

# Green Revolution

Bankrolled by the Rockefeller and Ford Foundations in the 1960s – and subsequently by publicly funded institutions and governments – the “Green Revolution” promoted the use of high yielding seed varieties, irrigation, mechanization, fertilizers and pesticides. Heavily influenced by Cold War ideology, the Green Revolution aimed to increase productivity in countries perceived as susceptible to communism because of rural poverty and hunger. Rather than increasing production through land reform and agroecology, the Green Revolution promoted technological intensification.



By the 1970s, it became apparent that Green Revolution technologies were biased in favor of large, highly capitalized farmers and thus accentuated social inequalities. Government institutions began reaching out to small farmers with the goal of incorporating them into industrial agriculture. Credit, training and input packages were extended to peasants under the assumption that “early adopters” would survive and grow, while late- or non-adopters would be forced out of agriculture and into the labor market.

Indeed, many smallholders were pushed out of agriculture and into the massive city slums now common throughout the Global South. Others began farming fragile hillsides and marginal lands, deepening cycles of poverty, environmental degradation and vulnerability. As a result, while the total available food in the developing world rose by 11 percent between 1970 and 1990, the number of hungry people also rose by 11 percent. Despite grain surpluses, poor people simply couldn't afford the food being produced.



As chemical fertilizers eroded the soil's natural fertility and as pests developed tolerance to pesticides, farmers had to apply increasing amounts of chemicals to get the same yields. In Punjab, India, an early Green Revolution

showcase, farmers now apply three times the amount of fertilizers to maintain the same yields. The high level of debt and vulnerability of Indian farmers has led to a tragic wave of farmer suicides.

By the 1990s around 40 percent of all farmers in the Third World were using Green Revolution seeds. The world lost an estimated 75 percent of its agro-biodiversity, and control over seeds shifted from farmers to a handful of corporations such as Monsanto, DuPont and Syngenta. In the Philippines, at the heart of the world's "rice bowl," the number of rice varieties dropped from 1,400 to only four because farm credit was conditioned on planting Green Revolution hybrids.

Despite its high social and environmental costs, the Green Revolution was wildly successful from the point of view of agribusiness corporations, which expanded their control over production processes and resources — especially the seed. The shift from a Green Revolution to a "Gene Revolution" in the 1990s further deepened this control, granting patent protections to private companies that develop and market genetically modified (GM) seeds. The most pervasive GM crops are Monsanto's herbicide resistant ("Round-up Ready") maize and soy, which also tie farmers to Monsanto-produced agrochemicals.

In 1999, the Rockefeller Foundation launched its New Green Revolution for Africa initiative to bring the Gene Revolution to Africa, and was joined in 2006 by the Bill and Melinda Gates Foundation to form the Alliance for a New Green Revolution in Africa (AGRA). Aware of the Green Revolution's devastation of biodiversity and farming systems in Asia and Latin America, African farmers organizations have demanded state protection for smallholders and support for agroecological production. These groups include ROPPA (West African Network of Peasants' Organizations), ESAFF (Eastern and Southern African Farmers' Forum), and AFSA (Alliance for Food Sovereignty in Africa).

In the United States, consumers and producers are building movements and alliances--such as the March Against Monsanto (pictured right)--to protest the bio-tech industry's inordinate influence on food policy and demand more stringent regulations such as mandatory labeling laws.

## Dig Deeper:

Holt-Giménez, Eric, Miguel Altieri and Peter Rosset. 2009. *Ten Reasons Why the Gates Foundation's Alliance for Another Green Revolution Will Not Solve Poverty and Hunger in Africa*. Food First Policy Brief No. 12.

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Altieri, Miguel. 2004. *Genetic Engineering in Agriculture: The Myths, Environmental Risks, and Alternatives*. Oakland: Food First Books.

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