

The Good Food Revolution

The lush landscape of Hawai‘i once offered abundant food. What can these islands teach us about food and sufficiency?

by **Claire Hope Cummings**

posted Feb 13, 2009

The island of Kaua‘i is one of the most beautiful and fragile places on earth. From above, it looks like a vibrant green flower, lush and pulsing with life, floating in the middle of the Pacific Ocean. The Hawaiian tourist industry calls it “The Garden Isle,” comparing it to the Garden of Eden. The image of Hawai‘i has always been sold as a “paradise.” But there is another side to life on this island, one that visitors rarely see.

The west side of this tiny island is home to the U.S. military’s Pacific Missile Range and testing grounds, part of the longstanding military occupation of the Hawaiian islands, and to the headquarters of giant agrochemical corporations Syngenta and Dupont. These corporations test and produce genetically modified crops on former sugar plantation lands here and throughout Hawai‘i, along with toxic herbicides, insecticides, and fertilizers. It is the very worst of America’s “agrochemical military industrial complex,” imposed on the ancient homelands of a rich traditional farming and fishing culture, in the midst of some of the world’s most precious biodiversity.

When I visited the west side of Kaua‘i in 2006, the local newspapers were full of reports of children from Waimea Canyon School who had been sickened by chemicals used on nearby test plots. As many as 60 people were affected, including teachers and staff. It happened again in 2007, with school children suffering nausea, headaches, and dizziness. In 2008, for the third time in three years, chemicals being tested for industrial agriculture sickened children and adults and sent them to clinics and the emergency room with tears in their eyes, holding their heads in their hands, or vomiting. The corporations responsible for the tests deny any role in the incidences. But the open air testing of chemicals and genetically modified crops is now a persistent worry for people living in this small rural community. Local activists have suggested that the welcome sign at the Kaua‘i airport be changed to warn tourists of what is going on there: “Welcome to the Mutant Garden Island.” Instead of being a source of health and well-being for the land and people, the [American system of industrial agriculture](#) has become a source of problematic food and even fear.

The connection to the military is the key to understanding how this tragedy came about. Most of the toxic chemicals used in agriculture came from the implements of war, such as nerve poisons and defoliants developed during World War II. And our military has been repeatedly used to impose our system of industrial agriculture on other lands, depriving traditional farmers of their livelihoods and redirecting their natural resources to the use of U.S. business interests. American plantation owners used the military to force the monarchy of Hawai‘i out of power. The takeover of Hawai‘i—the imposition of plantation agriculture on Hawai‘i’s traditional system and the conversion of the Hawaiian people to a Western lifestyle—is a case history and a warning for all of us concerned about the future of food. We are facing an urgent problem: Given global warming, growing populations, and declining



Hawai‘i’s lush environment once provided its people with abundant food. What happened? Above, community taro harvesting and replanting during an annual festival.

Photo by Scott Crawford,
Kipahulu Ohana
www.kipahulu.org

natural resources, how will we feed ourselves?

Before colonization, Hawaiians had a sophisticated system of land, water, and ocean resource use that fed populations equal to or even greater than those on several of the islands today (excluding the urban populations of O‘ahu). Now, residents of Hawai‘i import 85 percent of their food. The descendants of the first Hawaiians, like most native peoples who have been colonized, suffer from some of the worst poverty and diet-related health problems of anyone living in the United States.

The food being imported into Hawai‘i is produced, processed, packaged, and transported using enormous amounts of fossil fuels. By one measure, the current U.S. food system uses 10 times more energy than it produces in the form of food calories. Even if you like industrial agriculture, its built-in obsolescence is a problem. When oil production peaks, and prices rise again, as they inevitably must, food in Hawai‘i will become unaffordable. What will happen when the gas pumps and grocery store shelves are empty? This is a question [all of us will face](#), sooner or later, since we are all on what David Brower called “Earth Island,” a small planet floating in a sea of space.

A Storied Land

Mythologists like Joseph Campbell tell us that many creation myths are stories about how a food plant or animal came to people, usually as [a gift from their creator](#). But invariably, these gifts came with instructions about maintaining respect for and reciprocity with the sources of one’s food, to assure its continuing productivity. These stories are central to the formation of a culture’s core values. And they affect us now, not just in how we feed ourselves, but in how we relate to the natural world and each other.

A Hopi creation story, as told by Frank Waters in *The Book of the Hopi*, is a good example, illustrating the values inherent in the choices we make. As Waters explains, the continuity of the Hopi people comes from these values and the way corn forms the sacred center of their lives, kept alive in ritual and practices to this day.

