THE RISE and Predictable FALL of GLOBALIZED INDUSTRIAL AGRICULTURE

A REPORT BY
THE INTERNATIONAL FORUM ON GLOBALIZATION

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AN EPIC PLANETARY STRUGGLE is now underway that will ultimately have more to do with the future well being of human beings on the planet than will the far noisier wars over oil, or terrorism, or political ideology. That is the battle over who will ultimately control the cultivation, production and distribution of the world’s food. This issue is surely among the most important for the ultimate survival of human communities, on a par with the continued availability of freshwater on the planet, also in crisis.

The question is this: Should the cycle of food production remain in the hands of small, independent farmers who are intimately engaged with the ecology of the land, familiar with the soil, local climate, local microorganisms, water resources, wild creatures, and local cultures? Throughout human history, farmers living close to the land and to their communities have fed the world and maintained an abiding allegiance to local and regional needs. Even today, regional farming continues to feed a majority of the population.

Or, should food production and distribution be centrally controlled by giant globe-spanning business enterprises? They advertise that they can more efficiently “feed a hungry world,” but enjoy no direct relationships to local lands or communities. They operate according to a hierarchy of values that places institutional profits above all other concerns. Their program is to convert millions of acres that once grew a great diversity of locally developed food crops into vast monocultures, fed by pesticides, chemical fertilizers, oil-guzzling machinery, biotechnology, et. al. Food is then transported across continents and oceans, often destined for luxury markets within already well-fed countries.

These giant corporate interests like to argue that their production methods and distribution systems are the only way to successfully grow food for the world. That has been their continuing advertising
theme, hawked through billions of dollars in persuasive television and print commercials year after year. And over the past several decades, they have succeeded in shifting a high percentage of food production toward large industrialized globalized systems, run by ever larger, and ever fewer giant corporations, as we will see in this report.

The sharp recent shift in direction, however, has not been based on good performance. The “agricultural revolution” of recent decades, has far less to do with corporate efficiencies of production, or qualities of food they produce, or even volumes of food. It primarily has to do with their ability to control the bureaucracies and governments that finally determine who shall grow the food and who gets the benefits from the operating rules. Meanwhile as far as successfully feeding the world, the reality is that nearly 900 million people go hungry each day, according to recent estimates of the United Nations Food and Development Agency (FAO). Millions more suffer from malnutrition and related illnesses.

Despite the inherent problems of industrial food production, which we will discuss in greater detail shortly, these corporations continue to profit, grow and consolidate, mainly because they have been able to control the rules of the system. The corporations at the hub of the industrial food system enjoy extremely intimate relations with the powers that be—governments and bureaucracies. Beyond intimate, one could call their relations co-dependent. Obviously, local communities of small farmers certainly do not enjoy the kind of familial access to the halls of power that is routinely the case with giant global corporations, who are also the leading campaign donors for client governments, and also the leading beneficiaries of government largesse.

However, most important for this document is the way that global corporations have gone beyond their advertising arguments, and even beyond the support of national governments, to operate on a global level, literally writing the rules and components by which food production increasingly takes place: the rules of investment and credit; the standards and rules of food safety; the rules of trade in and out of countries; the rules of ownership and patenting; et. al. These mega-corporations have lobbied for, and succeeded in constructing a vast international bureaucratic infrastructure, an architecture of global bureaucracies that is inherently in service to the industrial agricultural model, as invented by themselves.

This is especially the case with the rules of the World Trade Organization (WTO), and dozens of agreements and bureaucracies that operate within it. These will be the central focus of this document.

This report will attempt to do several things. First, to briefly review the current state of play in the global production of food, its distribution, and some of the main social and ecological effects of this model of production. Second, we will try to explain some of the components of the current architecture of the system, the WTO agreements, and their common practices, and reveal how they inherently bring about these negative outcomes. (If you are going to promote a system that tries to ship billions of tons of food across thousands of miles every day, you are going to use huge amounts of oil, and you are going to pollute the seas; there is no way around this.) Third, we will also survey key agreements affecting agriculture within the WTO, and also offer some specific proposals by which they could be altered or reformed to achieve some beneficial change.
However, it is also our purpose in this report to discuss a huge and growing countertrend that has lately emerged in direct reaction to the clear failures, inherent problems, and growing dangers of an industrial agriculture model that has not nearly lived up to its advertising. Many of the groups that form this countertrend would rather see the entire model dismantled.

One of the most important aspects of the countertrend is the emergence of exciting new alliances among the world’s developing countries. Force fed a take-it-or-leave-it agreement during the final WTO negotiations, these countries have banded together to declare that they will not take it any longer and that they will no longer go with the current system until the rules are changed to reflect a true level playing field. Promoters of globalization assured developing countries that they would have access to wealthy country markets in a quid pro quo of open markets. The theory was that increased exports would enable poorer countries to gain foreign exchange for development goals and to help relieve debt. As will be discussed later in this report, this theory has failed to deliver its promises. Instead, the rules were skewed toward favoring large producers in industrial countries.

In recent years, developing countries have formed various alliances to counter this system. Beginning with the Ministerial meeting in Seattle in 1999, WTO negotiations failed to go forward because of disagreements over agriculture rules. However, a strong resistance among developing country governments emerged at the 2003 WTO Ministerial in Cancun. For example, a Group of 21 poor countries, led by Brazil, China, south Africa, Egypt, Argentina, and others, representing some 75 percent of the global population, refused to accept the pressure of the rich countries and the meeting failed. Similar alliances among poor countries have happened at every meeting since then, right up through Hong Kong in December 2005. By June of 2006, WTO Director General Pascal Lamy suspended WTO negotiations completely, due to the utter breakdown of the agriculture negotiations. This has brought into serious question whether the WTO itself can actually survive for much longer.

Also very important has been the enormous burst of activity among the thousands of groups that do not seek any engagement with national or international rules. They have given up on the system, actually, and are instead heading out onto the land, to recover direct control, installing sustainable, small scale farming practices that traditionally served them very well, while trying to build communities from the inside out, as it were, rather than the top down. We will survey these impressive activities.

Finally, of course, these countertrend activities may not by themselves succeed in overturning the global agricultural system, at least in the near term. Despite the growing opposition and countertrends, WTO rules are still in place and still driving a globalized industrial system. Many bi-lateral and regional trade agreements promoting the globalized agriculture model are becoming the new mode to keep this system ensconced. But there is yet another factor coming into play that may do the job anyway. The growing crises of climate change and “peak oil” will each have immeasurable negative impacts on the sustainability of a food production model that is utterly dependent upon cheap energy resources that are rapidly disappearing. This set of conditions, which may be said to be the revenge of nature itself, may succeed where human beings have not in reversing the domination of an unsustainable and in the end, unsuccessful model, and help bring the future of agriculture far closer to home, in production and control; more local, more regional, with less corporate intervention, with far less shipping and resource use, far greater ecological and social sustainability, and featuring the re-emergence of familiar traditional and organic practices, close to the Earth.
Part One

COMMODIFICATION OF SURVIVAL

TOUCHING THE SOIL

Food growing once expressed a “personal” relationship between human beings, wildlife and the earth. Successful farming was based on generations of accumulated knowledge about place: climate, land, water, soil and the organisms within it; mixing and rotating crops, seed saving, breeding, and recycling organic matter. Growing food was an intimate process; it involved farmer, land and community, with the goal of sustaining that life-giving exchange forever. At the heart of the matter: a deep love of the land.

Over the past several centuries, most food has primarily been grown locally for local community and family consumption. Until very recently, developing countries grew 90 percent of the food they consumed domestically and for small local markets. (Sophia Murphy, “Managing the Invisible Hand: Markets, Farmers and International Trade,” Institute for Agriculture and Trade Policy, April 2002.) Over the centuries, local farmers developed seeds and used them collectively as a community to re-plant for the next harvest. They invented a variety of cultivation methods, crops, and pest management systems that were unique to local ecosystems and cultures. Communities freely shared all local “commons”—water, labor, seeds, traditional knowledge and innovation—that were vital to food cultivation and the survival of stable communities. Natural resources were carefully nurtured to maintain an important balance between regional fish, fowl, and other wild creatures, and the needs of the community.

