



# Formalizing agroforestry in Malawi

## trees take root in government policy

# Agroforestry in action

World Agroforestry Centre



### At a glance...

Poor soil fertility is a major contributor to the low grain yields that precipitate recurring food shortages in Malawi. Over the past decade the World Agroforestry Centre has been developing and promoting the use of nitrogen-fixing trees to improve soil fertility, thereby increasing crop yield and averting hunger in the region. The government of Malawi recently took notice of a Centre policy brief promoting the use of nitrogen-fixing trees and has given priority to agroforestry in the national agricultural agenda. Consequently, the Ministry of Agriculture in partnership with UN agencies have incorporated fertilizer tree agroforestry options as a sustainable strategy in the overall programmatic approach of establishing a Millennium Global Village in Malawi.

Most years, Malawi faces a shortfall in maize production. Hunger is prevalent in many parts of the country and an estimated 65 percent of all Malawians live in poverty, surviving on less than one dollar per day. The conditions that lead to food shortages are directly linked to the quality of Malawi's soils — if soil fertility could be boosted, the country should be able to meet most of its food needs relatively quickly.

The policy brief *'Fertilizer trees and Malawi's new food security initiative'*, published by the World Agroforestry Centre in 2004, highlights the problem: the price of chemical fertilizers increase as they move from Europe to the African coast and into Malawi, a land locked country. This is due to high logistics and transport costs. Not only are fertilizers difficult for local farmers to procure, but they have hitherto been unable to single-handedly solve Malawi's food shortages.

Over a decade of applied agroforestry research in southern Africa by the Centre, with support from the Canadian International Development Agency, the German Ministry for Technical Cooperation and

the United States Agency for International Development, supports the idea that agroforestry — through the planting of nitrogen-fixing trees — can remedy the situation by helping rural people do a better job of managing natural resources, restore soil fertility and increase farm income.

Tens of thousands of farm families in Malawi have been trained in different agroforestry technologies, such as improved fallows, relay intercropping, *Gliricidia*/maize intercropping and biomass transfer, as a result they are succeeding in feeding their families. Farmers who practice agroforestry, can produce two to



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### Impacts

- Better policies
- Biodiversity
- Capacity Building
- Food and health
- Income and markets
- Land regeneration
- Watersheds

three times more maize than the national average.

“The rate of return on an investment in agroforestry can be extremely high,” says the Centre’s Director General, Dennis Garrity. World Agroforestry Centre economists estimate the cost of training and equipping one farm family to practice agroforestry at about USD 2.50. “That’s a one-time investment,” Garrity adds, “Subsidized fertilizer and seed distribution schemes cost millions and go on and on, year after year.”

The proven results and self-replicating nature of agroforestry have the government in Malawi taking note. After reading the Centre’s policy brief on fertilizer trees in Malawi, the government has recently shown more interest in supplementing the chemical fertilizers with seed for agroforestry species that restore soil fertility as a sustainable strategy. These fertilizer trees capture nitrogen, and some have a nitrogen-fixing root system, which also allows the plant to store nitrogen in the branches and leaves. For example in the simultaneous intercropping

of *Gliricidia sepium* and maize, the young trees are cut, chopped and mixed into the soil before planting food crops, thereby building up organic matter and adding nutrients.

“In the early stages, the adoption of agroforestry technologies is generally not amongst the poorest of the poor, as they are not able to bear the perceived risk of the new technology,” indicates Judith de Wolf, social scientist with the Centre’s Southern Africa programme. “Through institutionalization of agroforestry in different NGOs, CBOs and the government extension system, we can reach many more farmers in need of these technologies.”

These farmers also receive support in adapting to the new technologies. Small, illustrated instruction leaflets are included with each package of seeds, and reinforced by government extension staff who visit and train participating farmers.

The political reach of ‘fertilizer trees’ is also broadening. Festus Akinnifesi, the Centre’s Country Representative in Malawi, explains, “Because of this policy

brief, government Ministers are using ‘fertilizer tree’ terminology for the first time.”

And NEPAD is expanding its vocabulary, as well. Participants in the Eastern and Central Regional Meeting to Launch NEPAD’s Comprehensive Africa Agriculture Development Programme cited the production and distribution of seed for ‘fertilizer trees’ and ‘green manure’ species as the number one early action priority.

Although the change is slow, agroforestry technologies are gaining recognition for their ability to address the problems of depleted soils and hence food security. As a result, the necessary political is being increasingly mobilized.

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