ex: NAADS) already providing it?
11. What level of the VC do you focus on (ex: production, processing, marketing)?
12. What crops do you focus on (ex: oilseed)?
13. Which skills are unique to certain crops and which skills are the same across all crops?
14. How does the agricultural VT you offer compare to traditional extension services?
15. Do you feel your VT programs respond to market demand for skills?
16. Are there any gaps in the market-demanded skills and the VT offered?

Research Question: How can Ag VT meet the educational needs of dropouts?

17. What perception do people in Uganda have toward VT?
18. Does that kind of perception affect your ability to recruit students?
19. How long does Agriculture VT typically last?
20. What is the average cost of Agriculture VT?
21. How does the cost compare to secondary school? Agriculture extension services?
22. How do students finance it?
23. Are some students forced to drop out because they cannot afford VT?

Research Question: What agricultural skills do dropouts need to improve their livelihoods?

24. What do you tell students they will gain after completing Agriculture VT?
25. What kind of certificate or degree do you provide graduates?
26. What job opportunities are available to graduates of your Agriculture VT program?
27. How do they compare to those available to primary and secondary school graduates?
28. Are most graduates self-employed or formally employed?
29. Do you provide any start up capital for youth to start their own businesses?
30. What are the biggest constraints faced by graduates of your Agriculture VT program?

## *4.5 Interview Guide for Trainers*

(UOSPA, NAADS, FAO (FFS) & Mukwano)

General Information
- Name
- Organization & Position
- Full-time or Part-time
- Education or Training Completed

Research Question: Are youth who drop out of school interested in attending Ag VT?

1) What are the main factors that youth in the district consider when choosing a career? Probe:

- Income
- Location (rural/urban)
- Modernity
- Job Availability
- Training Opportunities
- Capital Requirements

2) Of all the factors mentioned, which ones can the Agriculture sector (Oilseed) satisfy?
3) What are the gaps you see between what youth want and what Ag/Oilseed can offer?
4) Are there activities in the district to address that gap?
5) What are other reasons youth are not interested in Ag/Oilseed? How can they be addressed?

Research Question: What is the current supply of Ag VT?

6) Please rank the skills you teach farmers the most.

a. Land maintenance (applying fertilizer, rotating crops)
b. Seed information (seed selection, planting, spacing, watering)
c. Improved production methods (weeding, harvesting)
d. Post-harvest handling (drying, storage)
e. Processing
f. Marketing (transportation, packaging, labeling, branding, pricing, quality standards)
g. Business skills (basic literacy & numeracy, start-up, accounting, book keeping, etc.)
h. Agro-Machinery (manufacturing, operating, producing spare parts, repairing, etc.)

7) How many other trainers work in this district to provide training to farmers?
8) How does the training you offer differ from current Ag VT opportunities in the district?
9) How many farmers (or groups/villages) are you responsible for training? Per day? Month?
10) What is your main mode of training? Probe:

- Contact farmer
- Demonstration plot
- Extension services
- Other

11) Do you offer specific training to the youth (15-25?)? If not who trains them?
12) Are the youth interested in learning from you?
13) What kind of training does your employer give to you? How often?
14) What are some of the constraints that you encounter when giving training? Probe:

- Lack of knowledge
- PR techniques
- Presentation techniques
- Transportation

15) If you were to be given additional training, what skills do you want to acquire? Probe: Refer to the list in question 6, but also presentation skills, customers service skills, etc.

16) Would your organization ever be interested in partnering with Agriculture VT programs? How?

Research Question: What agricultural skills do dropouts need to improve their livelihoods?

17) Which skills do youth farmers (in the oilseed sector) need most from your perspective? (Rank from list in Q6)

18) Which skills do youth farmers (in the oilseed sector) struggle to learn/use the most?
(Rank from list in Q6)
19) Which skills do youth farmers (in the oilseed sector) want to learn the most?
(Rank from list in Q6)
20) If VT centers were to offer Agriculture training to youth, what skills should they teach?
(Rank from list in Q6)

Research Question: How can agricultural VT meet the educational needs of dropouts?

21) Is there any organization for youth dropouts at the village level?
22) What percentage of youth dropouts belongs to some kind of group?
23) What is the most efficient way to approach youth dropouts in rural areas?
24) What is the most efficient way to train the youth? Probe:
To go out to villages? Or to ask them come to a central training facility?
25) What can be done to attract youth dropouts to those VT centers?

# Appendix 5 – Contact List

| Name | Organization | Title | District | Date | Contact |
|---|---|---|---|---|---|
| James Ogurang | UGAPRIVI | Programme Officer | Kampala | 1/12 | |
| Kobusingye Moreen | | Administrative Officer | Kampala | 1/12 | |
| Haj Yusuf Bachu | | General Manager | Kampala | 1/12 | |
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| Detlef Betz | GTZ PEVOT | Technical Advisor | Kampala | 1/13 | detlef.betz@gtz.de |
| Israel Kafougole | | Programme expert | Kampala | 1/13 | 075-269-3873 |
| Nafutali Onjie | Lugogo Vocational Training Institute | Acting Principal | Kampala | 1/13 | lvti@utionline.co.ug |
| Mwesigye George Shillingi | | Principal | Kampala | 1/13 | 077-247-9106 |
| Sewpala Patrick | Comissioner | MOES | Kampala | 1/13 | pssewpalo@yahoo.com |
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| Agong Ray Bruno | | Monitoring & Evaluation Officer | Kampala | 1/13 | oilseed@utonline.co.ug |
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| Ayo Angella | | Agricultural Officer | Mbale | 1/14 | 077-725-5851 |
| Nasimiyu Lunus | | Education Officer | Mbale | 1/14 | 075-263-4430 |
| Namgosya Mike | | DEO | Mbale | 1/14 | 077-242-6776 |
| Soaao Dawl | | Head of Production | Mbale | 1/14 | 071-292-3949 |
| Lwunga Edward | NAADS/Mbale | DNC | Mbale | 1/14 | 071-292-3949 |
| Richard Mntenyo, | Busiu VT | Principal | Mbale | 1/14 | |
| Kakuba M. Mumbogne | Municiple Polytechnic | Agriculture Head Instructor | Mbale | 1/14 | |
| Wanyaula J. | Mt Elgon Technical College | Principal | Mbale | 1/14 | |
| Irene Atim | UGAPRIVI | ICT Instructor | Mbale | 1/14 | |
| Morrely Kabono | | Regoinal Assisstant | Mbale | 1/14 | |
| Nicanor Mutambo | Busiu United Farmers Marketing Association | | Mbale | 1/15 | 071-558-177 |
| Esther Mujasi | | | Mbale | 1/15 | 078-208-5251 |
| Dr. Philip Wakimwene | | Gov'nt Extensionist Busin Subcounty | Mbale | 1/15 | 075-253-1788 |
| George Wauateke | | | Mbale | 1/15 | 075-315-8426 |
| Buteme Jackline | | Youth | Mbale | 1/15 | 072-981-702 |
| Immaculaie Mukoya | | Youth | Mbale | 1/15 | |
| Mugirya Dau | | Youth | Mbale | 1/15 | |
| Patrick Ejoku | El-Shaddai Int. Ltd | Owner | Mbale | 1/15 | 077-249-0262 |
| Mutommi Agmes | Sukura Agro Supplies Ltd. | Owner | Mbale | 1/15 | 075-282-0031 |
| | Mt. Elgon Seed Company | Owner | Mbale | 1/15 | |

| | | | | | |
|---|---|---|---|---|---|
| Nelson W. Kyagera | Eastern Private Sector Developoment Centre Limited | Chief Executive Officer | Mbale | 1/15 | kyagera2000@yahoo.com |
| Annette N. Muwonge | | Micro Finance Officer | Mbale | 1/15 | muwoann@yahoo.com |
| Geoffrey Hambafut | | | Mbale | 1/15 | 077-463-0000 |
| Sandra Amollo | FDNC Vocational Training Centre | | Mbale | 1/15 | sandramollo@yahoo.com |
| Rev. Ebukalin Sam | Bukedea District Local Government | District Chairperson | Bukedea | 1/16 | lifteso@yahoo.com |
| Gahafu Petero | | CAO | Bukedea | 1/16 | |
| Norah Anyakoit | | P.D | Bukedea | 1/16 | 077-433-2979 |
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| Ogwal Samuel | | Machine Operator | Lira(APAC) | 1/21 | |
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| Benard Watenyeli | | Drop-out Youth | Mbale | Mawanda | | |
| Brian Napokoli | | Drop-out Youth | Mbale | Bunanimi | | |
| Godfrey Mwelu | | Drop-out Youth | Mbale | Bukaya | | |
| Sam Wanibu | | Drop-out Youth | Mbale | Nangona | | |
| Tony Wanda | | Drop-out Youth | Mbale | Namuyu | | |
| Moses Sakwa | | Drop-out Youth | Mbale | Raasa | | |
| Joseph Mukhama | | Drop-out Youth | Mbale | Bukhula | | |
| Judith Kakai | | Drop-out Youth | Mbale | Toma | | |
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| Anne Nagakma | | Student - ODE II | Mbale | | | |
| Sara Nassaka | | Student - Ordinary Diploma in Mechanical Engineering | Mbale | | | |
| Peter Bdeire | | Student - Ordinary Diploma in Mechanical Engineering | Mbale | | | |
| Sylus Msogo Kaliba | | Student - Architectural Draughtsmanship and Drawing | Mbale | | | |
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| Etiang, Simon | | Drop-out Youth | Bukedea | | | |
| Jane Adeke | | Drop-out Youth | Bukedea | Miroi | | |
| Moses Oucul | | Drop-out Youth | Bukedea | Komongomeri | | |
| ? | | Drop-out Youth | Bukedea | | | |
| ? | | Drop-out Youth | Bukedea | | | |
| ? | | Drop-out Youth | Bukedea | | | |
| ? | | Drop-out Youth | Bukedea | | | |
| ? | | Drop-out Youth | Bukedea | | | |
| ? | | Drop-out Youth | Bukedea | | | |
| Emma Admulmu | Bukedea Town Council Youth Drop-out FGD | Drop-out Youth | Bukedea | Tamula | 19-Mar | |
| Patricia Okwahinga | | Drop-out Youth | Bukedea | Kide | | |
| Asio Scovia | | Drop-out Youth | Bukedea | Bukedea | | |
| Raymond Opoloi | | Drop-out Youth | Bukedea | Oswapai | | |
| Moses Osaro | | Drop-out Youth | Bukedea | Osarapai | | |
| Stellah Amujar | | Drop-out Youth | Bukedea | Emokodi Ward | | |
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| Moses Omodiny | | Drop-out Youth | Bukedea | Okunyuro Parent Ward | | |
| Simon Okalebo | | Drop-out Youth | Bukedea | Bukedea Ward | | |
| Kenneth George Okalamy | | Drop-out Youth | Bukedea | Tamula Ward | | |
| Stephen Osomel | | Drop-out Youth | Bukedea | Kide Ward | | |

| | | | | | | |
|---|---|---|---|---|---|---|
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| Samuel Olinga | Kyere Sub-county Council | LC III Chairman | Soroti | | 20-Mar | |
| Deborah R Akiteng | Kyere Sub-county Youth Drop-out FGD | | Soroti | Okunguro | 20-Mar | |
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| Stella Asango | | | Soroti | Oingai | | |
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| Vincent Esoot | | | Soroti | Amese | | |
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| Henry Olupoj | | | Soroti | Ariet | | |
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| Dorcus Akoli | | | Lira | Awielem | | |
| Christopher Onang | | | Lira | Corner | | |
| James Anthony Ocwic | | | Lira | Adwek | | |
| Tom Boza Ocen | | | Lira | Awie-Alem | | |
| Jimmy Okola | | | Lira | Barkwogoa | | |
| Lawrence Olue | | | Lira | Akor | | |
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# Appendix 6 – List of VT Providers

| Private VT Center | Contact | Course Offerings | Agricultural courses? | Current Enrollment | Accept Dropouts? |
|---|---|---|---|---|---|
| Mbale | | | | | |
| Body Alive Ministry (BAMI) Vocational Institute | Paul Wabukoma | Carpentry & Tailoring | No | | |
| Budaka Rehabilitation Center | Leah Njoroge | Mechanics, Carpentry & Brick-laying | No | | |
| Bududa Hope Technical Institute | Paul Kooko | None yet (still not opened) | None yet | | |
| Bukhaweka Vocational Training Centre | Kizito Michael Waburoko | Carpentry, Computer, Tailoring, Brick Laying & Secretarial | No, "modern farming" but "not agriculture" | 50 | Yes |
| Bungokho Rural Development Centre | Bob Arnold | Carpentry, Building, Tailoring & Agriculture | Yes, farming | 100 | Yes |
| Busiu Vocational Centre | Richard Michael Wanboka | | | | |
| CCP Vocational Training Institute | Masaba Isaiah Dwale | Hotel/Catering, Secretarial Studies, Nurse Training, Brick-laying, Concrete, Car Mechanic, Plumbing, Electrical Installation & Hair Dressing | None, but they have a farm where they grow food for the students | 800 | No |
| Christian Childcare VTC | Godfrey Waswa | Not in operation | | | |
| Foundation for Development of Needy Communities (FDNC) | Samuel W.Watulatsu | | | | |
| Green Pasture Secondary & Vocational School | Philemon Barasa | Not opened yet | None yet | | |
| HUGU Youth Development Foundation | Fred Manana | Brick laying, Carpentry/Joinery, Sewing & Knitting | Yes, crop (coffee) and animal rearing | | Yes |
| Mbale Resort Hotel Ltd. | Lawrence Kinyua | Hospitality & Guest Services | No | | |
| NAMUKHONGE COMMUNITY POLYTECHNIC (N.C.P.) | Masette Nelson | Block Laying & Concrete, Carpentry, Jewelry, Tailoring & Secretarial Services | No, but would like to (no funding available) | 40 | |
| Passa Premier Vocational High School | Abbas Samali | Carpentry & Tailoring | None yet | | |
| Prothone Inst. Of Voc. Training | Onyango Annette Teddy | Not in operation | | | |
| Salem Brotherhood (Uganda) | Peter Netiwa | No classes yet | No | | |
| St. Anthony's Tech. College | Richard Munyabwenge | Mechanics, Welding & Architecture | No | | |

