

Kenya: Organic cultivation gives better harvests

Eco-farmer Samuel Maina's organic vegetable cultivation gives the family a good life. Now they have procured cattle, chickens and goats. Demand for non-toxic food has increased in Kenya, and the organic farmers can get a good price for their organic vegetables. In addition, organic farming is better for biodiversity and helps farmers cope with the tough challenges of climate change.



The organic cultivation gives Samuel Maina and his family a good life. Now they have been able to obtain livestock, and the income is enough for school fees for the children.

Photo / Illustration:
Sara Assarsson

Samuel Maina pulls up a few grass straws between the rows of cauliflower, pumpkin seed, beans and sweet potato. Small drops of water have accumulated on the leaves

after the night's fall, and Samuel Maina has to tread carefully so as not to lose his footing in the red, muddy soil.

It is rainy season in the highlands of southwestern Kenya where Samuel Maina grows tea on the steep hills. Dark green tea bushes cover the scenic landscape as far as the eye can reach. Single houses, trees and poles stand out among the cultivations. Here, Samuel Maina has been harvesting tea leaves for more than fifteen years, in the middle of what is called Kenya's tea zone.

But in recent years, vegetable cultivation has become increasingly important. Every cultivable plot between the dwelling house and the tea plantation that extends down the slope has been filled with vegetables, banana plants and edible plants.

What used to be a small kitchen garden has been transformed into small-scale agriculture. The surplus from the crops sells Samuel Maina and his wife Jennifer to the neighbors.

- I grow more than my family needs. We live a good life, he says.

Collected rainwater provides better harvests

The tea bushes are still his main income, but vegetable sales are becoming increasingly important. The family has provided livestock, chickens and goats for the money from vegetable cultivation, and almost a year ago they dug a pond that holds 50 cubic meters of rainwater.



With the money from the sale of organic vegetables, the family has procured goats.

- The powers of the weather are our biggest challenge. As a farmer you are totally dependent on rain so for me this pond has been a huge lift, he says and shows the water pipe that goes from the pond to the vegetable land.

Collecting rainwater makes small farmers less vulnerable to climate change and irregular rainfall. Samuel Maina says that he is now harvesting for a larger part of the year, which gives him a more evenly distributed income.

Organic cultivation in the protection of the trees

In the ground next to the dam stands about forty plants neatly lined up. It is avocado trees that Samuel Maina has driven up to plant on his property. He enthusiastically talks about silver grevillea, mango and other fruit trees that have been planted among the crops. Also, among the tea bushes, several trees stand out. The trees provide shade and prevent the nutritious mill from running away, while the leaves of some trees are used to feed the animals.

- We need to plant more trees that retain moisture in the soil. It's a bonus that we can also harvest fruits to eat and sell, he says.

Agroforestry or forestry is called the method where trees and shrubs are planted among agricultural crops or in pasture. The benefits are many: the fertility of the cultivated land increases, biodiversity is favored while the risk of wind and rain erosion is reduced. In addition, increased coal storage means that agriculture's impact on climate change will be less extensive.

Organic farming promotes food security

About 80 percent of Kenya's population work in agriculture, while just under half of the population lives below the poverty line. Food security is a problem in Kenya's so-called tea zone, says Edward Muiruri from the Pelum Nature Conservation Association, an umbrella organization that advocates organic farming and land use in central, eastern and southern Africa.

- Many of the growers are very vulnerable because they only grow one crop. Tea is a so-called "cash crop" that they themselves cannot consume but are sold for processing, he says.

Instead, Pelum encourages small farmers to grow several different types of crops. The fact that they encourage organic cultivation has several reasons, both from an environmental point of view and from an economic perspective.



The cultivation of organic vegetables provides food for the family and is sufficient for sale.

- Artificial fertilizers and other chemicals are a very expensive expense for smallholders. Nor is it financially sustainable for them to buy hybrid seeds, says Edward Muiruri.

The advantage of more traditional crops is that the seeds can be used as seeds for the next growing season, he explains. Reduced expenditure on agriculture makes the profit margin a little bigger and families get more over to school fees, clothes and other necessary.

Demand is increasing for food free of chemicals

Oack, Organic Agriculture Center of Kenya, is one of Pelum Kenya's member organizations that helps farmers in the region convert to organic land use through courses and advice.

- We want to promote organic food even at the local level. There is an increased demand for healthy foods that are free of chemicals. It is important that organic food is not only for the affluent population of the big cities but accessible to everyone, says Edward Muiruri.

More effective agricultural practices, diversification and better use of rainwater resources will in the long run help lower prices of organic food, believes Edward Muiruri.

- We are convinced that organic land use is the best way to reduce the effects of climate change. Already we are experiencing periods of drought, occasional rainfall and bad

harvests. By growing several different types of crops that grow on the same field, small farmers get greater returns on a small area, he says.

Organic cultivation favors biodiversity

Samuel Maina switched to organic farming ten years ago. For him, it is self-evident to use neither fertilizers nor synthetic pesticides. Nutritious manure comes from livestock and chickens, and to remove insect pests he uses a mixture of chilli and soap.

- It keeps the insects away without killing them. My kitchen garden may look a bit wild compared to commercial agriculture, but it is better to grow more different crops so that I always have access to fresh vegetables, he explains.



He shows how the mill is aerated, watered and enriched to provide the best conditions for a good harvest. The compost is covered with a tarpaulin to prevent the nutrient-rich mill being washed away in heavy rain. The many different varieties of plants increase biodiversity - which benefits his beekeeping.

- I learned to use the soil of my parents and now I have gone back to the methods they learned from their parents. I no longer buy seeds but plant the seeds from last year's harvest, he says, and proudly displays a collection of lined jars, clearly marked with cereals or seed.

Exchange of experience for more organic cultivation

In the village there is a network of 14 small farmers who meet regularly to exchange experiences. Samuel Maina has become known for his seed bank and is happy to share his knowledge.

But small farmers and organizations lobbying for a chemical-free land use are battling headwinds, says Mary Irungu of Pelum Kenya:

- The multinational companies that sell hybrid seeds and pesticides are quite aggressive in their marketing. For a small user, it is sometimes easier to add a ready-made solution than to make the products yourself.

- At the same time, there is a great interest in healthy food. We must convince everyone that organic food is better both for the environment and for health.

Text and photo: Sara Assarsson

More about Pelum Kenya and organic farming

The Nature Conservation Association's cooperative organization [Pelum Kenya](#) helps farmers convert their agriculture to organic farming for increased harvests and higher income. A combination of agroforestry and rainwater harvesting gives the greatest increase in the harvest and also helps small farmers to cope with the tough challenges that come with climate change.

Read about how [organic cultivation leads to greater harvests in India](#)

Organic farming is an important part of the solution for sustainable food production within the planet's borders. It favors biodiversity and important ecosystem services such as pollination. Biodiversity is 30 percent greater on organic farms. Organic farming also contributes to several of the global development goals, such as clean water, reduced hunger, increased biodiversity and sustainable production and consumption.



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