As one United Nations Environment Program (UNEP) report observed: “In India, peasants grow over forty different crops on localities that have been cultivated for more than two thousand years without a drop in yields, yet have remained free of pests.” The report also attested to the benefits of agro-ecological approaches over millennia, citing also practices of indigenous populations that are “based on ecological knowledge and understanding” and are “highly efficient and productive and inherently sustainable.”
Cultures have successfully adapted to difficult environments with innovative techniques for irrigation, drainage, soil fertility, frost control, and disease management. In Central America, for example, ingenious raised-bed systems known variously as chiampas, waru waru, or tablones have withstood truly terrible geological conditions and have successfully fed populations without ecological damage. Similarly, highly evolved, locally appropriate systems are found in Africa, the Andes region, South Asia, and many other places. All of these successful adaptations resulted from farmers intimate relations with the land, weather conditions, and unique local conditions. In this way, they fed themselves for millennia.

Local, decentralized food production still provides millions of livelihoods around the world and provides fresh, nutritious food direct from the land to the table without the stresses and expenses of long distance shipping. India’s wheat economy is a good example of this. Millions of Indian farmers grow over 6 billion tons of wheat per year. Leading food rights advocate Dr. Vandana Shiva explains the process in the IFG book Views From the South: A chain of traders (artis), bring wheat directly from the farm to the local shops. Most people buy fresh wheat from the local corner store (kirana) and then take it to the local mill operators (chakki wallas). It is estimated that over 2 million small neighborhood mills produce fresh flour. Additionally, flour is produced by women working in households. Shiva observes: “Less than 1 percent of flour carries a brand name because Indian consumers trust their own supervision of quality at the local mill better than a brand name attached to stale, packaged flour.”

Small-scale, local food economies have successfully sustained millions of people for many centuries with little capital investment and infrastructure. Rather than technology and investment capital, people and natural resources (“natural capital”) are at the center of this system. Additionally, these centuries-old knowledge systems begat amazing food diversity. Traditional cultures enjoyed beautiful varieties of rice, potatoes, beans, corn, and other foods. Indeed cultures were created and defined by the diversity of their foods. Annual festivals and seasonal celebrations of planting and harvesting helped ensure that the culture was imbued with nature-based practices over the centuries.

**Radical Shift to Corporate Control**

During the last century a radical new approach to agriculture emerged. Instead of local farmers growing food locally to be eaten by their own communities, a new highly centralized, global system of industrialized agriculture rapidly began replacing the local, decentralized small-scale food systems connected to traditional cultures, climates, geography, ecosystems, and other endemic factors. This model now represents the dominant paradigm for industrial, northern countries. Beginning with the Green Revolution, many developing countries began to adopt industrial agriculture practices. This industrial agriculture regime of the last few decades is characterized by excessive focus on the import and export of food, and is promoted and enforced by international institutions and agreements such as the World Bank, the International Monetary Fund (IMF), the World Trade Organization (WTO) and other regional and bilateral trade and investment agreements. Unlike the agreements of other international bureaucracies, such as those of the United Nations, the WTO’s agreements are legally binding and have strong enforcement capability. Thus, they have become the most important vehicles for implementing economic and also social policies across the world. Though the rules and policies of recent global agreements and institutions are negotiated between governments, they are largely crafted by large agribusiness corporations—the primary beneficiaries.
Box One

WHO OWNS THE FOOD: FARM AND FOOD OLIGOPOLIES

In recent years, with the help of bureaucracies such as the WTO, the world has rapidly shifted from community based small-scale agriculture to a system where a handful of corporations control all parts of the food cycle, from seeds, to production, to distribution. This has far reaching implications for food security everywhere on earth, as it makes food vulnerable to the whim of market manipulations. Big global corporations like to say they are here to “feed a hungry world,” but the decisions of corporate boards and executives have much more to do with feeding the corporate bottom line. Here are some stunning figures that offer a good picture of the degree of corporate concentration at every stage of the production cycle:

- As of 2005, the top 10 commercial seed companies—the first link in the food chain—controlled more than 50 percent of the world’s commercial seed sales. This is an increase of 17 percent in only two years. (See Table A.)
- As of 2000, five grain trading companies controlled 75 percent of the world’s cereal commodity market, and its prices.
- In the vegetable seed market, one corporation dominates: Monsanto. It controls 31 percent of bean seed sales, 38 percent of cucumber seed sales, 34 percent of hot pepper sales, 29 percent of sweet pepper sales, 23 percent of tomato seed sales, and 25 percent of onion seeds. (See Table B.)
- As of 2004, Monsanto also accounted for 88 percent of the total land acreage producing genetically modified (GM) seeds: 91 percent of GM soybean lands; 97 percent of GM maize lands; 63.5 percent of GM cotton lands; and 59 percent of canola.
- The top 10 biotech companies control 75 percent of world biotech crop sales; this is an increase of 50 percent in two years.
- The top ten pesticide manufacturers control 84 percent of the pesticide market.
- Among grocery retailers, one company, Wal-Mart, is four times the size of its nearest competitor in terms of food sales, and bigger than the combined sales of the next four leading retailers. (See Table C.)
- Among agrochemical companies, the top ten control 80 percent of global sales.
- Among pesticides manufacturers, the top six companies account for 70 percent of the global market.

(Most figures are supplied by Rural Advancement Foundation, International Canada and the ETC group, Canada.)

All of this leaves small producers and farmers caught in a terrible trap, as both their inputs for farm production and their outlets for distribution are controlled by an ever-smaller number of giant corporations, which also control commodity price markets.

So, whether it’s ownership of seeds, or the inputs for industrial agriculture production, or retailing, a very small number of companies dominate. When we are speaking of the global food supply, it is tragic and dangerous and leaves the world vulnerable. Making matters worse, one company, Monsanto, dominates in several aspects of the global food cycle.
### TABLE A. WORLD’S TOP 10 SEED COMPANIES

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>2004 SEED SALES (US MILLIONS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Monsanto (US) + Seminis (acquired by Monsanto 3/05)</td>
<td>$2,803</td>
</tr>
<tr>
<td>2. Dupont/Pioneer (US)</td>
<td>$2,600</td>
</tr>
<tr>
<td>3. Syngenta (Switzerland)</td>
<td>$1,239</td>
</tr>
<tr>
<td>4. Groupe Limagrain (France)</td>
<td>$1,044</td>
</tr>
<tr>
<td>5. KWS AG (Germany)</td>
<td>$622</td>
</tr>
<tr>
<td>6. Land O’ Lakes (US)</td>
<td>$538</td>
</tr>
<tr>
<td>7. Sakata (Japan)</td>
<td>$416</td>
</tr>
<tr>
<td>8. Bayer Crop Science (Germany)</td>
<td>$387</td>
</tr>
<tr>
<td>9. Taikii (Japan)</td>
<td>$366</td>
</tr>
<tr>
<td>10. DLF-Trifolium (Denmark)</td>
<td>$320</td>
</tr>
</tbody>
</table>

Source: ETC group – Communiqué, September/October 2005; Issue #90

### TABLE B. MONSANTO CORPORATION: GLOBAL VEGETABLE SEED MARKET SHARE

<table>
<thead>
<tr>
<th>Crop</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn/Maize</td>
<td>41%</td>
</tr>
<tr>
<td>Soybeans</td>
<td>25%</td>
</tr>
<tr>
<td>Beans</td>
<td>31%</td>
</tr>
<tr>
<td>Cucumbers</td>
<td>38%</td>
</tr>
<tr>
<td>Hot Pepper</td>
<td>34%</td>
</tr>
<tr>
<td>Sweet Pepper</td>
<td>29%</td>
</tr>
<tr>
<td>Tomato</td>
<td>23%</td>
</tr>
<tr>
<td>Onions</td>
<td>25%</td>
</tr>
</tbody>
</table>

Source: ETC group – Communiqué, September/October 2005; Issue #90

### TABLE C. TOP 10 GLOBAL FOOD RETAILERS

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>2002 SALES (US MILLIONS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Wal-Mart (US)</td>
<td>$246,525</td>
</tr>
<tr>
<td>2. Carrefour (France)</td>
<td>$64,979</td>
</tr>
<tr>
<td>3. Royal Ahold (Netherlands)</td>
<td>$59,455</td>
</tr>
<tr>
<td>4. Kroger (US)</td>
<td>$51,759</td>
</tr>
<tr>
<td>5. Metro AG (Germany)</td>
<td>$48,714</td>
</tr>
<tr>
<td>6. Tesco (UK)</td>
<td>$40,387</td>
</tr>
<tr>
<td>7. Costco (US)</td>
<td>$38,762</td>
</tr>
<tr>
<td>8. Albertson’s (US)</td>
<td>$35,916</td>
</tr>
<tr>
<td>9. Safeway (US)</td>
<td>$34,799</td>
</tr>
<tr>
<td>10. Ito-Yokado (Japan)</td>
<td>$27,606</td>
</tr>
</tbody>
</table>