| Private VT Center | Contact | Course Offerings | Agricultural courses? | Current Enrollment | Accept Dropouts? |
|---|---|---|---|---|---|
| Bukedea | | | | | |
| Apoolo Na Angor (development of women ) | Moses Aisia | Tailoring, Crafts | Yes, including farm schools | 77 | Yes |
| Odwe Oduk People's Technical | John Robert | Mechanics | No | | |
| Soroti | | | | | |
| Algebright Institute | Lawrence Florence Oematum | | | | |
| Madera Rehabilitation Center | Patricia | | | | |
| Modern Vocational Training Centre | Kenneth Ayuku | Carpentry & Joinery, Block Laying & Concrete Practice, Tailoring & Cutting Garments and Motor Vehicle Mechanics | No, but future plans to open up a course in Tropical Agriculture | 300 | Yes |
| Shoa Institute of Hotel Management, Catering and Business Studies | Henry Onaba, Director | Hotel Management, Catering, Tailoring, Textile Technology & Business Studies | No | 30 | Yes |
| Soroti Technical and Business Institute | Marx Angesu | | | | |
| St. Pius Vocational Training Institute | Simon Ocen | Driving, Motor Mechanics, Carpentry, Brick Laying, Tailoring & Agriculture (partly) | Yes, about 50 students are in agriculture. They have an orange garden (120 plants). | 137 | Yes |
| Uganda Martyrs VI | Fred Aeko, Director | Brick Laying & Concrete, Plumbing, Motor Mechanics, Carpentry, Tailoring, Catering, Metal Fabrication & Driving | No, ag is not part of the main curriculum. But they hope to expand it into a full program. | 450 | Yes |
| Umoja Vocational Training Institute | Milton Okello-Opio, Director | Motor Vehicle Mechanic, Welding & Fabrication, Tailoring & Garment Cutting, Carpentry & Joinery and Block Laying & Concrete Practice | Plans to start an Ag course in May 2009. Has already advertised for an instructor. | 170 | Yes |
| Vocational Training Institute in Soroti | Joseph Adweka, Director | Carpentry & Joinery, Motor Vehicle, Brick Laying & Concrete, Electrical, Plumbing, Tailoring & Garment, Catering & Hotel Management, Secretarial & Computer Studies, Blacksmith, Welding & Metal | No | 250 | Yes |

| Private VT Center | Contact | Course Offerings | Agricultural courses? | Current Enrollment | Accept Dropouts? |
|---|---|---|---|---|---|
| Lira | | | | | |
| Adwoki Technical School | Omiat Sam | Brick-laying, Carpentry, Tailoring, Tropical Agriculture & Mechanics | Yes | 750 | Yes |
| Agwichiri Vocational Training Centre | | | | | |
| Amuka Vocational Institute | Chagara Johnson | | | | |
| Ave Maria Vocational and Youth Development Centre | Quilinous Otim, Founder | Tailoring & Cutting Garment, Knitting, Garment Designing, Carpentry & Joinery, Painting & Decorating, Brick Laying & Concrete Practice, Welding and Metal Fabrication and Computer (ICT) | Yes, to be developed into full courses: Bee-Keeping & Honey Processing, Piggery, Duck Rearing & Tree Planting | 300 | Yes |
| Brother Konrad Technical School | Okullo Patrick | | | | |
| CEASOP Vocational Training Centre | Odur Rouby | | | | |
| Djra Comprehensive Vocational School | Anna Akeny | | | | |
| Gweno's Vocational Training Centre | | | | | |
| Human Technical Development Training Centre | Ogwang Kalisto | Plumbing, Building & Concrete, Motor Vehicle, Electrical Installation, Carpentry & Joinery, Tailoring & Cutting Garment, Business Studies, Driving & Craft | No, but it is in their 5 year development plan (2006-2010) | 610 | Yes |
| Light Vocational School | Obong Vincent | | | | |
| Lira School of Catering | Obol Godwin | | | | |
| Nelkoo Technical School | Ayek Nelson | | | | |
| PAG Technical School | Okello Polycarp | | | | |
| Rural Child Vocational School | Omara Bosco | | | | |
| Sema Multipurpose Comprehensive | Apule Alphonse | | | | |
| St Francis Vocational Training Centre | Ekou Francis | | | | |
| St John Bosco Vocational Centre | | | | | |
| St Victor's Technical School | Obyelo Victor | | | | |
| Unity College Ngetta | D.L. Arok-Okiro, Director | | | | |
| Unity Youth Vocational Training Centre | | | | | |

# Appendix 7 – Qualitative Analysis

| OILSEED ACTORS MATRIX | What agricultural skills do dropouts need to improve their livelihoods? | What are the skill gaps in the oilseed value chain? | What is the existing supply of agricultural VT? |
|---|---|---|---|
| **KAMPALA** | | | |
| | • Business skills<br>• Financial literacy<br>• Production and processing | • Need better marketing<br>• Outdated technologies | • UOSPA works with (and trains): 947 producer groups + 62 millers<br>• There were District Farm Institutes (now defunct) – people did not like Ag VT here |
| **MBALE** | | | |
| | • Fertilizer use<br>• Modern production techniques<br>• Post-harvest storage<br>• Access to market information (prices)<br>• Knowledge of different seed varieties & access to quality (hybrid) seed | • Low production<br>• Marketing (middlemen get all the money)<br>• Packaging<br>• Quality control<br>• Post-harvest handling<br>• Business skills | • Through extension workers (free)<br>• Some NGO training (free)<br>• Farmers' Associations (small fee)<br>• Some input suppliers (ex: seed companies) |
| **BUKEDEA** | | | |
| | • Information about seed varieties<br>• Government certification (from Uganda Bureau of Standards) to sell sunflower oil<br>• Farm managements | • Research on improved seed varieties<br>• Proper planting and harvesting<br>• Soil improvement and maintenance<br>• Mechanized production<br>• Processing (only one machine in Bukedea)<br>• Processing machine maintenance<br>• Packaging<br>• Reaching export markets | • UOSPA<br>• VODP extension workers<br>• Farmer-to-Farmer (within Associations)<br>• Not much formal training<br>• Lack of training facilities<br>• Demonstration plots |
| **SOROTI** | | | |
| | • Quality of seed more important than skills<br>• Trainees cannot implement what learned<br>• Youth must see quick reward ($$$) | • Production (need quantity & quality)<br>• Mechanization<br>• Processing technology<br>• Servicing equipment<br>• Seed multiplication | • Farmers' Association<br>• VT focuses on traditional skills (not Ag)<br>• Uganda Manufacture Association (process)<br>• FAO (Farmer Field Schools) |
| **LIRA** | | | |
| | • Farmers need business skills<br>• Efficient individual processing equipment<br>• Post-harvest storage and marketing (should not all sell whole harvest at once)<br>• Mechanization and other improved techniques at production level<br>• Need complete package (not just training) | • Post-harvest handling<br>• Quality seed (local hybrid production)<br>• Refining capacity<br>• Meeting international standards<br>• Branding & packaging<br>• Admin and accounting (for millers)<br>• Machine maintenance and operation<br>• Small-scale processing technology<br>• Production<br>• Value addition | • Mukwano (hard to find extension workers)<br>• North Uganda Millers Association – Training on UBS standards<br>• UOSPA<br>• NAADS & NARO<br>• Need for additional Ag/technical institutes |

| VT CENTERS & AGRICULTURAL TRAINERS MATRIX | What Ag skills do dropouts need to improve their livelihoods? | What are the skill gaps in the oilseed value chain? | What is the existing supply of Ag VT? | How can Ag VT meet the educational needs of dropouts? |
|---|---|---|---|---|
| **KAMPALA** | | | | |
| | • Business skills (most VT graduates become self-employed)<br>• Financial literacy<br>• Processing (value addition) | • Need better marketing<br>• Outdated technologies | • "Traditional" VT does not have Ag<br>• Perception: Ag VT demand is short-lived and seasonal; not high enough to justify a course<br>• UOSPA works with (and trains): 947 producer groups + 62 millers<br>• Sometimes public VTIs offer short Ag courses upon request | • Often VT is too expensive for students to attend/graduate<br>• Time commitment (2-3 years) is too long for some students<br>• Primary school dropouts are not eligible for public VTI admission |
| **MBALE** | | | | |
| | • Processing (value addition)<br>• All aspects of the value chain<br>• Must be able to convert skill to good or service (other obstacles include capital and credit) | • Grading and packaging<br>• Agro-processing machine repair<br>• Middle men get all the money<br>• Marketing<br>• Processing | • Traditional VT can include Ag<br>• Each sub-county should have a Polytechnic to offer Ag courses (but does not)<br>• Student demand drives course offerings<br>• Ag is a popular concentration<br>• Business training does not target youth or agro-enterprises | • Most public VT providers do not admit primary school dropouts<br>• Need shorter modularized training<br>• Financial support for dropouts |
| **BUKEDEA** | | | | |
| | | | • Very limited | |
| **SOROTI** | | | | |
| | • Commercial agriculture<br>• Value addition (processing)<br>• Whole value chain<br>• Planting | • Production (quality & quantity) | • TESOPS – Business Training<br>• Demand driven<br>• VT does not typically include Ag<br>• Ag Colleges for more educated | • Some people are too poor to pay<br>• Modularized good for Ag VT |
| **LIRA** | | | | |
| | • Processing (add value)<br>• Practical (not theory)<br>• Post-harvest handling<br>• Need start-up kits for graduates<br>• Marketing<br>• Business skills<br>• Seed multiplication | • Processing/Value Addition<br>• Production<br>• Marketing<br>• Refining<br>• Local seed development<br>• Machine maintenance & repairs<br>• Having access to information about crop prices | • Much interest among VT centers<br>• FAO (Farmer Field Schools)<br>• Farmers' Association<br>• NGOs (ex: AT Uganda)<br>• Demonstration Farms<br>• Extension workers (NAADs)<br>• Almost all at production level | • Expand capacity of Ag Institutes<br>• VT is very costly<br>• Certification for practical skills<br>• Youth can learn by 'doing' |

| YOUTH DROPOUTS & STUDENT FGD MATRIX | Are youth dropouts interested in attending agricultural VT? | What agricultural skills do dropouts need to improve their livelihoods? | What are the skill gaps in the oilseed value chain? | What is the existing supply of agricultural VT? | How can agricultural VT meet the educational needs of dropouts? |
|---|---|---|---|---|---|
| **MBALE** | | | | | |
| Youth Dropouts *Busio sub-county* | · Yes, 9 out of 11 work in agriculture & all 11 would be interested in attending VT<br>· However, constraints include cost and distance<br>· Positive perception of ag VT | · Ability to identify quality seeds and be able to afford them<br>· Production skills (knowing the right mix of fertilizer to apply, for ex.) | · Oilseeds are profitable, esp. sim-sim and sunflower, however, no access to inputs (seeds, for example) | · There are no VT centers nearby ( more than 1 hour away); the one in the sub-county is not in operation | · More job opportunities: agricultural officer, VET officer & NAADS coordinator<br>· Gain credibility w/ag VT<br>· Believe it can improve skills/knowledge base, can teach others, friends/family & can bring in more income to help sustain livelihood |
| Student Youth *Mt. Elgon Technical College* | · 6/8 would attend ag VT, but historical neg. perception of VT (for poor people); trend is changing, so we are now more interested in ag VT<br>· Youth dropouts would be interested in attending ag VT b/c they'd learn practical skills at a low cost (rel to university); most of Uganda is in ag & many do not know how to properly work the land | · production—applying seeds (spacing); how to use higher technologies to improve production (help w/weeding and planting, for ex.)<br>· Important to learn one skill before learning other skills along the value chain | | · There are no ag VT programs that we know of; this is why we are at a technical college | · Better agricultural products, higher yields and improved income<br>· Provides more practical and hands-on learning |
| **BUKEDEA** | | | | | |
| Youth Dropouts *Bukedea Town Council sub-county [note: need Kolil s-c info]* | · 15 out of 15 youth are interested in ag VT<br>· More than 60% of youth in ag (livelihood of entire sub-county) | · modern approaches to ag, beekeeping, post-harvest handling impt too, how to make own fertilizer—sustainability | · Oilseed is impt for marketing purposes (can sell in market)<br>- Benefits of oilseed: produces oil for sale and personal consumption, seedcake for feed<br>- Negatives of oilseed: fail to get to market; or, can produce oil but the market p is too low storage, no machinery to squeeze oil | · 1 VT center nearby but no program for youth; no ag VT but occasional NAADs extension training | · Primary school dropouts are not eligible for public VTI admission |

