MKULIMA WA
SEVIA

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SEVIA: SEEING IS BELIEVING

WHERE ARE WE NOW?

by Elijah Mwashayenyi

Loveness Maleale had a successful sweet pepper crop in the second half of 2018

Quote from a farmer:

"I am training other farmers what I learned from SEVIA. My fellow farmers have even changed my name. It is easier to find me if you say you are looking for Abubakari SEVIA."

Abubakari Saidi of Babati

Our name 'SEVIA' has really become synonymous with vegetable production in Tanzania. For the past four and half years, Team SEVIA has cross-crossed the country with demonstrations and messages of better vegetable production. At this juncture, we once again would like to bring you a summary of what we have achieved so far.

Frank Mazengo talking about growing lettuce under drip irrigation

A knowledge base for vegetable production

The SEVIA Centre, at Lambo Mferejini, Hai District (near Moshi Town) has indeed become a knowledge base for vegetable production in Tanzania and beyond. The centre continues to host a few strategic trials but mostly demonstrations. SEVIA's work covers both open field and greenhouse production. Building capacity in knowledge on vegetable production has been SEVIA's key focus. The farm has been the main centre for training of trainers (mostly sector professionals and lead farmers). To date, SEVIA has trained 1035 sector professionals and lead farmers.

Over 900 demo sites, over 39,000 farmers reached

The SEVIA theme, "Seeing is believing" epitomizes the SEVIA approach of using demonstrations as evidence based extension. Over the past four years we have since established 979 demonstration sites that have acted as in-field facilities for both capacity building and technology transfer. Some 39,853 farmers have been reached in 11 regions (20 districts).

Ladislaus Mkufya (right) demonstrating trellising of tomato in Babati

Wilfred Makange (left) explaining organic farming in the greenhouse of **Jecha Katunzi** (right)

Introduction to new varieties and technologies/practices

Through SEVIA, farmers in 20 districts across Tanzania have been introduced to improved seeds, including hybrids, and better crop management practices. Themes covered in this technology/knowledge transfer include nursery management, crop protection, fertilizer management, drip irrigation, greenhouse production, post-harvest handling and market information.

Research officer **Latifa** checking for thrips in a thrip control trial

Information on vegetable production

While we have strived to provide information to farmers through our extension officers, we have also been able to do so through our periodic newsletter, crop guides for farmers and the e-learning tool for sector professionals. Our 12 crop guides (so far) developed with support from Wageningen UR and covering 11 vegetable species, have been a hit with farmers. Again with support from Wageningen UR we have developed an e-learning tool for sector professionals. It can be accessed through our website www.sevia.biz.

Quote from a farmer:

"Since I took the SEVIA advice, I am happy to be different from other farmers. With the income I am getting from a more lucrative market in Dar, I am buying inputs to provide loans to other farmers. I get repaid through a profit sharing and so I have extra income from farming. That makes me a happy farmer."

Ayubu Juma Makasi of Lushoto

Market linkages

Though SEVIA does not buy or market produce on behalf of farmers, it offers some information on markets and assists in creation linkages. SEVIA works closely with other organisations like Tanzania Horticulture Association for farmers to access markets. In 2017 SEVIA, with support from research by Moshi Cooperative University, produced a report on the market options for vegetable growers in Tanzania.

Research

Our research work, also done in collaboration with Sokoine University of Agriculture, Moshi Cooperative University (MOCU), Tari-Tengeru and The World Vegetable Centre has evaluated some 144 vegetable varieties and completed some 75 projects on various topics including fertilization, crop protection, irrigation, trellising, plant spacing and greenhouse production.

Some summaries of research reports can be found on www.sevia.biz.

Improving the rural economy

SEVIA has continued to encourage farmers to treat vegetable production as a business. This is contributing to boosting the rural economy. Increasingly we are beginning to see younger people entering the farming business. This is more so where technology is involved. We believe that the sustainability of farming in generally rests on the participation of women in decision making and the involvement in the youth in farming.

