

Nyumbani Village: Growing Organic for HIV/AIDS Orphans and Dryland Reclamation

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A troop of marauding baboons recently raided the riparian permaculture gardens, smashing all the watermelons just for fun! Wild herbs, like basil and sage, grow amongst the vegetables, jockeying for position along the drip irrigation line. Aphids burden the blossoms of the tomatoes and peppers. Such are the pest problems that come along with making the desert bloom. Pests from near and far--legged, rooted, and winged—delight in the only oasis of green vegetation in sight. What is a dryland farmer to do?

Actually, these problems only exist because of the incredible organic farming experiment going on at Nyumbani Village, Kitui. Most conventional farmers would solve such problems by applying greater amounts of pesticides, herbicides, or synthetic fertilizers to grow more, faster; to fight nature! But George Mbatha, the Sustainability Manager at Nyumbani, sees things differently. Since coming to the village two years ago George has completely transitioned *himself* to organic. Previously he studied and worked in chemical agriculture, but now he says, “even if I leave Nyumbani someday, I will always think organic as the first solution.”

Organic agriculture is an alternative system that works with nature, rather than against it; one that flows with the current, rather than fighting upstream. Organic farmers practice techniques to build soil health, increase carbon content and microbial life, like composting crop residues and manure, nature's sources of fertility. Organic farmers avoid pests and diseases by frequently rotating crops and growing diverse polycultures of legumes, leaf crops, fruits, vines, and roots together. Polyculture planting makes the most of all possible growing spaces, which in turn conserves water and nutrients and leaves little space for weeds. In organic systems all things are connected. In other words, one good thing leads to another! Rather than producing waste, which can be defined as unused energy, organic farmers recycle nutrients to feed another component of the farm.

At Nyumbani Village, the animal caretaker, Musau, feeds the cows and goats wild grass and herb that he forages from adjacent pastures. In exchange for this feed, the animals produce milk and meat for direct consumption, as well as urine and manure. Musau composts these “waste” products for villagers to apply to their vegetable gardens. The gardens grow vitamin and mineral dense vegetables and oil rich seeds for biodiesel to feed and fuel the village. After eating the vegetables, workers compost the children's waste and seed cake from oil crops, which is then applied back to the pastures so they can grow even richer grass and herbs to feed the animals. This enhanced fodder will allow the livestock to produce even more milk and eventually vegetables!

Nyumbani Village is a project of the Children of God Relief Institute (COGRI), a non-profit organization better known for its work helping HIV/AIDS orphans and families in Nairobi. According to Sr. Mary Owens, COGRI Executive Director, “The village is a revolutionary idea of the late Fr. Angelino D'Agostino, Nyumbani Founder, as a model to positively and proactively overcome the pandemic of HIV/AIDS orphans in rural Africa.” The village is situated within the larger community of fifteen traditional Kikamba villages, whose elders participate in guiding Nyumbani development. The village itself is home to hundreds of children and grandparents orphaned by HIV/AIDS from the Kitui region. The residents live together in family units, and receive education, health care, and a supportive community.

The vast village lands are managed organically to generate food, fuel, and diverse sustainable income sources. Nicholas Makau, the Nyumbani Village Manager describes that, “As the children grow up, they will learn these management techniques naturally by living in this community. When they are ready to leave, they will return to their homelands to live out strong, sustainable adult lives.” So far there are over two hundred orphans living in 32 families, nine courses being taught at the village 'Hot Courses' primary school, and a staffed health center that is also open to the public.



A group of grandparents gather to share milk from the Nyumbani Village cows.

Nyumbani village is not just for the benefit of the orphans, but for the wider community as well. Initially, community-based organizations from the surrounding villages collaborated to construct the village. Using local soil, the community groups made rammed earth blocks, and lined the village roads with traditional woven stick fences, both excellent use of locally available resources. This phase of the village brought considerable wages for over a year, funded by generous international donations. Since the end of the construction phase, villagers continue to benefit by utilizing the village infrastructure and resources: chiefly through access to irrigated lands, organic farming training, and markets for their products.

One of the first village developments was constructing sand dams, a permaculture technique originating in Middle Eastern deserts. Kikamba women carved check dams into the seasonal riverbed. When scarce rains come to the drylands, it quickly runs off the sun-baked soil and down the riverways; a memory before its use can be realized. The sand dams do not trap water, rather they fill up with sand and silt eroded by the runoff. When water flows into the sediments it slows down and gradually recharges the river edges. Over time this area has changed into a permanent wetland and irrigation water source. Solar powered pumps now carry water from the sand dams uphill to storage tanks that gravity feed drip irrigation lines in the gardens. This is another example of permaculture, slowing down the flow of energy and recycling it many times before it leaves the system. In such a recycling system, yield is limited only by one's imagination!

Village managers, student interns, and volunteers engage community members and village residents alike with sustainable agriculture experiments. A collaborative education effort between the Global Environmental Management Education Center (GEM) at the University of Wisconsin-Stevens Point, Kenya Institute of Organic Farming (KIOF), Jomo Kenyatta University of Agriculture and Technology, Kenyatta University, and Nairobi University, connects students from diverse natural resource backgrounds to applied projects at Nyumbani. Students are attached to community projects to test the effectiveness of many theoretical land use techniques they have learned in school. The experimental nature of their work encourages knowledge exchange with local farmers. “In many cases its not necessarily the technique, but the cultural context its applied to that is difficult,” says Millicent Misau, a former GEM-sponsored KIOF intern that is now employed as the Nyumbani Farm Foreman. International volunteers and students also bring organic ideas and interests from afar, but certainly take with them more than they brought. A new project is afoot to calculate the carbon emissions of international air travel to the village, so volunteers can plant the number of fuelwood and fruit trees at Nyumbani needed to offset their carbon footprint.



Members of the Nyumbani Organic Outgrowers group

Nyumbani Village is now the home of the Nyumbani Organic Outgrowers, a recently formed group of 40 farmers from the surrounding community that grow organic vegetables on small, individual plots of irrigated village land. Most of their harvests go directly to feed their families, some helps feed the village, and a growing amount is starting to be sold to Nairobi organic markets. The growers receive land, seedlings, advice, and of course, water. In exchange they agree to follow organic practices as the village is now certified organic by EnCert. Not only does the village benefit from the food and improvement of the land, but the plots are also located around the village perimeter, which creates a working boundary of organic gardens that defend the village from grazing herds, pests, and would be poachers. During the rainy season the perimeter shambas expand with grains, trees, and oil crops, providing the outgrowers and village with a new, year-round income and fresh vegetable source.



Making the desert bloom! Before and after photos of the same polyculture plot of tomatoes, kale, spinach, onions, peppers, maize, and leguminous trees under drip line irrigation.

Nyumbani Village still has huge dreams to fulfill for the orphaned families and for sustainable dryland management. At the root of it all is a healthy community, something that can only be grown organically! For more information or if you would like to support Nyumbani Village, visit www.nyumbani.org or contact info@nyumbani.org.

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