| | | | | | |
|---|---|---|---|---|---|
| **SOROTI** | | | | | |
| Youth Dropouts<br>*Kyere sub-county* | · 2 out of 15 youth dropouts interested in ag VT; there is no land for them to "work"<br>· However, all 15 agreed that agriculture work is profitable (they need land!) | · Skills desired: sewing, mechanics, driving (no mention of agricultural skills, even when pressed to answer) | · G-nuts are profitable | · No VTIs nearby (at least 22 km away); transport is a problem | · Better job opportunities and higher income |
| Student Youth<br>*Arapai Agricultural College* | · 18 out of 18 youth interested in ag education (all enrolled in ag college) but feel that ag is often a "fallback" option for youth b/c no one likes to "dig"<br>· None of the ag college students wanted to go back to farming once they graduated; all wanted to work in 'white collar' ag jobs | · Need to understand how to handle a crop from seed making and selection all the way to harvesting the crop; post-harvest handling is also necessary | · at Arapai college there is more focus on production, students are not taught processing skills and they wish to learn about that | · No ag VT programs nearby | · Better job opportunities and higher income for youth individually and for the country overall |
| **LIRA** | | | | | |
| Youth Dropouts<br>*Ogur sub-county* | · Most youth "dig"; others in animal husbandry<br>· 5 out of 10 wanted ag VT (others preferred "traditional" VT) | · agricultural tech (how to use machinery for production), marketing knowledge (seeds from Mukwano are too expensive, so the costs of production exceed sales margins) | · sunflower not so profitable here, soya beans are better (less dependent upon Mukwano) | · No VT centers nearby (b/c of rebel activity), but in town (Lira) there are traditional VT centers | · Better market access; higher quality yield & product; higher income |

| NATIONAL & LOCAL GOVERNMENT MATRIX | Are youth dropouts interested in attending agricultural VT? | What agricultural skills do dropouts need to improve their livelihoods? | What are the skill gaps in the oilseed value chain? | What is the existing supply of agricultural VT? | How can agricultural VT meet the educational needs of dropouts? |
|---|---|---|---|---|---|
| **CENTRAL LEVEL GOVERNMENT** | | | | | |
| *Ministry of Education, BTVET, VODP, NAADs* | • Can also be made available to more educated youth groups since it can help them in gaining practical skills<br>• Youth are interested but do not get the financial support they need to attend agricultural VT | • Seed germination and distribution<br>• Business skills<br>• Marketing skills<br>• Transportation knowledge and skills<br>• Oilseed marketing<br>• Processing<br>• Storage<br>• Quality control (standards) | • VODP government trainers try to focus on the production aspect of the oilseed value chain. Their main concern is to help increase the country's exports and reduce dependency on imports<br>• Wide variety of knowledge lacking in knowing which fertilizer type to use, getting access to seeds, understanding how to store cash crops<br>• Marketing skills<br>• Need access to price information | • There needs to be further dissemination of BTVET<br>• Make VT more affordable and accessible to youth drop outs<br>• There are public VT centers; 4 VT Institutes; 14 VT schools; 16 polytechnic schools; 4 farmer schools and 2 agricultural colleges<br>• Most VT centers focus on traditional courses like carpentry, brickmaking, tailoring, etc…<br>• NAADs works on improved production and aims to supply 1 extension worker per sub-county, however a lack in Government resources prevents this from happening<br>• NAADs trainers may sometimes lack the skills needed in the community | • There is a need for greater marketing of agricultural VT programmes in the country<br>• There is a lack of common standards for certification<br>• There is a limited supply of qualified teachers<br>• Short courses with hands-on training are more useful<br>• NAADs training is done weekly but is not targetted for youth |
| **DISTRICT LEVEL LOCAL GOVERNMENT** | | | | | |
| *Mbale, Bukadea, Soroti, Lira* | • Youth move to cities in search of jobs<br>• Youth seek quick money from jobs, lack patience | • Post harvest handling skills | • | • not many VT centers focus on agricultural training<br>• not many VT ag centers in the districts but there are other training opportunities: Bukedea Variety Training Centers, Community Farmer Field Schools, and community farmers that teach skills<br>• In Bukedea there are no VT centers; in Soroti there is the Amuchosin, Sesere Polytechnic school | • Education must be practical and hands-on<br>• Should add-value<br>• Next steps after graduation are challenging<br>• Some agricultural skills are taught at primary and secondary schools but they are not practical |

| SUB-COUNTY LEVEL LOCAL GOVERNMENT | | | | | |
|---|---|---|---|---|---|
| *Busiu, Kolil, Bukedea Town Council, Kyere, Ogur and Barr sub-counties* | • Youth prefer learning agricultural skills through a structured learning programme, instead of taking one-off trainings offered by extension workers or other NGOs<br>• Youth are interested in skills training and improved knowledge since they are more open to change and willing to take risks in agricultural practices<br>• Youth would be interested if they knew about the VT centers that exist and offer agricultural training. More advertising is needed<br>• Interest is there but there are obstacles youth face: cost, distance, insecurities | • Production skills, processing doesn't make sense since there is lack of funds to invest in processing equipment<br>• Learning more about production of oilseed crops, as well as food security crops, is beneficial since it provides for income<br>• Marketing skills, such as understanding current crop prices, are essential<br>• How to use technology/agro-machinery in production | • No access to inputs (seeds, fertilizer, land)<br>• Farmers are unclear on the best time to harvest oilseed crops<br>• Would be good to include trainings from other small to medium-scale producers<br>• Need to look at other possible oilseed crops instead of sunflower (like soya bean) | • currently most farmers learn from extension workers and NGO trainings<br>• there is also informal training from within communities (learn from neighbouring farmers)<br>• Mukwano facility also provides trainers for those interested in harvesting crops for the company, seeds must be purchased from Mukwano and agreement also made to sell to Mukwano<br>• more females attend the NAADs trainings than males, since men are in search of jobs in the cities | • so much of the sub-county's are involved in agriculture work so VT is the best way to learn since it provides practical skills<br>• Youth require a specialized targetted training programme to meet their specialized needs<br>• Structured training programmes provide youth with tangible incentives<br>• Better to train youth together instead of mixing them with adults in trainings<br>• Agricultural VT should reach youth in isolated rural areas<br>• Training should provide tangible support such as giving seeds or equipment for production<br>• VT program should be designed according to the cultivation period/ should not take farmers away from critical planting and harvesting periods<br>• No need for classrooms if demonstration plots are available |

# Appendix 8 – Survey Results

## General Analysis

### A. Geographic Distribution

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | Total (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| District | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| Mbale | 13 | 26% | 3 | 17% | 10 | 31% | 8 | 31% | 1 | 10% | 7 | 44% | 5 | 21% | 2 | 25% | 3 | 19% |
| Bukedea | 9 | 18% | 4 | 22% | 5 | 16% | 6 | 23% | 3 | 30% | 3 | 19% | 3 | 13% | 1 | 13% | 2 | 13% |
| Soroti | 10 | 20% | 4 | 22% | 6 | 19% | 4 | 15% | 2 | 20% | 2 | 13% | 6 | 25% | 2 | 25% | 4 | 25% |
| Nebbi | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| Kaberamaido | 2 | 4% | 0 | 0% | 2 | 6% | 0 | 0% | 0 | 0% | 0 | 0% | 2 | 8% | 0 | 0% | 2 | 13% |
| Jinja | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| Bushenyi | 1 | 2% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 1 | 13% | 0 | 0% |
| Arua | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| Kitgum | 1 | 2% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 1 | 13% | 0 | 0% |
| Hoima | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| Kayunga | 1 | 2% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 1 | 13% | 0 | 0% |
| Mbarara | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| Lira | 8 | 16% | 4 | 22% | 4 | 13% | 8 | 31% | 4 | 40% | 4 | 25% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

### B.1. Age Distribution

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Age | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| 15 | 2 | 4% | 2 | 11% | 0 | 0% | 2 | 8% | 2 | 20% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| 16 | 1 | 2% | 0 | 0% | 1 | 3% | 1 | 4% | 0 | 0% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |
| 17 | 3 | 6% | 3 | 17% | 0 | 0% | 3 | 12% | 3 | 30% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| 18 | 1 | 2% | 0 | 0% | 1 | 3% | 1 | 4% | 0 | 0% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |
| 19 | 5 | 10% | 2 | 11% | 3 | 9% | 5 | 19% | 2 | 20% | 3 | 19% | 0 | 0% | 0 | 0% | 0 | 0% |
| 20 | 8 | 16% | 2 | 11% | 6 | 19% | 6 | 23% | 0 | 0% | 6 | 38% | 2 | 8% | 2 | 25% | 0 | 0% |
| 21 | 1 | 2% | 0 | 0% | 1 | 3% | 1 | 4% | 0 | 0% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |
| 22 | 7 | 14% | 3 | 17% | 4 | 13% | 0 | 0% | 0 | 0% | 0 | 0% | 7 | 29% | 3 | 38% | 4 | 25% |
| 23 | 4 | 8% | 2 | 11% | 2 | 6% | 0 | 0% | 0 | 0% | 0 | 0% | 4 | 17% | 2 | 25% | 2 | 13% |
| 24 | 7 | 14% | 1 | 6% | 6 | 19% | 2 | 8% | 1 | 10% | 1 | 6% | 5 | 21% | 0 | 0% | 5 | 31% |
| 25 | 4 | 8% | 1 | 6% | 3 | 9% | 1 | 4% | 1 | 10% | 0 | 0% | 3 | 13% | 0 | 0% | 3 | 19% |
| 26 | 4 | 8% | 2 | 11% | 2 | 6% | 2 | 8% | 1 | 10% | 1 | 6% | 2 | 8% | 1 | 13% | 1 | 6% |
| 27 | 2 | 4% | 0 | 0% | 2 | 6% | 1 | 4% | 0 | 0% | 1 | 6% | 1 | 4% | 0 | 0% | 1 | 6% |
| 28 | 1 | 2% | 0 | 0% | 1 | 3% | 1 | 4% | 0 | 0% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

### B.2. Age (Descriptive Stats)

| | Total (n=50) | | | Youth Dropouts (n=26) | | | VT Students (n=24) | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Female | Male | Total | Female | Male | Total | Female | Male |
| Mean | 21.8 | 20.7 | 22.5 | 21.1 | 19.4 | 21.1 | 23.3 | 22.3 | 23.9 |
| Median | 22.0 | 21.0 | 22.5 | 20.0 | 18.0 | 20.0 | 23.0 | 22.0 | 24.0 |
| Std. Dev. | 3.3 | 3.5 | 2.9 | 3.4 | 4.1 | 3.4 | 1.8 | 1.9 | 1.5 |
| Max | 28 | 26 | 28 | 28 | 26 | 28 | 27 | 26 | 27 |
| Min | 15 | 15 | 16 | 16 | 15 | 16 | 20 | 20 | 22 |

### C.Current Occupation Distribution

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Occupation | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| student | 22 | 44% | 7 | 39% | 15 | 47% | 0 | 0% | 0 | 0% | 0 | 0% | 22 | 92% | 7 | 88% | 15 | 94% |
| self-employed | 2 | 4% | 2 | 11% | 0 | 0% | 2 | 8% | 2 | 20% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| farmer | 11 | 22% | 4 | 22% | 7 | 22% | 9 | 35% | 3 | 30% | 6 | 38% | 2 | 8% | 1 | 13% | 1 | 6% |
| tailor | 1 | 2% | 0 | 0% | 1 | 3% | 1 | 4% | 0 | 0% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |
| at home | 7 | 14% | 4 | 22% | 3 | 9% | 7 | 27% | 4 | 40% | 3 | 19% | 0 | 0% | 0 | 0% | 0 | 0% |
| Blank | 7 | 14% | 1 | 6% | 6 | 19% | 7 | 27% | 1 | 10% | 6 | 38% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

### D.Currently enrolled in school?

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Yes/No | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| Yes | 24 | 48% | 8 | 44% | 16 | 50% | 0 | 0% | 0 | 0% | 0 | 0% | 24 | 100% | 8 | 100% | 16 | 100% |
| No | 26 | 52% | 10 | 56% | 16 | 50% | 26 | 100% | 10 | 100% | 16 | 100% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

### *E.1. Last Year of School*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male |
| Grade | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | |
| P1 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | |
| P2 | 1 | 2% | 0 | 0% | 1 | 3% | 1 | 4% | 0 | 0% | 1 | 6% | 0 | 0% | 0 | 0% | |
| P3 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | |
| P4 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | |
| P5 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | |
| P6 | 1 | 2% | 0 | 0% | 1 | 3% | 1 | 4% | 0 | 0% | 1 | 6% | 0 | 0% | 0 | 0% | |
| P7 | 13 | 26% | 6 | 33% | 7 | 22% | 13 | 50% | 6 | 60% | 7 | 44% | 0 | 0% | 0 | 0% | |
| S1 | 2 | 4% | 2 | 11% | 0 | 0% | 2 | 8% | 2 | 20% | 0 | 0% | 0 | 0% | 0 | 0% | |
| S2 | 3 | 6% | 0 | 0% | 3 | 9% | 3 | 12% | 0 | 0% | 3 | 19% | 0 | 0% | 0 | 0% | |
| S3 | 1 | 2% | 0 | 0% | 1 | 3% | 1 | 4% | 0 | 0% | 1 | 6% | 0 | 0% | 0 | 0% | |
| S4 | 4 | 8% | 2 | 11% | 2 | 6% | 4 | 15% | 2 | 20% | 2 | 13% | 0 | 0% | 0 | 0% | |
| S5 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | |
| S6 | 1 | 2% | 0 | 0% | 1 | 3% | 1 | 4% | 0 | 0% | 1 | 6% | 0 | 0% | 0 | 0% | |
| Currently in school | 24 | 48% | 8 | 44% | 16 | 50% | 0 | 0% | 0 | 0% | 0 | 0% | 24 | 100% | 8 | 100% | |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | |

### *E.2. Reason for stopping at P7*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Reason | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| cost | 6 | 67% | 3 | 75% | 3 | 60% | 6 | 67% | 3 | 75% | 3 | 60% | NA | | NA | | NA | |
| distance | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| quality of school | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| life event | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| work at home | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| difficulty of the course | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| employment found | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| look for work | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| lost parental support | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| lack of motivation | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| orphan | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| insecurity | 2 | 22% | 1 | 25% | 1 | 20% | 2 | 22% | 1 | 25% | 1 | 20% | NA | | NA | | NA | |
| parents passed away | 1 | 11% | 0 | 0% | 1 | 20% | 1 | 11% | 0 | 0% | 1 | 20% | NA | | NA | | NA | |
| **Total** | **9** | **100%** | **4** | **100%** | **5** | **100%** | **9** | **100%** | **4** | **100%** | **5** | **100%** | **0** | | **0** | | **0** | |

### *E.3. Age at drop-out*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Age | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| 6 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| 7 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| 8 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| 9 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| 10 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| 11 | 2 | 9% | 0 | 0% | 2 | 14% | 2 | 9% | 0 | 0% | 2 | 14% | NA | | NA | | NA | |
| 12 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| 13 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| 14 | 2 | 9% | 2 | 22% | 0 | 0% | 2 | 9% | 2 | 22% | 0 | 0% | NA | | NA | | NA | |
| 15 | 3 | 13% | 2 | 22% | 1 | 7% | 3 | 13% | 2 | 22% | 1 | 7% | NA | | NA | | NA | |
| 16 | 4 | 17% | 0 | 0% | 4 | 29% | 4 | 17% | 0 | 0% | 4 | 29% | NA | | NA | | NA | |
| 17 | 4 | 17% | 2 | 22% | 2 | 14% | 4 | 17% | 2 | 22% | 2 | 14% | NA | | NA | | NA | |
| 18 | 3 | 13% | 2 | 22% | 1 | 7% | 3 | 13% | 2 | 22% | 1 | 7% | NA | | NA | | NA | |
| 19 | 3 | 13% | 1 | 11% | 2 | 14% | 3 | 13% | 1 | 11% | 2 | 14% | NA | | NA | | NA | |
| 20 | 2 | 9% | 0 | 0% | 2 | 14% | 2 | 9% | 0 | 0% | 2 | 14% | NA | | NA | | NA | |
| 21 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| **Total** | **23** | **100%** | **9** | **100%** | **14** | **100%** | **23** | **100%** | **9** | **100%** | **14** | **100%** | **0** | | **0** | | **0** | |

### *E.4. Age at drop-out (Descriptive Stats)*

| | Total (n=50) | | | Youth Dropouts (n=26) | | | VT Students (n=24) | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Female | Male | Total | Female | Male | Total | Female | Male |
| Mean | 16.9 | 16.3 | 17.2 | 17.2 | 16.3 | 17.2 | NA | NA | NA |
| Median | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | NA | NA | NA |
| Standard Deviation | 2.8 | 1.9 | 3.2 | 3.2 | 1.9 | 3.2 | NA | NA | NA |
| Max | 22 | 19 | 22 | 22 | 19 | 22 | NA | NA | NA |
| Min | 11 | 14 | 11 | 11 | 14 | 11 | NA | NA | NA |

### *F.Reasons for not going to school*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Reason | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| cost | 25 | 64% | 9 | 69% | 16 | 62% | 25 | 64% | 9 | 69% | 16 | 62% | NA | | NA | | NA | |
| distance | 4 | 10% | 2 | 15% | 2 | 8% | 4 | 10% | 2 | 15% | 2 | 8% | NA | | NA | | NA | |
| quality of school | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| life event | 3 | 8% | 0 | 0% | 3 | 12% | 3 | 8% | 0 | 0% | 3 | 12% | NA | | NA | | NA | |
| work at home | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| difficulty of the course | 1 | 3% | 0 | 0% | 1 | 4% | 1 | 3% | 0 | 0% | 1 | 4% | NA | | NA | | NA | |
| employment found | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| look for work | 1 | 3% | 0 | 0% | 1 | 4% | 1 | 3% | 0 | 0% | 1 | 4% | NA | | NA | | NA | |
| lost parental support | 1 | 3% | 0 | 0% | 1 | 4% | 1 | 3% | 0 | 0% | 1 | 4% | NA | | NA | | NA | |
| lack of motivation | 1 | 3% | 0 | 0% | 1 | 4% | 1 | 3% | 0 | 0% | 1 | 4% | NA | | NA | | NA | |
| orphan | 1 | 3% | 1 | 8% | 0 | 0% | 1 | 3% | 1 | 8% | 0 | 0% | NA | | NA | | NA | |
| insecurity | 2 | 5% | 1 | 8% | 1 | 4% | 2 | 5% | 1 | 8% | 1 | 4% | NA | | NA | | NA | |
| parents passed away | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | NA | | NA | | NA | |
| **Total** | **39** | **100%** | **13** | **100%** | **26** | **100%** | **39** | **100%** | **13** | **100%** | **26** | **100%** | **0** | | **0** | | **0** | |

### *G.Attended VT course?*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Yes/No | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| Yes | 10 | 20% | 4 | 22% | 6 | 19% | 1 | 4% | 1 | 10% | 0 | 0% | 9 | 38% | 3 | 38% | 6 | 38% |
| No | 36 | 72% | 13 | 72% | 23 | 72% | 24 | 92% | 8 | 80% | 16 | 100% | 12 | 50% | 5 | 63% | 7 | 44% |
| Blank | 4 | 8% | 1 | 6% | 3 | 9% | 1 | 4% | 1 | 10% | 0 | 0% | 3 | 13% | 0 | 0% | 3 | 19% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

## *Analysis on perception towards Vocational Training*

### *A.1. Considered VT?*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Yes/No | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| Yes | 7 | 14% | 2 | 11% | 5 | 16% | 4 | 15% | 2 | 20% | 2 | 13% | 3 | 13% | 0 | 0% | 3 | 19% |
| No | 6 | 12% | 3 | 17% | 3 | 9% | 6 | 23% | 3 | 30% | 3 | 19% | 0 | 0% | 0 | 0% | 0 | 0% |
| n/a | 6 | 12% | 2 | 11% | 4 | 13% | 0 | 0% | 0 | 0% | 0 | 0% | 6 | 25% | 2 | 25% | 4 | 25% |
| Blank | 31 | 62% | 11 | 61% | 20 | 63% | 16 | 62% | 5 | 50% | 11 | 69% | 15 | 63% | 6 | 75% | 9 | 56% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

### *A.2. Why Attractive? (multiple answers: % = as percentage of the sample)*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Reasons | # Yes | % | # Yes | % | # Yes | % | # Yes | % | # Yes | % | # Yes | % | # Yes | % | # Yes | % | # Yes | % |
| practical skills | 14 | 28% | 4 | 22% | 10 | 31% | 6 | 23% | 1 | 10% | 5 | 31% | 8 | 33% | 3 | 38% | 5 | 31% |
| increased income | 10 | 20% | 5 | 28% | 5 | 16% | 6 | 23% | 3 | 30% | 3 | 19% | 4 | 17% | 2 | 25% | 2 | 13% |
| better job opportunities | 6 | 12% | 2 | 11% | 4 | 13% | 4 | 15% | 0 | 0% | 4 | 25% | 2 | 8% | 2 | 25% | 0 | 0% |
| cheaper | 1 | 2% | 1 | 6% | 0 | 0% | 1 | 4% | 1 | 10% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Total** | **31** | | **12** | | **19** | | **17** | | **5** | | **12** | | **14** | | **7** | | **7** | |

### *A.3. Why Not Attractive?(multiple answers: % = as percentage of the sample)*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Reasons | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| cost | 3 | 6% | 1 | 6% | 2 | 6% | 3 | 12% | 1 | 10% | 2 | 13% | 0 | 0% | 0 | 0% | 0 | 0% |
| time | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| distance | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| no help finding job | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| have other work at home | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| never thought of it as an option | 1 | 2% | 1 | 6% | 0 | 0% | 1 | 4% | 1 | 10% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| wanted to go to secondary school | 3 | 6% | 1 | 6% | 2 | 6% | 3 | 12% | 1 | 10% | 2 | 13% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Total** | **7** | | **3** | | **4** | | **7** | | **3** | | **4** | | **0** | | **0** | | **0** | |

### *B. Perception of VT in Villages*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Attitude | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| positive | 37 | 74% | 14 | 78% | 23 | 72% | 22 | 85% | 8 | 80% | 14 | 88% | 15 | 63% | 6 | 75% | 9 | 56% |
| negative | 6 | 12% | 0 | 0% | 6 | 19% | 1 | 4% | 0 | 0% | 1 | 6% | 5 | 21% | 0 | 0% | 5 | 31% |
| neither positive or negative | 1 | 2% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 1 | 13% | 0 | 0% |
| I don't know | 2 | 4% | 1 | 6% | 1 | 3% | 2 | 8% | 1 | 10% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |
| people don't know | 2 | 4% | 1 | 6% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 2 | 8% | 1 | 13% | 1 | 6% |
| Blank | 2 | 4% | 1 | 6% | 1 | 3% | 1 | 4% | 1 | 10% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

### *C. Ranking Educational Options*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Option | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| agricultural training | 23 | 46% | 7 | 39% | 16 | 50% | 9 | 35% | 3 | 30% | 6 | 38% | 14 | 58% | 4 | 50% | 10 | 63% |
| vocational training | 13 | 26% | 6 | 33% | 7 | 22% | 11 | 42% | 4 | 40% | 7 | 44% | 2 | 8% | 2 | 25% | 0 | 0% |
| secondary school | 13 | 26% | 5 | 28% | 8 | 25% | 6 | 23% | 3 | 30% | 3 | 19% | 7 | 29% | 2 | 25% | 5 | 31% |
| none of the above | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| all of the above | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Blank | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

### *D. How long to closest VT?*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Minutes | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| 15 min or less | 5 | 10% | 3 | 17% | 2 | 6% | 1 | 4% | 1 | 10% | 0 | 0% | 4 | 17% | 2 | 25% | 2 | 13% |
| 15 to30 mn | 4 | 8% | 2 | 11% | 2 | 6% | 2 | 8% | 1 | 10% | 1 | 6% | 2 | 8% | 1 | 13% | 1 | 6% |
| 30 to 45mn | 6 | 12% | 2 | 11% | 4 | 13% | 2 | 8% | 1 | 10% | 1 | 6% | 4 | 17% | 1 | 13% | 3 | 19% |
| 45mn to 1hr | 2 | 4% | 1 | 6% | 1 | 3% | 2 | 8% | 1 | 10% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |
| more than 1 hr | 15 | 30% | 4 | 22% | 11 | 34% | 6 | 23% | 1 | 10% | 5 | 31% | 9 | 38% | 3 | 38% | 6 | 38% |
| none exisits | 14 | 28% | 6 | 33% | 8 | 25% | 13 | 50% | 5 | 50% | 8 | 50% | 1 | 4% | 1 | 13% | 0 | 0% |
| don't know | 3 | 6% | 0 | 0% | 3 | 9% | 0 | 0% | 0 | 0% | 0 | 0% | 3 | 13% | 0 | 0% | 3 | 19% |
| Blank | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

## *Analysis on perception towards Agriculture*

### *A. What do youth do? (multiple answers: % = as percentage of the sample)*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Occupation | # Yes | % | # Yes | % | # Yes | % | # Yes | % | # Yes | % | # Yes | % | # Yes | % | # Yes | % | # Yes | % |
| street vendor | 1 | 2% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 1 | 13% | 0 | 0% |
| bike taxi driver | 12 | 24% | 5 | 28% | 7 | 22% | 8 | 31% | 4 | 40% | 4 | 25% | 4 | 17% | 1 | 13% | 3 | 19% |
| farmer | 23 | 46% | 9 | 50% | 14 | 44% | 11 | 42% | 4 | 40% | 7 | 44% | 12 | 50% | 5 | 63% | 7 | 44% |
| teacher | 5 | 10% | 2 | 11% | 3 | 9% | 3 | 12% | 0 | 0% | 3 | 19% | 2 | 8% | 2 | 25% | 0 | 0% |
| government employee | 3 | 6% | 2 | 11% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 3 | 13% | 2 | 25% | 1 | 6% |
| extension worker | 2 | 4% | 2 | 11% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 2 | 8% | 2 | 25% | 0 | 0% |
| doctor | 1 | 2% | 1 | 6% | 0 | 0% | 1 | 4% | 1 | 10% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| nurse | 2 | 4% | 2 | 11% | 0 | 0% | 2 | 8% | 2 | 20% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| lawyer | 1 | 2% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 1 | 13% | 0 | 0% |
| ag | 7 | 14% | 3 | 17% | 4 | 13% | 4 | 15% | 2 | 20% | 2 | 13% | 3 | 13% | 1 | 13% | 2 | 13% |
| brick making | 2 | 4% | 1 | 6% | 1 | 3% | 2 | 8% | 1 | 10% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |
| at home | 2 | 4% | 1 | 6% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 2 | 8% | 1 | 13% | 1 | 6% |
| no opportunities | 5 | 10% | 2 | 11% | 3 | 9% | 4 | 15% | 2 | 20% | 2 | 13% | 1 | 4% | 0 | 0% | 1 | 6% |
| **Total** | **66** | | **32** | | **34** | | **35** | | **16** | | **19** | | **31** | | **16** | | **15** | |