Source: ETC Group, based on data provided by IGD
A salient feature of these agreements is that food is treated as a commodity rather than as crucial for the survival of all humans. Given that food is a basic necessity of life, unlike other commodities such as tires or computers, many governments and civil society movements believe that such policies are grievously misguided. As Lori Wallach, of Public Citizen, puts it, “Food—like water—is not an optional product that consumers may choose to purchase: food is the basis of life. People without food die, while people without cars or tires walk and people without tin ore use local materials.” As such, many believe that governments have an obligation to ensure food as a basic human right. The result of this shift has been a loss of livelihoods for millions of farmers, and the depression of rural communities; an increase in hunger in many parts of the globe; compromised nutrition and safety of food; increased environmental destruction; and the control of food production and distribution by an ever-smaller number of giant global agribusinesses. (See Box 1.) These are some of the outcomes of this shift:

- Local self-reliant food systems that had provided food and livelihoods for millions, and a secure food supply, are rapidly being replaced by corporate control—often foreign corporations—over farm inputs, energy, crop commodity prices, food production, and marketing. These corporations value profits and export trade over the needs of local communities for food and sustainable products.

- Industrial agriculture eliminates diverse food production for local needs, replacing it with large scale monocultural production of one or two crops appropriate for export markets, thus diminishing natural biodiversity—of microorganisms, plants, insects, and animals, and diminishing local food supply as well.

- Heavy use of industrial agricultural processes, including pesticides, chemical fertilizers and fossil fuel-based machinery are rapidly destroying the vitality of the soil, polluting and over-using scarce fresh water, polluting the air, and harming wildlife and humans.

- The corporate introduction of genetically modified organisms (GMOs) and plants further destroys biodiversity and brings unknown, potentially catastrophic dangers via new forms of biopollution.

- The export driven model of globalized agriculture requires a huge increase in transport infrastructures—roads, ports, airports, energy grids—often constructed at the expense of nature and in defiance of global energy shortages.

- Massive shipments of agricultural commodities across great distances requires additional fossil fuel usage, refrigeration, packaging, etc. and fosters mobility of exotic plant and animal species, and the spread of pests, viruses, bacteria, and disease.

- Control over and access to the most essential elements of life—the commons—are being stripped away from local communities and given over to corporations (often via World Bank privatization schemes).

- Traditional knowledge of seeds, plants, and cultivation are being expropriated for profit, and patented by large corporations, the process known as “biopiracy.”

GLOBAL MACRO EFFECTS

The expansion of the industrial agriculture model affects everyone, whether they live in cities, suburban America, or the countryside in the Global South or North. To illustrate, we offer examples below on how globalized industrial agriculture relates to two of the most pressing issues of our time: immigration and global warming.
The Roots of Migration

The issue of immigration has dozens of countries in the world seriously in turmoil. The United States is no exception. Here, the raging debate about immigration is largely the result of globalized industrial agriculture, and trade agreements that embrace this model.

Between 1990 and 2005, the number of migrants from Mexico and Central America living in the United States without authorization spiked from 2 million to an estimated 6.2 million. Many of these migrants could be called “NAFTA refugees.” The North American Free Trade Agreement (NAFTA), which went into effect in 1994, lifted barriers to “free” agricultural trade between North and South, with enormous dire consequences.

As part of the condition for joining NAFTA, Mexico was required to drastically change its Constitution and abandon the traditional ejido system of communal land and resource ownership. This is the system created after the Mexican Revolution of the early 20th century, that made traditional farming in Mexico productive and viable. Mexico was also forced to dismantle a system that had provided a guaranteed floor price for corn for Mexican farmers, which had sustained over 3 million corn producers. As a result of NAFTA, Mexican farmers suddenly found themselves competing with an influx of cheap agricultural commodities produced by large-scale, heavily subsidized U.S. producers.Corn imports from the North grew 17-fold between 1993 and 2001 and accounted for 25 percent of Mexican corn consumption. This compared to a pre-NAFTA figure of 2 percent. (USDA, Foreign Agriculture Service, U.S. Maize Exports to Mexico 1993-2001; “Growing Troubles in Mexico,” Los Angeles Times, Jan. 17, 2000.) Within a year of NAFTA’s passage, Mexican production of corn and other basic grains fell by 50 percent, and millions of peasant farmers lost a significant source of their incomes. (Nadal, The Environmental and Social Impacts of Economic Liberalization on Corn Production in Mexico.)

Facing dire poverty in the Mexican countryside, millions of farmers migrated off their lands and made the wrenching decision to leave behind families and communities and head northward. Once in the United States, these migrants often found jobs in the fields, performing backbreaking work for poor pay and without basic rights. Thousands of others toil in industrial food processing plants, where conditions today resemble those depicted in The Jungle by Upton Sinclair at the end of the 19th century.

Despite NAFTA’s record, the U.S. Congress approved a similar agreement with Central America in 2005 that is expected to have similar devastating effects on small farmers in those countries. Many of them will also likely attempt to seek economic opportunities in the United States. Similar stories could be told throughout the developing world; farmers everywhere are vulnerable to import competition, not only because of free trade agreements but also due to World Bank and IMF-promoted cuts to all types of supports for small-scale agriculture, as we will discuss.

Climate Change/Peak Oil—Fatal Threats to Globalized Agriculture

Another threat from the globalized industrial agriculture is the role it plays in the rapid advancement of climate change on the earth. In dozens of ways, from destruction of carbon-absorbing forests, to the massive over-use of fossil fuels for production and for transportation (upon which the entire model depends), climate change is directly furthered. One-eighth of the world oil supply is now used for transportation with a very high percentage of that being used for long distance shipment of food across oceans or conti-
nents. It has been widely quoted that the average plate of food on an American dinner table today has traveled more than 1,500 miles from source to plate. According to Edward Goldsmith, Europe’s leading ecological thinker, and publisher of The Ecologist, industrial agriculture bears overall responsibility for about 25 percent of the world’s carbon dioxide emissions, 60 percent of methane gas emissions, and 80 percent of nitrous oxide—all of them major greenhouse gases contributing to climate change. Many climate scientists already predict hundreds more storms on the scale of Katrina or worse, and a rise in sea levels that could inundate thousands of miles of coastal farmlands in both North and South.

Ironically, there is also a reverse kind of threat to the food supply within a global industrial agriculture system, in that we are now approaching an unprecedented shortage of oil and natural gas on the Earth, called “peak oil” by many scientists and even corporations and governments. When that shortage fully kicks-in—and some say it is doing so now—the entire global industrial agriculture system could be threatened with collapse, as it will not be able to maintain long distance shipping in the face of increasingly high energy costs. This could play havoc with food delivery globally and itself bring-on a reversal of current trends. Here’s a brief review of some of the climate related impacts from industrial agriculture:

In the last few decades climate-stabilizing tropical rainforests have been cut down at an alarming rate, mainly for conversion to industrialized export-crop production, or else for cattle grazing. Millions of tons of nitrous oxide emissions are the result. Nitrogen fertilizers, a staple of industrial agriculture, are another major source of nitrous oxide, contributing as much as 10 percent of total annual nitrous oxide emissions. Methane emissions are also dramatically increasing because of flood-irrigated, nitrogen-dosed rice fields and the substantial increase in industrially raised livestock—in particular, cattle.

Carbon dioxide emissions are largely caused by the loss of soil carbon to the atmosphere. Modern industrial agriculture massively contributes to this by practices such as drainage of wetlands, deep plowing that exposes the soil to the elements, use of heavy machinery that compacts the soil, use of fertilizers and pesticides that destroy soil structure, overgrazing leading to desertification, and the practice of growing monocrops on a large scale.

