



# SEVIA - Seeing is believing

## Revival of the vegetable sector in Tanzania and beyond

*By Elijah Mwashayenyi (SEVIA Managing Director)*

In Tanzania the average daily intake of vegetables per person does not meet the preferred minimum of 200 g a day. The population would benefit from an increasing production of vegetables. That's where SEVIA comes in. As the managing director I am happy to update you on the SEVIA project.



*SEVIA is demonstrating the production of vegetables such as Sukuma wiki, Eggplant, Sweet peppers, Watermelon, Cabbage, Tomato*



### Tanzania's vegetable requirements and areas of improvement

For a population of 45 million Tanzania requires 13,500 tons per day (5,000,000 ton/year). This volume of fresh vegetables represents a daily harvest of vegetables of minimal 1,350 ha of land, which translates to 500,000 ha/year (single crop cycle). The current area for fresh vegetables is an estimated 120,000 ha, while the total irrigated land area in Tanzania currently is approaching 300,000 ha. Since the potential irrigated and non-irrigated area is much larger we are convinced that Tanzania can increase its productivity per ha and expand the production area.

## First Steps

The first phase of implementation of the SEVIA Project started in 2013. The site was secured near Moshi, in Lambo Mferejini, Hai District. Staff recruitment commenced in 2014. The centre is now fully established with the SEVIA team focusing on variety screening, training of farmers and sector professionals, and extension in collaboration with local partners. SEVIA has assigned the first extension officers in Kilimanjaro (Hai and Moshi districts), Arusha (Meru and Arusha districts), Tanga (Lushoto district) and Morogoro (Morogoro district) regions. The project will place extension officers in Mwanza, Mbeya, Iringa and Zanzibar in January 2016. As per the theme 'Seeing is believing', demonstrations are central to SEVIA's work.



## Expected Results

SEVIA intends to screen over 100 varieties, organize 1000 demo's across Tanzania, produce 10 crop manuals, train 1000 sector professionals and reach 30000 farmers. Improved germplasm coupled with technical knowledge and technology transfer is expected to result in development of market oriented small scale farmers who are equipped to meet the vegetable needs of Tanzania. It is also expected that improved vegetable production methods will reduce production costs, reduce use of chemicals and will lead to responsible and sustainable production and marketing. And as a result of this, more and affordable vegetables will find their way to the Tanzanian market, which will benefit nutrition and health of the Tanzanian people.

SEVIA (Seeds of Expertise for the Vegetable Industry of Africa) is a public-private partnership of seed companies East West Seed and Rijk Zwaan together with Wageningen University Research Center and the Dutch Government. SEVIA is cooperating with local partners: Tanzania Horticulture Association (TAHA), Sokoine University of Agriculture, AVRDC, Horti-Tengeru and others. For more information: [www.sevia.biz](http://www.sevia.biz) ●



# Planning for vegetable production as a business

Vegetable production can be a very fruitful venture especially if done in the right way and environment. Tanzania has potential for improving both the production and productivity of vegetables especially through adoption of improved varieties and appropriate technologies. However, this potential can only be reached through proper planning by the farmer. The rule of thumb is to consider the issues highlighted below.



## Grow for the market

The one mistake farmers make is what we in SEVIA call the 'cereal crops mentality'. Quite often farmers just grow a vegetable crop and towards harvesting they start thinking about the market. The farmer either ends up getting very low prices or having no market for his/her produce. While this approach might work for cereal crops (which store well), it is a disastrous strategy for vegetables (which are very perishable). So the first question we in SEVIA ask a potential commercial vegetable farmer is **"Where is your market"**. If you have no market for it, do not grow it. It also pays to start small and grow slowly with your market. Do not grow a crop just because everyone else is growing it or "people made money last year". It is not surprising that tomato prices in Arusha crashed from TSh70 000 per crate to TSh 5000/crate recently within a period of 3 months. The reason is obvious "everyone" grew tomatoes causing a glut in the market. **Study the market and plan accordingly.**

## Do you have a reliable water source?

Vegetables require frequent irrigation and hence your water supply must be reliable. The quality of water is also important as saline water will not be suitable for most vegetables except for few crops like beetroot and Swiss chard. Freedom from diseases such as bacterial wilt is also important.

