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Christina Msalato
and Abigael Mlonga
are friends and vendors in
Msalato Village (Dodoma).
Smallholder farmers like the
ladies because they pay a fair
price for the produce. Their profit
margins are small, with e.g.
buying tomatoes at TZS 800
per kg and reselling

Become a better farmer than your neighbour

"What is the best time to grow tomatoes, if I want to get the highest price on the market"? Who is going to buy my produce? How can I improve my crops, so that every trader wants to buy my vegetables? These are questions farmers should ask themselves, before starting their vegetable production.



Smallholder vegetable farmers in Tanzania are facing a number of challenges including seasonality of production, price fluctuations, poor infrastructure and lack of alternative markets to sell their produce. In this article we give some advices about what farmers could do to increase their chances on the market. We present some market options, but our most important message is: "Become a better farmer than your neighbour."

and Abigael is made easier by farmers who use better quality seeds advocated for by SEVIA. "We are happy with the quality of this tomato variety (Victory F1) and our customers like it too. It makes selling easier."

Best harvesting times

Timing is critical in getting the best price for the produce and therefore planning is key for every farmer. Planning involves the entire production chain, so before starting to grow farmers should reflect on:

- Choosing improved varieties that are more resilient to pests and diseases; these varieties are known to deliver a higher yield and better and uniform produce, which is more attractive to the market. Better varieties lead to a lower production cost price.
- Choosing varieties that have very specific characteristics: e.g. some pepper varieties are more pungent than others; some have
 different shapes or colours. All these differences might attract specific traders and give you a competitive advantage. Consider
 to grow other than traditional crops, in order to distinguish yourself from other growers; being one eggplant grower amongst
 a few competitors can be more profitable than being one of a thousand tomato producers. Make sure there is a buyer
 interested in the produce.

- Be careful: the market is unpredictable. High prices in one season are no guarantee. On the contrary...after a good season with high prices many farmers assume the next season will be alike and all start planting a particular crop. Then markets are being flooded and prices will drop.
- Targeting on off-season harvest if you have access to water supplies; The majority of farmers grow vegetables during the long rains (March to July). Because of shortage of irrigation water, many farmers refrain from growing vegetables during short rains and the dry season (August to February). Of course this has an impact on the supply and the price difference: in general prices of vegetables like tomato, onion, sweet pepper, cabbage and cucumber are lower from June to December and prices are higher from January to May.



Knowledge is crucial: farmers should know what they are heading for and acquire knowledge about every step of vegetable production. E.g. from when to start sowing during short rains and the amount of water needed, up to how to store or pack vegetables until marketing. SEVIA is there to give advice. Tanzania Horticulture Association (TAHA) provides information on market

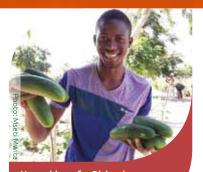
prices in various markets and price trends of some vegetables.

Where to sell the produce?

Recent research carried out by SEVIA and Moshi Cooperative University pointed out that though there are export markets in the Middle East, Europe and elsewhere, smallholder farmers in Tanzania barely have access to these markets, which are accessed only by large traders. Unfortunately some major chain supermarkets like

Shoprite, Uchumi and Nakumatt have closed due to institutional issues and lower demand for high-end products. So above all smallholder farmers will find buyers on open markets and have to keep on producing good quality vegetables for them. There are many open markets in Tanzania, ranging from the village to





No problems for Richard Augustino (Dodoma): buyers will find him!

the major city/town markets. Some village markets only have products on selected market days, once or twice a week. However, in major centres markets operate daily. Some of the major open markets are:

Region	Market Place
Kilimanjaro	Mbuyuni– Moshi Sadala (Hai District) Central market
Mtwara	Central market
Lindi	Central market
Zanzibar	Central market Darajani market Forodhani market
Mbeya	Soweto Sido Tukuyu - Ushirika
Могодого	Central market Gairo - Kilosa
Iringa	Central market Ilula
Arusha	Kilombero (City) Tengeru (Meru District) Namanga (Tanzania- Kenya boader)
Mwanza	Central market (City) Kirumba (Ilemela District) Buhongwa
Dar es Salaam	Kariakoo Temeke Mabibo Kisutu Shekilango Sinza

And also processors...

Vegetable processing is increasingly becoming important in some areas and might offer more opportunities to farmers. Processors in the Southern Highlands like Redgold, Dabaga and IVORI are found in Iringa while Marriet Natural Foods is based in Njombe. Darsh Industries Limited in Arusha is a leading manufacturer of fruit and vegetable products and is also the country's biggest processor of tomatoes. Serengeti Fresh (Arusha) is a grower, processer and exporter of fresh produce that also contracts smallholder farmers to grow crops, like green beans. Small scale vegetable processing industries for sauces and ketchups are increasingly operating in big centres like Dar es Salaam, Zanzibar, Arusha and Mwanza. Smallholder farmers may approach these companies when interested •

SEVIA and Moshi Cooperative

University ca

Some facts from the analysis:

STORIES FROM THE FIELD

LIVING AN AMAZING INDEPENDENT LIFE



Joseph Burton at his tomato plot

Joseph Burton (24 years) from Lusungo (Mbeya) has been growing tomato, Chinense pepper, onion, sweet pepper and maize since 2012. He got to know SEVIA through the training facilitated by SEVIA's Frank Mazengo on a neighboring farmer's demo plot.