Lasting impact

The SEVIA journey continues at full throttle. We are seeing the impact of our work and we believe that our stakeholders are seeing that too. We still have many more farmers and sector professionals to reach and train. However, we firmly still believe that our legacy will not so much be based on the numbers of stakeholders that we train, but our impact on lives of farmers, their families and the impact on the overall vegetable sector in Tanzania.

BRINGING FARMERS TO THE NEXT LEVEL

by Anita van Stel

"Tanzania has 365 days of 13 hours daylight. If a farmer has access to water, he is able to grow vegetables all year round. It is rather strange that Tanzania is importing vegetables."

Speaking is Harald Peeters, who has been living in Tanzania since 1991. As Managing Director of Rijk Zwaan Q-Sem/Afrisem he was one of the co-founders of SEVIA.

Peeters states that Tanzania has much potential for growth in vegetable farming: "Farmers can improve their livelihood in different ways: first of all by changing their ways of farming on current mashamba. By using better seeds and adoption of appropriate methods we see yields improving. If farmers have the means to invest in plastic greenhouses, drip irrigation, mulch or solar systems, or intensifying farming of their fields, and by doing so become agricultural entrepreneurs, they can earn lots of money. Training farmers and transferring knowledge is key!"

Convinced to change habits

Of all vegetable seeds being sold in Tanzania only 10% are hybrids or high level OPV's. As a worldwide leader in production of vegetable seeds, Rijk Zwaan is targeting on expansion of its sales in the country. "There is a large market share to be won," says Peeters, but at the same time stating that education and training of farmers needs to come first. "When farmers see what new techniques or better varieties can mean for them, they can be convinced to change habits. On our Nanenane demo field in Lakezone we taught farmers how to graft tomatoes in order to avoid bacterial wilt and we met a lot of enthusiasm. Another example is our tomato variety Jarrah F1. This is so vigorous and white fly resistant that it can be grown in January and February during the hottest time of the year. Farmers were shown that the plants can still do well despite theharsh circumstances of the dry season. With extra care and extra inputs, yields may go up to 80 tons per ha. **Seeing is believing.**"

Four demo-centers throughout Tanzania

Rijk Zwaan had the image of being interested mainly in lead farmers with greenhouses, but the company is also reaching out to more open field farmers: "We want to take farmers to the next level. We notice that many farmers are very interested to know about biological pest control or fertilization. They also want to be able to calculate costs of their production."

Recently Peeters changed jobs: he became Area Manager Africa Digital Strategy and Retail-Chain Development. One of his first achievements was a partnership of Rijk Zwaan Tanzania with the American organization USAID. The

grant of USAID was awarded as a contribution to training farmers in four newly established demo-centers (greenhouses and classrooms), in Morogoro, Mbeya, Iringa and Zanzibar. At SEVIA a fifth greenhouse was built. The demo-centers will have the capacity to host thirty farmers a day, rotating between classroom, open field and greenhouse. Peeters: "For our trainings we are working with reliable partners. When - for instance - providing a training about drip irrigation, we should have the professionals around."

An amazing job

How does Peeters value SEVIA? Peeters: "SEVIA is doing an amazing job, we like working together with SEVIA staff and should continue doing this. Because of the grant of the Dutch government (that made the project SEVIA possible) also Rijk Zwaan was able to make a leap in Tanzania." Peeters implicitly has a message for the Tanzanian policy makers too: "The population will double in the near future and they all need healthy food. Farmers can contribute to a stable socio-economic climate. By stimulating entrepreneurship in the countryside and assuring income, a middle income class will develop and these people will be less eager to move to already exploding cities like Dar es Salaam."

Jarrah F1 and Gamhar F1

Peeters is proud of Rijk Zwaan contributing to 'breeding for climate change':
"Both tomato varieties Jarrah F1 and Gamhar F1 were bred at Afrisem in Tanzania. That means they are really adapted to the climate, soils and needs of the farmers. The first is for the dry hot season, the latter for the rainy season. Since their introduction, they have conquered Tanzania by storm and we can barely keep up with the demand. The news has mainly spread by word of mouth from satisfied customers."