## What is your climate?

Vegetables can be grown on a wide range of climates and altitude. A lot depends on the type of vegetable or the variety of the vegetable. Cooler environments tend to be more suitable

for temperate vegetables such as onions, brassicas (cabbage, broccoli, cauliflower, sukuma wiki etc), carrots and peas while warmer areas are more suitable to more tropical vegetables such as pumpkin, cucumber, squash, nightshade, amaranthus and watermelon.

## What are your soils like?

While vegetables can be grown on a wide range of soils, they are best suited to loamy soils; soils that are less prone to waterlogging. For, example, crops such as pepper and tomato will not survive waterlogging for 48 hours due to the depleted amount of oxygen in the root zone. More clayey soils are prone to waterlogging while sandier soils tend to give problems with nematodes and poor drainage which results in leaching of fertilisers.



## Slope

Very gentle sloping land is best for the convenience of irrigation and drainage. Steep slopes may require terracing.

## Garden position

Your garden is best placed near your homestead if possible for ease of monitoring and management. A fenced area protects your field from animals and theft as well.

## Distance and transport

The accessibility of your source of inputs and your market will depend on the roads, transport available and sheer distance.

## Knowledge and expertise

What knowledge do you have in vegetable production? If you do not have, expertise is available. Utilise it. SEVIA's primary objective is to disseminate knowledge to vegetable farmers. Feel free to attend trainings, consult extension officers and visit our site.

## Access to finance

Obviously any vegetable production you want to embark on requires funds. What is available to you? Make a calculation. You can start with what you have or what you can access. Better start small and good than on big plots with lower quality.

## Conclusion

While the above list may not be exhaustive, it is important for the farmer to consider the above-mentioned factors in planning for vegetable production.

**In the next issue of this newsletter we look at the importance of selecting good quality seeds/varieties ●**



# Who is...? Eugene Agbicodo

Eugene Agbicodo is the Breeding manager of Afrisem, a breeding station in Tanzania, set up in 2008 by East West Seed and Rijk Zwaan. At Afrisem a team of specialists is in constant search for perfection by looking for varieties with even better combinations of desired characteristics.



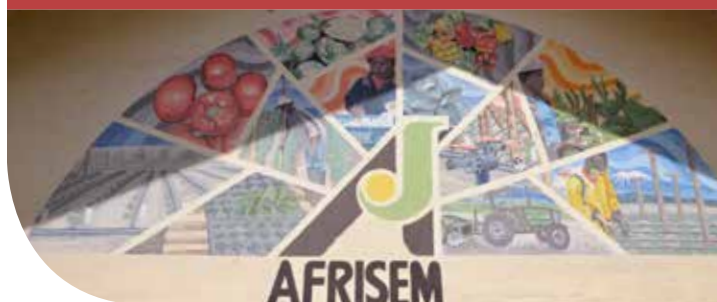
## Who is Eugene and what is his opinion about SEVIA?

I come from a small village in Benin and I literally grew up between seeds. My parents were selling agricultural seeds, mainly maize and beans. As children we spent our holidays in the fields, weeding and making beds. I always liked it. After highschool and university I started working at the International Institute of Tropical Agriculture (IITA), as an assistant researcher in plant pathology. We had to screen plant materials sent in by breeders, like cowpea and cassava. By working in the lab I learned a lot, also about statistics, but my heart wasn't in the job. I just wanted to be a breeder. After a few years I managed to get a MSc scholarship, to study Breeding in Germany. And I got my PhD in plant breeding at Wageningen University.

In 2010 Rijk Zwaan and East West Seed offered me the job at Afrisem. Afrisem is a typical Dutch and unique cooperation, because of competitors working together on a fair basis. As breeding manager I have to make sure that I provide them with the same amount of information, about new varieties. We have made quite good

progress with the Afrisem project. We succeeded in breeding a new Habanero pepper which is worldwide very important. It's a good hybrid, compared to the local variety, yield and taste like; we improved a lot of characters. The first and second sets of hybrids for African eggplant were ready in November 2012 and April 2015,

*"We have a common goal"*



respectively. The hybrids have improved shelf life, better resistance to red spider mite and more importantly almost double the yield of the OP varieties.

