

What you feed the soil with determines food quality

Fact. The preparation of good food starts in the garden where soil is prepared. In the synthetic world, that will mean getting a chemical-laden herbicides to kill off the grass.

BY JOAN SALMON

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As the consumer awareness campaign continues to spread, we can only win when we are certain of where our food comes from.

A ride to Kalerwe Market, a rather big collection of various food types was one I took in with excitement because I thought I would find something organic. To my disappointment, the women on some of the stalls shared that such foods cannot thrive in the market.

"We spray every food product here. How can you sustain a tomato on your stall without spraying it before harvesting? Even the big cabbages must be sprayed with chemicals to keep the caterpillars away. No stall owner can survive with organic food items here," they said.

Albert Kakande is an organic farmer, a Multiplier on the Knowledge Hub for Organic Agriculture in Eastern Africa (KHEA) project, trainer and producer of organic inputs, from Nkoowe Wakiso who grows watermelons, maize, beans and matooke. Formally, he worked with synthetic soil inputs and says before the shift, he noticed a decline from 150g of maize per cob in the first season to 50g or less by the end of the third season.

"Previously, I got 15 bags but with organics, I can get up to 25 bags", he shares.

Kakande emphasises that the preparation of good food starts in the garden where soil is prepared. In the synthetic world, that will mean getting a chemical-laden herbicides to kill off the grass. Herbicides also exist in the organics world but these are made from things on the farm.

One of these that Kakande uses comprises eucalyptus or pine tree husks, hairy grasses such as elephant grass, and broom grass and/or thorny plants such as rose flower stems, olukandwa, lantana camara (akayuki). You will also need vinegar and table salt.

"We train our farmers on how to make it and while some grasses are tough, the work of the vinegar is to cut down the tissue. To get rid of tough grasses, spray continually," he shares.

He adds that it is also important to look at the kind of seeds you are planting.

"However, looking at maize, the indigenous seeds have been submerged by hybrid and Genetically Modified (GMOs) types. Therefore, in that case, you may not have much control," Kakande shares.

After planting, a farmer must look at fertilising the soil and plant. In the synthetic world, the fertiliser's role is to sustain this maize plant through the three to four months of growth and maturity.

"In organics, we look at feeding the soil so it can feed plants beyond one planting season. That is in as much as you will put some more

fertilisers in the subsequent seasons," he says.

Some of the organic fertilisers Kakande uses include Bio-slurry whose major ingredient is composite celery, bio-char which is mainly comprised of plant residues as well as bokashi. These are solid fertilisers.

In order to manage the pests that come after the crops have germinated, Kakande says there are organic pesticides to counter that as well.

One can make a pesticide using tephrosia (muluuku), phytolacca (oluwooko), neem trees and table vinegar strengthened by adding rabbit



urine. "It works for soft body pests (caterpillars, small bugs) as well as hard bodies pests and termites. Concentration is determined by your target pests; for soft body insects, mix 250ml in 20 litres of water while 500ml will work for the hard bodied ones," he shares.

Fungicides

Fungal diseases also affect plants and Kakande says his main ingredients are the phytolacca (oluwooko) and neem tree because they have good antifungal properties.

All these organic inputs can also be used in urban farming and the quantities needed are smaller.

Hajara Nantume, a pineapple farmer from Kayunga who has worked with PELUM Uganda has been in the organic trade for the last three years and says she has stayed on course because organic farming is cheap in the long run. "I make my own fertilisers and pesticides on the farm. Organic pineapples also have a different market price from conventional ones and the consumers appreciate the value of what they are consuming. For instance, on the market, a medium pineapple is 2,500 but ours will go for between Shs2,800 and Shs3,000," Nantume, who started working with PELUM Uganda right after university through a project; Youth in Agroecology, says.

Nantume got most of her clients through the annual symposium of agroecology actors and they included value addition players.

"I was added to that platform and it now becomes easy to

Kakande making soil inputs. He says with organics, they look at feeding the soil so it can feed plants beyond one planting season.
PHOTO/JOAN SALMON

link up with them," Nantume added.

Matthias Kayemba, the proprietor of Parents Empowering Children and Youths Uganda, a community-based organisation and a KHEA Multiplier, and organic farmer in Kyetuume, Kasangati begun farming in 2018, practicing Integrated Pest Management (IPM).

"At times, I was an organic farmer and others times synthetic. That meant that whenever I saw a serious problem coming, I went to synthetics for help. Otherwise, I did not do much spraying, save scouting the garden," he shares.

However, since he chose to stick to organic farming, his soil health improved because previously, when he sprayed then put fertilisers, the ground developed cracks which showed the level of infertility and the amount of chemicals therein.

"Today, even when the soil is dry, it looks sandy, dusty but soft. The amount of water it needs has also reduced because of better soil practices," he says.

Owing to practicing agroforestry, Kayemba says even in the hot season, the environment is cool. Additionally, the attitude of his neighbours towards organic farming has improved because he walks the talk.

Best practices

Kayemba's garden is on one acre and he does intercropping. He intercrops herbs and plants. For instance, there is marigold in the garden which acts as a pest repellent because of the smell it gives off.

The grower of several crops, including vegetables such as amaranthas, spider plant, malakwang, and otigo also practices mulching because it keeps the soil wet. "The water then dissolves the nutrients making them accessible to plants," he shares.

Weeding is also necessary as weeds usually create a home for pests.

Kayemba also practices terracing to create channels for soil and water conservation. "The richer the soil, the healthier the plants," he says.

Incentivising farmers

Change of mind-set is what it takes to help a farmer appreciate organic farming. It is about helping them understand that it goes beyond the Shs10,000 they want to put in the pocket. Kakande says the main aim of organic farming is the health of the soil because when using chemical fertilizers, what remains in the soil is actually a poison that reacts with the soil and makes it acidic or alkaline; hence the need to buy fertilizers every season.

"Moreover, it costs Shs300,000 for 25kg of fertilizers and yet this must be done continually which is costly on the pocket and soil. The more applications you do, the worse the soil becomes because the microorganisms are continually killed. Many say, after three consecutive seasons of application, in the fourth, there may be no yield. On the other hand, the more organic fertilizers, the richer the soil gets," he shares.

Costs

While many may say organic farming is costly, Kakande says it is usually at the beginning of the process when one feels the pinch. When starting out, one may need to apply, say a tonne of bokashi fertiliser on an acre of garden to resuscitate the soils.

"When you apply this organic fertiliser, it becomes part of the soil and you may not have to apply the next season. Even when you have to, it is just a dressing rather than investing the same amount as the previous season," he says.

We encourage farmers to make their own organic inputs but if you must buy them, they are readily available among many of the KHEA Multipliers and other producers of organic inputs. For example, for bokashi, 1kg is between Shs800 and Shs1,000, Bio-slurry is Shs1,500 per 1kg while bio-char is at Shs2,000. Our prime goal is that farmers can make it on the farm. Therefore, after training, the onus is on the farmer to collect the material and make it.

"That said, for those who wish to buy in large quantities, the price drops," Kakande says.

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PRICE IN
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