YOUR FREQUENTLY ASKED QUESTIONS WITH OUR ANSWERS

by Epaphras Milambwe

During field days and training farmers ask many questions to our extension officers and other SEVIA staff. We compiled the eleven most raised questions and hope you might benefit from the answers. Do not hesitate to ask other questions to SEVIA, wherever whenever!

Q1 How can SEVIA help us to control bacterial wilt for our crops, especially tomato and sweet pepper?

SEVIA: *First you have to know that your plant can wilt due to bacterial wilt, fusarium wilt, verticilium wilt, nematodes and physical injury of the roots or limitations in irrigation. So you first need to identify the cause for wilt, before rushing into conclusions. Fusarium and Verticillium wilt are soil borne fungal diseases. Bacterial wilt is caused by soil borne bacteria.*

And how can we prevent bacterial wilt?

1. *Rotate crops from different families. Bacterial wilt but also Fusarium and Verticilium can survive indefinitely in the soil.*
2. *Choose tolerant or resistant varieties. There are also Fusarium and Verticilium tolerant varieties.*
3. *Grafting of the commercial variety on a resistant rootstock.*
4. *Plant tomatoes in well-drained soil with a balanced pH.*
5. *Remove and destroy affected plants at the end of the season.*
6. *Wash your hands after handling infected plants.*

There are no chemicals yet to control bacterial wilt.

Q2 How can SEVIA help us to address the challenge of market for our vegetables? Price fluctuation?

SEVIA: *Planning is key for every farmer. Where and when do you get the best price?*
*Make a deal with a buyer before starting production.*Target on off-season harvest if you have access to water supplies. In general, prices of vegetables like tomato, onion, sweet pepper, cabbage and cucumber are lower from June to December and higher from December to June. SEVIA does not offer market to farmers but gives market information to farmers through extension officers in different districts; this includes; volume, consistency and quality. We also collaborate with our partner TAHA who gives daily information on prices for different crops. If you register with TAHA no.*149*59# you can access daily market information.*

Q3 Hybrids are expensive for smallholder farmers, how can you assist? Are hybrid seeds superior to OPV?

SEVIA: *Hybrid seeds are expensive to breed by the breeding companies but will also return higher yields when grown properly, it is a matter of cost benefit. Hybrids seeds are tolerant to some pests and diseases and generally give higher yields compared to OPV. Farmers can also grow hybrids on a smaller piece of land and still get good returns. Besides costs of seeds are relative, it seems high but a simple survey that was conducted with SEVIA showed that farmers spend more money on labour, pesticides and fertilizers compared to seeds.*

Q4 Some varieties disappear from the market after a short time of promotion? What is the problem?

SEVIA: *That may be true. Some seed companies may decide to withdraw some varieties from the market once they have sufficient information that the performance of that particular variety is not promising to farmers and may cause a loss. Sometimes they withdraw it to improve it. Or the companies had problems in producing enough seed to sell.*

Q5 Can Sevia support us with a start-up capital for vegetable production?

SEVIA: *SEVIA is not a donor organization, so does not give loans or grants to farmers. But knowing the challenges that vegetable farmers face, SEVIA links farmers to financial institutions that can assist farmers: among them are the financial institutions NMB (loan) and EFTA (equipment loan). As a farmer, you should also save for the next cropping after selling your produce.*

Q6 How can you help us to avoid buying fake inputs (seeds and pesticides) in the agro shops?

SEVIA: *The role of SEVIA has been to train farmers, agro-dealers and other sector professionals on different aspects of vegetable production. The issue of fake products can only be solved by good legislation and enforcement by the government. However, one of the aspects is seed quality how you decide what to buy. Before you buy a product you can already do a few things to avoid buying a fake product. Read the label properly and understand the information on it. A lot of reputable companies put telephone numbers and batch numbers on their products so you can confirm if it is real or fake. Before complaining whether seeds or pesticides are fake or not, ask yourself if the products have been handled properly. Storage condition can lead to degradation of the products. Therefore, you need to understand the optimal conditions for seed and pesticide storage, because a lot problems can be attributed to poor storage by the farmer or agro-shops.*

Q7 Can we mix different pesticides to save time?