Modern irrigation is especially energy intensive. Farmer-saved seeds that have been developed and selected over millennia to succeed in specific local climates and geological configurations have longer roots that can dig deep into the soil to find sources of moisture that the short-rooted industrial commercial high yielding seeds cannot utilize. For example, in industrial corn production, it is sometimes necessary to pump out water from a depth of more than thirty meters. Such pumped irrigation requires more than three times as much fossil fuel energy as rain-fed corn cultivation. Commercial high yielding hybrid seed varieties, and genetically modified seeds, require much more water than traditional crops, just as they require more chemicals than non-commercial seeds. This increases dependence on perennially irrigated crops at a time when the planet’s fresh water supply is diminishing.

Most modern industrial agriculture production is for export markets—this translates into massive increases in the use of increasingly scarce fossil fuels for transport, and increased production and disposal, packaging, and long distance refrigeration. All of this, however, could be undermined by the realities of “peak oil” which could spell the beginning of the end of the dominance of the industrial agriculture model. This possibility combined with the model’s more apparent failures, makes it even more crucial that alternatives to the industrial agriculture model be studied and implemented. This will be discussed later in Part Three.
Anyone who has followed the high drama displayed in the last several major ministerial summits of the WTO, knows that agriculture has been at the center of controversy. For many years, disagreements within this sector have had trade officials butting heads while massive numbers of small farmers from dozens of countries have protested outside negotiating rooms, usually peacefully, but sometimes via spectacular acts such as the suicide of a South Korean farmer, during the Cancun Ministerial, to protest the unlivable conditions forced by WTO rules.

The protests have also entered inside the WTO as the poorest countries have banded together in agreements not to go along again with global trade deals that do not serve their interest. This has created a serious threat to the continued viability of the WTO itself.

It is hard to imagine that until recently agriculture was only a minor part of international trade rules.

The WTO, established at the Uruguay Round negotiations in 1995, greatly expanded the traditional scope and power over agriculture. The predecessor to the WTO, the General Agreement on Tariffs and Trade (GATT), had a very narrow mandate: to set quotas and tariffs for agriculture products. Other matters remained under the purview of national governments. Though not without flaws, the GATT system allowed countries more flexibility to protect domestic markets from predatory “dumping” of subsidized items from foreign countries, and price gouging by a handful of corporate commodity traders. The creation of the WTO changed all that.
The WTO’s expanded power over agriculture limits the authority of member governments to set appropriate national farm and food policies that protect their own farmers, consumers, and natural resources. The net result has been a loss of livelihoods and income for farmers in the South and the North; environmental devastation from industrial practices and increased food transport; and lower food safety standards.

There are several WTO agreements that directly affect food production, food security, and safety as well as who benefits and who loses from the global system. These include:

The Agreement on Agriculture (AoA); the Agreement on the Application of Sanitary and Phyto-sanitary Standards (SPS); and the Agreement on Trade Related Intellectual Property Rights (TRIP).

Other WTO agreements have indirect effects on agriculture, such as the Agreement on Technical Barriers to Trade (TBT), the Agreement on Trade Related Investment Measures (TRIMs); and WTO basic principles: “Most Favored Nation” and “National Treatment.” All of these will be discussed in turn, in the following sections.

I. THE AGREEMENT ON AGRICULTURE (AOA)

The preamble of the AoA states that the agreement’s intent is to establish a more pure market-based agriculture. According to Martin Khor of the Third World Network, “The WTO has stamped a new paradigm for national economic and social policies worldwide, and a new framework of international economic relations.”

The primary focuses of the AoA are in these four areas:

- **Market access**: Countries are required to open national and local economies to foreign commodities, and to import a certain minimum level of agricultural products (referred to as “minimum access” rules).

- **Reduced “trade barriers”**: Countries are required to convert import quotas (or “non-tariff” controls) into tariffs (taxes), which must then be reduced and/or eliminated over time.

- **Domestic supports**: Countries are required to diminish production subsidies and other supports that national governments traditionally extended to domestic farmers.

- **Export competition**: Countries are required to bind their level of export subsidies to WTO rules, and then reduce subsidies over time. However, richer countries were permitted to maintain internal transportation subsidies and marketing subsidies, giving them a huge advantage over poorer countries that cannot afford such subsidies, and are not allowed, under the WTO, to create any even if they could afford them.

While AoA rules have adversely affected small-scale farmers in both the North and the South, those in developing countries are experiencing an especially severe loss of livelihoods for farmers and rural communities, as well as increasing food insecurity and hunger in many regions of the globe. In effect, AoA rules have forced developing countries into reliance on an export-growth agriculture strategy. As a result, developing country farmers find they must export internationally, at suppressed world prices, the very crops that otherwise would be consumed at home. Noted physicist and agriculture writer, Dr.
Vandana Shiva, says AoA policies have resulted in a “shift in production from food to export crops that has reduced food security.”

AoA rules have become the flash points for several major conflicts in WTO agriculture talks—on subsidies, commodity dumping, and market access, as follows:

**Subsidizing the Powerful**

The battle over agricultural subsidies and their relationship to “commodity dumping” has become the Achilles heel of the WTO nearly since its inception. For many decades in industrial countries, subsidies and farm price supports have been used as a way of sheltering farm livelihoods, rural communities, and local culture against imported competition in food. The AoA was supposed to bring a reduction of agricultural subsidies in the North to “level the playing field” and this was expected to improve the ability of southern countries to export their agricultural products to the North, which would now be more “accessible.” As it turns out, however, the agreement actually allowed northern countries to maintain most of the high subsidies that existed prior to the WTO. In contrast, developing countries, which had little or no domestic or export subsidies in the first place, were now barred by the AoA from having them or creating any new ones. Additionally, central seed banks, supply management systems, emergency food stock programs, and other tools that developing countries historically used to protect domestic producers and consumers, are being further dismantled via WTO rules. (In the decade prior to the creation of the WTO, structural adjustment policies of the World Bank and the IMF had already kick-started this process.)

How did the North manage to maintain their subsidy structure and protect some of the large commodity producers? One trick was to selectively choose its base year from which the percentage of required cuts in domestic supports would be calculated in WTO negotiations. The U.S. presented 1986-88 as its base year, a period when support levels were unusually high. Thus, when WTO-sanctioned subsidy reductions were implemented, the U.S., in effect, had actually not made huge cumulative cutbacks. In fact, since the WTO, the U.S., as well as the European Union have increased the level of many subsidies. The U.S. level of “reductions” of tariffs, export subsidies, and other supports actually allowed for increases in many subsidies and tariffs. For example, under these WTO guidelines, the U.S. raised several tariffs between 1992 and 1996—from 5.7 percent to 8.5 percent for agriculture and livestock production, from 6.6 percent to 10 percent for food products, and from 14.6 to 104.4 percent for tobacco products.

Another scheme was to manipulate the notoriously complex system of domestic supports (subsidies) laid out in the WTO agriculture agreement. In this system domestic supports are assigned to “boxes”—amber, green, and blue. Domestic policies are classified to these boxes as follows:

- **Amber Box**—subsidies policies that have a substantial impact on the patterns and flow of trade. Those must be reduced.

- **Green Box**—policies that are not deemed to have a major effect on production and trade and are exempt from reduction requirements.

- **Blue Box**—subsidies that can be increased without limit, so long as payments are linked to production-limiting programs.
The U.S. and the EU have cleverly negotiated to move many of their domestic subsidies that support “dumping” or are otherwise “trade distorting” into a box category that allows them to keep their high levels of domestic supports and subsidies. Additionally, export subsidies, which are payments that primarily go to commercial and corporate interests, remain largely intact.

Defenders of the AoA subsidy system argue that developing countries have also been allowed to maintain export subsidies; however, very few developing countries have export subsidies to maintain. Export subsidies are primarily used by northern country farmers and agribusiness, and so they benefit only a handful of rich northern agribusinesses. Even IMF loans to developing countries have been used for export subsidies to northern corporations. As former U.S. secretary of agriculture, Dan Glickman stated, “The main reason we have not lost more export to Asia is because the (U.S. Department of Agriculture) extended $2.1 billion in export credit guarantees. Without IMF actions another $2 billion in agricultural exports would have been at great risk in the short term and far larger amounts in the long term.” In other words, southern countries actually would have had a chance to compete on an even playing field. (“Inside U.S. Trade,” Release no. 008998, Remarks of Secretary, Dan Glickman, 1998, Agricultural Outlook, Washington D.C., February 23, 1998.)

