

# Cuba's Transition to Organic Agriculture

In this report, I draw from information from researchers from the Institute for Food and Development Policy, [foodfirst.org](http://foodfirst.org), which is located in Oakland, California.

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Many Cuban agricultural researchers--especially the younger ones-- began focusing on alternative agriculture in 1982. Their unused research on organic methods of farming, for instance, how to use and make biopesticides and biofertilizers, was immediately available to transform the country's agriculture when pesticide and fertilizer availability dropped by about 80 percent.



This drop came about because of a 53 percent decrease in oil imports--most pesticides and fertilizers are made from fossil fuels.

The shortage in oil imports came about when Cubans lost their trade with the former Soviet Union in 1989 and when The United States tightened its embargo on the country in 1992.

Anyone docking their ship in a Cuban harbor can not dock their ship in a U.S. harbor for six months.

Cuban government officials began the new agriculture program with land reform. They broke up



large state farms and gave them to groups of workers as worker-owned cooperatives or to individuals. The state continues to grow a small amount of sugarcane for export to bring in foreign exchange.

The workers are now given complete freedom to manage their plots--as long as the land is put to good use. The state continues to own the land to prevent its concentration in fewer and fewer hands and exploitation by landlords, which in other countries is resulting in staggering levels of hunger and unemployment.

The farmers choose what to grow and they have the freedom to sell their produce where they wish, whether it is on roadside stands, in farmer's markets or

elsewhere. The farmers set their own prices--though people can still get access to a limited amount of low-cost vegetables, subsidized by the state, that can only be purchased with their ration cards.

Before this reform, a worker was scattered all around on huge impersonal state farms, weeding here one day then harvesting there on another day.

Now, the worker has "linked to the land," as Fidel Castro puts it. Productivity has increased all over the country, which is perhaps a lesson for capitalists and communists alike. Workers are more motivated earning money for themselves rather than for the state or for the stock market.

Also in response to the food shortage, many people began to make gardens in their yards, vacant lots, balconies, rooftops and patios. The government makes garden plots available to all. In the city of Havana alone, there are 40,00 garden plots, according to Rachel Brunkhe, who did her masters thesis in Cuba on how the government raises the people's awareness of renewable energy.

Block committees and the Cuban Women's Federation have helped get the distribution of garden plots established.

When changing to organic methods of farming, it takes about three to five years to build up soil fertility and to re-establish the natural enemies of pests to control insects and disease. But in Cuba's case, the transition had to be immediate,

so they have been depending on biopesticides, such as bacteria, fungi and viruses, that attack pests but are nontoxic to humans. Other biopesticides include insects that eat or parasitize other insects.

One biopesticide is made from a fungus that controls diseases that grow in the soil and attack tobacco, tomatoes, peppers and other crops. They also use certain flies that eat other insects; tiny wasps that eat the eggs of the assava hornworm, the tobacco budworm, caterpillars and other pests; and predatory ants that attack the sweet potato weevil.

One former administrator of a forestry research institute says he has no need for biopesticides in his garden because of its incredible biodiversity.

"We are reaching biological equilibrium. The pest populations are now kept under control by the constant presence of predators in the ecosystem," he said.

Agricultural extension workers have had an important role in the conversion to organic agriculture. They travel by bicycle, foot or bus making regular visits to all of the gardeners in their areas, teaching them how to be effective in organic farming.

For instance, the worker may show a gardener how to use guava and avocado trees planted in wide rows to provide shade for vegetable crops that cannot thrive in the hot tropical sun. They diagnose pest and disease problems, help gardeners

get and use biological control products, inform the people about workshops, help them get the supplies they need, inform them about research centers, information services and other resources in their city and help them form garden clubs.

Joining a garden club gives a gardener access to workshops to help them learn gardening skills, foreign donations, material resources, assistance with their work on heavy workdays, access to markets, networking opportunities and friendships.

People can also learn gardening skills from the national television and newspaper articles.

The seed houses have also contributed to Cuba's success in organic agriculture. There are 12 of these in the city of Havana alone. They sell low-cost biopesticides, biofertilizers and low-cost gardening supplies, such as worm humus, seeds, fruit-tree saplings etc.

There are various agricultural research services that are the backbone of Cuba's success at organic farming. One research institute conducts educational programs and workshops. Another one, the Soil and Fertilizer Research Institute, does research on non-chemical ways of enriching soil with such substances as quarried minerals, worms, green manure, animal manure and solubilizing bacteria that make the soil rich in phosphorous the crops need.

The Swedish Parliament honored a Cuban group with the 1999 Right Livelihood Award, also called the Alternative Nobel Prize, for its agricultural expertise and commitment to organic farming.