

The Permaculture Activist © (ISSN 0897-7348) is published quarterly. Copyright 2014 by The Permaculture Activist, a sole proprietor business operated by Peter Bane. Material contained herein may be copyright by individual authors, artists, or other publishers as indicated.

Permaculture Activist is an independent journal serving the permaculture movement in North America. We aim to provide information useful to people actively working to establish permaculture systems "on the ground."

For subscriptions, advertisements, editorial submissions, and all correspondence write: Post Office Box 5516, Bloomington, IN 47407 USA. Please see page 64 for complete subscription information.

The publisher assumes no responsibility for unsolicited materials. Please send typescript, photographs, or digital content on CD or via email to our address below. Materials not accompanied by a stamped, self-addressed envelope will not be returned. Copy and artwork should be submitted at least two months prior to publication date.

An ad rate card is available upon request from:
The Permaculture Activist
Post Office Box 5516
Bloomington, IN 47407
1+812-335-0383 or see our website.
ads@permacultureactivist.net

Publisher

Peter Bane
publisher@permacultureactivist.net

Senior Editor

John Wages
editor@permacultureactivist.net

Editorial Guild

Rhonda Baird Keith Johnson

Photo credits to article authors unless noted. Front cover photo credit Abigail Conrad. Rear cover photo credit Steve Gabriel.

Tree Tax

For each issue mailed to subscribers, 25¢ is placed in a Tree Tax Fund maintained by The Permaculture Activist. From time to time these funds are distributed to individuals or groups working in reforestation and forest preservation. Recipients are selected based on need and demonstrated effectiveness in their work. To apply for funds, contact the Publisher and include a short description of your project and proposed use of funds. We have approximately \$1000 available per year.

Please send subscriptions, letters, and material for publication to:

The Permaculture Activist
Post Office Box 5516
Bloomington IN 47407 USA
editor@permacultureactivist.net
www.permacultureactivist.net

CONTENTS

EDITOR'S EDGE

Critical Questions for Permaculture	2
<i>Rafter Sass Ferguson</i>	
Dynamic Accumulators Revisited	3
<i>Robert Kourik</i>	
Experimentation in Permaculture	9
<i>Chris Warburton-Brown</i>	
Nitrogen-Fixing Vegetables	12
<i>Apios, Jonathon Bates</i>	
Bio-Char—the Carbon Kickstarter	17
<i>Kelpie Wilson & Hans-Peter Schmidt</i>	
People's Science or Pseudoscience?	19
<i>Rafter Sass Ferguson</i>	
Permaculture Farmers in Malawi	26
<i>Abigail Conrad</i>	
Forming a More Perfect Union: Permaculture and Academia	31
<i>Steve Gabriel</i>	
Soil and Biodiversity Tests	37
<i>Tom Kemeny</i>	
Political Ecology & Public Permaculture	42
<i>Christopher Kelly-Bisson</i>	

Permaculture Activist welcomes your articles, news items, photos, and other materials of interest. Please contact the Editor in advance of your submission to request writers guidelines and present your ideas. (editor@permacultureactivist.net)

DEPARTMENTS

Regional Reports	47	Back Issues	60
Movement Musings	48	Calendar	62
Reviews	51	Classifieds & Subscription	64
Permaculture Events	57	Book Catalog	Center Insert

Upcoming Issues, Themes & Deadlines

#94	Seasonal Cycles of Work	September 1
#95	Perennial Crops	December 1
#96	Building the Solar Economy	March 1

Permaculture is a holistic system of DESIGN, based on direct observation of nature, learning from traditional knowledge, and the findings of modern science. Embodying a philosophy of positive action and grassroots education, Permaculture aims to restructure society by returning control of resources for living: food, water, shelter, and the means of livelihood, to ordinary people in their communities, as the only antidote to centralized power. For 30 years Pc has combined top-down thinking with bottom-up action to make a world of difference in over 100

Enhancing Food Security in Southern Africa

Permaculture Farmers in Malawi

Abigail Conrad

THE MEDIA, DONORS, AND SOME SCIENTISTS have touted Malawi as a Green Revolution success story after national maize (corn) yields increased in part due to a government fertilizer and hybrid seed subsidy. However, the impact has been overstated. (1) Malawi's economy is largely dependent on tobacco, sugar, and tea exports, and half its 15 million people live on less than a dollar a day. (2) Malawi's smallholder farmers, who make up 78% of the population over 15 years old, primarily depend on agricultural production to meet both food and livelihood needs. (3) Many are not able to produce enough food for the whole year, which compounds pervasive, interrelated problems of poverty, food insecurity, and malnutrition.