“Dumping” on the Poor

Related to subsidies is the issue of “dumping,” i.e. the practice of selling an export product at a price below the actual cost of production. According to the Institute for Agriculture and Trade Policy (IATP), U.S. grain companies that dominate the global market are engaged in widespread dumping. In 2003, wheat was exported at 28 percent below its cost of production, soybeans were dumped at 10 percent below cost, corn was dumped at 10 percent below cost, cotton was dumped at 47 percent and rice at 26 percent below cost. This practice has devastated many developing countries’ economies.

Two main factors contribute to dumping: 1) Large-scale farms and agribusiness have been allowed to maintain, and even increase, subsidies for many export crops; and, concurrently, 2) WTO rules require developing countries to open their markets to imports, yet have stripped away traditional mechanisms such as quantitative import restrictions that could help safeguard against out-of-control dumping.

As a result, the practice of dumping on poor developing countries continues to destroy self-reliant food economies and farmers’ livelihoods. For example: Haitian and Honduran rice farmers lost their farm incomes when those countries were forced to reduce their tariffs, according to the rules of the WTO and the IMF. They were suddenly faced with an influx of subsidized U.S. rice. Jamaican dairy farmers cannot compete with cheap subsidized milk powder from Europe. And subsidized cotton from the U.S. has also wiped out the cotton market in many African countries, particularly Mali, Benin, and Burkina Faso, which have lost twice as much from the drop in cotton prices as they receive in U.S. foreign aid.

Such examples result from a combination of: (1) loan “conditionalities” imposed by the IMF, World Bank; (2) WTO rules that further reduce the right of poor countries to enact import tariffs and quotas to protect local farmers; and (3) WTO rules that reduce or ban the kinds of subsidies that poor countries used, while allowing subsidies that enable rich countries to export cheaply.
Technically, the WTO prohibits dumping and gives countries the right to impose special anti-dumping duties against offending countries. However, the rules require that countries must prove that they have been harmed by dumping, which is a complicated, challenging and expensive process, particularly for smaller countries. Few small countries can afford to stick their necks out by challenging powerful economic players like the United States.

The dumping problem also stems from the built-in bias of most global rules toward giant agriculture corporations. These corporations have been able to concentrate their domination over many of the world’s agricultural commodities and control global prices and supply. A handful of companies now trade virtually all the world’s corn, cotton, wheat, and soybeans, with trade in coffee, sugar, and other tropical specialty crops also highly concentrated. For example, in 2002, the largest six grain-handling companies controlled three-quarters of the world’s cereal commodity market. (“Consolidation in Food Retailing and Dairy: Implications for Farmers and Consumers in a Global Food System,” Mary Hendrickson, Ph.D., William Heffernan, Ph.D., Philip Howard, and Judith Heffernan, Department of Rural Sociology, University of Missouri, Jan. 8, 2001, at 74.) Similar oligopolistic conditions exist in both farm supplies (seeds, chemicals) and in food processing and distribution. (See Box 1.) This leaves small farmers in both rich and poor countries subject to the whims of corporations, commodity brokers, and the market, and generally unable to get fair prices for their products. The ultimate control over farm livelihoods is now the domain of a handful of corporations.

In sum, the rules of AoA are strongly biased in favor of the rich countries and giant agribusiness interests. They are effectively allowed to subsidize export commodities that are then dumped in poorer countries. Meanwhile, developing countries have been stripped of their few mechanisms to safeguard their food base and rural livelihoods.

“Market Access”—The Great Debate

Many southern countries were originally persuaded to join the WTO and to open their markets to foreign imports because of the promise that northern countries would do likewise, in a fair exchange. The promise of market access was tantalizing because many developing economies are focused on agricultural production. However, southern countries have actually opened markets more deeply and in more sectors than countries in the North, which have maintained barriers to key products from developing country exporters. Combined with the technological advantages and greater wealth and subsidies already enjoyed by northern agricultural producers, this has led to even greater imbalance in the system. Subsidized northern imports have destroyed rural communities and self-sufficient livelihoods throughout the South. Many people now working for poverty wages as Nike subcontractors are refugees from formerly self-sufficient farming regions and communities.

Some developing country governments, along with many global civil society groups, argue that southern countries must have market access, as promised, to level the playing field. But others believe that the entire export model is doomed because it moves production away from basic self-sufficient traditional farming, making all farmers vulnerable to the whims of the global marketplace, increasingly controlled by mammoth corporations. Many believe that food security is best achieved by growing diverse crops locally for local consumption, instead of relying on food imports.
These divergent viewpoints have led to a partial rift among civil society movements, depending upon whether one feels the situation is now so desperate that market access can provide the only quick fix or whether one takes a longer view toward a paradigm of community self-sufficiency. Still, most activists who advocate for agricultural self-sufficiency acknowledge that in the short term, many southern nations remain dependent on agricultural exports to the North. Hence, they recognize that transition strategies are needed to help nations that often feel trapped in colonial trade patterns to shift toward greater food security and self-sufficiency. One proposed short-term solution would be to grant immediate market access for key crops important to short-term economic needs in the South. The question remains as to whether export-oriented growth in agriculture actually does benefit farm economies among developing countries. Some indicators seem to indicate otherwise, and that the “market access theory” could be wrong. Consider the following:

**Developing Country Indicators**

- An estimated 43 percent of the rural population of Thailand continues to live below the poverty line even though agricultural exports grew an astounding 65 percent between 1985 and 1995.

- In Bolivia, by 1990, following half a decade of the most spectacular agricultural export growth in its history, 95 percent of the rural population earned less than a dollar a day.

- It is estimated that over 350,000 rice and corn farmer livelihoods in developing countries are being destroyed due to a conversion of acreage devoted to cut flowers for export to western markets.

- In Brazil, during the 1970s, agricultural exports, particularly soybeans, enjoyed a huge boost. Yet, hunger spread from one-third of the population in the 1960s to two-thirds by the early 1980s. In the ‘90s, when Brazil became the world’s third largest agricultural exporter, the per capita production of rice, a basic staple of the Brazilian diet, fell by 18 percent. (Rice growing land was converted to soybean production, largely exported to Japan and Europe for livestock feed.)

- The Chinese government estimates that 10 million farmers will be displaced by China’s implementation of WTO AoA rules. (Another 200 million Chinese peasant farmers are estimated to also lose livelihoods as a result of other implementations of trade liberalization and agriculture industrialization.)

- Kenya was self sufficient in food until the 1980s; it now imports 80 percent of its food, while, preposterously, 80 percent of its exports are also agricultural.

- In Nigeria, Ethiopia, Sudan, Kenya, Tanzania and Zaire, which account for 60 percent of the population of sub-Saharan Africa, there has been a 33 percent decline in cereal output per capita and 20 percent decline in overall food per capita in less than a decade. At the same time, all these countries saw rising agricultural exports per capita along with declining food output, and food consumption per capita.

- India spent 1.37 billion rupees as foreign exchange for promoting floriculture exports, while a mere 0.32 billion rupees were earned. Export earnings from floriculture are only sufficient for India to buy one-fourth the food it could have grown.


- Sub-Saharan Africa’s per capita GDP grew by 36 percent between 1960-1980, but declined by 15 percent between 1980-2000. (*WHOSE*, page 167)
Latin America’s per capita GDP grew by 75 percent between 1960-1980, but between 1980-2000 it grew by only 6 percent. (WHOSE, page 167)

The volume of Canadian exports doubled during 1989-1999. However, dropping commodity prices meant that farmers’ net income declined 19 percent. (National Farmers Union Canada, “Free Trade: Is It Working for Farmers,” August, 6, 2002.)

Such figures as these call into question whether globalization advocates who favor “market access” as a panacea are operating by a correct theory.

**Undermining Farmers’ Protections**

Supply Management Boards/Price Support Systems

WTO, NAFTA, and other agreements have outlawed a variety of pricing and supply mechanisms that allowed farmers to negotiate collective prices with domestic and foreign buyers, which helped ensure that farmers received a decent price for their commodities. These mechanisms include supply management boards and price support systems. Dismantling these has further empowered multinational corporations to drive down commodity prices and drive out local farm producers.