### *B. Any Ag work?*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Yes/No | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| Yes | 41 | 82% | 15 | 83% | 26 | 81% | 22 | 85% | 7 | 70% | 15 | 94% | 19 | 79% | 8 | 100% | 11 | 69% |
| No | 6 | 12% | 3 | 17% | 3 | 9% | 4 | 15% | 3 | 30% | 1 | 6% | 2 | 8% | 0 | 0% | 2 | 13% |
| Blank | 3 | 6% | 0 | 0% | 3 | 9% | 0 | 0% | 0 | 0% | 0 | 0% | 3 | 13% | 0 | 0% | 3 | 19% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

### *C. Which Ag sector do you work in? (multiple answers: % = as percentage of the sample)*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Job | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| seed multiplication | 14 | 28% | 4 | 22% | 10 | 31% | 5 | 19% | 1 | 10% | 4 | 25% | 9 | 38% | 3 | 38% | 6 | 38% |
| production | 25 | 50% | 10 | 56% | 15 | 47% | 16 | 62% | 5 | 50% | 11 | 69% | 9 | 38% | 5 | 63% | 4 | 25% |
| processing | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| post-harvest handling | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| marketing | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| business skills | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| agro-machinery | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| N/A | 3 | 6% | 2 | 11% | 1 | 3% | 3 | 12% | 2 | 20% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Total** | **43** | | **16** | | **27** | | **24** | | **8** | | **16** | | **19** | | **8** | | **11** | |

### *D. Who owns the land?*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Owner | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| family owned land | 39 | 78% | 13 | 72% | 26 | 81% | 21 | 81% | 8 | 80% | 13 | 81% | 18 | 75% | 5 | 63% | 13 | 81% |
| self owned | 2 | 4% | 0 | 0% | 2 | 6% | 1 | 4% | 0 | 0% | 1 | 6% | 1 | 4% | 0 | 0% | 1 | 6% |
| rented land | 4 | 8% | 3 | 17% | 1 | 3% | 2 | 8% | 1 | 10% | 1 | 6% | 2 | 8% | 2 | 25% | 0 | 0% |
| cooperative owned land | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| other1 | 1 | 2% | 0 | 0% | 1 | 3% | 1 | 4% | 0 | 0% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |
| family & rent | 1 | 2% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 1 | 13% | 0 | 0% |
| Blank | 3 | 6% | 1 | 6% | 2 | 6% | 1 | 4% | 1 | 10% | 0 | 0% | 2 | 8% | 0 | 0% | 2 | 13% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

### *E. Who did you learn Ag from?*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Learned from | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| family | 24 | 48% | 14 | 78% | 10 | 31% | 12 | 46% | 7 | 70% | 5 | 31% | 12 | 50% | 7 | 88% | 5 | 31% |
| friends | 3 | 6% | 0 | 0% | 3 | 9% | 3 | 12% | 0 | 0% | 3 | 19% | 0 | 0% | 0 | 0% | 0 | 0% |
| training | 3 | 6% | 1 | 6% | 2 | 6% | 0 | 0% | 0 | 0% | 0 | 0% | 3 | 13% | 1 | 13% | 2 | 13% |
| self-taught | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| school | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| parents | 6 | 12% | 1 | 6% | 5 | 16% | 5 | 19% | 1 | 10% | 4 | 25% | 1 | 4% | 0 | 0% | 1 | 6% |
| never learned | 2 | 4% | 1 | 6% | 1 | 3% | 1 | 4% | 1 | 10% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| other1 | 2 | 4% | 0 | 0% | 2 | 6% | 2 | 8% | 0 | 0% | 2 | 13% | 0 | 0% | 0 | 0% | 0 | 0% |
| family & training | 2 | 4% | 0 | 0% | 2 | 6% | 1 | 4% | 0 | 0% | 1 | 6% | 1 | 4% | 0 | 0% | 1 | 6% |
| training & school | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| friends & training | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| Blank | 4 | 8% | 1 | 6% | 3 | 9% | 2 | 8% | 1 | 10% | 1 | 6% | 2 | 8% | 0 | 0% | 2 | 13% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

### *G. List of Ag Training Received ? (multiple answers: % = as percentage of the sample)*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Training | # of Yes | % | # of Yes | % | # of Yes | % | # of Yes | % | # of Yes | % | # of Yes | % | # of Yes | % | # of Yes | % | # of Yes | % |
| Demnstration farm | 11 | 22% | 5 | 28% | 6 | 19% | 3 | 12% | 1 | 10% | 2 | 13% | 8 | 33% | 4 | 50% | 4 | 25% |
| Extension worker | 13 | 26% | 6 | 33% | 7 | 22% | 5 | 19% | 2 | 20% | 3 | 19% | 8 | 33% | 4 | 50% | 4 | 25% |
| NGO sponsored | 6 | 12% | 2 | 11% | 4 | 13% | 1 | 4% | 0 | 0% | 1 | 6% | 5 | 21% | 2 | 25% | 3 | 19% |
| Farmers association | 7 | 14% | 2 | 11% | 5 | 16% | 1 | 4% | 0 | 0% | 1 | 6% | 6 | 25% | 2 | 25% | 4 | 25% |
| Trained farmer | 9 | 18% | 6 | 33% | 3 | 9% | 3 | 12% | 2 | 20% | 1 | 6% | 6 | 25% | 4 | 50% | 2 | 13% |
| Ag School | 9 | 18% | 2 | 11% | 7 | 22% | 3 | 12% | 0 | 0% | 3 | 19% | 6 | 25% | 2 | 25% | 4 | 25% |
| others2 | 2 | 4% | 1 | 6% | 1 | 3% | 1 | 4% | 1 | 10% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |

### *H. Need for Ag training?*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Yes/No | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| Yes | 37 | 74% | 15 | 83% | 22 | 69% | 24 | 92% | 9 | 90% | 15 | 94% | 13 | 54% | 6 | 75% | 7 | 44% |
| No | 6 | 12% | 2 | 11% | 4 | 13% | 0 | 0% | 0 | 0% | 0 | 0% | 6 | 25% | 2 | 25% | 4 | 25% |
| n/a | 3 | 6% | 0 | 0% | 3 | 9% | 0 | 0% | 0 | 0% | 0 | 0% | 3 | 13% | 0 | 0% | 3 | 19% |
| Blank | 4 | 8% | 1 | 6% | 3 | 9% | 2 | 8% | 1 | 10% | 1 | 6% | 2 | 8% | 0 | 0% | 2 | 13% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

### *I. Satisfied with income?*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Yes/No | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| Yes | 1 | 2% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 1 | 13% | 0 | 0% |
| No | 37 | 74% | 14 | 78% | 23 | 72% | 23 | 88% | 9 | 90% | 14 | 88% | 14 | 58% | 5 | 63% | 9 | 56% |
| n/a | 6 | 12% | 2 | 11% | 4 | 13% | 0 | 0% | 0 | 0% | 0 | 0% | 6 | 25% | 2 | 25% | 4 | 25% |
| Blank | 6 | 12% | 1 | 6% | 5 | 16% | 3 | 12% | 1 | 10% | 2 | 13% | 3 | 13% | 0 | 0% | 3 | 19% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

## *Analysis on need for Agricultural Vocational Training*

### *A. Need for separate Ag. course?*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Yes/No | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| Yes | 44 | 88% | 17 | 94% | 27 | 84% | 25 | 96% | 9 | 90% | 16 | 100% | 19 | 79% | 8 | 100% | 11 | 69% |
| No | 2 | 4% | 1 | 6% | 1 | 3% | 1 | 4% | 1 | 10% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| n/a | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Blank | 4 | 8% | 0 | 0% | 4 | 13% | 0 | 0% | 0 | 0% | 0 | 0% | 4 | 17% | 0 | 0% | 4 | 25% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

### *B. Which training is most interesting? (multiple answers: % = as percentage of the sample)*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Training | # of Yes | % | # of Yes | % | # of Yes | % | # of Yes | % | # of Yes | % | # of Yes | % | # of Yes | % | # of Yes | % | # of Yes | % |
| Improved Production | 29 | 58% | 10 | 56% | 19 | 59% | 14 | 54% | 6 | 60% | 8 | 50% | 15 | 63% | 4 | 50% | 11 | 69% |
| Seed multiplication | 10 | 20% | 2 | 11% | 8 | 25% | 4 | 15% | 1 | 10% | 3 | 19% | 6 | 25% | 1 | 13% | 5 | 31% |
| Processing | 15 | 30% | 5 | 28% | 10 | 31% | 9 | 35% | 3 | 30% | 6 | 38% | 6 | 25% | 2 | 25% | 4 | 25% |
| Post-harvest handling | 6 | 12% | 0 | 0% | 6 | 19% | 0 | 0% | 0 | 0% | 0 | 0% | 6 | 25% | 0 | 0% | 6 | 38% |
| Marketing | 11 | 22% | 3 | 17% | 8 | 25% | 4 | 15% | 1 | 10% | 3 | 19% | 7 | 29% | 2 | 25% | 5 | 31% |
| Business skills | 8 | 16% | 3 | 17% | 5 | 16% | 5 | 19% | 1 | 10% | 4 | 25% | 3 | 13% | 2 | 25% | 1 | 6% |
| Agro-Machinery | 8 | 16% | 2 | 11% | 6 | 19% | 3 | 12% | 0 | 0% | 3 | 19% | 5 | 21% | 2 | 25% | 3 | 19% |
| none of the above | 2 | 4% | 1 | 6% | 1 | 3% | 1 | 4% | 1 | 10% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| all of the above | 1 | 2% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 1 | 13% | 0 | 0% |
| no opinion | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |

### *C. Is Oilseed Profitable?*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Yes/No | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| Yes | 46 | 92% | 16 | 89% | 30 | 94% | 22 | 85% | 8 | 80% | 14 | 88% | 24 | 100% | 8 | 100% | 16 | 100% |
| No | 3 | 6% | 2 | 11% | 1 | 3% | 3 | 12% | 2 | 20% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |
| Blank | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

### *D. Which is the most profitable? (multiple answers: % = as percentage of the sample)*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Product | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| sunflower oil | 31 | 62% | 13 | 72% | 18 | 56% | 13 | 50% | 6 | 60% | 7 | 44% | 18 | 75% | 7 | 88% | 11 | 69% |
| groundnut paste | 17 | 34% | 5 | 28% | 12 | 38% | 7 | 27% | 2 | 20% | 5 | 31% | 10 | 42% | 3 | 38% | 7 | 44% |
| peanut paste | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| soap/detergent | 6 | 12% | 2 | 11% | 4 | 13% | 0 | 0% | 0 | 0% | 0 | 0% | 6 | 25% | 2 | 25% | 4 | 25% |
| roasted nuts | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| seedcake | 4 | 8% | 1 | 6% | 3 | 9% | 0 | 0% | 0 | 0% | 0 | 0% | 4 | 17% | 1 | 13% | 3 | 19% |
| soy products | 3 | 6% | 1 | 6% | 2 | 6% | 0 | 0% | 0 | 0% | 0 | 0% | 3 | 13% | 1 | 13% | 2 | 13% |
| ground nut | 7 | 14% | 3 | 17% | 4 | 13% | 7 | 27% | 3 | 30% | 4 | 25% | 0 | 0% | 0 | 0% | 0 | 0% |
| sun flower | 2 | 4% | 0 | 0% | 2 | 6% | 2 | 8% | 0 | 0% | 2 | 13% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Total** | **71** | | **25** | | **46** | | **29** | | **11** | | **18** | | **42** | | **14** | | **28** | |

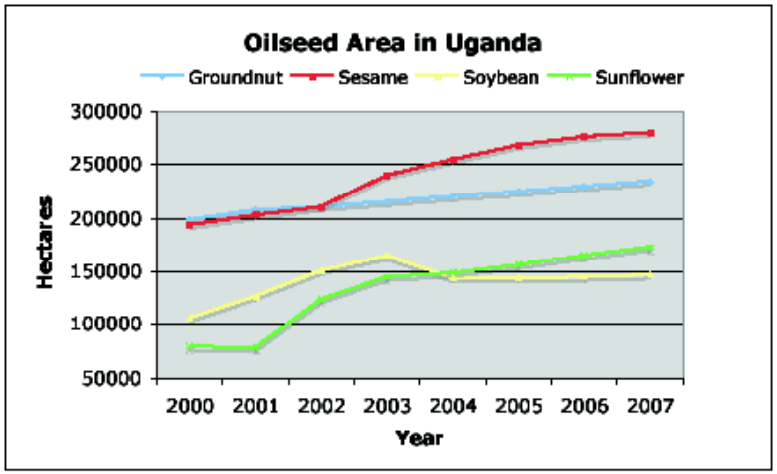
### *E. Next step after training?*

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Next step | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| Look for a job | 19 | 38% | 4 | 22% | 15 | 47% | 7 | 27% | 1 | 10% | 6 | 38% | 12 | 50% | 3 | 38% | 9 | 56% |
| start your own business | 29 | 58% | 13 | 72% | 16 | 50% | 17 | 65% | 8 | 80% | 9 | 56% | 12 | 50% | 5 | 63% | 7 | 44% |
| secondary school | 2 | 4% | 1 | 6% | 1 | 3% | 2 | 8% | 1 | 10% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |
| Blank | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Total** | **50** | **100%** | **18** | **100%** | **32** | **100%** | **26** | **100%** | **10** | **100%** | **16** | **100%** | **24** | **100%** | **8** | **100%** | **16** | **100%** |

