

STATE OF THE WORLD 2011 Innovations that Nourish the Planet



State of the World Brief Series Chapter 2. Moving Ecoagriculture into the Mainstream

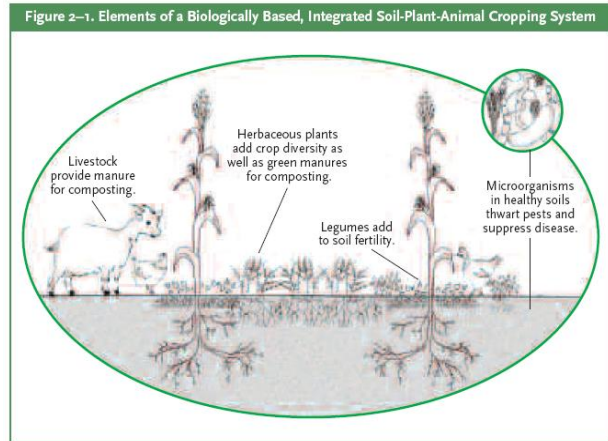
Key Messages

- As concern about environmental degradation and climate change mounts, the possibility of eco-friendly, locally adapted agriculture is sparking widespread innovation in Africa and worldwide.
- Sustainable farming requires negotiation and cooperation among diverse stakeholders, so adaptive management—modifying plans in response to changing situations and new knowledge—is a cornerstone of ecoagriculture projects.
- The debate over whether agroecological production practices will be able to meet global food demand is misplaced and should not prevent future investment. Evidence indicates that sustainable agriculture can feed a large portion of the world while simultaneously addressing problems such as environmental degradation, livelihood insecurity, and poverty.

The Problem

In many parts of sub-Saharan Africa, farming remains the chief source of income for entire communities. As pressure to feed this struggling continent grows, farmers have been encouraged to increase production at all costs. Yet purely production-oriented agricultural practices have contributed to degradation of land, soil, and local ecosystems that ultimately hurts the livelihood of the farmers who depend on natural resources the most.

Although agricultural reform is necessary in many parts of sub-Saharan Africa, achieving food security, watershed restoration, biodiversity conservation, and market development requires more than just the effort of individual farmers. If farmers wish to promote eco-friendly practices on a larger scale, entire communities will need to collaborate with the organizations that are responsible for managing forests, water, wetlands, wildlife, and infrastructure.



Source: M. Phemister

Many skeptics ask whether agroecological practices will be able to compete economically and politically with monoculture fields of high-yielding seeds and chemical inputs. And because ecoagriculture aims to satisfy multiple social, ecological, and economic objectives, its benefits can be difficult to measure and even more difficult to prove.

Innovations/Solutions

Increasing numbers of studies have been able to document significant production, livelihood, and environmental benefits of agroecological practices. In 1999, sustainability researcher Jules Pretty surveyed more than 286 projects in 57 developing countries and found that the average crop yield gain was 79 percent over previous production practices. Similar studies of sustainable rice intensification (SRI) plots in eight developing countries found that, on average, farmers increased yields 47 percent using mostly organic fertilizers and also saw a 40 percent water savings, a 23 percent reduction of input costs, and a 68 percent increase in income.

Other examples of successful agroecological efforts include:



By using mulch, intercropping, and natural drainage systems, tea farmers have increased the levels of organic matter in the soil and improved water conservation. (Bernard Pollack)

Restoring high-biodiversity forests and watersheds in Kenya. The Kijabe Environmental Volunteers of Lari, Kenya, began mobilizing farmers to protect and restore high-biodiversity forests and watersheds. With the forests and wildlife now thriving, the farmers can benefit from healthier soils, higher crop yields, well-fed livestock, and new markets. Farmers are also working to diversify their livestock by keeping rabbits, chickens, goats, and cattle, and gathering manure to compost with crop residues to improve soil fertility.

Communal grassland restoration in Zimbabwe's savanna. A 20,000-acre communally owned grazing area in Dimbangombe is an important grazing area and a valuable wildlife habitat in the Hwange and Zambezi National Parks. Although mismanaged grazing had degraded the water supply and local biodiversity, innovative land managers began a rotational grazing system for their livestock to help mimic natural, less-intense grazing patterns. In just two years, the landscape had vastly more forage and ground cover, water retention had improved, and the area's major river was flowing again. The grazing changes increased livestock production and also

helped previously starving animals regain their health.

Sustainable tea plantations in Kenya. Initiatives in Kericho, Kenya, have enabled the members of smallholder tea cooperatives to manage 8,000 hectares of tea plantations using Sustainable Agriculture Initiative Platform principles. By using mulch, intercropping, and drainage systems similar to naturally occurring ecosystems, the farmers have increased the levels of organic matter in the soil and improved water conservation. They have also been able to increase their production without using insecticides or fungicides in their tea fields.

Unilever Tea Company, which manages the program, has increased the farmers' success by cooperating with the Rainforest Alliance to develop certification for their sustainable methods. Publicizing the farmers' efforts to promote environmental health has provided them with a 10–15 percent increase in revenues because they are able to sell their tea as a sustainable product.

Looking Ahead

Agroecological methods are especially important in regions facing high food insecurity and high pressure for agricultural intensification. These methods can not only help farmers in areas with soil degradation and poor water quality, but also provide a sustainable alternative when industrial inputs are unaffordable, unavailable, or economically risky.

Slowly but surely, commercial demand is creating attractive market opportunities for eco-certified cropping systems. Stimulated by necessity and the knowledge of traditional farming practices, farmer and community organizations have become the latest innovators and leaders in the spread of agroecological practices. Combined with the rapid growth of market demand for organic and eco-certified products, farmers can attract the attention of both consumers and business investors.