Take the case of Mexico’s corn growers. Less than two years after NAFTA went into effect, Mexican domestic corn prices fell by 48 percent as a flood of cheap U.S. corn exports entered the country. Before NAFTA, government agencies set stable prices for Mexico’s corn growers. Post NAFTA, such price regulations are not allowed. Without those, thousands of farmers have been forced to sell their lands.

The hardship experienced by small-scale farmers in the North could also have been eased by supply management mechanisms. From the 1930s through most of the 20th century, U.S. agricultural policies included measures to help stabilize and support prices through supply management, and price support systems, policy tools that required agribusinesses to pay farmers a minimum price for their major commodities. However, over the last two decades there has been a dramatic shift toward a reliance on the “free market”, based on faulty ideologically driven arguments that U.S. farmers would become rich through increased exports.

Other programs such as maintenance of domestic seed banks, emergency food supply systems, and low-interest loan programs for small farmers have also been dismantled by trade agreements. For developing countries, many of these systems were also undermined or eliminated via World Bank and IMF structural adjustment policies.

**International Commodity Agreements (ICAs)**

In the 1970s and 1980s, the United Nations Committee on Trade and Development (UNCTAD) negotiated agreements aimed at providing a more stable export environment for commodity producers by maintaining prices agreed to by both the producer and consumer countries. The agreements focused on “cash” crops such as coffee, cocoa, and other items primarily grown by poorer countries. The coffee
agreement was one of the most effective, as it succeeded in stabilizing prices and persistently raised them by 24-30 percent over what would otherwise have been market clearing levels. These International Commodity Agreements (ICAs) were important tools that consistently helped maintain stable commodity prices. While not all international commodity agreements (ICAs) had been successful, many developing countries believe that these agreements provided some stable pricing for commodities, which allowed regions to better plan long-term social and economic development.

Several factors led to the collapse of the ICAs. As part of the structural adjustment programs of the 1970s and 1980s, the World Bank and IMF activity pressured developing countries to switch to export-oriented agricultural production, further ensconcing the colonial legacy of dependency on large scale production of specialty commodities of interest to colonizers. This undermined the original intent of the ICA and diminished UNCTAD’s role. A second factor was that conditions for IMC loans required countries to remove the state marketing boards. The experience of these boards varied, but many performed ancillary services such as supplying seeds, pest control services, agricultural extension, provision of rural roads, schools, etc. Nothing was put in place to replicate these services and deleterious effects are felt even today. (Countries such as Cameroon, Cote d’Ivoire, and Nigeria that dismantled their marketing boards have suffered greater price volatilities than in Ghana, where some state marketing mechanisms remain.)

These ill-advised policies led to an oversupply of very cheap imports and an overall decline in prices. As prices for low earning cash crops dropped, the terms of trade for developing countries fell dramatically. For example, between 1980 and 1992 the terms of trade for commodities in relation to manufactured goods (of richer countries) fell by 52 percent. This means the sale of an average unit of a commodity could only buy half as much in 1992 as it could in 1980. So, developing countries had to produce twice as much just to stay even.

Lack of political and monetary support from, mainly, the U.S. and Europe is another major factor in the collapse of the ICAs. The U.S., for example, refused to contribute to UNCTAD’s fund to assist ICA programs and implementation. According to Martin Khor of Third World Network, “they decided that these commodity agreements clashed with their new free-market philosophy.” As a result, by the end of the 1980s, the agreements had largely fallen apart and most commodities have since suffered a general decline in their price levels due to surging supply.

During the Uruguay Round negotiations (to formulate the WTO), the U.S. spearheaded the effort to incorporate (some would say dismantle) the UNCTAD commodity division into UNCTAD’s trade division, which more closely follows “free trade” orthodoxy. Many believe this move was the final nail in the coffin of ICAs, and implementation of the WTO’s agriculture agreement further entrenched the historical advantage of developed nations.

From 1980 to 2000, world prices for 18 major export commodities fell by 25 percent in real terms. For farmers in the North, such lower prices made them even more dependent upon their governments for payments or subsidies to help ease this instability. But when payments no longer made up for the difference between the cost of production and the price paid for the goods, increasing debt and farm foreclosures were the result.
In addition, as developing countries have no tradition of payment or subsidy systems for their farmers, falling commodity prices automatically result in increasing poverty and hunger. To make matters worse, countries in the South are more dependent upon commodity prices for “cash” crops, a legacy of colonial occupation. Declines in prices for those crops has been especially steep over the last two decades: cotton (47 percent), coffee (64 percent), rice (61 percent), cocoa (71 percent) and sugar (77 percent) with grave consequences to small farmers.

II. AGREEMENT ON TRADE RELATED INTELLECTUAL PROPERTY RIGHTS (TRIPS)

From its birth in 1995, the WTO introduced many new areas into the global trading system, vastly expanding its scope. A common aphorism among WTO critics is that a new area of control could be brought under the WTO by the simple device of prefacing it with the term “Trade Related.” Intellectual property rights is one of those areas.

The basic framework for the TRIPs system was conceived and shaped by the Intellectual Property Committee (IPC) of the United States, and by industry associations of Japan and Europe. The IPC coalition represented thirteen major U.S. corporations including Bristol Myers, Dupont, General Electric, General Motors, Hewlett Packard, IBM, Johnson and Johnson, Merck, Monsanto, Pfizer, Rockwell and Warner. This body provided the major impetus for internationalizing intellectual property rights within the WTO. The control of local community innovation, once considered an inherent right of communities, has now become a statutory right of corporations.

Prior to the WTO, all patenting and intellectual property rules were under the purview of national governments. Most developing countries favored a sui generis community-based patent system which often exempted agriculture, medicine, and other essential products and processes from control by national patent laws. Such policies aimed to acknowledge generations-old traditional local knowledge and ensure that basic necessities of life remained available to all, as a “commons,” in the public domain. Thus, sui generis systems promoted local seed saving, seed research, and seed exchange. (Some systems allowed small-scale sales of seeds.)

TRIPs, however, allows seeds, plants, and other life forms (e.g., “micro-organisms”) to be patented by global corporations far outside the community or nation. Through the WTO, sui generis systems are being undermined and abandoned, and countries are forced to convert to a western-style system of intellectual property rights, which means that nothing is exempt from patent laws, unless explicitly exempted in TRIPs.

The most dangerous element of TRIPs is that it effectively enables large foreign corporations to obtain patent control of local production and distribution of seeds, plants, and life forms. (This is important also for the marketing of genetically modified seeds). As a result, seeds, plants, and other materials are being taken out the local commons and placed within corporate control. Farmers must pay to use what was formerly a commonly held resource, shared freely in the community. Additionally, a handful of corporations are now able to “own” much of the knowledge and material developed by local farmers over centuries that was formerly in the public domain.
Of particular concern to many is the effect that TRIPs has upon seed ownership. As Dr. Vandana Shiva writes in a report by the Tuscany regional government: “Seed is the first link in the food chain. It is the embodiment of life's continuity and renewability; of life's biological and cultural diversity. Seed, for the farmer, is not merely a source of future plants/food; it is the storage place of culture, of history. Seed is the ultimate symbol of food security.”

By expanding the patenting rights of corporations, located primarily in the North, TRIPs fosters what has come to be called “biocolonialism” and “biopiracy.” Since the WTO went into effect, patents on traditional seeds and plant varieties have rapidly increased. A collaborative study by the Rural Advancement Foundation International (RAFI) and Heritage Seed Curators Australia found nearly 150 cases of research institutions and businesses applying for patents or licenses for naturally occurring plant varieties, many of which have been farmed for generations. (Rural Advancement Foundation International, “Plant Breeders Wrongs,” Aug. 1998, at 19.)

From 1991-1993 (before the WTO existed), an average of eight patents a year were awarded on corn and soybeans; by 1999-2001, 281 patents were being awarded each year for these two crops. (Tom Bearden, “High-Tech Crops,” Newsbour with Jim Lebrer, Aug. 12, 1999.) Under TRIPs, the patent holder is given all rights to the seeds and can charge farmers for the right to use a seed that his own community may have originally developed. Similar biopiracy trends continue as many traditional, indigenous seeds and crops, such as basmati rice, neem, pepper, harar, bahera, amla, mustard, ginger, castor, jaramla, amaltas, and new karela and jamun from India have all been patented with the aid of TRIPs.