SEVIA: *Yes, you can do that. However, if it is not explicitly mentioned on the label, the risk of disappointing results when using a mix is yours only and the producer will not be liable for any damage. Mixing can lead to more toxicity or rendering other pesticides inactive, hence incurring unnecessary costs for buying more pesticides. Thus, pesticide mixing can cause problems to your crops and yourself.*

Q8 How can we control Tuta absoluta or Katangaze in tomato?

SEVIA: *The first thing you have to take into account is field hygiene. Make sure all infected debris and other plant parts are collected, buried or burnt. Also make sure your neighbour observes field hygiene too. Infected fruits should be buried as well. In the situation where you plan to use chemicals, make sure you understand your target: whether it is egg, larvae, pupae or adult. If you can manage to control larvae you are likely to eliminate infestation to a large extent. Flubendiamide, Chlorantraniliprole, Lufenuron, Deltamethrin, Lambdacyhalothrin are effective against Tuta larvae and adults. However, make sure you alternate pesticides, use in a period of 18 days one pesticide spraying every 5-6 days, after that select another one to avoid that Tuta becomes resistant to pesticides.*

Q9 What is the difference between producing vegetables in the greenhouse and the open field?

SEVIA: *The biggest difference is that inside a greenhouse the climate will be different and the pest and disease pressure will be lower. This is because of the plastic roof and the side walls of insect or screen net. Optimum temperature and air circulation enable a crop to grow well in the greenhouse. The plastic also keeps rain water from leaves, hence reducing diseases. In open field you have no control over external factors like pests and diseases so you will need to spray a lot more and costs will be higher. Compared with the open field more skills and know how are required from the farmer. With proper crop management you are able to harvest for a longer period compared to the open field. Select appropriate crops for greenhouse production for good returns.*

Q10 Is it right to extract seeds from a hybrid crop for next cropping/planting?

SEVIA: *NO!*
Hybrid seeds are meant for one cropping cycle. If you extract seeds from a hybdrid crop you will notice that in the next season your crop doesnot look uniform anymore. You will observe very good performing plants but also a lot of tiny non productive plants. You may also encounter that fruit shape and size is not the same for each plant . Hybrids have the tendency to segregate to original parent plants that may be susceptible to diseases or lower yields.

Q11 Is foliar fertilization better than granule application?

SEVIA: *Foliar fertilizers are normally applied as supplementary fertilizer, basically because they contain low quantities of nutrients. Micronutrients (in foliar fertilizers) are also required in small quantities. It is not economic to apply major nutrients solely through foliar fertilizer. We always recommend granular fertilization or fertigation if you have the facilities and know how to use the latter. Foliar application is recommended as a supplement in situations when granular fertilization is not effective or may take long to give results. Also understand the uptake/intake of nutrients via roots and leaves to avoid unnecessary costs. Choose nutrients that can easily be taken up by roots and leaves.*

WE ARE HERE TO STAY

by Anita van Stel

"One seed of Imara F1 (tomato) costs TSH 20. The yield of one plant is 4 to 5 kilograms. On the market, a farmer could sell one kilogram for TSH 1,000. You do not need a calculator to compute the profit," says Samson Meshack, Marketing manager of East-West Seed, a partnering company in SEVIA.

Samson Meshack and **Coen Everts**

Save money later

Why do farmers in Tanzania stick to buying OP's or using farm saved seeds when hybrid seeds obviously ensure better yields? **Coen Everts, General Manager of East-West Seed in Tanzania**, understands the reluctance of farmers: "Farmers have to open their purse to buy seeds. They are not used to this because the seeds they save from their own tomatoes or watermelons are free of charge. If they decide to buy seeds the OP varieties are much cheaper than hybrids. We sell OPV´s in massive amounts, but we are strongly promoting hybrids. By choosing hybrid seeds the farmers will save money later. How? Because hybrids are higher yielding and have resistance to some diseases, like our tomato variety Kipato F1 that is resistant to bacterial wilt. Farmers can therefore economise on agrochemicals and fertilizer use. They will need less compared to resources needed to protect the crops growing from OPV's and farm-saved seeds." Meshack mentions the other advantages of growing hybrid crops: "Fruits have a good, uniform size, transportability is better and they have a better shelf life. Farmers do see the potential."