Since the beginning of their existence, the Hopi have emerged through several worlds. Whenever they were overwhelmed by wickedness or corruption, their world would be destroyed. Later, they would emerge into the next world. At each emergence, the Creator would give them corn for sustenance. When the people entered the Fourth World, the one we are living in now, the Creator decided to find out how much greed and ignorance there still was among these humans. Many ears of corn were laid out of all different shapes, sizes, and colors. The people had divided into many races, and each was told to choose, according to its wisdom, the corn they would take with them into the Fourth World. They rushed forward and took different corn ears—long ears, fat ears, and ears of different colors. The Hopi held back and waited. All that was left for them was the smallest ear. But, they said, it was like “the original humble ear given them on the First World.” They recognized that this corn would be the best one to help them survive the harsh desert climate where they now lived.

Traditional people worldwide have developed long-standing [symbiotic relationships](#) among themselves, their homelands, and their foods. And their farming practices are intimately adapted to the places they inhabit. All over the Americas, people developed corn varieties that were finely tuned to local conditions. According to Boone Hallberg, a botanist and one of the world’s experts on corn, some of these varieties were drought-resistant; some withstood wind, crowding, local pests, and different soils; and some even fixed their own nitrogen. These plants are evidence of an incredible genius at work in the reciprocal relationships among people, plants, and place. New Mexican activist Miguel Santistevan describes how, in the Pueblos, each type of corn “drank” from its own river, producing seed that was specific to its own watershed.

One of the world’s most influential creation stories comes from the Book of Genesis in the Bible. It is often told incorrectly, without the warnings and prohibitions that are in the story—as if the children of

Adam and Eve were entitled to control creation. Whether you read this story literally or metaphorically, it has had a powerful impact on Western thought. Many scholars believe that our current environmental conditions came about because our society interpreted this story as a license to dominate nature. When told this way, the development of our military-industrial system of agriculture makes sense. We can see the long arc of history, the search-and-destroy missions throughout the ages, including manifest destiny and the conquest of native peoples, their lands, and their well-developed integrated food systems.

And the good, no, the really wonderful news, is that all over the world, people are engaged in relearning traditional ways, weaving them into new life-enhancing technologies, and making essential ecological and economic reconnections.

We can see the gradual and painful dismembering of North America. Europeans brought with them a fragmented system of agriculture, breaking the sod, fencing, and buying and selling parcels of land. Piece by piece, they went about destroying the natural systems that gave this land its enormous fertility. Their ancestors had deforested many European countries, and they continued seeking sustenance by taking more than was returned, depleting the resources they used, and then moving on. After using up the larger landscapes, they now have turned to smaller frontiers—genes and molecules.

Genetic engineering in agriculture was developed as a way to squeeze more from corn, wheat, and rice, turning these plants into little machines. We demanded that these plants put out more and more for us, and pumped them full of chemicals and hormones. Now, almost 80 percent of corn grown in the United States is genetically modified. The rest is contaminated with [GMOs](#), and the parent seed lines of corn are privately owned by the agrochemical companies. If we cared to learn, corn would have been able to teach us about generosity, adaptability, and resiliency. But rather than learn from nature, we still believe that our limited human imagination is sufficient and that we can solve systemic problems in mechanistic ways.

This approach is fundamentally flawed. Production-based solutions to hunger have failed miserably. And yet the urge to control nature seems unbounded. Farmers at the beginning of the 20th century could make a decent living. They [saved and exchanged seeds](#), and bred their own crop varieties.

Then, in the 1920s and 1930s, a growing private seed industry used the new medium of radio advertising to heavily promote commercial hybrid seeds as the way to increase production. Hybrids can be bred to increase vigor, but they do not produce seed that is “true,” meaning that each year new hybrid seeds have to be purchased and planted. On-farm seed saving and plant breeding began to go out of fashion. Not content with just a good share of the seed market, seed companies began pushing for changes to the law, and by the end of the 20th century, farm-based seed saving and plant breeding ended. Now, sexually reproducing, living plants can be patented—a moral, biological, and legal outrage.

American commodity agriculture has become a bloated industrial machine dependent on chemical inputs and government subsidies to survive. Commodity farming is not about food for people. It’s an extractive industry, often compared to mining. It mines the soil and pollutes the water and creates mountains and rivers of waste. Soil regenerates on a slow natural timescale, about one inch of topsoil in every 500 years. The United States is losing topsoil 13 times faster than it can be replaced, costing the nation an estimated \$37.6 billion in productivity losses each year. According to a recent U.S. Geological Survey, the one billion pounds of pesticides that American farmers use every year have contaminated almost all of the nation’s streams and rivers, as well as the fish living in them, with toxic cancer-causing chemicals. Fertilizers pour off farms into the Mississippi watershed, stimulating algae blooms in the Gulf of Mexico and creating a “dead zone” where nothing lives.

