



Kingdom of the Netherlands

Swift Prosperity Through Growing Superior Vegetable Varieties

Stories from Vegetable Farmers in Uganda



A Big Thanks to Our Partners



Table of Contents

| | |
|--|----|
| Acronyms | 04 |
| Project Overview | 05 |
| STORIES FROM VEGETABLE FARMERS | |
| Hope For Vegetable Farming Renewed <i>Okello Moses, Aleptong District</i> | 06 |
| They Call Me Teacher <i>Alweru Colleen, Lira District</i> | 08 |
| What Resilience Looks Like In Uganda's Farming Sector <i>Kayemba David, Lira District</i> | 10 |
| East Or West, Farmers Are Planting Off season For More Profit <i>Okino Nicholas, ISSD Plus</i> | 12 |
| I Will Never Stop Farming <i>Tumuhirwe Eselda, Rukiga District</i> | 14 |
| Tripping Both Yield And Income With Less Seeds <i>Katurebe Medad, Ntungamo District</i> | 16 |
| From Working On A Farm To Owning One <i>Mugarura Jimmy, Ntungamo District</i> | 18 |
| I Have Never Seen A Seed Like Hybrid <i>Katushabe Hillary, Ntungamo District</i> | 20 |
| Out With The Old, In With The New Red Coach F1 Seeds <i>Mukuta Sebowa, Rukiga District</i> | 22 |
| Redcoach F1: Double The Seed, Double The Yield <i>Tugarukye Benon Salongo, Rukiga District</i> | 24 |
| Hydroponic Farming Is The Future <i>Hans Barendse, Mukono District</i> | 26 |

Acronyms

EWS - East West Seed

ISSD - Intergrated Seed Sector Development Program

ToT - Trainer of Trainers

QDS - Quality Declared Seed

Project Overview

The Project Objective:

The vegetable component within the ISSD Plus Project, is aimed at contributing to increased earnings and competitiveness of the vegetable sector actors which would subsequently contribute to improved national food and nutrition security.

Pre-existing barriers to Vegetable Production: the renowned major constraints to vegetable production and competitiveness of the sector both on the local/regional and international markets include:

- Limited knowledge & access to well-adapted varieties available in the market
- Lack of knowledge and skills in recommended agronomic practices
- Pre-dominant use of low-quality seedlings from field nurseries
- High pest and disease pressure
- Poor water and fertilizer use
- Lack of market information on vegetable crops
- Non-consistency in vegetable product quality and supply
- Non-conformity to phytosanitary requirements
- High production cost and low productivity.

Such constraints have led to lower overall competitiveness of the Ugandan vegetable sector in comparison to neighbouring countries.

Interventional Approach: The ISSD Plus Project intervention addresses these constraints by promoting the use of advanced vegetable varieties. Use of advanced vegetable varieties is effected by exposing farmers to the available options among the advanced varieties. This is achieved through four complimentary work packages outlined below:

- I. Variety demonstrations: where estimable characteristics of the advanced vegetable varieties are showcased and resounded. ISSD Plus targets the establishment of 440 variety demonstration sites serving atleast 17,600 farmers.
- II. Training Sites: Where farmers receive indepth practical training on improved production techniques.
- III. Training of Trainers' Program (TOT) : This is aimed at skilling at least 100 practicing professionals (Extension Providers), and 20,000 farmers into real practical commercial horticulture.
- IV. Mass media campaigns have been effected through radioshow which include spot adverts, DJ mentions and live talk shows.

Technical Support to Vegetable competitiveness:

The four work packages are implemented in partnership with six seed companies, namely; House of Seeds (Enza Zarden), CYCAS International (Bejo), East West Seed International, Holland Green Tech (RijkZwaan), Sygenta Seed B.V and Home Harvest (Bakker Brothers).

ISSD Plus promotes the use of superior varieties through four major activities which include:

I. Variety demonstration sites:

These are commercial / competitive sites at which each partner seed company show cases the estimable characteristics of their varieties. At crop maturity, farmers are invited to a field day to evaluate the performance of the exhibited variety for informed decision-making regarding variety selection.

II. Farmer training sites:

Through this approach, farmers receive training to equip themselves with skills for successfully growing superior varieties. This training is done by partnering seed companies and is done at a training site which is comprised of production plots which have a maximum of three varieties. At each training site, twenty five farmers regularly receive scheduled information on topics based on the crop stage.