***F. Biggest challenge after VT? (multiple answers: % = as percentage of the sample)***

| | Total (n=50) | | | | | | Youth Dropouts (n=26) | | | | | | VT Students (n=24) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Female | | Male | | Total | | Female | | Male | | Total | | Female | | Male | |
| Next step | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| capital for inputs | 25 | 50% | 11 | 61% | 14 | 44% | 16 | 62% | 6 | 60% | 10 | 63% | 9 | 38% | 5 | 63% | 4 | 25% |
| land | 15 | 30% | 6 | 33% | 9 | 28% | 9 | 35% | 3 | 30% | 6 | 38% | 6 | 25% | 3 | 38% | 3 | 19% |
| loan collateral | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| access to credit | 5 | 10% | 2 | 11% | 3 | 9% | 1 | 4% | 1 | 10% | 0 | 0% | 4 | 17% | 1 | 13% | 3 | 19% |
| supply | 4 | 8% | 3 | 17% | 1 | 3% | 2 | 8% | 2 | 20% | 0 | 0% | 2 | 8% | 1 | 13% | 1 | 6% |
| business skills | 5 | 10% | 2 | 11% | 3 | 9% | 2 | 8% | 1 | 10% | 1 | 6% | 3 | 13% | 1 | 13% | 2 | 13% |
| market access | 3 | 6% | 1 | 6% | 2 | 6% | 1 | 4% | 0 | 0% | 1 | 6% | 2 | 8% | 1 | 13% | 1 | 6% |
| natural resources | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| none of the above | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| all of the above | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| no opinion | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| access to seeds | 4 | 8% | 1 | 6% | 3 | 9% | 3 | 12% | 1 | 10% | 2 | 13% | 1 | 4% | 0 | 0% | 1 | 6% |
| seeds quality | 1 | 2% | 0 | 0% | 1 | 3% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 4% | 0 | 0% | 1 | 6% |
| machinery for processing | 1 | 2% | 0 | 0% | 1 | 3% | 1 | 4% | 0 | 0% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |
| other4 | 2 | 4% | 1 | 6% | 1 | 3% | 2 | 8% | 1 | 10% | 1 | 6% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Total** | **67** | | **27** | | **40** | | **37** | | **15** | | **22** | | **30** | | **12** | | **18** | |

# Appendix 9 – Oilseed Charts

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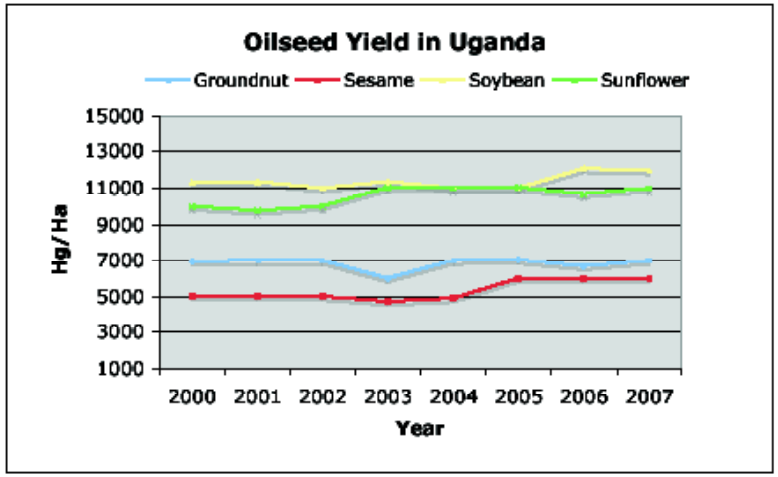
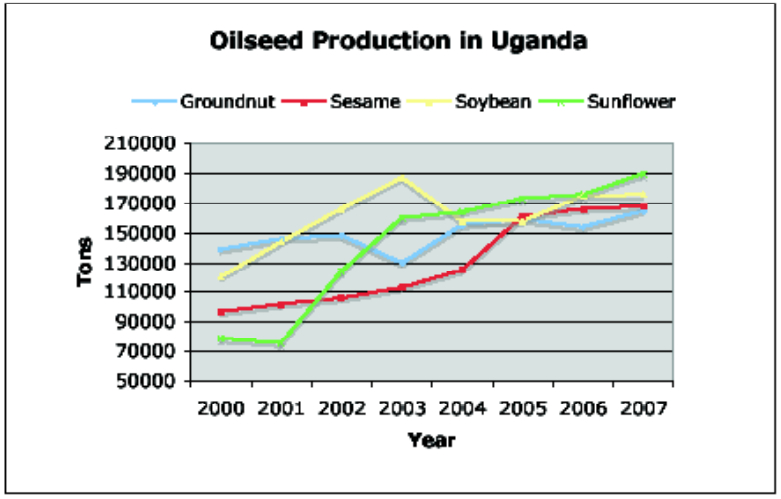
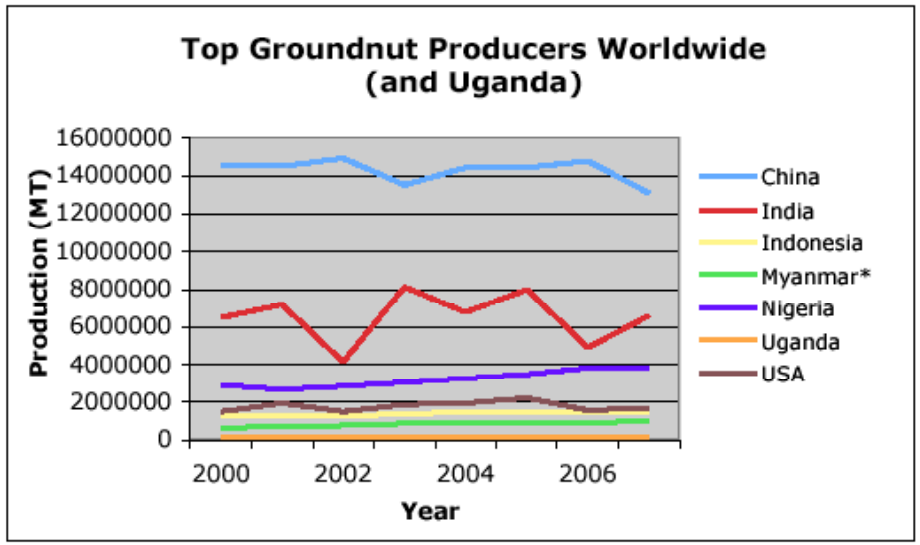



FAOSTAT | © FAO Statistics Division 2009 | 28 March 2009




FAOSTAT | © FAO Statistics Division 2009 | 28 March 2009

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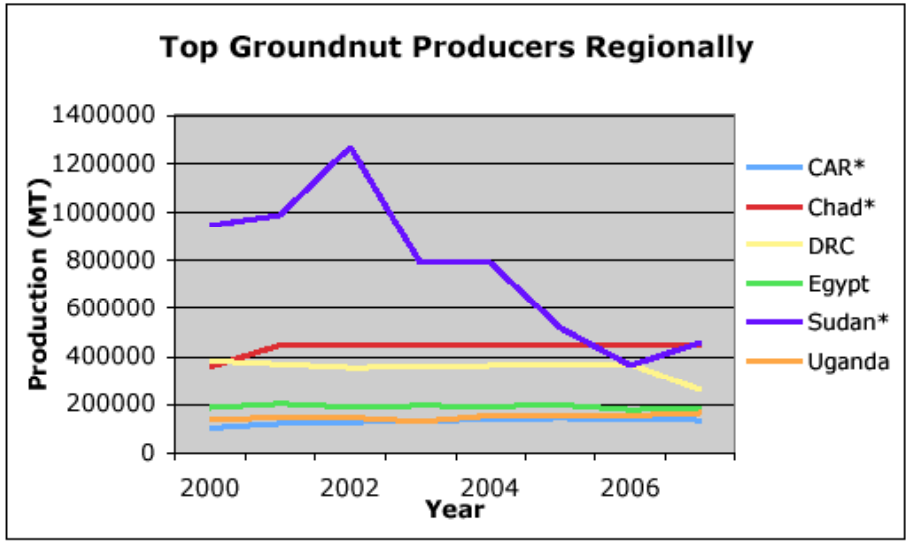


*Unofficial Figure

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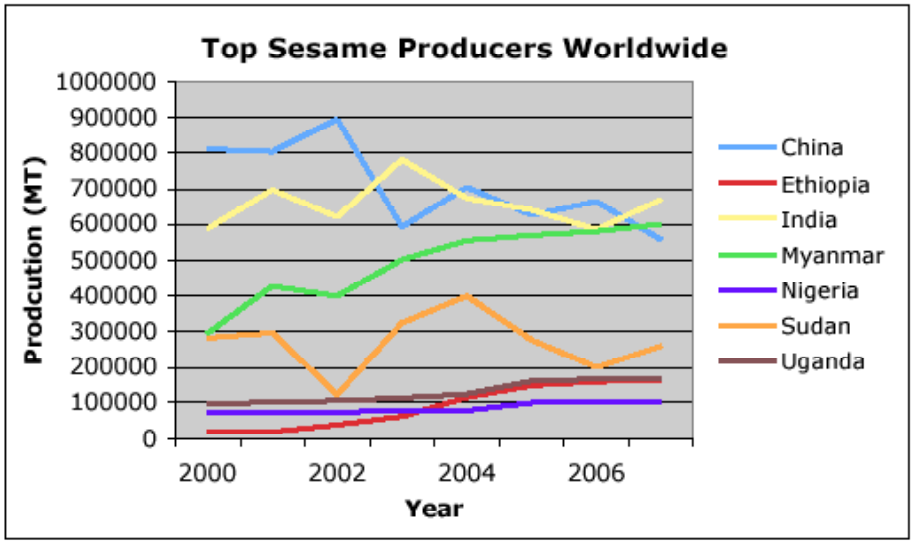


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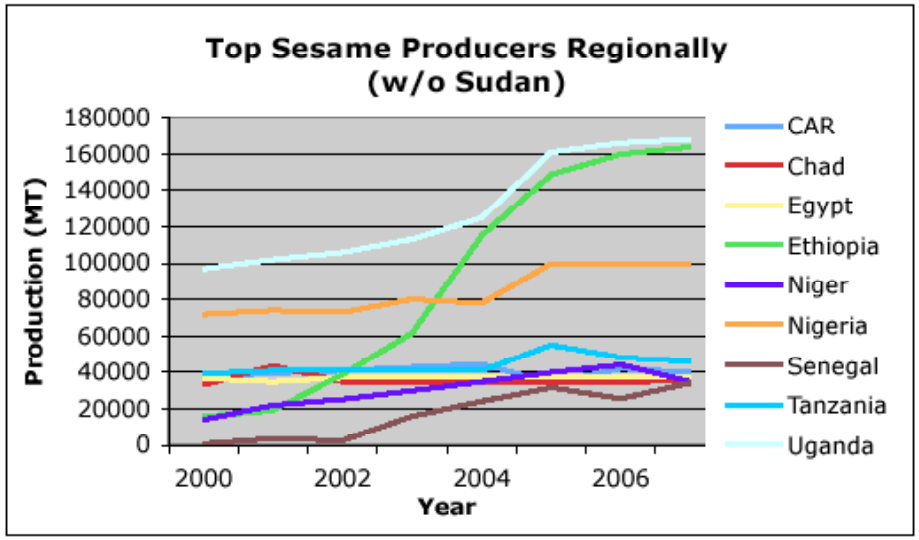


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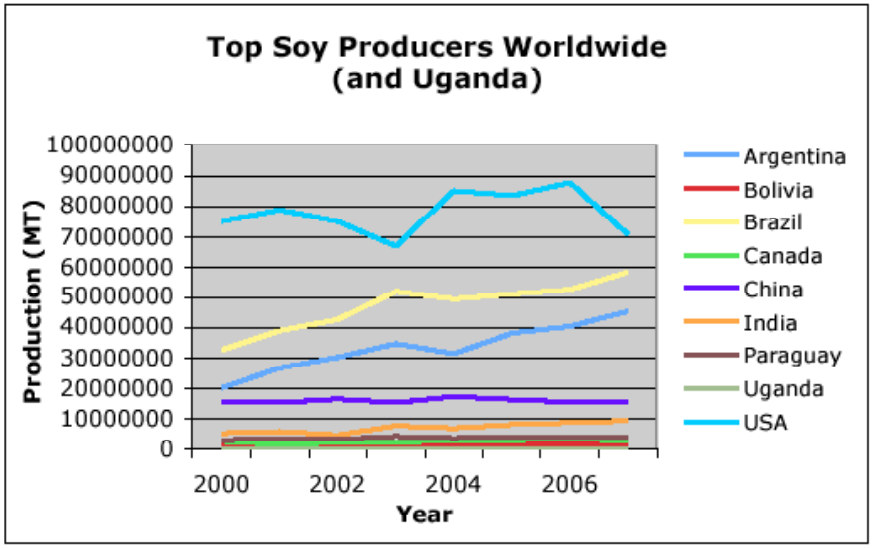


