

At the homes of Never Ending Food (NEF) intern, Hardwell Kaniye (middle) and former NEF permaculture manager, Luwayo Biswick (right).

Never Ending Food in Malawi

'Never Ending Food' Demonstration Site

In 1997, Kristof and Stacia Nordin were invited by the Government of Malawi to work with the Ministry of Health on issues of HIV prevention, care and support. The Nordins quickly found that it was difficult to address such health issues without an improvement in nutrition.

This led to an analysis of Malawian agricultural and dietary practices, which revealed an over-emphasis on the production and consumption of maize - one high-carbohydrate, low-nutrient food introduced from Central America - to meet the dietary needs of the country.

In an effort to reduce malnutrition, food insecurity, and poverty, the Nordins began to utilize a sustainable design system known as 'permaculture'. What transpired was 'Never Ending Food' (www.neverendingfood.org), a community-based demonstration site in Chitedze, Malawi, which outreaches to thousands of people in the surrounding villages, hosts regular visitors, supports an internship programme, maintains a 'model village' with the participation of several local families, and showcases many low-input, high impact ecological agricultural technologies.

Permaculture-Based Solutions

During their initial assessments, the Nordins were informed by many of the communities in the area that their concerns were primarily about food insecurity, stemming from namely, lack of financial means to obtain agricultural inputs (i.e., seeds and fertilizer). They also expressed problems related to scarcity of water resources, a chronic 'hungry season' which lasted from about December to April when the nation's maize reserves run short and people had to wait for the newly planted maize crop to mature, and a staggering national rate of malnutrition of 47% of children under the age of five.



Permaculture is commonly defined as a science of applied ecological design. To me, it is simply the science of a design system which mimics nature.

Emmanuel Chilonga
(Never Ending Food Intern)

Ironically, many local sources of food existed which could provide a year-round, highly nutritious diet. Many of these were open-pollinated (replantable) plants and trees and their seeds could be sourced and saved at no financial cost. In addition, there was untapped animal diversity (like fish, bees, insects, and livestock). These local resources could eliminate the 'hungry season' which ironically coincided with Malawi's most agriculturally productive time of the year; the rainy season.

In 2001, the Malawi government switched from teaching a three-food group model (body building, body energy, and body protection) to a six-food group model (staples, vegetables, fruits, legumes & nuts, animal products, and fats). This switch was designed to encourage people to incorporate greater diversity in their dietary and nutritional choices. Unfortunately, many of the government's agricultural policies remained fixated on the production of maize.

A large amount of information on Malawi's traditional food crops has been amassed by Never Ending Food as the result of local knowledge transfer. Community members (especially older women who are the cultural custodians of knowledge on the identification, harvesting, preparation, and utilization of local resources) have

been the main source of this information. Reviving and respecting this traditional knowledge has helped restore a sense of cultural pride in the use of local resources and provided the communities with alternative solutions.

Never Ending Food has been able to assemble and categorize a list of almost 600 different foods which can be used to improve nutrition, increase resilience, eliminate the 'hungry season', and provide diverse opportunities for income generation. Over the years, Never Ending Food has been able to propagate over 200 of these foods, which now grow year-round and provide the communities with daily access to Malawi's six food groups.

All of Never Ending Food's production systems have been designed using permaculture principles and uphold permaculture's three ethics: (1) care for the earth, (2) care for people, and (3) fair share of resources. This has allowed for the intensification of food production using low-input, high-yielding and organic methods. The site showcases a large range of natural medicines, fodder crops, open-pollinated seed stock, fuel, building supplies, timber, and appropriate technologies (solar driers, a hand-powered water pump, composting toilets, water harvesting tanks, fuel-efficient stoves, etc.)

