

In recent months, RUCID has been involved in efforts to promote agro forestry through afforestation programmes targeting areas deforested by charcoal dealers and populations in search of land for farming and settlement. As a result of RUCID's wide exposure, the National Forestry Authority (NFA), a government parastatal body, in October 2009 partnered with RUCID to distribute 4000 *casuarina* tree seedlings to Kitenga sub-county in Mubende district that has been ranked as one of the highest charcoal producing regions. The trees are ornamental, concentrate nitrogen in soil, act as bee fodder and can be used as wood fuel as well.

Residents in the area were also happy to receive 3,500 *graveria* tree seedlings prized for their timber, animal fodder and concentration of phosphorous levels in the soil. The tree deep rooting tree is also known to live harmoniously with other crops and pumps nutrients into the soil. As a result of the strong linkage with NFA, RUCID has distributed 20,000 pine and *graveria* trees to farmers in Kiboga through district authorities.

RUCID's food processing plant which started operations in 2004 came as a blessing to fruit growing farmers. Many had lost heart in growing fruits in large quantities as most of the fruits they could not sell quickly perished or lost value due to lack of refrigerated storage facilities. The factory came in to reduce the perishability of farm produce and increase the value of the product so that the farmers are food secure and have processed food for income and storage. The USD\$ 17,894 plant established with assistance from Danish International Development Agency (DANIDA) processes farm fresh fruits extracted from mangoes, pineapples, apples, bananas and jack fruit. It also packages tomato sauce, dry carrots, papaya, cabbages and onions.

According to the Head of Food Processing Department, Ms Sylvia

Nabatanzi, farmers had been complaining about the high post harvest losses of perishable fruits due to poor storage. To alleviate the problem, RUCID thought of establishing a processing plant where farmers could have their fruits produced in addition to adding value to the produce.



Mouthwatering organically grown pineapples stored at RUCID's food processing plant ready for processing

"A farmer invests time and money into cultivating sufficient food products for his household and the market. He must sell his produce, recover costs and make a profit. But, the problem of wastage of perishables was a recurring issue that had to be addressed seriously." said Nabatanzi.

The plant produces 120 crates of juice per week branded as RUCIFRESH juice, a mixture of pineapples, mangos, oranges, and passion fruit. The packaged products that have featured at the PELUM organized Food Fairs in Uganda and Tanzania have also found space on the shelves of some of Kampala's major supermarkets such as Uchumi, Shoprite and Nakumat besides penetrating shopping malls in neighbouring towns.



Some of the RUCID processed juice and food products ready for dispatch to the market

Support from PELUM

Nyanzi owes RUCID's success to its strong relationship with PELUM which stretches way back into the 1990s bringing about a number of benefits to the former. Through PELUM's sponsorship, RUCID was able to catapult itself into full and effective utilization of ICTs following landmark training in 2004 of its senior staff in Electronic Technology at the prestigious government run Uganda Institute of Information and Communications Technology (UICT).

Nyanzi said that the ICT training was a good investment to support RUCID's core objectives for it improved staff knowledge and skills and made it easy for the organization to do its work. It also increased staff productivity and made a greater impact on the organization given that the training was based on an ICT Lifelong Learning Skills training approach with hands-on use of ICT as requested by PELUM.

"Not knowing how to do something is very frustrating and time consuming. We used to outsource ICT technicians which turned out to be expensive and time consuming. After the training we came back and trained our colleagues. Now we work better as a team.



Godfrey Kajubi picks weeds from a tree Nursery bed at the RUCID Trial Farm

We have increased our output reduced operational cost and enabled the organization to be more effective in its service delivery," said Sebaduka who benefited from the training.

RUCID registered more benefits from the ICT training after the organization purchased computers and set up internet connectivity including a website (www.rucid.org.ug) thus enabling peer-to-peer communication, information management, retrieval and dissemination. With internet connectivity, RUCID's consultancy services in Sustainable Organic Agriculture that had been started as an income generating project received a major boost as the exposure helped to generate cooperation, exchange information, knowledge and experiences with research and training institutions. Now, RUCID boasts of training hundreds of agricultural extension workers for the Ugandan Catholic Church agricultural projects, students of environmental studies in Makerere University including agriculturalists from Nigeria, Cameroon, Rwanda and the Kenya Institute of Organic Farming (KIOF) interested in practicing organic agriculture.

In 2008, the strong PELUM-RUCID relationships were again evidenced when PELUM-Uganda sponsored RUCID to participate in the PELUM Regional Traditional Food Fair in Morogoro, Tanzania where it emerged second best. Earlier, during the month of September in the same year, RUCID had emerged the best exhibitor at the Indigenous Food Fair in Kampala organized by PELUM-Uganda where the best exhibitor would represent the country in Morogoro.

Furthermore, RUCID's expertise in sustainable agriculture became of great benefit to PELUM member organizations when RUCID was invited as lead facilitators at a one week workshop on sustainable agriculture organized by PELUM in Kampala. This symbiotic relationship created more publicity for RUCID and culminated two months later into an exposure visit by PELUM member organizations to RUCID's farm in Mityana.



RUCID's Agricultural Advisor, Elisa Sebaduka uproots a carrot to ascertain the health of the crop

Gender mainstreaming

With gender issues turning out to be critical factors in agricultural production, RUCID encourages family members to work as a team on their farms to increase output which would result in increased income and general improvement of the family's livelihood. According to Sebaduka, it was realized that where one family member participates in an agricultural activity or puts new knowledge into use while the other continues to implement old practices, that activity will not progress as expected. RUCID also observed an interesting stereotype that prevailed in culture and practice which places the burden of growing food crops to women as the men are more involved in growing cash crops and have more freedom of movement.