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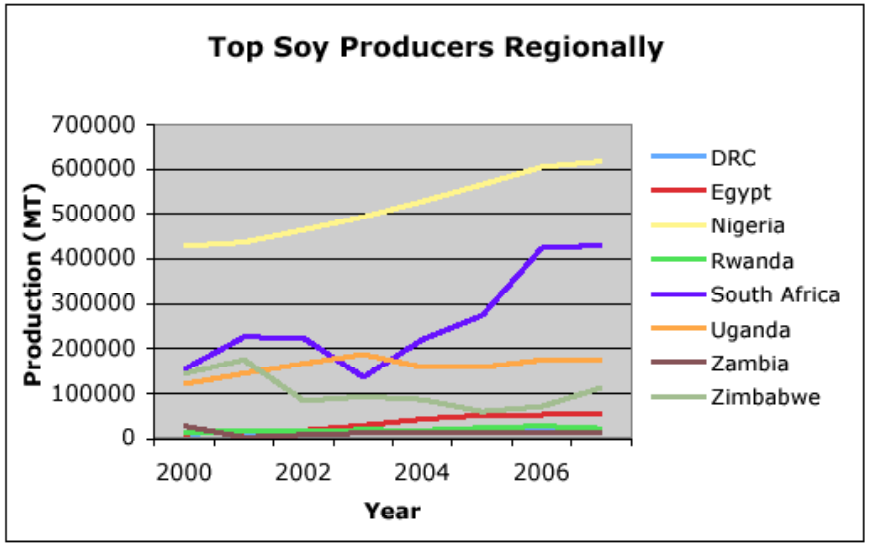


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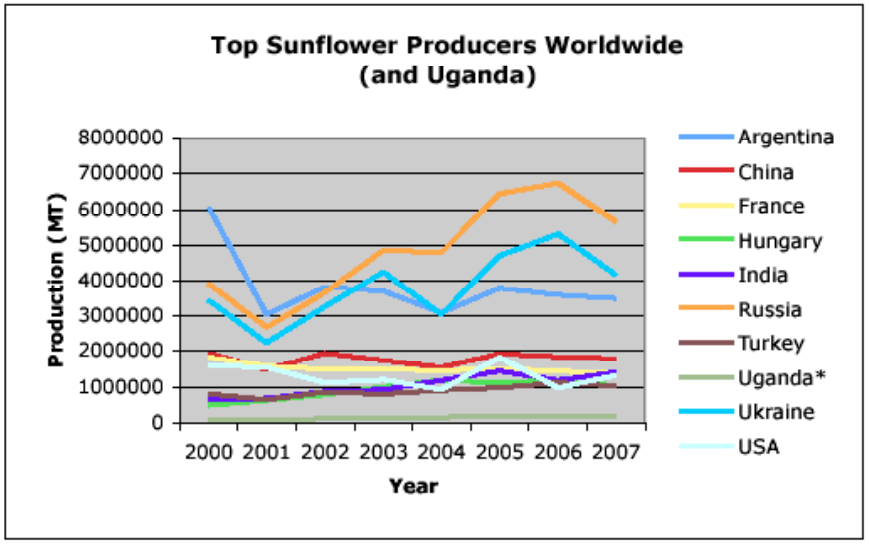


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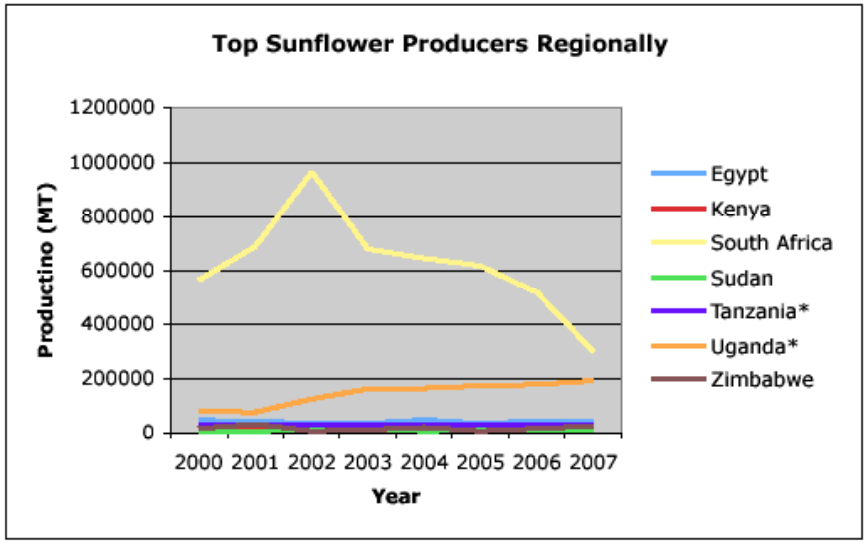


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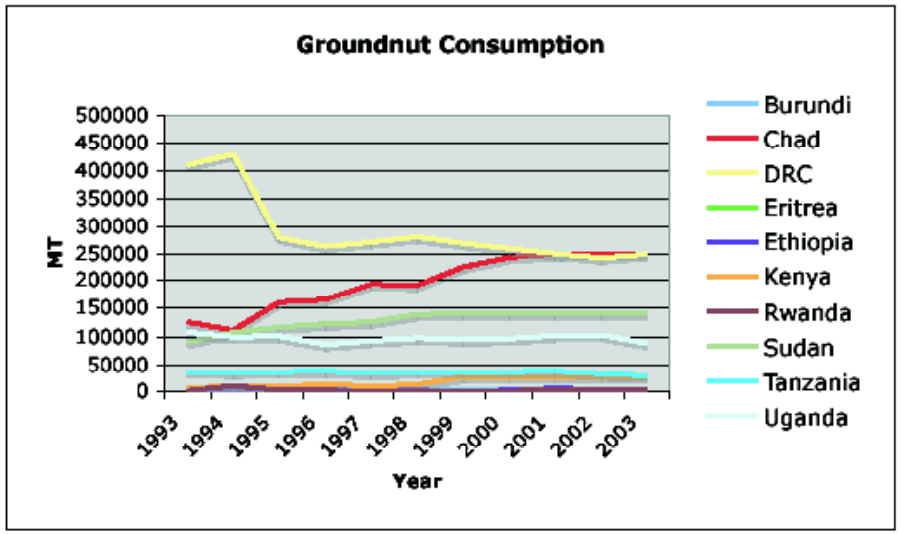


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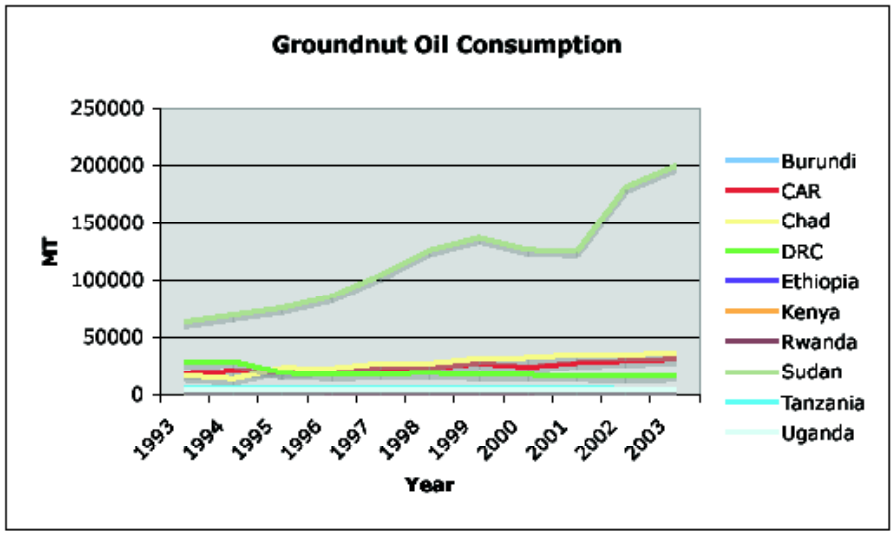


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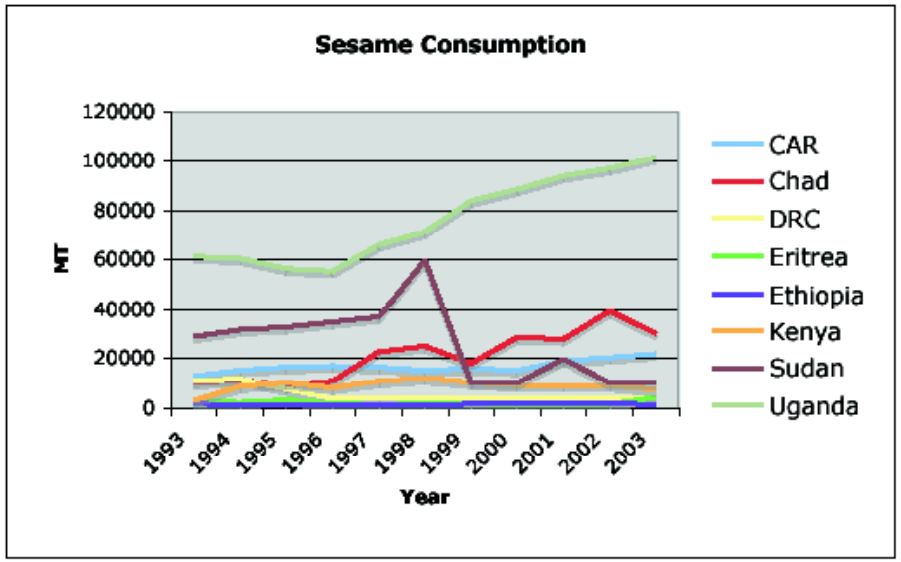


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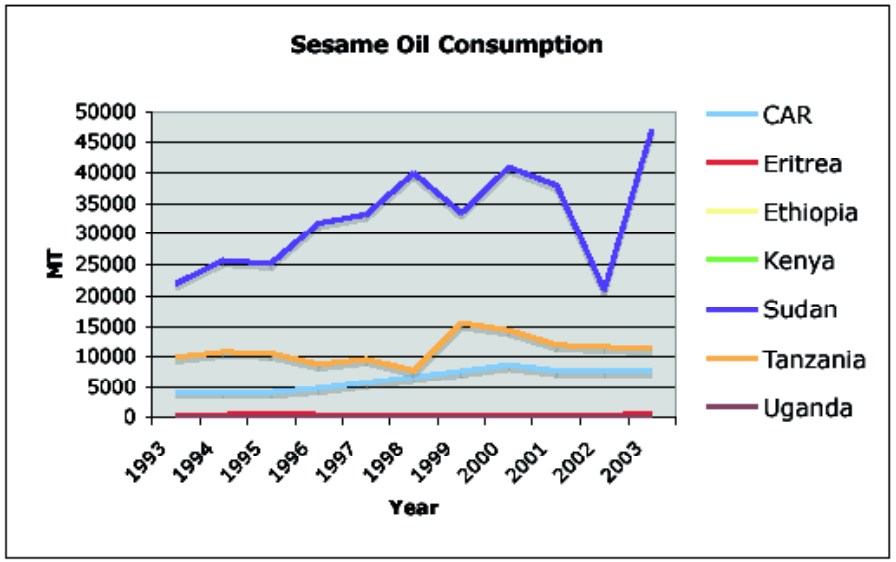


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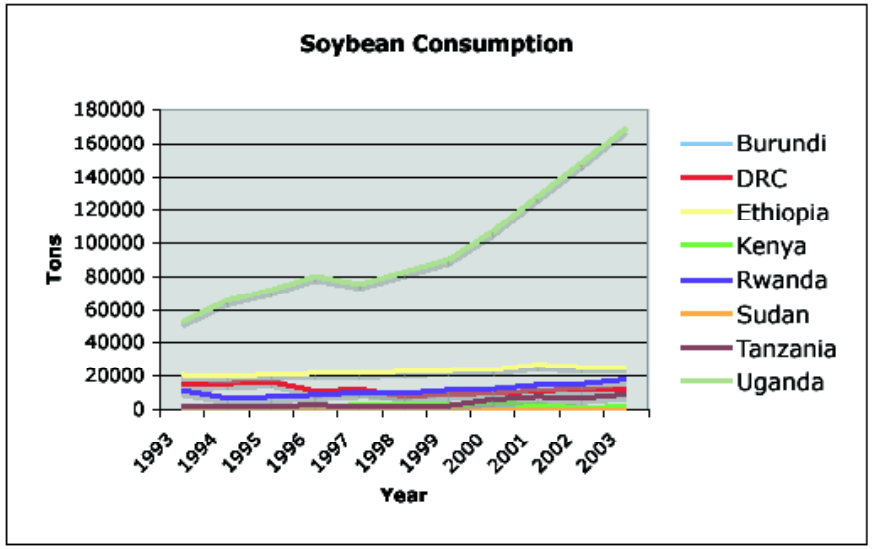


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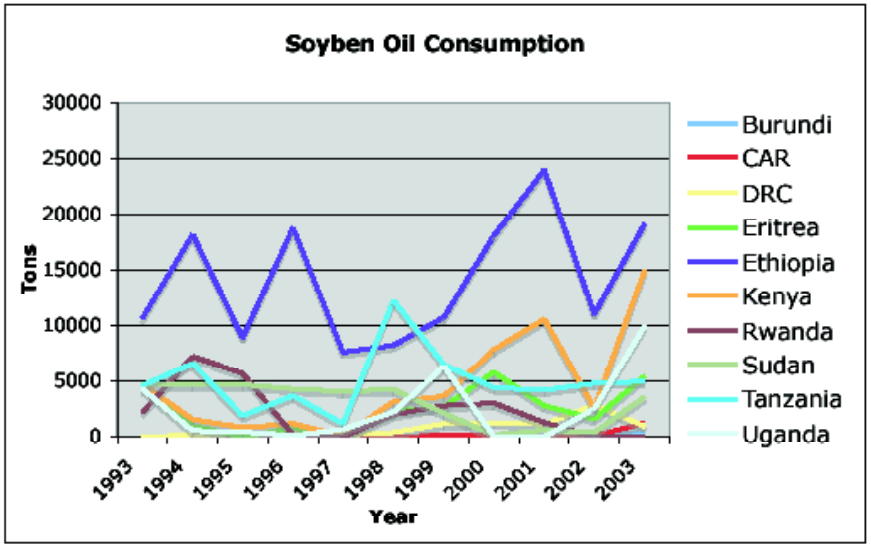


