

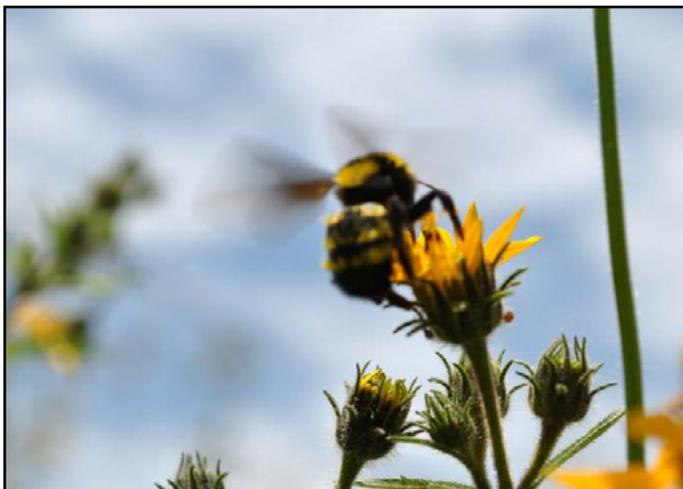
Farmer-led Pollinator Restoration in Central Mexico

Since 2008, Food First has been supporting farmer-led restoration of critical pollinator habitat in central Mexico. With rising concern over the collapse of honeybee populations linked to chemicals used in industrial agriculture, integrated grassroots efforts that link sustainable agriculture, conservation, and farmer livelihoods are urgently needed.

This project is an initiative of RICDA—The Indigenous Farmers Agroecology Network of Mexico. Indigenous *Nahuatl* and *Totonaco* farmers from the Sierra Norte of Puebla have allied with small farmers in the Central Mexican states of Guerrero and Tlaxcala to conserve soil, water and biodiversity as they restore pollinators to hundreds of acres of smallholder farmland. They work with nature—and with each other. There are good reasons why.

Pollinators and the Green Revolution

Mesoamerica is the genetic birthplace of corn, squash and many bean varieties, as well as home to millions of smallholder and indigenous farmers who for centuries have depended on the resiliency of their local agroecosystems to cope with drought, floods and pests. Today, the expansion of mining, industrial agriculture and unfair competition from free trade agreements are putting environmental and economic pressure on smallholder farming systems, exacerbating poverty in the countryside and leading to record levels of out-migration.



The spread of industrial agriculture results in low and uneven flowering on fruit trees and vegetable crops, caused by a decline in bees and natural pollinators such as bats, butterflies, birds, native bees, ants and other insects. The widespread use of insecticides including the neonicotinoids linked to bee colony collapse in the US is commonplace in Mexico. The loss of natural pollinators not only lowers crop yields for farmers, it also degrades the ecosystems that provide habitat for beneficial insects and other fauna. All of this weakens the resilience of agroecosystems and ultimately raises the cost of food and reduces the range of foods available, increasing the risk of malnutrition in the countryside.

The loss of natural pollinators in central Mexico is a reflection of a larger, ecosystems breakdown that began in the late 1960s with the Green Revolution.

Vicente Guerrero, a small, rain-fed village in the poor, eroded state of Tlaxcala was a latecomer to the Green Revolution. Farmers there received government credit, hybrid seeds and fertilizer in the early 1970s. At first, production increased. But by the late 70s, after a decade of planting the Green Revolution's high-input corn varieties, farmers were in trouble. The new seeds were more susceptible to drought and pests than local varieties. As nitrogen fertilizer steadily burned up the organic matter in the fragile, dryland soil, yields began to fall precipitously—even though farmers took out more credit and applied higher and higher doses of fertilizer each year. Farmers were faced with either paying their debts of feeding their families. Some farmers sold their animals for cash or left for Mexico City in search of work.

Others tried to farm more land, but the only areas available were forest fragments and steep hillsides. Deforestation—already a problem—increased.