"We studied the role of women and their contributions to farming in the home and realized that women are focused on food production while men are focused on cash crop production. If a woman plants bananas using the prescribed right technologies such as good spacing, the man will plant coffee or any other cash crop in the spaces. Yet coffee will destroy the food crop if it is planted close to the bananas which negatively affects the farming output," noted Sebaduka.

RUCID has endeavoured to address the gender question by carrying out sensitization programmes for farmers to be gender sensitive and avoid the rigid cultural practices that impose heavy workloads and negatively affect the living conditions for women. Such awareness initiatives have worked out well for Nsereko's farm, for example, which experienced a remarkable turnaround in farm yields and management as a result of the combined efforts of his family members.

"I work on the farm with my wife and children and this has enabled us to produce more than enough for our needs and live harmoniously because we plan together" revealed Nsereko.

The varied benefits from sustainable agriculture

One positive 'side effect' where farmers switch to organic systems is the awareness of the need to organize themselves. Initially, farming was an individual activity, but when farmers switched to the organic system, they began to realize that working together is more beneficial in terms of workload, bargaining power, knowledge sharing and reducing environmental impact on agriculture.



Madina Nsereko stirs cow urine used as both a fertilizer and a pesticide

In Kiboga district, Mr. Sam Sebitalo of Gayaza Sub-county had used chemicals on his farm for years, yet he had to take out more money to buy fertilizer and pesticides, while the harvest decreased over the years. Through interaction with RUCID registered farmers, such as Mr. Julius Tumwebaze of Bagezza Sub-county in Mubende district, he learnt organic farming methods using cow urine which he used both as a fertilizer and pest control agent. Three years later, the results on the farm were different as better yields were registered.

The experience of 32-year-old Tumwebaze is another illustration of how the consistent application of sustainable farming practices over time can improve agricultural output and livelihoods. Tumwebaze, a former Primary School teacher

in Kaazo village and now Sub-county Councilor, saw a dramatic increase in the output of his 4 acre farm upon retiring from teaching. With enough time at his disposal he dedicated his physical energy into transforming the farm from subsistence to commercial production combining good agri-business, environmental, crop and animal husbandry practices.

In a spate of three years, his earnings rose from US \$1,116 annually to US \$3,500 from the various agricultural enterprises from his 6 acre piece of land. The enterprises include goat rearing, a piggery, dairy farming and crop farming including pineapples, Irish potatoes, beans, maize, oranges, avocados and paw paws. Interestingly, he earns about US\$ 1000 per month from pineapple sales alone.



RUCID member Julius Tumwebaze, an avid practitioner of organic agriculture in his vast pineapple

"In order to improve yields, I had to maintain soil fertility by using the crop rotation method, minimizing pollution, applying crop residues and livestock manure efficiently as fertilizers" said Tumwebaze, who is recognized by the government's National Agricultural Advisory Services as one of the model farmers in the district. With this recognition, came a surge in the number of farmers and student groups visiting his farm to learn from his various improved farming techniques.

Citrus and mangoes are some of the prime cash crops on Nsereko's farm. During the harvest season he gets an income of approximately USD 200 and another USD 300 from selling oranges and mangoes to a niche consumer market including a large bakery in Mityana town. Through marketing and negotiation skills taught by RUCID, Nsereko is able to fetch a higher price for his organic products and is no longer manipulated by middlemen.

Another farmer from Kiboga district, Ms Gertrude Nansubuga, said she was able to replenish her farm after undergoing training in sustainable organic farming systems. Her farm had experienced severe soil erosion and poor crop yields so through protracted sustainable farming actions such as mulching, use of cover crops, crop rotation and planting casuarina, a deep rooting nitrogen fixing plant, she was able to reclaim her farm's potential.

Challenges

There are however some challenges that need to be addressed. The inability of some smallholder farmers to respond to shocks caused by adverse climatic conditions has

created considerable economic instability and hardship to the farmers. Indeed, some farmers are torn between producing for income in order to have substantial amounts of liquid cash to sustain their families or produce food crops to ensure food security. To overcome this challenge, farmers have been prompted to balance their efforts on food security and poverty alleviation, and to restructure their agricultural activities to overcome the challenges.

In a related development, individual farmers are faced with another difficult choice, that is balancing land conservation with its long term benefits against use of agrochemicals and other conventional practices which tend to yield more immediate benefits. These tensions between 'green agriculture' and 'modern technologies' are becoming increasingly evident as hundreds of farmers whose families are stricken with starvation and cannot hold on to the long term benefits of organic agriculture.

With one major source of funding from Misereor, Nyanzi says there is need for increased funding towards activities that can make organic agriculture more strategic, knowledge driven and technology based so that it can remain competitive and profitable.

Why practice sustainable agriculture?

The final good news story is that sustainable agriculture can pay off directly in increased yields. Soils that have adequate organic matter yield more than soils with low organic matter. The yield benefit is even higher if the low organic matter levels make the soils more prone to moisture stress or reduced emergence due to crusting. The payback from good soil management due to increased yields, early planting, potential improvements in nutrient use and better drainage can be significant.

Organic agriculture puts the needs of rural people and the sustainable use of natural resources at the centre of the farming system. Locally adapted technologies create employment opportunities and income. Low external inputs minimize risk of indebtedness and intoxication of the environment. It increases harvests through practices that favor the optimization of biological processes and local resources over expensive, toxic and climate damaging agro-chemicals. Organic agricultural practices bring land degraded by unsustainable farming practices, severe drought and soil erosion back into production.

While figures and statistics are increasingly showing that sustainable agriculture is viable in ensuring food security and rural livelihoods, it is important to note that agriculture is also about human experiences. Sustainable agriculture is a story about livelihoods, about how farmers struggle to make changes for a better future.