Getting low yields and short life-span of crops in tomato was a major challenge. By attaching to SEVIA, he learned proper fertilizer application and trellising. After all the practices he had amazing results, including that the plants lasted longer in the field. "I have at least doubled my tomato harvest", he said. "After three consecutive seasons I was able to start a family and open a retail shop. I now live an amazing independent life."

BETTER MARKET ACCESS ACHIEVEMENT



Joint farmers are happy to see their produce

Amos Kimilomilo (28) and Iddi Mahamudu (29) are youth farmers from Budebude (Bagamoyo). They have jointly engaged in agriculture since 2016 with okra, African eggplant, tomato, sweet pepper and maize. Now they focus on tomato and sweet pepper.

In the last season they struggled to sell 28 crates of an open pollinated variety. Then they met Nurdin Mndoholele (SEVIA extension officer) and following his advice, they adopted the use of hybrid seeds, fertilizer application, and spraying and trellising techniques. So far they have easily sold 20 crates of hybrid variety Gahmar F1 from two weeks of harvesting on the same piece of land (250 m²). They expect to harvest for three more weeks and to double their yield. However, due to its good quality they will have no problem with selling their produce.

The pair also plans to cultivate 2000 tomato plants (Gahmar F1) and 3000 of sweet pepper (Mekong F1) in the coming season.

"We delayed to gain this knowledge. Maybe we could have been very far by now", they laughed. "However, we now look to the future with hope because we have been empowered to achieve success."

I NOW EMPLOY MYSELF



Eugene Sanga is trellising cucumber (Mydas F1) in his self-built wooden frame greenhouse

Eugene Senga (33) from Mbwanga (Dodoma) has been growing tomato, sweet pepper and African eggplant for six years now. In 2017 he participated in greenhouse construction at Nanenane plot in Dodoma under SEVIA technician George Kisamo. Besides he got knowledge about crop management when subsequently working with SEVIA Extension officer Mseti Mwita.

"I have now constructed my own wooden greenhouse and struck a deal of Tshs 600,000 with a farmer in Rorya for constructing another greenhouse. More farmers are asking me to do the same. I never knew I could employ myself in this way", said Eugene.

Eugene also learned the importance of using hybrid seeds in the open field and, by combining these seeds with better farming practices, he obtained high yields. From the land size of 300 m², he got 52 crates of tomato compared to27 crates of yield before the adoption of hybrid seeds.

"There is nothing in return I can give SEVIA rather than training other farmers on the use of hybrid seeds in greenhouse production", he said •

TIPS & TRICKS

Know organic remedies to control pests and diseases

Vegetable production often involves the use of chemical pesticides. Some farmers cannot afford the rather expensive pesticides, which – if not properly used - entail also other possible disadvantages, like damaging the environment and affecting the consumers of the vegetables. Therefore SEVIA also promotes organic methods to control pests and diseases without chemicals.



An organically produced okra crop at the Catholic Sisters' plot in Mailisita. Hai District

Do you know that...

Field hygiene is important

The long rain season is the period of many weeds and they serve as hiding places for pests. Always ensure

your field is weedfree, at all times. Uproot infected plants and dispose them properly, preferably by burying them deep or by burning away from the field. Remove all crop debris after harvest as pathogens overwinter in crop debris.

Choice of variety and raising healthy seedlings helps to control pests/diseases

Plants that are healthy with vigor can overcome attacks from pests and diseases. Select varieties that are tolerant to pests and diseases and raise your seedlings in trays or improved ground nursery using treated media. When you start with a healthy seedling you will need fewer applications of pesticide and reduce your production costs.

Organic pest control suggestions

Remember, not all insects eat your crops, and some help to keep other pest species down to acceptable levels. Such 'good' insects include wasps, praying mantis, ladybirds and lacewing bugs that feed on pests.

Cutworm damage can be prevented by creating a barrier around the plant or applying ash around the stem base of the plants.

Ladybird eats aphids





Transplanted seedling with ash at the base

Cutworms may also be repelled by placing onion stems around the transplants.

Slugs and snails can be nasty invaders as well. You can trick them and catch them: place a piece of wide board on the around late in the afternoon near the growing plants; the slugs and animals will like to hide and feed there. The following morning vou can collect them from underneath the board and get rid of them.

In general it is very feasible for the bigger types of pests to be handpicked and killed, e.g. caterpillars.