The drive of East-West Seed

In 2017 Everts started managing the East-West Seed affiliate in Tanzania. It consists of a big production plant with 350 tunnels, where marigolds for the Asian market are grown, packed and shipped. Vegetable seeds are also repacked for distribution. In this facility, East-West Seed employs 250 people from neighbouring villages. For the sales organisation the company has an office in Moshi town. Everts does not have a background in agriculture, but setting up a sound distribution network and working on establishing good relations with customers, are missions he accomplished in his previous international jobs too.

He is very clear about the drive of East-West Seed in Tanzania: "We are here to stay and putting our money where our mouth is. We invest in order to grow in the vegetable seed business. East-West Seed strongly believes that in every center, a professional Research & Development and breeding department should be installed. Recently we started collaborating with an associate breeder and are going to focus on breeding indigeneous leafy vegetables, like Sukuma wiki, Ethiopian kale and Nightshade."

Hand in hand with transferring knowledge

In Africa and Tanzania the population is expanding fast and there is a growing demand for vegetables. Research of TAHA has shown that the overall Tanzanian market for vegetable seeds is growing with 8 to 15 percent a year. In Tanzania 85% of all farmers (estimated 10 million) are smallholder farmers. Everts says that the company's goals are to become the number one seed supplier in Tanzania, to sell more hybrid seeds and bring vegetable farming to a higher level. "Smallholder farmers are the esteemed customers of East-West Seed."

Everts believes that SEVIA's extension officers have played a significant role in the process of acceptance of hybrid seeds. "The introduction of hybrid seeds to farmers has to go hand in hand with transferring knowledge about farming techniques. You have to tell and show the farmers, which SEVIA is doing well," he states. "However, we have just started. SEVIA has reached 40,000 farmers, but there are many more waiting for the appropriate advice."

Mkombozi

"Have you heard about our new watermelon variety," Everts asks. "It is called Mkombozi F1, which means 'savior' in Kiswahili", Meshack adds. "The yield goes up to 30.000 kg/acre, with fruits weighing 12 kilo and the taste is very good. The bigger the better, buyers tell us. We recently launched it on Zanzibar and it is picking up really well."

SEVIA GOES INTERNATIONAL

by Elijah Mwashayenyi

Right from the onset, SEVIA had a vision for expanding its reach across Africa. Due to the intensive nature of the operation in Tanzania, it was not practical to replicate the SEVIA project in other countries within such a short time frame (2014 to the present). However, SEVIA found a way to spread its influence beyond its borders through collaboration with our partners. Once they started extension operations in other countries, the SEVIA experience became handy. On invitation of the partners (and their expenses) we were more than happy to share our knowledge. We are proud to show some (definitely not all) examples of our collaborations.

With Wageningen UR in Uganda

Ruth Ardzard and SEVIA's Mary Maganga also visited the tomato demo of the Uronu family in Machame

The first such collaboration was with Wageningen UR's Integrated Seed Services Development (ISSD). SEVIA gave support for the establishment of pilot trials in Lira in Uganda in 2016 that were a precursor to a new vegetable extension project. Cate Nakatugga, the coordinator, and her colleague extension officers came to SEVIA to tap experience. Once the ISDD vegetable project in Uganda took off, partners went into action. East-West Seed Knowledge Transfer (EWS KT) established a team on the ground. SEVIA trained the first nine EWS KT and ISSD officers. Thereafter Annet Kizza, the EWS KT Manager in Uganda and Ruth Ardzard from EWS KT in Nigeria came to the SEVIA Centre for training. Maarten Hermes of Greentech Holland, representing Rijk Zwaan in Uganda and active within the same ISSD program, also visited SEVIA to exchange experiences.

