

# Fitter and healthier with traditional varieties

In Kenya, smallholders are improving the health of their families by growing local cereal varieties and indigenous vegetables. The use of traditional foods is even helping people with HIV/AIDS.

*Most traditional vegetable varieties are rich in vitamins and provide a sound basis for a balanced diet.*

It is not only acute hunger that kills people. Poor nutrition can also result in potentially fatal conditions such as diabetes and high blood pressure. Malnutrition or “hidden hunger” causes permanent damage to the organism. A third of the world’s population obtains a more or less sufficient caloric intake from a diet consisting predominantly of three staple foods – rice, maize or wheat – but is deficient in vitamins, minerals, trace elements, essential fatty acids and amino acids.

A balanced diet, by contrast, lays the foundation for lasting good health – and hence development: it is only when people are consistently well that they have sufficient energy. “If a smallholder is not in good health, the productivity of his farm declines, which in turn has an adverse impact on the entire family’s food situation”, says Listone Ayodi of the Rural Service Programme (RSP), a Kenyan NGO. “It is the children in particular who suffer as a result of malnutrition”, Ayodi continues. It weakens them and makes them vulnerable to disease. They cannot keep up at school because they lack energy and have difficulty concentrating. In the immediate post-natal period malnutrition has particularly seri-



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ous consequences. “It can hinder the child’s entire development for a very long time.”

Listone Ayodi is hoping to change this with the help of traditional cereal and vegetable varieties. “The old varieties are very rich in nutrients.” With the support of the German organisation Brot für die Welt (Bread for the World), the RSP is distributing suitable seed in the project region in the mountains above Lake Victoria. The organisation is also teaching the smallholders about sustainable farming techniques and the right way to prepare the rediscovered foods.

Malnutrition is now a thing of the past for the three children of Mable Kagesha and Christopher Itayi from the village of Budira. When they come out of school at midday, they are ravenously hungry. “It feels good to be able to offer them such lavish food”, says Mable Kagesha. On the table are

dishes of puréed plantain with fresh groundnuts, sweet potatoes, beans, maize cobs and a variety of leaf vegetables. The 35-year-old mother fills cups with a porridge of sorghum and millet from a canister. The children tuck into the food with enthusiasm. There was plenty on the table in the morning before they went to school, and there will be more after afternoon lessons to bridge the gap until supper – “they are growing.” The family has not always been able to eat like this. “We didn’t grow the range of things that is now enabling us all to thrive so well.” Christopher Itayi grins and sips at his cup of porridge. Years of toil under the equatorial sun have left their mark on him. His sinewy muscles tauten with every movement. The 38-year-old has worked in the fields almost all his life – first for his father and now on his own land. But his family’s change of diet has made a crucial difference: “I now have much more energy; I can work longer and harder.”

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## ■ Diversity returns

The people here used to grow local varieties. But in the 1970s, encouraged by major government campaigns, they started to plant more monocultures of hybrid seeds. The anticipated high yields did not materialise. Instead they had to pay out more for seed, chemical fertilisers and pesticides. Moreover, the maize that was widely grown did not contain enough nutrients on its own. Today, awareness of the health benefits and economic value of local varieties is increasing. On the farms, a wide variety of crops is flourishing again. To walk round Christopher Itayi's field behind the family's mud house is like touring a botanical garden. Sorghum, millet, groundnuts, amaranth, local bananas, various beans, lentils and potatoes grow in the red earth. There are also many types of cabbage, squash and spinach, as well as leaf vegetables whose value as a source of food is largely unknown in Europe. Zukuma, the local cabbage, is rich in vitamin A and calcium. Varieties of black nightshade and green lily contain many vitamins, minerals and trace elements. The African mito, a fine-leaved wild and cultivated plant, is a good source of vitamin A and beta-carotene. The leaves of the cowpea and the squash plant are also very nutritious. And West African sorrel encourages milk production in nursing mothers.

*Christopher Itayi  
harvesting groundnuts  
on one of his fields.*

Photo: J. Boethling



## ■ Food, medicine, fertiliser

Some of the native leaf vegetables contain therapeutic substances that are used in traditional medicine, for example to promote blood formation, relieve pain or reduce inflammation. As part of a balanced diet, indigenous plants can help tackle high blood pressure, diabetes, heart disease and elephantiasis, a widespread disorder involving abnormal swelling of part of the body as a result of lymphoedema.

Traditional cereals such as amaranth and sorghum, a type of millet, are also rich sources of nutrients, especially proteins and essential amino acids, carbohydrates that can be readily utilised and metabolised by humans, and unsaturated fatty acids. In addition, sorghum contains fluorine, sulphur, phosphorus, magnesium and potassium and is also a good source of silicic acid and iron. And it is gluten-free. There are also a number of traditional fertiliser crops that can contribute to a healthy diet as well as improve soil quality. This part of Kenya is very densely populated. The project area has around 1,200 inhabitants per square kilometre – a density rivalling that of Bangladesh. Resources are becoming increasingly scarce: there is virtually no forest left and the soil is depleted. It is essential that the fields

are managed as productively as possible and that soil fertility is maintained.