**Box Two**

**WHO OWNS TRADITIONAL KNOWLEDGE? DEBATE IN THE CONVENTION ON BIOLOGICAL DIVERSITY (CBD)**

In addition to the TRIPs agreement, a second international venue is now influencing the global rules over intellectual property rights, and corporate patenting of agricultural plants. This the United Nations Convention on Biological Diversity (CBD).

Third World farming communities and indigenous peoples have been strongly making their case within CBD that traditional community-based *sui generis* ownership of local plants, developed over centuries by the innovations of local farmers, must be legally affirmed. But, as reported in this document, the WTO’s TRIPs agreement strongly supports the opposite position: the *subordination* of traditional local ownership rights, and the confirmation of the patenting rights to absentee global agribusinesses.

Corporations counter the arguments of traditional farming communities within CBD, by taking a shocking position: Suddenly the corporations are saying that all biodiversity should be “freely accessible” to anyone. It should be considered a “common heritage for all mankind.” Resources should not be ‘locked-up” by traditional and indigenous farming communities that developed and nurtured them.
Such a stance has an altruistic ring until one realizes that it’s coming from the same corporations that, once they have their hands on these “freely available common resources,” immediately move to separate them from the commons. They instantly patent, privatize and monopolize these common resources—they lock them up, literally—and reserve all financial benefits to themselves. It would be hard to conceive of a more cynical stance.

Today, millions of Third World farmers who have developed and shared useful seeds over centuries continue to openly share them with each other via their traditional community ownership systems, in true recognition and celebration of the values and practices of the commons. These small farmers say that the patent rules of the TRIPs agreement, simply legitimize the theft and expropriation of indigenous knowledge of plants and seeds, and are inherently unjust. For corporations to argue they are in favor of sharing use, is fraudulent and immoral.

Communities also argue that continued useful development of such plants cannot continue unless the communities that have nurtured them are permitted to sustain their own lands in a traditional manner.

The negotiations within the CBD have been ongoing for nearly a decade, but so far have only reached a pathetic “compromise.” Rather than sustaining traditional community and/or indigenous rights to common resources, or, on the other hand, granting outright corporate proposals to keep biological resources “open” to their exploitation (and, under TRIPs) final ownership, the CBD now leans to a third option, “national sovereign control.” This means that ownership of such plant innovations, and the commons from which they emerged, should be housed in national governments, which, however, can lease them or sell them to anyone they choose. Given the power of global corporations to control governments, the outcome of this CBD position is little different from that of TRIPs. It still allows global corporations and their sponsors in wealthy industrial countries to raid the biodiversity of the Third World and of traditional peoples, albeit with a few more legal steps involved, and perhaps payment of (small) fees.

As we go to press on this document, the matter is not finally settled in CBD, and fierce struggles continue. One important group of outside participants in the debate, the International Society of Ethnobiology, in its Code of Ethics, has put its membership’s view of the matter this way:

“The Principle of Inalienability recognizes the inalienable rights of traditional societies, local communities and indigenous peoples in relation to their traditional territories, and the natural resources within them, and associated traditional knowledge. These rights are collective in nature but can include individual rights. It shall be for indigenous peoples, traditional societies and local communities to determine for themselves the nature and scope of their respective resource rights regimes.”
The SPS sets criteria for use of food additives, contaminants, toxins, veterinary drug and pesticide residues or other disease-causing organisms in food or beverages. It also sets parameters on member countries’ domestic policies regarding livestock and fisheries. The primary goal of the SPS is to facilitate trade by eliminating differences in food, animal, and plant regulations from country to country. The agreement requires member nations to “harmonize” their food safety standards with an international standards agency, the Codex Alimentarius.

Ironically, while describing themselves as working for food safety, the SPS Agreement and Codex permit even higher levels of pesticide residues (including DDT) in food than many domestic food safety and public health laws permit. Member nations also cannot enact or enforce any health, food, or environmental standards higher than those set by the SPS Agreement and the Codex. Any domestic food safety and public health standards higher than those in the SPS and Codex can be challenged under WTO courts as being “unfair trade barriers.” Thus, food and public safety policies are set to the lowest common denominator, and there is a global trend of downward harmonization.

These homogenized global standards are exquisitely attuned to the primary goal of benefiting global corporate producers. The SPS and Codex have enforced food processing standards that work directly against local and artisanal food producers while favoring the global food giants. For example, they require irradiation of certain products, pasteurization, and standardized shrink-wrapping of local cheese products, sold in even small local markets. All of those standards are appropriate for large producers, but not small.

Such rules as these tremendously increase costs for small producers and also negatively affect taste and quality. In fact, the advent of the WTO and other trade agreements has rapidly increased the international flow of both food and foodborne illnesses. The World Health Organization (WHO) has identified increased trade of food as a growing cause of illness worldwide. (WHOSE, page 53) In reality, the greatest threats to food safety and public health do not come from small food producers but from industrial farms and distributors whose practices have accelerated the incidence of salmonella, *e. coli* infection, *listeria*, and other bacteria in foods, as well as Mad Cow disease, hoof-and-mouth disease, and others. Industrial processes make it impossible for food producers to observe food quality closely, whereas small and artisanal food producers can more easily stop disease outbreaks.

An example of how the SPS Agreement is biased toward industrial agriculture can be found in the application of Article 2.2, which states that WTO members can set policies “only to the extent necessary to protect human, animal or plant life or health...based on scientific principles...and not maintained without sufficient scientific evidence....” (WHOSE, pg. 56) The SPS provision was invoked by the U.S. in its successful WTO court case challenging EU bans on certain pesticides.

This clause effectively eviscerates a long-standing safety standard known as the Precautionary Principle. The Precautionary Principle states that in cases where there is scientific uncertainty, governments have an obligation to take action to avoid harm to public health or safety, or to the environment, by seeking out less harmful alternatives. This approach was used, for example, in the case of the morning sickness drug
thalidomide. U.S. law followed the precautionary approach, and as a result averted a disastrous epidemic of birth defects. In countries that legalized the drug, it’s estimated that over 10,000 cases were directly related to the use of thalidomide. Under the WTO regime, the U.S. government now appears to be abandoning the precautionary system.

IV. OTHER RELEVANT WTO RULES AND AGREEMENTS

WTO Articles I and III: “Most Favored Nation” (MFN) and “National Treatment” (NT)

Both of these articles of the WTO charter have similar intentions. Article I, the WTO’s Most Favored Nation (MFN) rule, requires that all member governments treat goods imported from one WTO member nation “no less favorably” than goods imported from any other member nation. This effectively makes it impossible for governments to restrict imports from countries on moral or ethical grounds, such as horrendous human rights or labor standards, or environmental records, or that are dealing in illicit trade of some commodities, or are making wars, etc. Under this article it would have been impossible to boycott South African goods under apartheid.

Article I also requires WTO member nations to treat “like” products from a WTO member as favorably as it does from any other member. This rule directly contradicts rules developed in many other international treaties, most notably United Nation’s multinational environmental agreements (MEAs). These agreements allow a country to reject goods from another country if the goods do not meet standards of the applicable MEA—e.g., Convention on Biological Diversity, Convention on Trade in Endangered Species, Montreal Protocol on Substances That Deplete the Ozone Layer, and others.

The MFN rule also prohibits a country from setting up special trading relationships to favor development of poorer nations. This issue arose in the “Banana Wars” case between the United States and the EU. Under its Lome Treaty, the EU set aside a portion of its market for banana exports from its former Caribbean and African colonies in order to help these countries toward development and economic goals. The United States charged that this was discriminatory against Latin American banana producers and the WTO agreed. In 1998, when the EU refused to change the policy, the United States threatened to place 100 percent tariffs on some EU imports. Eventually, the EU backed down, in a devastating blow to small Caribbean nations dependent on banana exports. Since U.S. jobs were not at stake (no bananas are grown in the United States for export), there were strong suspicions that Chiquita, a U.S. company with extensive banana plantations in Latin America, had simply purchased the government’s support. Chiquita CEO Carl Lindner and his associates had given $5 million to U.S. political campaigns between 1991 and 1998.

