

## **Survival skills for Kenyan schools**

**In 2005-6, up to one in ten Kenyans faced starvation, as drought swept across East Africa. Yet while some schools closed due to food shortages, the Father Makewa High School in Machakos district has a different story. Located in Katangi division, some 200 kilometres from the nearest town, the school is surrounded by baked and dusty earth. Yet despite four years of drought, the school Principal is keeping his 290 students off food aid.**

### **Beating drought**



**Principal Joseph Mbindyo demonstrating one of the irrigation water pans. credit: Ebby Nanzala**

**When Principal Joseph Mbindyo took over the school in 2004, he liaised with the parents of children attending the school to introduce the uncomplicated yet innovative technique of water-harvesting. Four long trenches stretching through 26 acres of waste land around the school were dug out. Lined with**

plastic sheeting, water pans were formed to hold runoff water to use for irrigation during dry spells. The school has also integrated local sesbania trees for nitrogen fixation in the soil, and organic manure is used on the entire farm. As a result, Mbindyo's harvest can survive four extra months of the growing season each year, and yields have been doubled, despite the presence of drought.

"We had to struggle before the crops started showing signs of stability," says Mbindyo. "But with our work and God's grace, we have not asked outside people for food aid." However, having failed with staple foods like maize and beans, Mbindyo is careful about what he grows. Now, he avoids these low value crops which need a lot of land and require more time to mature. Instead, watermelons, tomatoes, onions, cabbages, pawpaw, kales, capsicums and French beans sprout thickly, as though growing in a region of adequate rainfall. Some of the harvest is sold later to buy the staple foods for his students' three meals per day. Where maize sells for 28 Kenyan shillings (US\$ 0.40) per kilogramme, watermelons can fetch 10 times that in the local markets; the same applies to cabbages, capsicums and French beans.

### Take-home messages

Mbindyo originally learned his agricultural techniques from his farmer parents, before completing a postgraduate degree in agriculture at the University of Nairobi. He insists that Africa's perennial reliance on outside help could be reduced if people looked for home grown solutions. The school wastes no water - even water used in the kitchen is collected, purified with ash and re-used for irrigation. Students willingly take on tasks like mulching the farm. Most of the workers in school are parents who work on the farm to subsidise school fees, and many of them are adopting the techniques to their homes. According to Mbindyo, the impact of the school's success is also being seen more widely: "People in

**Katangi division are adopting this system of farming, contributing to food security in the semi-arid region of Kenya," he says. Further recognition came during this year's World Environmental Day, when the school scooped the top award for environmental conservation in Machakos District.**



**Principal Joseph Mbindyo and some of the students tend to the cabbages on the farm. credit: Ebby Nanzala**

**Further plans for the school are in the pipeline. The Area Member of Parliament, Charles Kilonzo, has used the Constituency Development Fund (CDF), to construct a road leading to the school, which was previously inaccessible by vehicle. A groundwater bore-hole is in its final stages, but the school is still short of the Ksh 108,500 (US\$1,500) needed for a pump. Daniel Kivindyo, area education officer at Katangi Division, says the school has demonstrated that if a community has a vision, hunger can be eliminated. "Anyone who understands the climatic condition of the Katangi region and the plight that students face, would definitely agree that the project is one which could reduce hunger." But Kivindyo notes that although the school is showcasing excellent farming techniques and food generation, it still**

**has a deficit of over Ksh 1 million (US\$14,000) and it will require outside assistance from the government and other donors to be entirely self-sufficient.**

**Meanwhile, Principal Mbindyo believes that the school will earn over Ksh 1.1 million (US\$15,000) in revenue by next year. The school's goat keeping project has also picked up. Students have goat meat on their menu, which, he believes, is a 'noble' achievement. "I never experienced how good it feels having three meals per day - especially meat during the drought season," says Mary Nyile, a form four student at the school. "My parents have adopted the innovative techniques and we never go hungry."**

**Article written by Ebby Nanzala**