Malawian village in the dry season.

The food and agricultural problems facing smallholders today have been in the making since the late 1800s as Malawi's agricultural production changed from effects of the Columbian exchange, migration, the slave trade, British colonialism, environmental degradation, capitalism, and globalization. (4)

Today, farmers in Malawi experience food insecurity as a result of systemic limits on access to food, capital, land, labor, and environmental resources. (5) Most household farming, as well as national agriculture policy and agricultural development programs, focus on conventional farming techniques and maize production, but these are constrained by poverty, climate change, environmental degradation, and limited access to land, labor, information, and agricultural inputs. Conventional farming for monocrop maize production is expensive and unreliable in the short term, and environmentally and financially unsustainable in the long term. (6)

As an alternative, some organizations in Malawi promote permaculture to improve household farming and food security.

In this article, I focus on the main findings from my research with permaculture organizations and farmers in Malawi.

I first learned about permaculture during a trip to Malawi in 2006 on a tour of a permaculture NGO. I visited again in 2008 and 2010, when I encountered a second organization and a permaculture project run by a prominent international NGO.

I was interested in the extent to which farmers could use permaculture design and permaculture-inspired techniques to address food security and farming problems. Previous research and anecdotal reports from the NGOs pointed to potential benefits from such practices as well as socio-cultural, economic, political, and environmental constraints to their adoption. (7)

I was interested in the extent to which farmers could use [permaculture] to address food security...

Research participants and methods

For my dissertation research, I chose to evaluate the impacts of using permaculture by comparing the agricultural practices and food security of conventional smallholders to those who use permaculture. I conducted research with local assistants Geoffrey Mlongoti, Chisomo Kamchacha, and Enock Chitheka who translated from the local language, Chichewa, and helped design and conduct the research. We worked from September 2011 to July 2012 in Lilongwe Rural District in partnership with the two permaculture organizations I visited on previous trips. The US Environmental Protection Agency (STAR Fellowship Assistance Agreement no. 91732301), American University, and the Explorers Club Washington Group funded the project.

A group of foreigners and Malawians founded one of the permaculture organizations in 2009 as a Malawi-based NGO focused on permaculture demonstration and education. It provides training to smallholders in permaculture design and agroecology techniques, and through outreach and extension work helps them implement permaculture, with some limited material support like seeds.

The other organization is small and run by an American family out of their village home, which they transformed into a veritable oasis starting in 2003, and which now serves as a demonstration site. They teach courses across the country and in



Beds in development in Zone 1. Permaculture is having a real and positive impact on small farmers' food security.

the surrounding communities to encourage permaculture.

We used cluster sampling to select ten villages where some farmers practiced permaculture. Next, we discussed the study with local leaders and received their permission to proceed. Then, we recruited two sample groups: one of farmers who used permaculture and another of those who did not.

The "permaculture farmer" sample group consisted of 16 households. This included all households in the villages who were practicing permaculture when we enrolled participants in 2011, and an additional two households who volunteered to participate after having adopted permaculture during the study through participation in a permaculture organization program.

For the purposes of this study, we treated permaculture as an agroecology design system because that is how the farmers primarily understood and used it, although permaculture is also a movement, worldview, and best practice framework. (8) We determined three criteria for permaculture adoption, regardless of scale: 1) self-identify as practicing permaculture, 2) exposure to demonstrations or information about permaculture from an NGO, and 3) intentional use of multiple permaculture practices in one place. For instance, we counted farmers as practicing permaculture if they constructed beds in their yards, intercropped several crop varieties, used organic inputs, and watered plants using greywater with the intent of practicing permaculture. In contrast, there were farmers who did not meet these criteria, such as the ones who participated in introductory permaculture trainings, but did not yet self-identify as using permaculture even though they intended to soon, because they had only tried one new practice in isolation like making compost or growing one type of crop organically.

For comparison, we selected a control group consisting of 28 conventional farming households living in the same villages

as permaculture farmers or in adjacent villages. We initially selected 20 households using the random-walk method (ask households to participate while walking through a village using a random starting point). (9) Eight other households, who participated in a permaculture organization program and volunteered to join the study, were ultimately included in this control group because they had not adopted permaculture by the completion of the study.

