Agroecology

Known as the "science of sustainable agriculture," agroecology is both a practice and a movement. As a science, agroecology was originally developed by researchers who made careful ecological observations of traditional farming systems. These observations revealed that 1) traditional farming systems were not static but actually always changing and adjusting, and 2) that farmers around the world had developed highly sophisticated methods of managing and enhancing ecosystem functions in order to sustainably produce food, fiber, medicine and fuel. Some of these systems have been around for millennia.

As ecologists and biologists were joined by anthropologists, sociologists and economists, the field of agroecology began to grow. Scientists discovered that agroecological farming systems were biologically diverse and highly "knowledge intensive." This vast agroecological knowledge is held not just by the farmer, the farming family or the farming community, but is an integral part of peasant, fisher and pastoralist society and culture. Studies of agroecological practices expanded to engage with entire food systems.

It became clear that to preserve the planet's agro-biodiversity, store carbon, rebuild farming's climate resilience, end poverty and establish vibrant food economies, smallholders had to be protected from the onslaught of industrial monocultures (even "organic" ones) and from the ravages of neoliberal markets. Beyond a proven food system alternative, agroecology became part of a political project to protect the planet's two billion family farmers and to transform the world's food systems. Unsurprisingly, agroecology is the technical basis for the Campesino a Campesino (farmer to farmer) movement in Latin America and has become an integral part of La Vía Campesina and many organizations in the US food justice movement. Agroecology anchors much of the organic, urban farming, farm-to-school and local food movements. Agroecology is also

the basis for Cuba's astounding national agricultural recovery after the fall of the Soviet Union cut off the island's access to petroleum inputs.

Because of agroecology's central role in movement-driven food systems transformation, agroecologists and agroecological farmers have often clashed with the industrial food system in the field, in academia and in government. Agroecology is anathema to the corporate drive to expand areas planted to genetically-engineered crops, to "meatify" diets using confined animal feedlot operations, and to control the world's seeds. In sharp contrast to the proposals to industrialize all of the world's production systems with GMOs and monocultures, agroecology demands diversification, small and medium land holdings and an emphasis on farming as a livelihood.

In the face of the steady corporatization of public research, agroecology proposes farmer partnerships for participatory research based on community-driven research agendas. Instead of a steady concentration of wealth and monopoly power, agroecology works to decentralize and equitably distribute the power and wealth in our food systems.

Dig Deeper:

DeSchutter, Olivier. 2011. *Agroecology: A Path to Realizing the Right to Food.* Food First Backgrounder Vol. 17, No. 2 (Summer)

Holt-Giménez, Eric. 2006. *Campesino a Campesino: Voices from Latin America's Farmer to Farmer Movement for Sustainable Agriculture.* Oakland: Food First Books.

Rosset, Peter. 1999. *The Multiple Functions and Benefits of Small Farm Agriculture.* Food First Policy Brief No. 4.

Funes, Fernando, Luis García, Martin Bourque, Nilda Pérez and Peter Rosset. 2002. *Sustainable Agriculture and Resistance: Transforming Food Production in Cuba.* Oakland: Food First Books.

Agroecology in Action: www.agroeco.org