If science had remained publicly funded and in the hands of land grant universities committed to conducting research in the public interest, production-based innovations might have added another

useful tool to farm technology. Instead, private commercial interests hijacked the research agenda and privatized its technologies. Corporations and a few foundations took over the social mechanisms for problem solving, leaving us with only for-profit solutions in the form of products. Government not only deregulated many toxic technologies; it abdicated its responsibility to protect our health and safety.

There are no brakes on this runaway technology train. The continual expansion of corporate power poses even greater looming dangers. Biotechnology, especially as used in agriculture, has been harmful enough, but nanotechnology and synthetic biology, now being developed for biofuels, promise to do far more harm than good.

Industrial agriculture contributes almost 17 percent of all greenhouse gases, along with accelerating deforestation, desertification, and profligate water use. A study released in January this year in the journal *Science* predicts that half of the world's population will face [food shortages](#) by the end of this century as rising temperatures, drought, and loss of soil moisture depress crop production. Who, indeed, will be feeding us then? Monsanto, with its patented "climate-ready" crops, or the organic farmer who sells at your local farmers market?

As a Native American friend of mine used to say, "Here's a little bit of native wisdom: If we don't change direction pretty soon, we'll end up right where we've been headed!"



At the Waipa Farmers Market, in an empty field just outside of Hanalei town on Kaua'i, neighbors buy food from each other.

Photo by Wolfgang Schubert

Severing and Remembering

Another way to look at this rather dismal story is this: At every step of the way, we have disconnected and dismembered the intricate relationships that form the [web of life](#). Recombinant DNA technology, for instance, cuts a genome, inserts foreign material, and severs the original evolutionary lineage of that organism.

The solution to all this severing and disconnection is remembering, meaning "to put back together." This is the fundamental lesson traditional peoples keep trying to teach us. They often say that they are minding the rituals that hold the world together. They say that if we want to save the places, peoples, and plants we love, we have to remember their stories. They know that the answers we seek are already available, once we begin reweaving the social and biological webs that sustain us.

Independent science supports this interconnected approach to solving problems. The biotechnology industry asked several major international institutions like the U.N. and the World Bank to study how best to feed the world. After a four-year global study, 400 experts prepared a peer-reviewed report, adopted by 60 countries, known as The International Assessment of Agricultural Knowledge, Science and Technology for Development. Ironically, the report said biotechnology cannot feed the world. There is now a consensus in government and the scientific community that small-scale farming, traditional knowledge, and a focus on local economic vitality and adaptable agro-ecological methods are the optimal way forward.

And the good, no, the really wonderful news, is that all over the world, people are engaged in relearning traditional ways, weaving them into new life-enhancing technologies, and making essential ecological and economic reconnections. [Young farmers](#), urban activists, cooks and chefs, teachers and students, [community organizers](#), and faith groups are bringing local organic food, seed saving, and sustainable work projects into the mix. The values of the natural world—diversity, integrity, adaptability, and resiliency—are reemerging and re-entering the cultural exchange, just when we need

them the most.

On Kaua‘i, too, there are people engaged in remembering and reconnecting. Unlike the dry west side of the island, the North Shore is a lush place of almost heartbreaking beauty with a vibrant, racially mixed local culture. There, the Waipa Foundation hosts a weekly farmers market selling organic local food to support its work reviving traditional foodways. Like many Native Hawaiian organizations, they have a Hawaiian-language immersion school that integrates traditional food, farming, and fishing into their curriculum. They connect local farmers with schools, which are getting young people out of the classroom and into the mud of the taro patch. Activists on the island and throughout Hawai‘i are working toward food security. They achieved a ban on genetically modified coffee and are bringing back the original “gift economy” of exchanging traditional varieties of taro.

Just up the road from the Waipa farmers market, Limahuli Garden is restoring the traditional Hawaiian land-use system called an ahupua‘a. Kawika Winter, an engaging young ethnobotanist, Native Hawaiian, and the garden’s director, says the name lima huli means “turned hand.” It refers to a Hawaiian proverb which, roughly translated, says, “If your hand is turned up, you will be hungry; if your hand is turned down, toward the soil, your belly will be full.” The up-turned hand, Winter says, is not a positive symbol for Hawaiians. It is a sign of supplication. The down-turned hand, however, represents the hard work of cultivating the land.

Winter explains that the work they are doing there is all about remembering that the land is our ancestor. “We know that the way to get through difficult times is to use what was left to us—our land and our traditional knowledge. That will carry us into the future,” he says. “This is also our gift to the world.”

Claire Hope Cummings wrote this article as part of [Food for Everyone](#), the Spring 2009 issue of YES! Magazine. Claire is an environmental lawyer, journalist, and the author of *Uncertain Peril: Genetic Engineering and the Future of Seeds* (Beacon Press, 2008).