Priority Topics Offered at the Training Sites Include:

- Seedling production
- Fertilisation
- Crop Protection
- Soil and Water Conservation
- Any other identified skills gaps are addressed

III. Training of Trainers' program:

To contribute to improved extension services for vegetable producers, ISSD Plus Project in collaboration with Wageningen UR - plant research team implements a Training of Trainers (ToT) program for each region (East, West, North and South) regions of Uganda. The program is purposed to strengthen the hands-on skills among the extension providers. Targeted are the extension providers at various organizations: Researchers, Agro-input dealers, government extension workers and private service providers within the Vegetable sector. Twenty five of such are invited to each program.

Hope For Vegetable Farming Renewed

Okello Moses, Aleptong District



Okello Moses had given up on growing vegetables, especially tomatoes due to bacterial wilt disease. By 2003, all tomato growing was considered a dead end in his home area. A resident of Lwala Village in Aleptong District, Moses had grown tomatoes since 1984. He resumed in August 2018 when East West Seed came to his village and introduced superior tomato seeds (PADMA-F1). EWS set up demo sites and showed the farmers that tomato production, specifically tomatoes, can be free of bacterial wilt, profitable and enjoyable with the right techniques.

After the training, Moses and his friends were given one packet of PADMA-F1 which he planted. For the first time in a long time, Okello reaped big. After three seasons, his harvest attracted a profit of four million Uganda shillings. This is the money he used to build a home for his family of eight. Additionally, he bought a

plot of land by the roadside. Now, both assets remain as permanent reminders of his first PADMA-F1 harvest. He says he has also paid school fees for his son who is pursuing a medical course at Good Samaritan Nursing School in Lira. "Because of the high returns I got, I have picked a lot of interest in tomato production" says Moses.

"I believe next season the number of farmers going into tomato production will increase".

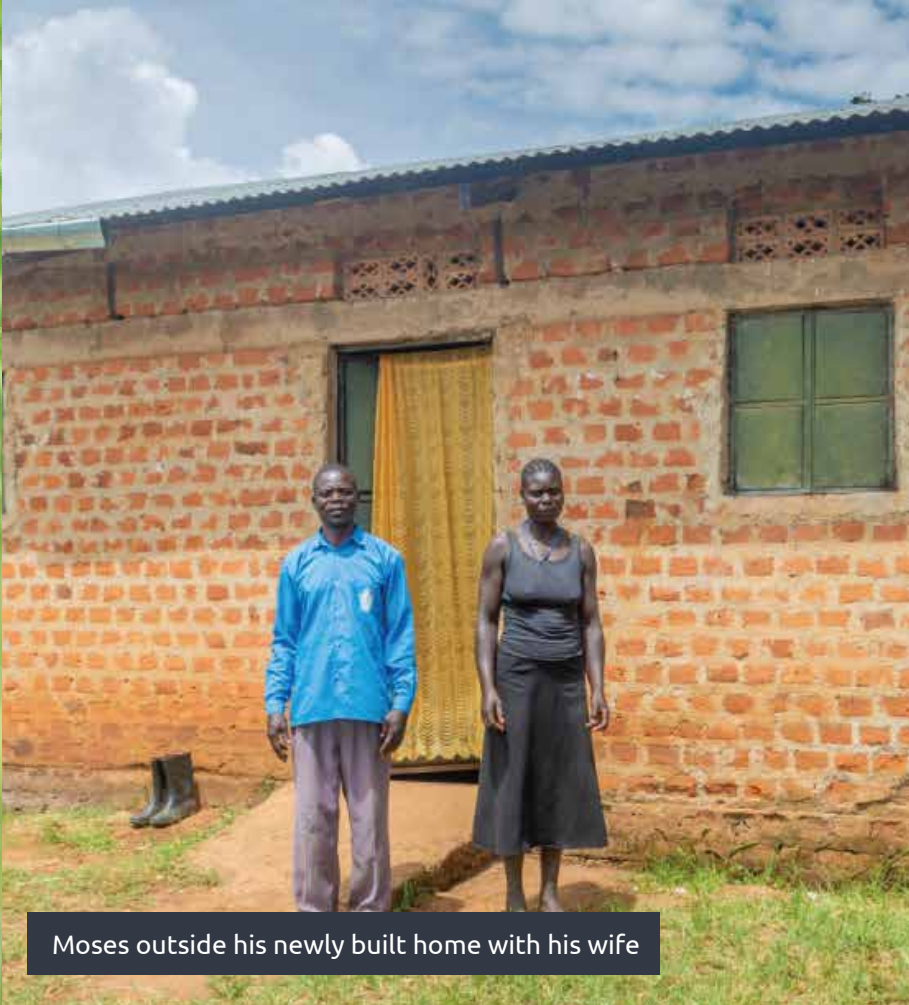
He says the most important lesson from East West was to plant tomatoes on raised beds which gave him clean tomatoes at harvest. He however still faces the challenge of price fluctuation and lack of a water supply system for irrigating plants in the dry season.