Resources

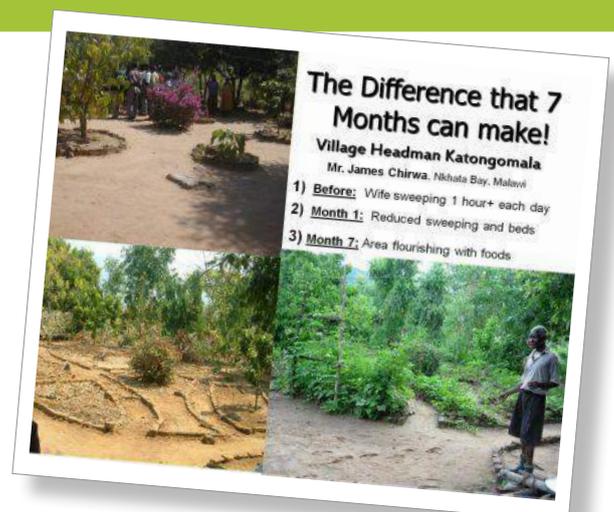
Kristof and Stacia Nordin, the co-founders of the project, along with their daughter, Khalidwe, aged 11, and two to three interns (hosted for two years at a time), facilitate the project. Because they focus on low-to-no cost implementation strategies, very little was and is required in terms of start-up costs.

In Malawi, everybody owns a hoe and that is really the only tool that one needs to get started. The seeds, cuttings, or root-stock of many varieties of highly nutritious and open-pollinated local food plants can often be sourced from roadsides, windrows, fields, forests, or local markets.

Permaculture allows people to save money and reduce inputs while simultaneously increasing opportunities for diversified income generation, so the indicator of assessment which should be used is not 'cost per person' but rather 'benefits per person'. In terms of the latter, permaculture teaches that the yield of a system is theoretically unlimited.

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Permaculture is good because we are able to get our day-to-day food in a simple way. We now harvest more food on a small amount of land and save energy, money, and time. We also get medicinal plants on our land, which is something good for our health. I have about ten people who have joined me in using lemon grass tea.
Mrs. Njoka, local farmer, housewife, and mother



All tours at Never Ending Food, however, are provided free of charge. A two-year internship, inclusive of a modest monthly stipend, a 12-day Permaculture Design Course, and other miscellaneous training activities, however, costs about 2,000 USD per intern. Hosting a Permaculture Design Course (PDC) in a workshop-setting costs about 1,000 USD per person, inclusive of room, board, and the facilitator's fees.

Land ownership does play a role in the establishment of permanent and sustainable agricultural systems; if a person does not own her/his land, it is less likely that she/he will make long-term investments in it. Never Ending Food has tried to help facilitate land ownership for various people through the years. Land prices vary greatly from less than 100 USD per acre to over 2,500 USD per acre. Implementation costs per acre are completely determined by locally available resources.

Outcomes

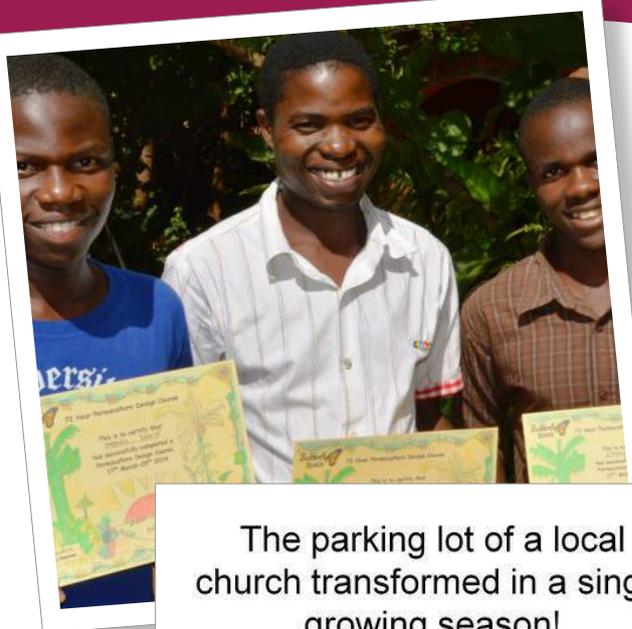
At the community level, there have been transformations in local households and farms through the use of permaculture designs and diversified agriculture. These have been in terms of positive changes in their dietary choices, reduced costs, increased incomes, the use of local resources, the conservation of ecosystems, and the good management of soil and water systems.