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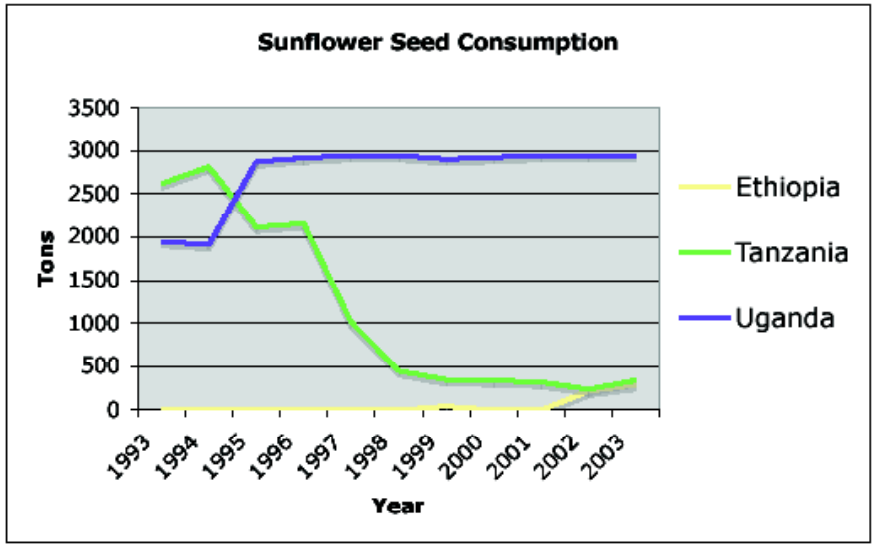


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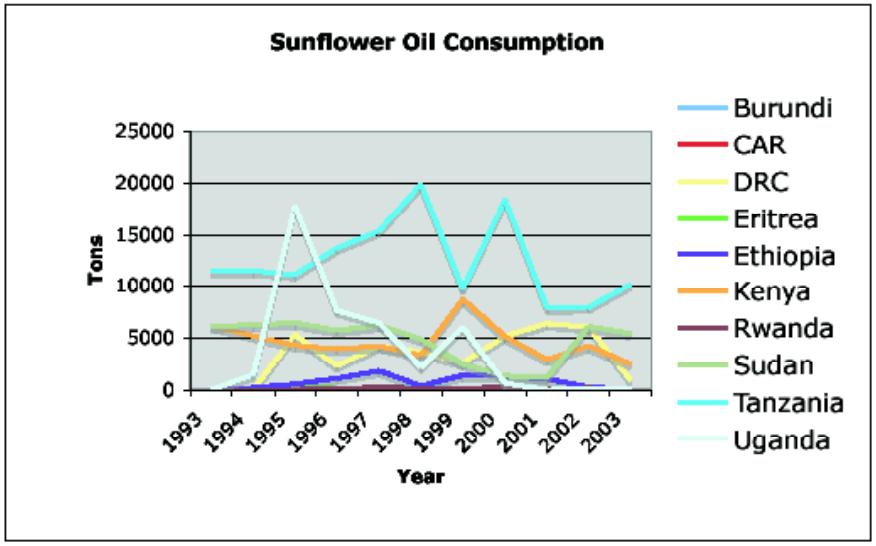


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# Appendix 10 – Ag VT Programs in Other Countries

1. Advancing Learning & Employability for a Better Future Project (ALEF) – Morocco

    a. At the core of the USAID/Morocco education and training strategy is the ALEF Project, a five-year initiative aimed at helping the education and vocational training sectors prepare graduates better to meet Morocco's current and future workforce needs. ALEF works with four agricultural training centers, among other types of schools, and it has recently developed two new tools to enhance the employability of agricultural vocational training graduates by placing emphasis on post graduate support for job placement, new business creation and on monitoring graduates' entry into the workforce.

    b. For more information:
        i. http://cge.aed.org/Projects/NAfrica/c_morocco_alef.cfm
        ii. http://cge.aed.org/news.cfm#firstvoc

2. Gikongoro Agricultural Development Project (GADP) – Rwanda

    a. The objectives of GADP were to improve food security and raise small farmers' incomes on the one hand, and to strengthen the agricultural services on the other. Project components included vocational training, among others. One main recommendation was that IFAD should ensure financing of the technical assistance and vocational training components. And one main lesson learned was that vocational training is very important and is beginning to show results, but that vocational training must be planned as a long-term activity.

    b. For more information:
        i. http://www.ifad.org/evaluation/public_html/eksyst/doc/prj/region/pf/rwanda/r232rwae.htm

3. Agricultural Development-Led Industrialization (ADLI) Strategy – Ethiopia

    a. The Government responses to the challenges of agricultural transformation and rural development for poverty reduction rests on six inter linked fundamental thematic strategies, including providing extensive technical and vocational education and training in agriculture. Since there is a need for an educated, innovative and creative skilled human labor force in agriculture, an Agriculture Technical and Vocational Training program has been launched.

    b. For more information:
        i. http://www.ifad.org/events/gc/26/speech/ethiopia.htm
        ii. http://webapps01.un.org/nvp/frontend!policy.action?id=124

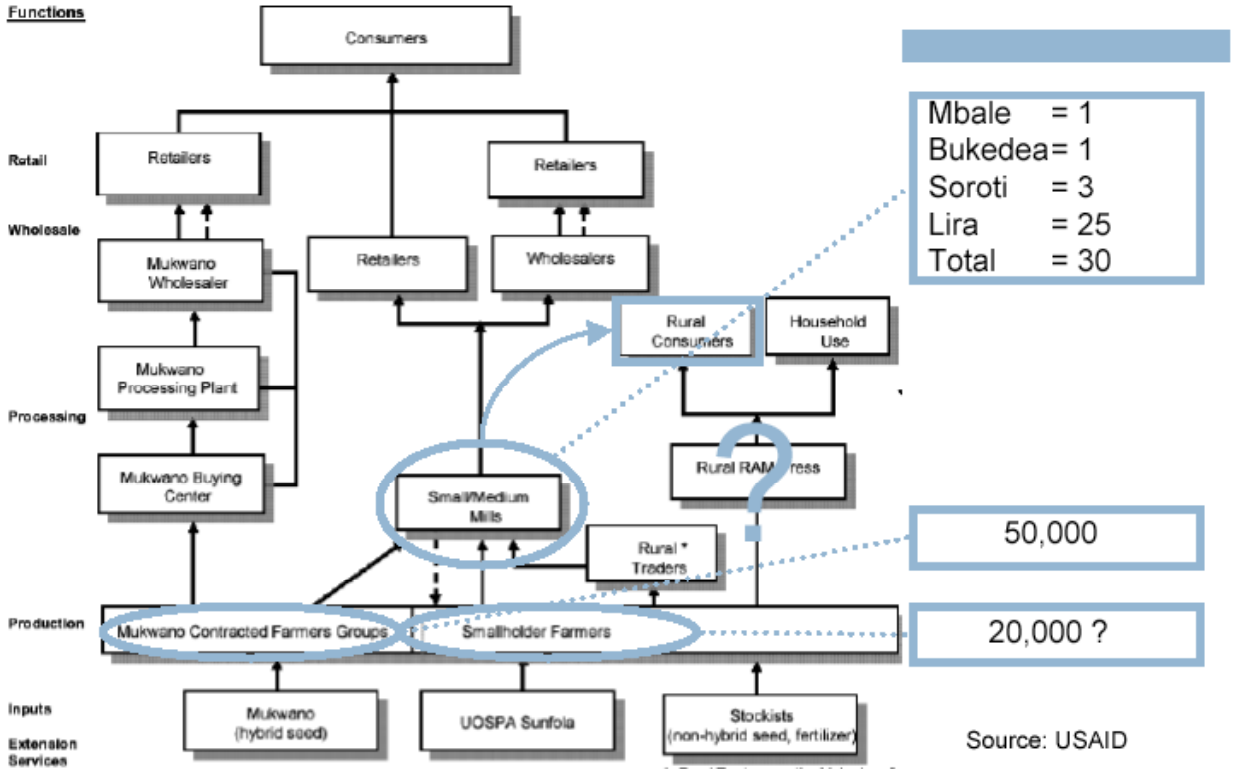
# Appendix 11 – Additional Findings

| District | Sub-County | Total Population | Number of Farmers | Number of Oilseed Farmers |
|---|---|---|---|---|
| Mbale | Busiu | 29,000 | A large majority | 4,000 (1,150 work with sunflower) |
| Bukedea | Kolil | 22,000 | 4,000 | This sub-county grows one of the largest quantities of sunflower seeds |
| Soroti | Kyere | 4,000 | Small number of farmers due to a lack of land availability | Very low number of oilseed farmers, despite the location of the Mukwano processing facility close by |
| Lira | Ojur | 58,000 | 52,200 | The majority are oilseed farmers (primarily sunflower) |
| | Barr | 46,000 | 9,000 | Almost all are oilseed farmers |

***Sunflower is the fastest growing oilseed crop in the target area.*** Among the oilseed crops grown in the region, sunflower has experienced the highest growth due to multiple value-added opportunities for the farmers, increasing the profitability of the crop. As a result, it is estimated that the import of vegetable oil in Uganda has fallen from 95 percent to 60 percent as sunflower oil is increasingly produced domestically. One of the farmer's associations indicated that their business in sunflower has been growing by 30 percent annually, which is similar to observations the team made throughout the research. According to AT Uganda, 60 percent of farmers in the region have demanded the sunflower seeds, indicating a huge interest on the crop. Though oilseed products were traditionally grown in the Northern and Eastern region of Uganda, NGO and private sector interventions in promoting cash crop to the farmers have initiated the process. In addition, the insecurity in the Northern region has actually enriched the nutrient content of the soil as none of the farmers were allowed to grow crops during that time. As the security situation has somewhat stabilized in the Northern region, the farmers are now able to benefit from the effect: nutrient-rich soil that is conducive to growing oilseed crops.

***Seed is mostly imported for sunflower production, which increases the price of the seeds, making inputs one of the main constraints in the whole value chain.*** The preferred sunflower seed is the hybrid seed from either South Africa or Kenya, which has a high oil content compared to traditional sunflower seed grown domestically. Since the hybrid seed cannot be produced locally, it is imported by Mukwano, UOSPA and other seed suppliers. It is estimated that 30,000MT of seeds are imported annually. As it is being imported, the supply and the cost of the seed becomes one of the constraints. Compared to traditional seeds that are sold at 3,000SHG/kg, farmers have to pay 10,000 to 10,500 SHG/kg for the seeds. In contrast to other agricultural products where farmers can multiply seeds themselves, they must buy the hybrids from Mukwano, UOSPA or seed companies, which means they end up loosing an opportunity to increase their income. Although there are plans underway to develop hybrid seed production in Uganda, farmers will need to continue purchasing the imported seeds in the sort term. Until there is sunflower hybrid production in Uganda, there will be limited opportunities for value-addition and hence skills training at the input level of the value-chain.

***The market for the processed oils currently focuses in the domestic market.*** Although there is potential for exporting the processed oil to the neighboring countries, and the FAO statistics indicate that this being done, the domestic market is the main target. In terms of small millers, since they can produce only "virgin" oil, most of the production seems to be consumed at the rural household level. The oil is sold directly at the processing facility to the farmers who usually have sold the seed to the facility. As for the large millers, their main market is in Kampala. Most of the product is sold as a "blend" of sunflower and palm oil. The reason they blend is to decrease prices, since oil is a price-sensitive good in the market (i.e. quality is not a concern for many people). While the FAO statistics cited in the introduction contradict this finding, the most recent of those data are from 2003. The SIPA team has reason to believe that more recently, consumption of sunflower oil and blended oil has been on the rise in Uganda. The following value chain map of sunflower summarizes how it is processed and marketed, and where it is consumed. The numbers cited are rough estimates from the four districts.




In terms of gender, the large majority of farmers trained by NAADs and UOSPA are male. There is no targeted training available for young women. In addition, this is also true of FFS associations, whereby there are mixed gender groups that may not necessarily provide direct assistance to the women of rural communities.

[i] Gross enrollment ratio (GER) could possibly be above 100 percent from 2 reasons. The first reason is inaccurate census figures that were used as denominator. The second is increased number of "repeaters" who repeat the same grade, or come back to primary school after having dropped-out for a while. Since Gross enrollment ratio = enrollment / the number of children who should be in school at that age, if denominator is fixed, increased repeaters would increase GER. On the other hand, Net enrollment ratio (NER) is used to calculate the enrollment ratio based on age. It is calculated as the number of enrollment at given range of school age / the number of children who should be in school at that age. Although NER is a better indicator to see if children are actually progressing within a given range of years, actual statistics on NER for Uganda shows that even NER exceeds 100 percent in some districts, which indicates that there could be some discrepancies to the census figures and actual population.