Moses pictured in his garden.



Moses poses outside his old house with his wife



Moses outside his newly built home with his wife

They Call Me Teacher

She learnt how to plant tomatoes, now she's passing it on to the village
Alweru Colleen, Lira District



Meet Alweru Colleen, a resident of Amungin village in Lira District, she is also known as 'teacher' in her community. Colleen gained the nick name from supporting other farmers in her village. So far, fifteen farmers (both male and female) have approached her to teach them how to increase crop yield. She has connected them to improved high quality seeds, and they all now boast of gardens the size of Colleen's. She takes great pride in the fact that she is a teacher to both males and females, in a mainly patriarchal society, she is breaking the norm and passing on an incredible message to the younger generation.

"My only request is that this project continues to support us as it has done in the past. Many farmers are interested in vegetable growing now and they too, should receive the same support that we did."

Colleen was among the first farmers to be contacted by ISSD Plus's partner, East West Seed in Lira. At that time, Colleen and several of her colleagues had given up on growing tomatoes. Before 2006, she recalls, bacterial wilt was affecting many of the tomato varieties they were growing at that time. When Carol from EWS reached out to her in 2018 about providing seeds that were tolerant to bacterial wilt, she was interested. She mobilized fifty other farmers to attend a field day at a demo in her own garden, facilitated by East West Seed. They were taught how to plant tomatoes on raised beds, and apply fertilizer.

"The tomatoes did very well and the second season we planted cabbages, which also did very well. From their returns, I realized that tomatoes are good crops that can actually help us improve our livelihoods".

They also learned the proper methods of applying fertilizer to enrich the soil in which vegetables are grown. She made UGX1.2M from her first harvest, fifty percent of which she used to buy bricks for her new home.

"Women in Amungin are coming because they have picked interest in vegetable growing. I advise them to go into such farming because of the returns". Colleen works together with women and men, visiting their gardens to sow and transplant seedlings with them. She also shows them the new method of trellising that uses less poles than the old method; "I always go and support them where they don't understand and advise them on what to do, especially on the raising of the beds and then using the fertilizers"

Colleen hopes to increase the acreage of her production, put up yet another permanent building and continue paying school fees for her children.

"My only request is that this project should continue supporting us, as it has done in the past. Many more farmers are interested in vegetable growing now and they too should receive the same support we did."



The teacher is pictured in front of the new home she's constructing with profits from tomato production.

What Resilience Looks Like In Uganda's Farming Sector

Kayemba David, ISSD Plus

For a long time now, the number of farmers abandoning growing vegetables like tomatoes, cabbages, green pepper and eggplants has been increasing. The main reason for this is diseases such as tomato blight, bacterial wilt in tomato and pepper, xanthomonas in cabbage and purple blotch in onions which kill off the plants before harvest time, bringing losses for farmers, and for most, heart wrenching disappointment.

To address this challenge, ISSD Plus, has partnered with seed companies to increase vegetable growers' access to climate resilient technologies (improved agronomical practices and superior varieties which are early maturing, pest resistant, drought resistant and high yielding). This has improved yields, boosted competitiveness in the vegetable sub-sector, and consequently increased profit for local farmers in Uganda.

ISSD Plus's strategy is based on four key approaches:

Awareness about superior varieties through variety demos

- Showcasing of superior vegetable varieties through partner seed companies which have varieties that are tolerant to common diseases affecting vegetables in Uganda.

Training through practical training sites

- Farmers are trained on improved production techniques through training sites set up in local gardens with the consent of farmers. Farmers have garnered knowledge & useful skills to improve their yield and minimize loss eg. How to grow vegetables off season, the right time for applying fertilizer at the different stages of crop development.