I am very positive about SEVIA. The level of horticulture in Tanzania is quite low. If a tomato farmer has one ha, he often only uses half of the plot. Local seeds have bad germination. SEVIA helps the farmers to see the potential in horticulture. And show the farmers the advantages of using hybrid varieties. It might take some time, as farmers need to be convinced and see the benefits with their own eyes. I work closely with Tyrrel Chisenga, the Variety testing manager of SEVIA. He is giving me useful information coming out of the field days and trials, about the preferences of the farmers. We have a common goal: better farming with better seeds ●

# Stories from the field

## Reginald Hugo is keen on starting greenhouse production

“As a starting farmer with only three years of experience I am motivated to practice vegetable farming with modern

*Location: Usa River*  
*Crop: Tomatoes, sweet pepper and cucumber*

technologies. Since SEVIA’s extension officer Bonaventura Lusaulwa started assisting me, I have seen great improvements in my production. After the demonstration supported by SEVIA I now know that plastic mulch and the use of seedling trays contribute to improved yields and efficient production. The trays resulted in healthy seedlings and so I didn’t lose seedlings and I had a good plant stand in the field. I managed to save water from my little pond by using drip irrigation with plastic mulch. The mulch also smothered weeds and so I did not have to weed. If it was not for the late blight, I would have produced even more tomatoes. I have learned that timely spraying is necessary to avoid loss. I was happy to share all this information with the more than one hundred farmers and students who attended the field day at my farm on the 21st of July 2015.

After my visit to the SEVIA site at Lambo Mferejini and Afrisem I am keen on starting greenhouse production. I also learned the importance of taking soil samples before farming; for instance last year I tried to grow watermelons but they did not grow well. Only after testing did I realise that my

soil had too much nitrogen which eventually harmed my crops.

I urge SEVIA to continue training on various subjects including fertilizer management. SEVIA should also continue engaging students in their activities, because they are our future. It will help to groom young farmers. I advise my fellow farmers to not only learn but practice and implement what we have been taught ●”





# SEVIA, the throwback events

Highlights between June and September 2015

- 803 farmers attended both on station and off station field days



- 112 lead farmers were trained in vegetable production
- 26 Sector professionals were trained on crop protection and fertilizer management
- 10 students have been on internship at SEVIA from Horti-Tengeru and Sokoine University of Agriculture



- SEVIA won a trophy at the fair of Nane Nane, second prize in the category of 'Non-profit companies/organizations offering services to farmers'

## Agenda

### SEPTEMBER

- Extension officers settling in their stations/districts (Hai, Moshi rural, Arusha, Meru, Morogoro and Lushoto)
- Planting for new trials and demonstrations both at the SEVIA farm and distant districts
- Training on seed nursery, field practices, post harvest handling and marketing strategies

### OCTOBER

- Training on crop protection

### NOVEMBER

- Training on field practices, post harvest handling and marketing strategies
- Exhibiting at the Meru Fair

# People @ Sevia



**Name**  
Joseph Kessy

**Age**  
28

**Function**  
Farm procurement and Logistics manager

**From**  
Moshi

**What I like about my job**  
Meeting the needs of each department, coordinating activities and needs

**Favorite vegetable**  
Water melon



**Name**  
Latifa Khamisi

**Age**  
23

**Function**  
Research officer

**From**  
Dar-es-salaam

**What I like about my job**  
Managing crops according to their treatment and observing their performance

**Favourite vegetable**  
Tomato

## Mahanjumati

### How to prepare Sukuma Wiki



#### Ingredients

500 g sukuma wiki\* - finely sliced  
1 onion - sliced or diced  
1 teaspoon garlic  
1 tablespoon cooking oil  
a pinch of salt

#### Method

Put the cooking oil into the pan and heat your pan at a moderate temperature. Add the onions and garlic and fry until they are light brown but not burnt. Add the sukuma wiki into the pan

and fry lightly. Let it to sweat a little, but it should not get soggy, this done to preserve the nutritional value of the sukuma wiki. After all the sukuma wiki is mixed well into the pan add salt. Cook for the next 2 minutes and remove from the heat. Serve when hot.

*\*You can replace sukuma wiki by spinach*

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