The villages each comprise approximately 20 to 50 households, largely made up of extended families. Despite proximity to the capital Lilongwe, the villagers live rural lifestyles. The settlements do not have electricity, running water, or paved roads. Each village has clusters of houses made of unfired or fired brick with thin thatch or sheet metal roofs, separated by meandering paths, hardpan dirt, occasional trees, and patches of maize. Fields of maize growing in ridges, sparsely intercropped with pumpkins and sometimes beans, and small patches of forested graveyards surround the villages (see 2). Just over half of participant households got their water from a borehole (protected deep well), and the rest drew it from an open well or river. Most of the participants had inherited land and relied on farming as their primary food source and economic activity. Most engaged in other subsidiary livelihood activities like informal farm labor and small household-based businesses; a few engaged in wage labor.

We designed the research to answer a central question: given

Future expansion [of permaculture] is limited primarily by material constraints, including land, labor, money, and water access...

cultural and structural constraints to implementing and adopting permaculture-identified practices, can smallholder farmers use permaculture to improve their household food security?

Food security refers to people's "physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life." (10) During multiple seasons, we repeated a food security assessment (11) and 24-hour-diet recall. (12) We conducted interviews and focus groups on food and farming practices, with questionnaires on agricultural production and household characteristics. With the permaculture farmers, we also conducted interviews and focus groups on how permaculture practices affected their crop production, farm labor, land use and quality, livelihoods, food access, food consumption, and health. In all, we completed 185 interviews, ten focus groups,

and 237 surveys. We also observed farmers at their homes and in their fields to learn about and document their food and farming practices, and at the permaculture organizations to learn about how they practice and teach permaculture.

How farmers learned about permaculture

As is common in Malawi, the participant households faced persistent food access problems. Over eight months, due to insufficient seasonal food access and monetary constraints, most households at least once could not eat what they were used to and so engaged in coping strategies.

Most commonly, farmers were motivated to adopt permaculture to get tangible benefits such as harvesting food, saving money, or solving a farming problem. Before adopting it, farmers had to understand permaculture and its goals, and to do so they often directly participated in a program with a permaculture organization.

Most of the permaculture farmers first encountered it at a permaculture organization and discussed it with a staff member or a friend or neighbor. They then learned more during unstructured learning interactions and observation, most commonly with permaculture organizations or relatives who used it. Just over half also learned either by participating in structured programs, while working for an NGO on a permaculture project, or through a formal training. The permaculture farmers also taught others in their social network about it; their use of permaculture provided additional local demonstrations, which encouraged others to adopt it.

All permaculture farmers learned about practices addressing land use, agrobiodiversity, soil and water conservation, and organic techniques. After unstructured learning and practice, permaculture farmers described using permaculture design concepts such as observing the environment, creating polycultures, detailed agricultural planning, conserving energy and resources, valuing diversity, and using multifunctional elements. Permaculture farmers who received structured training learned more agroecology techniques and explicitly learned about the permaculture design system and ethics.

Using the design system and agroecology

Farmers adopted permaculture in a process that took several years (see examples in 3). As they implemented permaculture practices, learned more, and gained benefits, they often were motivated to adjust or expand their practices. On average, the permaculture farmers in the study had practiced it for 3.02 years at the time of the study. They implemented permaculture primarily in their yards, while continuing to use conventional farming techniques in rain-fed maize fields and some in dry-season gardens. Both men and women used permaculture, although in some households, one family member was primarily responsible for its implementation.

There was overlap between the practices used by the permaculture and conventional farmers. Permaculture use was characterized by a combination of practices and use of the design system. Permaculture farmers applied agroecology

techniques that addressed soil and water conservation, agrobiodiversity, and energy and material input use. These farmers differed from conventional farmers primarily by growing more varieties, not burning organic matter, using low- and no-till practices, applying manure or compost, mulching, irrigating with greywater, farming during all seasons, intercropping, and growing perennial crops.

Permaculture farmers used the design system to varying degrees, depending on their knowledge of it and on available resources. I developed a permaculture practice rubric to classify households as low, medium, or high practitioners based on the extent of their permaculture use. High practitioner households differed from medium and low practitioners in their use of the design system and the extent to which they used permaculture practices, in part because more high practitioners had structured permaculture training. Permaculture farmers' scores positively correlated with the number of permaculture education sources, years of permaculture practice, and years of school completed by the household member with the highest level of education.