Training of Trainers(TOT):

- ISSD Plus trains Sector Professionals (Extension services' providers) on practical vegetable production techniques. The program is purposed to strengthen the Sector professionals' hands on and effective extension skills.

Mass Media

- Mass media campaigns are effected through radioshowes which include spot adverts, DJ mentions and live talk shows.

Farmers that have undergone the training under ISSD Plus have shown an increase in both household income, and household assets. Furthermore, they have better housing, are able to transport their produce to the market, and are now able to afford education for their children.

Many farmers are still using primitive methods of farming, and pesticide still present a viable threat to food safety. ISSD Plus, as part of its Trainer of Trainer's program, has trained sector professionals on the safe application of pesticide, and equipped them with knowledge and practical skills in vegetable production. Professionals completing the program are dubbed as vegetable Brigadiers.



East Or West, Farmers Are Planting Offseason For More Profit

Okino Nicholas, Lira



It is more challenging, and it is more work, but planting offseason means that farmers can finally dictate the price of their produce. Okino Nicholas (an Agronomist) East West Seeds is working with the Knowledge Transfer Project to teach farmers how to grow vegetables with emphasis on off season production and how to make optimal profit from their produce.

The training is done by EWS in partnership with ISSD Plus. Okino is one of the Extension providers who attended the ISSD Plus ToT program. As part of the Training, Okino and his colleagues had the opportunity to visit SEVIA in Tanzania, an institution which uses similar Extension approaches as ISSD Plus. It was after this training that Okino and his colleagues became committed to sharing the knowledge and skills they had acquired with farmers back home.

So far, Nicholas' team - with support from ISSD Plus - has set up training sites where they have successfully trained over 30,000 farmers in modern methods of vegetable production.

Eighty percent of farmers growing vegetables in Lira are using superior seeds; PADMA-F1 for tomatoes, AJUNA for pumpkin, INDICA for cabbage, and KAVERI for sweetpepper. East West is leading the promotion and supply of these superior seeds. They are now practicing the modern methods of vegetable growing they have learned from Nicholas' team.

"Of course, using superior varieties is not enough, we have to accompany it with the knowledge and the skills of production. So we designed a method of passing on the information to the farmers in five sessions. We are trying to build the resilience of farmers so that they can produce even with unreliable rainfall. This is very important."

MAJOR CHALLENGES

It was initially difficult to break through to the farmers because they had never used improved varieties before, so it was a new concept to them. This is why the training sites were so crucial, the farmers could observe and note the tolerance of the varieties to bacterial wilt. "Even farmers who had abandoned vegetable production have started growing vegetables again"

Other challenges include, low supply of fertiliser and Climate change which affects farmers who are no longer able to predict rainfall patterns.

Below is a summary of the topics delivered in the training:

1 Seedling Production

2 Fertilisation

3 Crop Protection

4 Soil and water conservation

5 Address individual challenges



I Will Never Stop Farming

Nyakitabirwe, Muhanga town council in Rukiga district, Western Uganda.

Tumuhirwe Eselda, Rukiga District

The very first type of onions I ever planted yielded very few sacks at harvest time. They were affected by unprecedented changes in rainfall and sunshine patterns. I made many losses, and one time I lost everything. I would plant other crops too, like irish potatoes and beans, but onions were my favourite because they were my main source of income. I have been growing onions for a long time now, as a cash crop but the profits were low.

Recently, I discovered House of Seeds and the good quality seeds that they have. I decided to give them a try. Mr. Alex came and taught us, worked together with us, and gave us seeds to plant. The outcome was tremendous, my colleagues and I profited very highly from the sale of onions, yet we planted on a small piece of land. The other varieties we used to plant needed a lot of land but yielded a small harvest. For one acre, one would get between ten to fifteen kilograms of onions. But with the seeds from House of Seeds, all I need to get thirty sacks of onions is one acre.

Eselda has been able to educate her children, one of whom was studying to become a farmer. House of Seeds is currently supporting her to pursue higher education in agriculture. **"I have gained so much from ISSD Plus, I will never stop farming! I have land, and a home, I want to mobilise people in my community to also attend training from House of Seeds."**

"Thank you House of Seed and Mr.Alex for bringing us great fruitful seed , teaching us and checking on us. If you discover any other good seed variety, please bring it to us and we grow it such that we may benefit even more than we do now."



