Agroecology as a way to improve farmer livelihoods now and in the future:
An example from Malawi

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A food challenge

Smallholder farmers play an important role as environmental stewards and food producers, yet they make up a disproportionate number of the world's poor and food insecure. This is the case in Malawi, a country in Sub-Saharan Africa where 80% of the population relies on farming for their livelihoods and 37% of children suffer from stunting (NSO & ICF 2017).

Local responses to hunger

A farmer-led organization, Soils, Food and Healthy Communities (SFHC), in Northern Malawi has responded to high rates of food insecurity by leading participatory projects in agroecology. SFHC supports and trains farmers to try locally relevant agroecology practices such as:

- adding compost or other organic material to the soil,
- intercropping legume plants such as pigeonpea, peanut and beans to improve soil fertility
- managing pests and diseases with locally available plant-based pesticides.

Farmer experimentation helps to choose the most appropriate practices, taking into account a changing climate and limited access to resources. Farmers share and exchange ideas using a farmer-to-farmer method of teaching and learning.

Figure 1. A group of farmers participating in an SFHC project; © SFHC

Between 2012-2017, 6,000 farmers in Northern (Mzimba district) and Central (Dedza district) Malawi joined an SFHC project, the Malawi Farmer-to-Farmer Agroecology Project (MAFFA), to receive training in agroecology, experiment with practices and seeds, and participate in farmer exchanges and discussion groups. The results of this project, reported here, have been empirically studied and published in scientific journals.

Source: JRC Contract CT-EX2019D351242-102 Agroecology for Food Insecure Countries, 2020

How can agroecology change farmers' lives?

With hunger affecting many households who joined the project, agroecology needed to address this critical problem quickly. At the same time, it was important that the immediate solution to food insecurity did not compromise farmers' future ability to continue farming, rather that an intervention alleviated current problems of poverty and food security and at the same time strengthened the foundations of farming.

Now: Immediately addressing poverty and food insecurity

Using agroecological practices effectively helped farmers to access more and healthier food. Compared to farmers who didn't use the new practices, farmers who had used the agroecological practices were significantly more likely to transition from food insecurity to food security. This transition happened quickly. In a sample of 708 farmers, 68% of households moved from food insecurity to food security within five years.

Agroecology not only gave farmers access to more diverse food groups and more of their staple food, maize, but also was linked to a significant increase in household income. Particular practices associated with improved food security were crop diversification, legume residue incorporation, compost, and legume intercropping.

Figure 2. A farmer field day: Farmers visit the field of a fellow farmer who has started using legume intercropping; © SFHC

Future: Rebuilding social and environmental foundations of farming

Agroecological practices reduce erosion and rebuild soil, the basis of crop production. Using only agroecological practices to improve soil fertility, farmers were able to obtain the same yields as those farmers using synthetic fertilizer. Early analysis of yield data linked use of agroecological practices to increased maize yield overtime. In interviews, farmers said they had observed that adding organic matter to their fields allowed soils to hold more water, making it more likely that crops can produce even in drought years.

Importantly, agroecology can deliver economic and food security benefits to marginalized groups, such as women and HIV-affected households, when equity issues are taken into account. SFHC focused on gender in farmer trainings and discussion groups, to increase gender equity in household decision-making, ownership and control over income, and labor. In another agroecology project focusing on climate change adaptation, the percentage of women considered empowered nearly doubled, from 49% to 76%, for project farmers. Finally, a participatory approach helped to revalue and share existing agricultural knowledge in farming communities, while encouraging farmer experimentation facilitates the adaption of practices to future social and environmental conditions.

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Figure 3. SFHC's agroecology projects increased gender empowerment. Farmers who discussed farming with their wives were 2.4 times more likely to be food secure.

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