The RSP supplies smallholders with seed that is suitable for collecting for future production after the first crop. The organisation distributes nutritious plants that also fertilise the soil; it shows people how to make and use compost and how they can utilise mixed cropping and crop rotation not only to improve the soil but also to diversify their diet. For example, banana trees provide shade for plants and soil, prevent erosion and feed the family. Some local plantain varieties are both very easy to grow and heavy cropping. A plant can bear fruit for up to thirty years. The bananas are rich in protein, vitamins and minerals. However, many inhabitants of the region are no longer familiar with these varieties.

## ■ Deficiency symptoms are a thing of the past

Christopher Itayi's land is less than half the size of a football pitch. In accordance with local custom, his inheritance from his father had to be shared with his brothers. This practice results in ever-smaller plots that make it increasingly difficult for the owners to feed themselves. Despite this, the produce of Christopher Itayi's land now feeds his entire family, including his sister, who has a mental disability, and his 76-year-old mother. "We used to have to go without one meal a day, because we didn't have enough food to go round", the farmer recalls. In the attempt to feed his family, he had to work as a day labourer on other farms. But even when they had enough to eat, they were all affected by deficiency symptoms – especially the children. "They were constantly scratching; they had scabs on their skin, suffered from headaches and diarrhoea and were pale and tired because of anaemia", recounts Mable



Kagesha. At school they were unable to concentrate. Their growth and development was also retarded: they were late smiling, sitting, crawling and recognising other people. All these developmental steps are delayed if a baby or toddler is malnourished. The consequences can still affect people as adults. Now Mable Kagesha's three children are very rarely ill. "They are among the best in their school." The mother's eyes light up. "And when I take them to town for their routine examinations, the doctors nod with satisfaction."

Her own health has improved too. When Mable Kagesha was pregnant with her last child, she felt far stronger than in her previous pregnancies. After the birth, a careful diet that included spinach, amaranth and squash leaves enabled her to replace the blood that she had lost more quickly. "And while I was breastfeeding I always had enough milk."

Her mother-in-law is also feeling better. 76-year-old Gladies Emenza is squatting in the shadow of the hut, leaning against the cracked mud wall and enjoying the light breeze that wafts over the property. Gladies Emenza has diabetes and high blood pressure. In the afternoons she always used to feel very unwell: she could scarcely walk and spoke only haltingly. Now her health problems are kept in check simply by means of a balanced diet.

*Malnutrition is now a thing of the past for Mable Kagesha, Christopher Itayi and their three children.*

## ■ New hope for HIV/AIDS patients

A healthy diet based on local varieties is even helping the many people in the project region affected by HIV/AIDS. The prevalence rate here is the second highest in Kenya. Around half of all deaths are attributable to HIV/AIDS. Fortunately the death rate has fallen now that antiretroviral drugs are distributed free of charge. However, people with AIDS still need to stabilise their health and find ways of dealing with the side effects of the drugs.

Agatha Mwavishi has achieved this by improving her diet with the help of traditional foods that she grows on her small plot of land. As a result, her health is now good. But as the 46-year-old sits at the table in her mud hut and tells her story, she turns her gaze inwards. "When the test came back positive, I felt numb." She wrings her hands and speaks very quietly. When her husband died of an AIDS-related illness, his family held her responsible. Instead of supporting the widow and her four children, they barricaded the paths to her small house, drove visitors away, stirred up the villagers against her and openly wished her dead. Here in western Kenya a woman moves to her husband's village. Her own family is often far away.

Then the widow fell ill herself and was tested. "I had always felt safe from HIV." Agatha Mwavishi pauses for a moment. "My husband had never told me that he was infected."

Fortunately the RSP workers started to look after her. They persuaded the village headman to curb the activities of her husband's family and agree to a new path to her house. Then Agatha Mwavishi joined a self-help group for HIV-positive people in the village. "We share our feelings and support each other." For the first time, the slightly built widow looks up again. Her glance ranges over the small room, taking in her youngest daughter's soft toy and the older daughter's teenager posters on the mud wall. The group also provides practical help. When people are ill, members help each other with housework, look after the children, feed the hens and rabbits or tend the vegetable garden.

Her vegetable garden is a source of great security for Agatha Mwavishi and her children. "Our diet is now nutritious and varied, and the children are fit and energetic." She is pleased by this – especially for her youngest child, who is also HIV positive.

Mother and daughter both suffer some side effects from the antiretroviral drugs. Their improved diet boosts their immune systems. Some foods such as amaranth even promote the formation of T helper cells, which prevent AIDS-defining illnesses.

With the drugs and the new diet, Agatha Mwavishi has first stabilised and then increased the number of T helper cells in her blood. "That's good." Agatha Mwavishi nods, as if needing to reassure herself of this. "But the most important thing is that the children are well." And they are – thanks to the healthy diet that despite all obstacles she is able to offer them.



Photo: J. Boethling