Facing and overcoming constraints

Farmers faced social, material, environmental, and knowledge constraints when implementing permaculture. These are similar to those that farmers face when adopting agroecology and conservation agriculture in Malawi and elsewhere in sub-Saharan Africa. (13) Initially, farmers face material, social, and information constraints. Then, while practicing permaculture, material constraints increase, environmental constraints become a problem, and social constraints remain. Future expansion is limited primarily by material constraints including land, labor, money, and water access, and secondarily by limited access to information. Permaculture farmers face social stigmas from using practices that some see as strange, illogical, messy, and unhygienic. Environmental constraints include erratic or inadequate rainfall and freely roaming livestock. Information constraints, such as lacking access to education, make it difficult for farmers to create permaculture designs initially, and later leave them skeptical about applying permaculture on a larger scale. These constraints speak to broader challenges that farmers face related to health, livelihoods, climate change, and



Hands-on courses with a focus on regenerative farming systems and homestead design.

- ▶ Permaculture Design Certificates ◀
- ▶ Food Forests ◀
- ▶ Earthworks & Keyline® Agriculture ◀
- ▶ Natural Building & more ◀

9312314099

spiralridgepermaculture.com

info@spiralridgepermaculture.com



A permaculture system in development. Systems developed faster when implemented by more experienced farmers.

entitlements to land, water, and money.

Summary of research findings

Farmers reported agricultural, environmental, livelihood, food and nutrition security, and health benefits from practicing permaculture. The most commonly reported benefits were higher agrobiodiversity (100%), successful cultivation of a small piece of land (60%), the ability to harvest at different times of the year (53%), improved soil fertility (60%), reduced expenditure on purchases of food (67%) and fertilizer (53%), and earned income from crop sales (47%). On average, permaculture farmers grew three times more crop types (average of 31.86 varieties) than conventional farmers (average of 10.25 varieties), which is a statistically significant difference. At least a third reported that permaculture practices helped them deal with the changing climate, grow healthy crops, have high yields, and increase income. On average, permaculture farmers spent a fraction of what the average conventional farmer spent on input costs—in part because farmers implemented permaculture on very small pieces of land (e.g., an eighth of an acre or 0.05 ha), while conventional farmers used more land. Seed costs were the only expense for almost all permaculture farmers, suggesting that these could be a barrier to scaling-up permaculture implementation. Overall, permaculture farmers reduced their dependence on purchased food and farm inputs. Other studies in Africa have found similar reductions when farmers use agroecology practices that improve soil fertility. (14)

All permaculture farmers reported improved food access because of increased crop diversity and more consistent food

access due to cultivation during all seasons. On average, they had slight, though statistically significant, increases in food security and diet diversity scores over conventional farmers. Linear regression analysis showed that using permaculture had an ~~independent~~ relationship with food security and diet diversity, while controlling for household characteristics such as physical capital, wage labor, and land ownership. Further, three times as many conventional farmers were severely food-insecure compared to permaculture farmers. Based on diet diversity categories developed for a UN Food and Agriculture Organization (FAO) study, more than twice as many permaculture farmers had high diet diversity compared to conventional farmers. (12) Small-scale permaculture use provided incremental benefits and helped to buffer against severe food insecurity and low diet diversity by improving food access. This also enabled farmers to diversify food consumption; they ate new types of foods, more legumes, and more vitamin A-rich fruits and vegetables.

Unexpectedly, three-quarters of permaculture farmers

The fact that permaculture doesn't depend [only] on access to money created options for the farmers who learned about and used it.

reported feeling that the health of their household members had improved, and disease incidence in their families had fallen since starting permaculture. Further research would be required to determine the precise causes of improved health.

In this study, the scope of impact of smallholders' permaculture use was primarily limited to the household level because that use did not change other critical determinants of their livelihoods and wellbeing such as the political, economic, healthcare, and education systems. It also did not affect the local or Malawian food system. Permaculture activists need to engage with the government and donors to change policies and funding priorities, something the permaculture organizations in Malawi have begun to do. Permaculturists have limited ability to influence the profit incentives, market structure, or trade regulations that structure the global, capitalist food system. Agribusinesses have a near-monopoly on the production, sale, and trade of much of the world's agricultural inputs and food. That will not change because pockets of farmers reduce their market purchases. However, permaculture can help smallholder farmers maneuver within such powerful systems.