Tripling Both Yield And Income With Less Seeds

Katurebe Medad, Katumba Parish, Ntungamo



We used to grow other onion varieties that at some point stopped growing well, that is when we decided to get the improved varieties from House of Seeds. Alex and Darius (employees at House of Seeds) told us they have some seeds for us to try. They gave each of us a few onion seeds for a demo. The new seeds took well to the soil, and I earned triple the amount I would earn from the same number of seedlings. These are the onions we have been growing since: Red Coach F1 and Malbec F1.

There is a big difference between the old seeds and the new ones from House of Seeds. We used to plant three kilograms on one acre and harvest thirty sacks of the old seeds. But with the new seeds (Redcoach F1 & Malabec F1) if you grow one kilogram on one acre, you can harvest over one hundred sacks!

If each sack is sold at UGX300,000 then one can make a very good profit of over thirty million. From the improved onion seeds, I have been able to buy a car, build two permanent houses, and I have two children at the University for whom I am paying school fees.

People have seen my garden, my houses and they too want to plant these onions from House of Seeds especially the youth. House Of Seeds has so far received between forty to fifty youth and taught them the process of onion planting. Some of them already have gardens and often have questions for me about their farms. The biggest challenge we face is lack of a water system to irrigate the plants during the dry season. Additionally, the market demand is also still low.

My advice to all farmers is that they should plant Red Coach F1, no matter how poor they are, they can still request for a discount from House of Seeds. I know that people would love to have these onions from House of Seeds.





From Working On A Farm To Owning One

Mugarura Jimmy, Ntungamo District

Katoma, Gwahigwentobo Parish



Jimmy's story is one that inspires us all. Jimmy came from being a porter at a farm to owning his own farm because he asked questions and was open to learning. Jimmy is a former employee of Mr. Katurebe Medad, the owner of the four acre farm in Ntungamo District, Western Uganda. While Jimmy was still working at Mr. Katurebe's farm, he observed that Mr. Katurebe's yield was great, and the seeds he produced were of very high quality. He then started asking questions about the type of seeds that Mr. Katurebe was planting, that's when he discovered Red Coach F1. He decided to start a small garden with just half a kilogram of seeds.

His yield was very good, so good, that the next planting cycle he planted more. This time one kilogram, from which he earned eight million Uganda shillings. He now wishes to plant two kilograms.

He has a few trainees in his garden and encourages them to start farms of their own. But their biggest hurdle is the price of the seeds, which they say is still high for them. "Am advising them to get involved in onion farming instead of seating idly at home because they are unemployed. They can go to House of Seeds, ask for discount and develop themselves so that they too can bear witness to it's benefits."



I Have Never Seen A Seed Like Hybrid

Katushabe Hillary, Ntungamo District

Nyaruhanga Rwehi rwentobo town council rushenji sub-county Ntungamo district



People are watching us make profit, and they also want to join. I bought a car, a motorbike, I am also constructing a house, everyone wants to know how I have been able to do this! I have been growing onions for the last fifteen years, but I have never seen the yield nor realized the profit that I got with the hybrid seeds. Ten years ago, we used to grow varieties but they would not yield well and some seeds would get spoilt.

Not only are the hybrid seeds able to produce more yield and do so faster, but they are also pest and drought resistant. House of Seeds is there to hold our hands throughout the plant growth cycle.

People in my village are very inter planting the hybrid seeds. I for one, am very ested in grateful to House of Seeds for introducing Red Coach F1 to us. I plan to buy more land and continue growing these onions. Current planting five kilos of seeds and can get fifty tly, I am million in a space of three months. My only request is that House of seeds gives us a discount so that we can buy more seeds, and that they help us to build stores for our produce.



Out With The Old, In With The New Red Coach F1 Seeds

Mukuta Sebowa, Rukiga District

One of the things Mukuta Sebowa loves about Red Coach F1 is its ability to yield more onions at harvest time, compared to other varieties. A farmer for the last ten years, Mukuta has planted: onions, irish potatoes, beans and bananas. "We used to hear about Red Coach F1 being grown in Mbale, but Mbale is so far from us! We were so happy when house of Seeds came to our community and introduced Red Coach F1. Since the, I stopped growing any other seed varieties and only grown Red Coach F1 because of high yield." In typical planting cycle, Mukuta is able to earn ten million Uganda shillings.