The *Campesino a Campesino* Movement

Luckily, in 1978 the farmers of Vicente Guerrero received a visit from a group of Kaq'chikel Mayan farmers from the highlands of Guatemala who taught them simple techniques of soil and water conservation, soil building and crop improvement. Farmers recovered their yields by restoring their soils, seeds and agrobiodiversity. The *Campesino a Campesino* (farmer to farmer) movement was born and spread quickly throughout Mesoamerica.



Farmer-promoter Manolo leads a workshop on pollinators



RICDA promoters

Over the last 35 years, the farmers of Campesino a Campesino have used small-scale experimentation and popular education methods to spread effective sustainable farming practices from farmer to farmer. The movement's holistic philosophy and extensive knowledge networks link thousands of farmer-promoters (*promotores*) to hundreds of farmer's organizations like RICDA.

Every year, RICDA holds dozens of farmer-to-farmer agroecology workshops in Puebla, Tlaxcala and Guerrero. Local farmers work together in teams to implement new practices on their lands. They are living examples of the potential of agroecological resilience.

Farmer-promoters give workshops and classes in their local grammar schools and high schools. Students classify local pollinators and their associated plants, and mount them in glass-case displays. They learn conservation and restoration practices and implement them on a small scale on their families' farms where they hold field visits. As their parents and other villagers follow the progress of the experiments, everyone learns and shares knowledge about agroecosystems, climate resilience, pollinator restoration, and soil and water conservation.

Workshops in the classroom and in the field engage participants in both theory and practice, encouraging them to test practices first, before adopting them. This not only helps to adapt the practices to local conditions, it builds the methodology of experimentation into the learning process so that farmers can address future agroecological challenges.

Additionally, the farmers of RICDA published their own online manual and short educational videos for pollinator restoration and broadcast their own weekly radio program to spread their message of agroecology. They've held numerous agroecology conferences—lively, well attended gatherings of farmers, technicians and consumers that include formal presentations, music, popular theater, workshops, discussions, markets for organic farm products, and field visits.

The Pollinator Restoration Campaign

In 2014, over 150 farming families will improve their yields, strengthen ecosystem resiliency and restore pollinator habitat on more than 300 acres of farmland. Using the time-tested *Campesino a Campesino* methodology, they'll also share their knowledge with more than 400 other farmers in nearby villages. The Farmer-to-Farmer Pollinator Restoration Project is the latest development in a decades-long struggle for farmer-led sustainable agriculture in Mesoamerica.

For RICDA, conserving natural pollinators is part and parcel of a larger campaign for peasant livelihoods based on agroecology, indigenous knowledge and food sovereignty: the democratic control over their food system. Aware of the importance of building alliances, RICDA organizes in the *tianguis* (farmers markets), giving workshops, informational materials and selling "pollinator friendly" products to a growing base of loyal consumers. RICDA members are active in the "*Sin Maiz No Hay Pais*" (Without Corn there is no Country) campaign and coordinate with the international peasant federation Vía Campesina to lobby for agrarian reforms that protect smallholders and native seeds.

The farmers of RICDA know that to conserve pollinators they need to be both environmentally and economically sustainable. "We have to stay on the land," says Manuel "Manolo" Moran of the Tonantlal farmers group in San Luis Coyotzingo, Puebla. "It is the only



A student presents her collection of native plant species

way to survive. But we need to make a better living, too, for our children—and for our land—to have a future. We can save the pollinators, but who is going to save us? We can't do it all alone."

Looking forward, RICDA has plans for a direct marketing association, village scale non-GMO tortilla factories, and other local businesses that tap into the stream of agricultural products and environmental services flowing from restored farms.

Help us bring back the bees to Mexico's farmland

The long-term impact of the Farmer-led Pollinator Restoration project will be to improve the health of the land, animals, plants and people of central Mexico by bringing the knowledge and practice of pollinator restoration and conservation to thousands of farmers in the *Campesino a Campesino* movement throughout the region.

You can help Mexican farmers spread the benefits of agroecosystem resilience, sustainable yields and ecosystem services, while staving off pollinator deaths from a destructive model of chemical-intensive industrial agriculture.

Donate today by visiting: <http://foodfirst.org/support-pollinators/>