Permaculture education improved farmers' adaptive capacity by building their skill sets to deal with agricultural problems and environmental shocks. The techniques they learned should also

incrementally improve their land quality and ecosystem services in the long-term, which may further improve agricultural yields and resilience. Food security and health may also improve livelihood and well-being in the long run by helping to keep farmers from experiencing severe problems.

Permaculture helped to lessen farmers' dependence on the market for agricultural inputs and food and improved food access using few externally sourced inputs on previously uncultivated land. One permaculture farmer aptly summarized the difference between resource use in conventional agriculture and permaculture. She said, "This other [conventional] type needs more energy from a person each and every time, and also it needs more inputs. While the permaculture one does not count whether I am rich or I am poor. Everyone can use it well."

The fact that permaculture doesn't depend on access to money created options for the farmers who learned about and used it. Their expanded skill set increased their options for how to farm, and the changes in farming led to increased food consumption choices. These changes had more than material benefits for farmers. Food insecurity and poverty lead to other forms of suffering such as stress, malnutrition, disease, and death in some cases. As such, improving agricultural production and food access can also help improve farmers' well-being.

For instance, for one elderly permaculture farmer, seeing other people practice it validated how she farmed with her family as a girl, encouraged her to return to those methods, and gave her new examples of how to improve her agricultural production. She explained to me what these farming changes meant to her. She said, "Its freedom, to plant the way you want." It is her freedom, she said, to be able to decide how to farm and to provide food for herself and her grandchildren.

Lessons for permaculture development

The primary limitations of this study are the small sample size, limited timeframe, and the fact that we were only able to work with farmers applying permaculture on a small scale. Despite the limitations, some research findings are generalizable to smallholders and other permaculture development projects.

Broadly, our findings suggest that smallholders can benefit from using permaculture and that the permaculture model for social change and development may have limited impacts. The

permaculture movement's model for social change underlies a common permaculture approach to development. As Rafter Sass Ferguson and Sarah Lovell write, it is "a model of social change that emphasizes personal responsibility and voluntary action and a relative lack of interest in influencing policy or large institutions." (8) According to my analysis, the predominant permaculture model of development is a hybrid that aims to improve human and environmental well-being by individuals, social movements, and local communities implementing carefully designed, small-scale, low-input interventions, changing practices, and strengthening ecosystems. While permaculture farmers gained diverse benefits, their permaculture practice did not influence broader political, economic, and social systems. This raises questions about the scope of change that

"This other type needs more energy from a person each and every time, and also it needs more inputs. While the permaculture one does not count whether I am rich or I am poor."

can result from smallholder farmers practicing permaculture in low-income, agricultural based economies. Beyond practicing permaculture, it is likely that permaculturists would need to engage in other efforts like broad dissemination, community organizing, lobbying, and civic engagement to effect change beyond the household or village level.

In addition, the permaculture projects I studied were shaped by incorporation within the development sector in Malawi. While the agricultural techniques promoted were different

November 11-21, 2014

Permaculture Design CERTIFICATION COURSE

Be part of the solution! On-site project with
Bill & Becky Wilson of Midwest Permaculture
Call now for more info: 815-256-2215

ENJOY ORGANIC VEGETARIAN MEALS & YOGA CLASSES

Sivananda Ashram Yoga Farm

530-272-9322 | www.yogafarm.org | Grass Valley, CA



from those in mainstream programs, the permaculture projects applied participatory project approaches based on a self-help model that is in line with mainstream development and also with permaculture's model for development. Understanding the similarities between permaculture and mainstream development approaches can help permaculture practitioners to evaluate the strategies they use and the potential effects of reinforcing current power relations rather than leading to their change.