Mukuta has invested his profits in land, and is working on expanding his farm. From the first cycle, he purchased a plot of land at five and a half million that now stands to earn him fifteen million from harvest of banana plantain. Mukuta now employs three people at his farm. He says the demand for Red Coach F1 seeds is high and will remain high; in his village alone (Rugarama Cell), about fifty people are involved in growing Red Coach F1 Onion seeds. The biggest challenge they face is lack of land on which to plant.





Redcoach F1: Double The Seed, Double The Yield

Tugarukye Benon Salongo, Rukiga District

Tugarukye Benon salongo has been farming for fifteen years, but he only started growing Red Coach F1 three years ago. He started out with a few seeds (one and a half kilograms) but after earning big from it, he decided to double the seeds. "The more I planted, the more harvest I got."

"We have made great economic strides with Red Coach F1, and I believe that if we continue planting it we shall even go further". Tugarukye's first harvest earned him fifteen million. He has educated his children so well and some have completed university studies. He purchased land to do more farming, bought cows and paid his workers on the farm. Tugarukye plans to plant on thirty acres of land in the next season, all of which he bought from profits of the previous planting cycles.

The biggest challenge for Tugarukye is water supply; "I would like to thank ISSD Plus, the people who brought us the training programs and enabled us to achieve alot. They should continue advising us. I own thirty acres of land now because of them"





Hydroponic Farming Is The Future

Hans Barendse, Kityabule Village In Nakisunga County, Mukono District



The farm is set up such that there is one main tank containing a nutrient rich solution that is circulated to trunkings around the farm with the help of a pump. As the water flows through the trunkings, it nourishes the growing plants with nutrients and returns back to the tank. This limits water wastage and addresses the challenge of irrigation during dry seasons. The fertilisers are also recycled in the same way.

According to Hans, Hydroponics farming has helped them become more consistent in their supply as they are better able to estimate the yield. "Hydroponic farming is not as complicated as it sounds, infact, it is easier, than it looks. If you can grow a plant in the soil, you can grow it in the water, as long as you have the passion and you're willing to learn, everybody can do it" Hans is using hybrid seeds from House of seeds and Holland Green Tech, Uganda.

Hydroponic farming is a breakthrough farming technique where plants are grown in nutrient rich water solution instead of being grown in soil. It is regarded "smart agriculture" because it is environmentally friendly; it requires less fertiliser, less pesticide and the crops are cleaner.

Hans is the proprietor of FINCA VERDE, a company that specialises in lettuce production through hydroponics. His farm, which he has been running for the last five years, is located in Mukono District. Hans has been in Uganda for atleast twenty years, fifteen of which he spent growing flowers.





HAN'S WIFE

Edna Barendse (married to Hans Barendse)