After 17 years of hands-on experimentation and practice, Never Ending Food is more convinced than ever that there is absolutely no reason for Malawi to continue facing chronic hungry seasons or high levels of malnutrition. Solutions to these problems have repeatedly been demonstrated in practice at Never Ending Food as well as at a growing number of permaculture sites throughout the country. Entire communities are now beginning to benefit from a completely new way of thinking about food production, agriculture, and nutrition. The three

Upscaling the Successes

Opportunities for upscaling the project have been attained at many levels. In Malawi, permaculture practices are being carried out in almost all of the country's 28 districts and there is a fully-operational permaculture training centre (Kusamala Institute of Agriculture and Ecology, www.kusamala.org). In 2009, Malawi hosted the International Permaculture Convergence.

At the national level, Never Ending Food has been influential in introducing permaculture into govern-



The parking lot of a local church transformed in a single growing season!



ment level programmes through various development partners. These programmes include the Ministry of Education's School Health and Nutrition Programme, which has piloted permaculture implementation in eight districts in 40 primary schools, 10 teacher development centres, and one teacher training college. Through working with primary school curriculum writers at the Malawi Institute of Education (MIE), Malawi's national school curriculum now contains units on permaculture and composting toilets.

Several research projects have been conducted in connection with the work of Never Ending Food. The results of these are available on the project website:

- 'The Potential of Permaculture: Addressing Subsistence Farming and Food Security in Malawi' (<http://www.neverendingfood.org/wp-content/uploads/2010/02/Conrad-Potential-of-Permaculture-SfAA-Presentation-2010.pdf>)
- 'Permaculture Adoption Among Malawian Farmers: A Positive Deviance Inquiry' (<http://neverendingfood.org/wp-content/uploads/2008/10/Permaculture-Final-Capstone-Paper-5-26-Hope.pdf>)

Never Ending Food has also maintained a successful internship programme which provides hands-on practical training. Two to three interns are generally hosted at a time for a two-year period. Promising candidates go through the 72-hour permaculture course and are awarded certificates in Permaculture Design on successful completion. Interns are assisted in applying for paid permaculture positions throughout the country.

In 2005, the United Nations' World Food Programme (WFP) in Malawi hired Never Ending Food to author the "Low Input Food & Nutrition Manual" (<http://www.neverendingfood.org/sustainable-nutrition-manual/>). This manual is used by individuals and organizations to help rebuild the bridge between good nutrition and the agricultural and environmental systems that provide that nutrition.

Advancing Food Sovereignty

Instead of working to devise naturally diverse, seasonal, perennial, inherently organic, and nutritious food supply systems, many African leaders are embracing an agribusiness expansion of industrialized agriculture which incorporates an increased use of monocropping, synthetic fertilizers, chemical pesticides, and genetically engineered seeds.

Africa already has hundreds of drought-resistant, pest-resistant, high-yielding, open-pollinated, seasonal, and naturally nutritious crops waiting to be integrated into agricultural systems without the need for newly engineered species. The only obstacle is the appreciation, respect and utilisation of these natural resources.

Never Ending Food's advocacy work at the national level takes a cross-sectorial approach. It has worked with several ministries. Efforts have been made to get governmental extension officers to work together as a team to communicate with communities on issues of agriculture, public health, nutrition, environmental conservation, water and sanitation in an assimilated and integrated manner rather than through isolated campaigns.

There are, however, challenges that persist. As diets and agricultural systems have moved further away from the use of traditional foods over the years, many of these local resources are generally seen as 'bush food', 'poor people's food' or as a 'last resort' to turn to only in hard times despite often having superior nutritional qualities. These messages are often reinforced by governmental policies that focus almost exclusively on the production of maize as well as school agricultural programmes which tend to concentrate on the production of maize and cash crops while overlooking local food. Many development approaches also contribute to this stigmatisation by focusing solely on external supplementation, fortification, and even genetic engineering rather than on the integrated use of highly nutritious local traditional food sources.

As a result of its advocacy work, Never Ending Food has been influential in getting permaculture activities established throughout Malawi, southern Africa, and even internationally. This has helped to strengthen the food security and perhaps even more importantly, the nutrition security of many communities.



This is a way that can make people self reliant while at the same time caring for the environment. Through Permaculture, people are able to have a direct access to their daily needs such as herbs, vegetables, and firewood just to mention a few. This helps us to use less money for buying some of these things.

Mrs. E. Kaniye, local farmer, housewife, and mother

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