There are five primary lessons for permaculture programs in Malawi and similar contexts based on the research findings. First, permaculture implementation is a multi-year process. NGOs can teach it as such to manage farmers' expectations and support implementation with staggered training and outreach. Second, demonstrations of different permaculture applications at NGOs, permaculture examples in villages, and one-on-one informal teaching can be effective education and motivation tools. Third, to lessen social stigma associated with using permaculture, NGOs can conduct outreach with whole communities—not only with program participants—to explain permaculture and its goals. Fourth, NGOs can work through

...[permaculture practice] will not change political and economic structures on its own...

existing social networks to disseminate permaculture and encourage adoption, because, in addition to NGO activities, farmers learned about permaculture from relatives, friends, and neighbors who were using it, were motivated by the benefits they saw, replicated the practices others used, and supported each other. Fifth, formal permaculture classes and access to further permaculture education was more important in helping farmers to intensify permaculture implementation and use of the design system, than it was for initial adoption.

Permaculture has broad applicability as a skills-based farming approach. However, the benefits that particular farmers may experience depend on their particular needs, problems, and specific applications, as well as the local context. In this case, farmers experienced improved food access because permaculture addressed a key problem: year-round access to fresh fruits and vegetables. The expense of inputs is also a serious problem—farmers benefitted from permaculture practices that addressed their material constraints. Therefore, farmers should apply permaculture in a way that specifically addresses their problems and that is suitable to the local context. In addition, the fact that the impact of permaculture is primarily limited to the household level and constrained by the broader food system is generalizable to most contexts. Whether using permaculture in a rural, agricultural economy or an industrialized one, a household's or community's use of

permaculture may help people to withdraw from or maneuver within the broader food system, but it will not change political and economic structures on its own. To reverse a permaculture saying, 'all the world's problems cannot be solved in a garden.'

Δ

Abigail Conrad is a PhD candidate in anthropology at American University in Washington, DC, and is certified in permaculture design.

References

1. GRAIN. "Unravelling the 'miracle' of Malawi's Green Revolution," *Seedling* (Jan. 2010). <http://www.grain.org/article/entries/4075-unravelling-the-miracle-of-malawi-s-green-revolution>.
2. UN Statistics Division. "Malawi" (2014). <http://data.un.org/CountryProfile.aspx?crName=MALAWI>.
3. National Statistical Office. "Statistical Yearbook 2011," Zomba, Malawi (2011).
4. Mandala, E.C. *The End of Chidyerano: A History of Food and Everyday Life in Malawi, 1860-2004*. Portsmouth, NH: Heinemann (2005).
5. World Food Programme. "Comprehensive Food Security and Vulnerability Analysis and Nutrition Assessment: Malawi," Rome: World Food Programme (2012).
6. Bezner Kerr, R. "Lessons from the Old Green Revolution for the New: Social, Environmental and Nutritional Issues for Agricultural Change in Africa." *Progress in Development Studies* 12: 213-229 (2012).
7. Thornton, H. "Permaculture Adoption Among Malawian Farmers: A Positive Deviance Inquiry". Master's thesis, School for International Training, Brattleboro, VT (2008).
8. Ferguson, R.S., Lovell, S.T. "Permaculture for Agroecology: Design, Movement, Practice, and Worldview. A Review," *Agronomy for Sustainable Development* 34: 251-274 (2014).
9. Magnani, R. "Sampling Guide," Washington, DC: Food and Nutrition Technical Assistance Project (1997).
10. Food and Agriculture Organization. "Rome Declaration on World Food Security," Rome (1996).
11. Perez-Escamilla, R., Segall-corre, A.M., Maranhã L.K., de Fatima Archanjo Sampaio M., Marin-Leon L., Panigassi G. "An Adapted Version of the US Department of Agriculture Food Insecurity Module Is a Valid Tool for Assessing Household Food in Campinas, Brazil," *Community and International Nutrition* 134: 1923-1928 (2004).
12. Kennedy, G., Ballard, T., Dop M.C. "Guidelines for Measuring Household and Individual Dietary Diversity," FAO: Rome (2011).
13. Milder, J.C., Majanen, T., Scherr, S.J. Performance and potential of conservation agriculture for climate change adaptation and mitigation in Sub-Saharan Africa, *Ecoagriculture Discussion Paper no. 6*, Washington, DC: Ecoagriculture Partners (2011). ecoagriculture.org/documents/files/doc_379.pdf.
14. De Shutter, O. "Report Submitted by the Special Rapporteur on the Right to Food, Olivier De Shutter". Report submitted to the UN General Assembly, Geneva (Aug. 11, 2010). http://www.srfood.org/images/stories/pdf/officialreports/20101021_access-to-land-report_en.pdf.