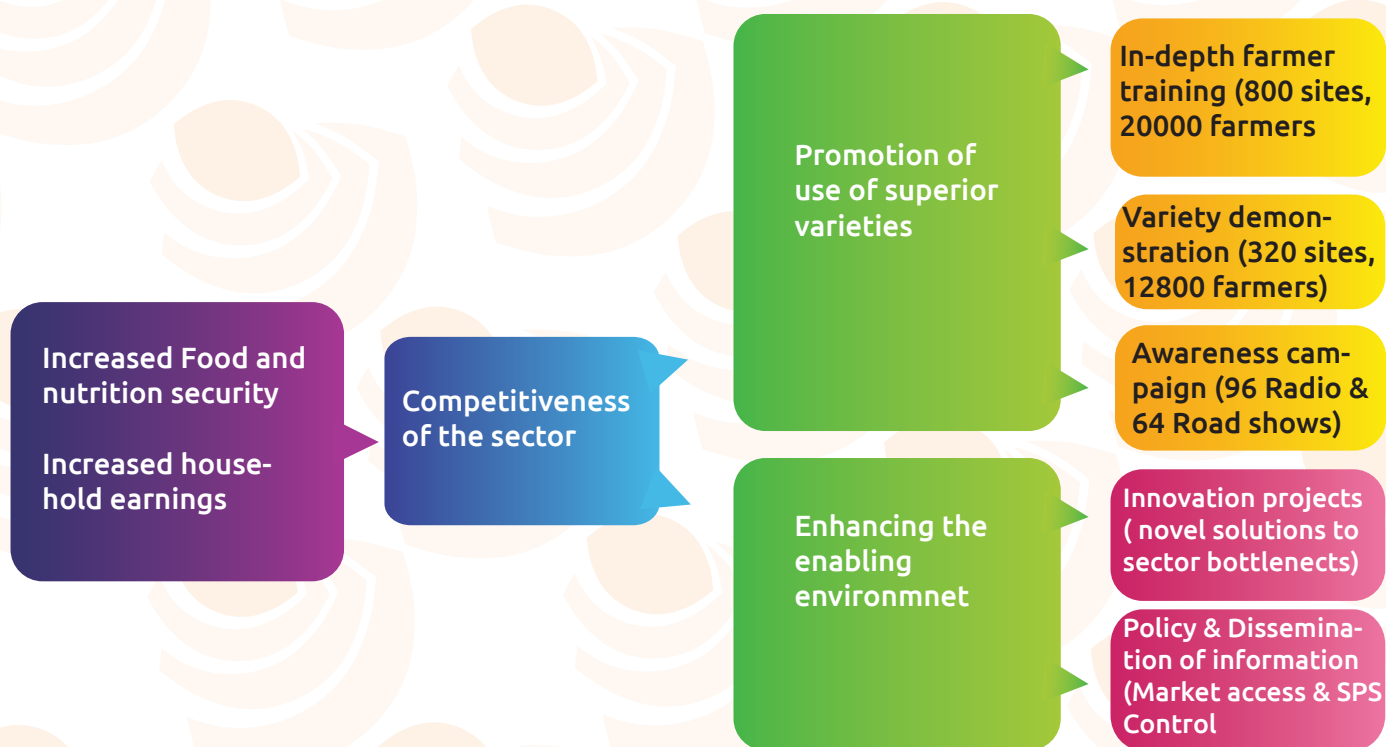
Hydroponics farming has helped us grow financially and become self-sustaining. We opted for it because we were making great losses planting in the soil. There was a lot of inputs with little yield at harvest time, we were getting a lot of dropouts and wastage. When we started with hydroponics we realized you can get 90%-99% back of what you plant. The farm is set up on seven acres, with one acre set aside for hydroponic farming. We employ thirty five people. most of whom are single mothers. We also have a unique opportunity to serve the community in which we live, by training them in hydroponic farming techniques.

"The world is changing, people are learning to live healthier. We want to produce crops that are healthier, cleaner, and reliable. Many products on the market are filled with chemicals. With hydroponic farming not many chemicals are used. More people are learning to take care of their bodies."

Hans and Edna needed some seed capital to start their hydroponics venture, so they approached Integrated Seeds, who were sold on their innovative idea. Integrated Seeds offered to fund 50% of the venture and also gave them technical advice on hydro-culture. They both have not looked back since. Now they plan to dedicate more of their twenty acres to hydroponic farming and stop soil farming completely. Edna's advice to farmers who want to go into hydroponics is to start small but with passion.



Vegetable Component Operationalization & Key Results



Milestones By 2019

Five capacity building programs for the sector professionals (extension providers) have been completed. The programs were designed to practically strengthen the sector professional's extension and hands on skills in vegetable production. 188 sector professionals have benefited from the program.

- Thirty seven Sector professionals and 6 commercial vegetable producers have participated in the exchange visit to SEVIA Tanzania. This was a part of the knowledge exchange and capacity building efforts of the Ugandan teams.
- 378 ISSD Plus conducted three training events at which 1,358 farmers received training on improved vegetable production technologies.
- Capacity building with farmers implemented in partnership with three seed companies – CYCAS international, House of Seeds and East West. Through the ISSD Plus supported training sites, seed companies have skilled over 7,000 farmers on improved vegetable production techniques
- Promotion of use of superior varieties was effected at variety demonstrations sites set up by six seed companies. Mass media campaigns were also carried out, reaching over 5,000,000 listeners through radio

Future Plans

ISSD Plus will support the establishment of a knowledge sharing platform for the skill extension providers known as vegetable brigadiers to facilitate them in the development of innovative ideas to support vegetable growers.



FOR MORE INFORMATION CONTACT

ISSD Plus Uganda

Studio house – Ground Floor 5 Bandali rise Bugolobi

P.O.Box 20106, Kampala

T | +256 (0) 751007613 / +256 (0) 775968005.

E | [info@ISSD Plusuganda.org](mailto:info@ISSDPlusuganda.org)