Bio pesticides

Neem extract is an organic pesticide for a wide range of pests such as aphids, beetles, grasshoppers, grubs, Japanese beetles, leafhoppers, locusts plant hoppers, scales, snails, thrips, weevils and whiteflies.

Basil leaves extract can be an alternative solution to conquer caterpillars, fruit flies, red spider mites, red scales, spotted leaf beetles, fungal diseases and nematodes.

With garlic extract you can control

caterpillars, fruit flies, red spider mites, broad mites, red scales, spotted leaf beetles, fungal diseases and nematodes.



Neem leaves

Cocktails of the above can also be alternatively used to control sucking and chewing insects. Lemon grass extract is effective for preventing leaf blight and bacterial diseases in vegetables •

Please check the SEVIA website for the recipes to prepare the extracts or ask your local SEVIA extension officer for more information.

Special field day in Babati draws 109 farmers

A staggering 109 people attended a special field day in Babati showcasing the importance of including potassium in tomato fertilization and presenting a new variety, Gahmar F1. The event, featuring one of SEVIA's partner companies, Rijk Zwaan, was the 7th field day (out of 26 in the October 2017 – February 2018 cropping season) organised by SEVIA.



The field day was held in Ayasanda village at the plot of Rashid Malomba Barie, a 79 year old veteran farmer who shows that he can still compete with the best. The occasion was also graced by five government officers including the District Agriculture, Irrigation and Cooperative Officer (DAICO) Mrs Jetrida Kyekaka. SEVIA's Managing Director Elijah Mwashayenyi talked about the importance of seeking markets and combining quality seed with good farming technology. "Farmers should take the lead in

finding markets", emphasized Extension
Manager Epaphras Milambwe. Matthew Ngoma
(Rijk Zwaan) explained the merits of using quality
seeds including Rijk Zwaan's tomato varieties
Gahmar F1 and Jarrah F1. In her address Mrs
Kyekaka pleaded with Rijk Zwaan to open a
branch in Babati so as to make their seeds more
accessible. Village chairman Elias Bombo thanked
SEVIA for choosing Babati as one of its working
districts and pledged to put Babati on the map
through vegetable production.



Two farmers, youth Erasto Elias who had been learning from Mr Malomba's demo and Abubakari Saidi from Kikore, gave moving testimonies of how collaboration with SEVIA was making a difference in their lives. Host farmer Mr Malomba could not hide their happiness at what was transpiring: "I would like to thank SEVIA and extension officer Ladislaus Mkufya. He is a hardworking young man whom

you can call at anytime. He has shown me that by using hybrid seed with proper fertilizer, I can get a good yield in a small plot. To my fellow farmers I say, if I can produce like this at my age, you can all do the same • "

Gahmar F1, the new act in town. All

the people attending marveled at the amount of fruit the tomato crop was carrying. One farmer just shook her head and said "I have never seen anything like this."

SEVIA FIELD DAY: A PLATFORM FOR SHARING INFORMATION WITH A LARGE AUDIENCE

From January to March 2018, SEVIA and farmers hosted a total of 26 field days. Themes covered included nursery management, fertilization, pest & diseases management, trellising, hybrid varieties versus open pollinated varieties and pruning. Crops featured were mainly tomato, cucumber and sweet pepper. Attendance per field day ranged from as few as 14 farmers up to a staggering of 119 farmers. SEVIA reached over 1300 farmers through these field days.

A SEVIA field day comes at the peak of the cropping season; when the crops are maturing and hence harvesting is due. It is at this stage that differences caused by technologies, techniques and varieties are clear for all to see and the farmers hosting demos are beginning to have testimonies on the benefits of such interventions. The field day is thus a platform to share information on those practical factors that will improve production, productivity and marketing.

A typical SEVIA field day starts with registration of farmers and other participants on arrival. Then the participants are addressed on the purpose and program of the day.



This is followed by a field tour to see the impact of the interventions; Seeing is believing. The tour is subsequently followed by a question and answer session facilitated by SEVIA extension staff. This constitutes the longest part of the field day. The host farmer and other farmers also have an opportunity to share their experiences with the interventions being exhibited. The field day ends with a closing address by a local authority or manager.

For a **special field day**, see the example from Babati on the previous page.



RESEARCH CORNER

Manure recommendation

SEVIA recently carried out a trial on using manure (with 1.5% Nitrogen) in cabbage production. The results led to the following application recommendation:

- If kilograms are used: 12 000 kgs (or 12 tonnes)/acre
- If a 20 litre bucket (estimated to carry 10 kg of manure) is used: 1200 buckets/acre
- If a wheel barrow (estimated to carry 50 kg of manure) is used: 240 wheel barrows per acre
- If a donkey cart (estimated at 10 wheel barrows) is used: 24 carts/acre

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MARCH	APRIL	мау	JUNE	JULY	AUGUST		
Training of farmers							
		Training of sector professionals	Advisory board meeting	SEVIA Center field days	Nanenane agricultural exhibition		

COLOPHON



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