Working together with Ghana

Zakari Musah from Tikola Ghana Limited (distributor of East-West Seed), came to SEVIA for an internship. Tikola Ghana limited does not just provide quality seeds adaptable to the lowland tropics of Ghana, but also quality training on how to attain maximum yields. In January 2019 SEVIA received Helen Gyasi, staff member from Rijk Zwaan Ghana, for an internship.

Rijk Zwaan and farmers from West, East and Southern Africa

SEVIA shared views on vegetable farming with a group of farmers and sector professionals from West Africa and East and Southern Africa who had come to attend the Rijk Zwaan field days.

Nuffic and Mozambique

SEVIA talked with Nuffic (Dutch organisation for internationalisation in education)about the training needs of youths in Tanzania. In addition, Nuffic organised a delegation from Mozambique (eight lecturers from universities and colleges) to come to SEVIA for training. Placido Jacinto Jofrice Da Costa, one of the participants with an agricultural background, stated: "Thanks to SEVIA for showing us technologies that are very different from ours in Mozambique."

Interns in Moshi

SEVIA has hosted fifty college interns from various agricultural colleges and Sokoine University in Tanzania, and two from Wageningen University (Netherlands).

SEVIA staff in Uganda and Nigeria

Ladislaus Mkufya was seconded to EWS KT in Uganda for three months to give support to their second intake of extension officers. Most of his time was spent on a central demo plot that acted as a training facility. "One of the challenges out here is that most farmers do rainfed vegetable production. One of the two rain seasons has little rain.I advised the Ugandan colleagues to explore the use of irrigation," Ladilaus reported.

Mseti (in yellow shirt) explaining proper transplanting and after care of young plants.

Some 4000 kilometers to the west in Nigeria, SEVIA's Mary Maganga and Mseti Mwita trained the relatively new EWS KT team of six officers.

Our international audience

We might not have established SEVIA centers in other African countries but we managed to reach farmers and sector professionals beyond our borders. Whether the referred-to establishment may still happen in future, no-one really knows. What we know for sure is that, in our own way, despite the odds we managed to make SEVIA have an international audience.

STORIES FROM THE FIELD

by Halima Jumanne

ENTREPRENEURSHIP OUT OF FARMING

"I started a business of selling seedlings. I started with 2000 seedlings and then increased." Joseph Mbuji became a business man in farming and is doing extremely well.

Joseph Mbuji in his net-nursery-house

Joseph Mbuji (42) is a vegetable farmer from Kerege in Bagamoyo. He has been farming since 2013, growing cabbage, sweet pepper, Chinese cabbage, watermelon, hot pepper, eggplant and African eggplant. When he started farming, he faced some challenges like access to market, low yield and crop diseases.

In 2016 Joseph Mbuji met Nurdin Mndoholele (then SEVIA's Bagamoyo extension officer) who selected him as a key farmer to host tomato (Kipato F1) and sweet pepper (Red Jet F1) demos. Joseph was also given advice on marketing by Thobias Mkamate (former Moshi extension officer). Joseph then installed drip irrigation with assistance from SEVIA technician George Kisamo. From a well-established demo, he learnt the efficiency of hybrid seeds, proper application of fertilizer, crop management procedures and subsequently adopted these techniques.

Joseph decided to sell his produce to local supermarkets where he got good prices. "SEVIA gave me an alert that changed my farming system completely. Initially, I used to increase the land size so as to raise my production. Now I realize that better cropping techniques with good varieties give me better productivity."

Joseph figured out a way to generate more income out of farming: "I started a business of selling seedlings. I started with 2000 seedlings which my customers appreciated. I then increased. The turnover of this business amazed me. I managed to construct a net-house for my nursery in order to produce healthier seedlings."

Up to 2018, Joseph managed to have a total of six net-houses for seedlings production, one agro-dealer shop and a drink selling point. He sells seedlings to both farmers and some institutions.

Joseph also continues with vegetable production and utilizes his farms to train other farmers. He appreciates SEVIA effort on providing farmers' training through demos and encouraged the project to expand its border so as to reach more farmers. "I cannot be thankful enough to SEVIA on how their knowledge got me from one step to another," he happily says.

THE IMPACT OF ADOPTION

"I was only using a single type of fertilizer on all stages of tomato, which resulted into flower abortion, blossom end-rot and poor yields. Now I know better," Paul Lyimo says.

Paul Lyimo with his wife Paskalina Simon

Paul Lyimo (46) from Managha village in Babati has been engaged in farming as his major activity since 2004. He started with maize, pigeon peas and tomato, but now focuses on tomato, sweet pepper and cucumber, on the same piece of land.

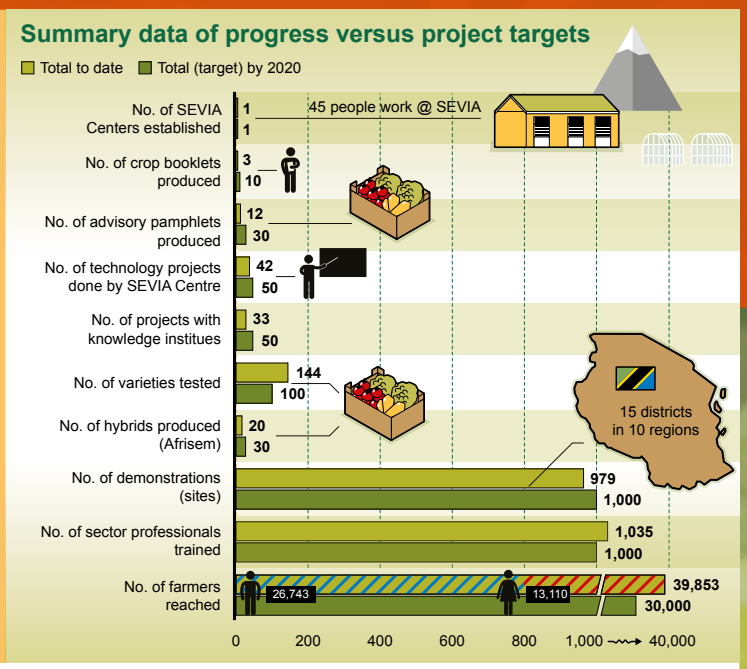
Everything changed after having been introduced to Ladislaus Mkufya (Babati extension officer). Paul was selected to attend a training held at SEVIA Centre in Hai near Moshi and learned about the significance of improved varieties, nursery management, proper plant spacing, trellising and general crop management.

Two months after the return to Babati, Paul hosted a tomato and cucumber demo. He was most pleased to learn about tomato fertilization. "I was only using a single type of fertilizer on all stages of tomato, which resulted into flower abortion, blossom end-rot and poor yields. SEVIA taught me the appropriate fertilizer at each stage of crop development and I was able to get a better and quality yield," he says.

Paul has adopted all farming techniques he learned from SEVIA. "I am now happy with the amount of produces I can make in different crops. My neighbours and I have been getting good results given technical advice provided by SEVIA."

Paul also advices SEVIA to keep on reaching more farmers as the training provided has potential to improve the skills of farmers throughout the country.

Summary data of progress versus project targets



Research Corner

Nursery and greenhouse recommendations

Over the past few years SEVIA has worked with various combinations of media to determine alternatives to commercial media, like peat moss and cocopeat. While these commercial media remain as standard materials there are some viable home-made options now:

For nursery (trays)

- A combination of 50% manure, 25% topsoil and 25% sand.
- Or 2 buckets of manure for every bucket of topsoil and bucket of sand.

Florah Yangole indicates mixing ratio to Mary Hassan

For using in bags for greenhouse production

- 75% topsoil and 25% burnt rice husks
- Or 3 buckets of topsoil for every bucket of burnt rice husks.

SEVIA interns preparing (burning) rice husks

NB: The size of the container used for measurement is not important. What matters is to maintain the ratio. Also note that sterilizing home-made media is important when bacterial wilt is occurring.

AGENDA

FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Leadership training of SEVIA staff		Start new cropping season		27: SEVIA Centre field day		1 to 8: NANENANE				
Training of farmers and sector professionals										

COLOPHON

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