As for Article III, National Treatment, it requires governments to treat all imported goods “no less favorably” than locally produced “like products.” Free trade advocates claim this article prevents “discrimination,” which is a lofty-sounding ideal, but that is definitely not the intent. The real purpose of Article III is to prevent any government from favoring or protecting its own local industries, or farmers or cultures that might otherwise be overwhelmed by globe-spanning corporations bringing vast amounts of cheap imports that make local or indigenous economies non-viable. Foreign businesses and banks may
buy-up local producers or local banks and literally takeover the economy of smaller, weaker nations. These rules also prevent countries from protecting jobs or local natural resources from accelerated exploitation, or local communities from being absorbed in the global economic juggernaut as many agricultural communities already have been.

Neither may a country “discriminate” against a product that might have been produced in a manner that caused environmental harm.

The implications of this rule were clear in the case brought by Mexico against a U.S. law which excluded tuna caught by domestic or foreign fishers who used nets that trapped and killed dolphins. A GATT panel determined that a country could not discriminate against a product based on how it was produced or harvested. According to Lori Wallach of Public Citizen: “In making this interpretation, this and later trade panels threatened the long list of environmental laws in countries around the world that focused on how seafood is harvested or how paper is manufactured.”

As a result of the case, the Clinton administration, as well as the administration of George Bush, Sr., weakened a portion of the U.S. Marine Mammal Protection Act to comply with the ruling, thus allowing tuna caught with the deadly nets to be sold in the United States.

The combination of Article I and Article III directly affects farmers by endangering small local producers of all kinds. We have given the example of Mayan corn farmers of Mexico, being nearly wiped-out by cheap, industrial subsidized U.S. corn exports. There are literally hundreds of such cases among farmers, forest peoples and fisherpeople around the world. Similar effects may be found among indigenous peoples whose lands are exploited by foreign corporations for minerals or wildlife or genetic resources. Under Articles I and III, there is little resistance possible.

**The Agreement on Technical Barriers to Trade (TBT)**

The Agreement on Technical Barriers to Trade (TBT), in addition to the SPS, greatly affects food and public health standards as it effectively views environmental, public health and food safety standards to be technical barriers to trade. Its provisions are detailed and complex, but essentially it establishes an international regime for “harmonizing” environmental standards, effectively creating a ceiling, but no floor, for environmental or safety regulations. This means that if a nation sets any standards above those in any agreements in the WTO, it is vulnerable to international trade dispute actions. The TBT was one of the agreements invoked in the WTO case ruling against the European Union’s ban on beef injected with hormones. As a result of this ruling, the U.S. has imposed severe trade sanctions on key export products from the EU.

**Agreement on Trade Related Investment Measures (TRIMs)**

The Agreement on Trade Related Investment Measures (TRIMs) constrains governments from imposing certain entry and operating conditions on foreign corporations. This has helped to enable huge agribusiness conglomerates to greatly expand control over commodity pricing, seed production and distribution, and other areas.
V. SUMMARY OF CONSEQUENCES OF U.S. FARM POLICY: MIMICKING THE WTO

As one of the largest food producers and exporters, the U.S. government and its agribusiness sector set the agricultural agenda for the globe. Several of the largest agribusiness companies in the world are U.S.-based: Archer Daniel Midlands, Monsanto, Cargill, and others. These corporations set trade agreement agendas and increasingly control world trade and food supply in major commodities such as corn, wheat, soy, cotton, and other products. During the last few decades, U.S. government farm policy, set by the 1996 Freedom to Farm Act, and the 2002 Farm Bill, accelerated the ascendancy to an export-oriented model of agribusiness.

These acts and other compatible government policies have effectively eliminated price floors (or a minimum price base), forcing farmers into excessive production so that they must send every possible bushel to the market no matter how disastrously low farm prices go.

International trade agreements and bureaucracies amplify such problems. Because of NAFTA and other "free trade agreements," cheap U.S. prices radiate low prices across the globe. Farmers in both the North and the South are forced into all-out production for survival. Despite massive subsidies, small family farmers even in rich countries have also been hurt by this new global food trading system. Domestic farm policies in the North, such as the U.S. Freedom to Farm Act and the EU’s Common Agriculture Policy (CAP), mimic the WTO subsidy system that favors huge agribusiness interests over smaller farmers. The current U.S. government payment scheme serves to maintain the cheap commodity system that benefits agribusiness, yet many farmers, despite the payments, are not able to make a living through their traditional livelihoods, producing food, and taking care of the land.

Some sobering figures demonstrate the severity of the farming crisis in the North:

- Although U.S. farm subsidies have soared to more than $20 billion per year, up from the average of $9 billion per year in the early 1990s (pre-WTO), less than 20 percent of U.S. farmers receive 86 percent of the total dollars of U.S. subsidies.
- Two-thirds of farms receive no subsidies at all.
- Net income for U.S. farmers in 2001 was 36 percent lower than in 1989.
- The U.S. lost over 38,000 small farms between 1995-2000.
- Over 73 percent of U.S. farms share only 6.8 percent of the market value of agriculture products.
- 7.2 percent of farms, including giant feedlots, receive 72.1 percent of the market value of products sold.
- Since 1984, the real price of food has remained constant, while the price farmers receive has fallen by 38 percent.
- In 1999, farmers received 21 cents on the dollar from food products, as compared to 10 years ago, when they received 32 cents.
Meanwhile, the profits of giant global agribusinesses have soared. During the first 7 years of NAFTA, Archer Daniels Midland’s (ADM) profits grew from $110 million to $301 million. Cargill’s net earnings from 1998 to 2002 jumped from $468 million to $827 million. ADM and Cargill are two of the main agribusinesses that control corn trade.

Such figures are similar in other nations in the North. As cited earlier in this report, the majority of Canadian farmers and food producers in EU countries are not benefiting from international trade policies.

In 2002 the EU CAP comprised roughly $50 billion, almost half of the EU budget. As in the United States, only around 20 percent of EU farmers receive subsidies. As the EU adds more “accession” countries, many are concerned about their agriculture base. Poland, for example, has 2.5 million small farmers. Following current EU policies, which discriminate in favor of large farms, many more farmers may be forced off their lands to make way for larger, more “viable” units. For example:

- The U.K. lost 60,000 farmers and farm workers between 1998-2001 and farm income declined an astounding 71 percent between 1995-2001.
- A recent survey of United Kingdom (UK) farming districts found that the average farmer is earning only £3.60 per hour, below the UK minimum wage.
- In Canada, farm debt nearly doubled since the 1989 Canada-U.S. Free Trade Agreement. Between 1996-2001, Canada lost 11 percent of its farms.

In summary, the trend is clear: farmer incomes are significantly declining, yet profit margins for large corporations are increasing at record rates.
Box Three

THE CALIFORNIA EXPERIENCE

The multiple harms caused to farmers in the North by WTO, NAFTA, and other trade agreements is typified by the experience of California, which because of its size and the variety of crops it produces, is important not only to the United States but to the world.

If California were a country, it would be the fifth largest economy in the world. It has led the nation in agricultural production for more than 50 years, with agricultural exports of $8.2 billion in 2004, 17 percent of the U.S. total.

California adopted the industrial, export-oriented agriculture model several decades ago—characterized by manufactured hybrid seeds; chemical fertilizers and pesticides; intensive water and energy use; heavy fossil fuel driven farm machinery; and monocrops—making the state an icon for agriculture around the world. It became a “poster child” example of a successful agriculture economy.

California farmers and ranchers now produce more than half of the nation’s fruits, nuts and vegetables. However, because of international trade and investment agreements, along with U.S. domestic policies that collude with these rules, California’s agriculture sector has actually begun to suffer on many fronts as follows:

- According to a 2001 report from the California Farm Bureau: “Prices for many of the state’s 250 plus commodities have collapsed due to foreign imports, including raisins and other dried fruit, olives, garlic, honey, apples, apricots, peaches, oranges, pears and tomatoes.”
- Two-thirds of California’s avocado export market has been lost since the mid-1990s, while avocado imports from south of the border have increased by 300 percent.
- Desert region grape growers have struggled to survive economically as table grape imports from Chile and Mexico increased by more than 100,000 tons in the last five years.
- California’s cotton and rice growers are seeing crop prices drop 30 percent compared to a decade ago.
- California was once the nation’s flower capitol, but recent imports from Columbia and other Latin American countries have depressed prices for California’s fresh flower growers and caused many to go out of business.

WHAT HAPPENED?

During the last decade, international and bilateral trade agreements such as NAFTA, the WTO and other instruments of the globalized “free trade” system have opened up borders to products from around the globe. At the same time, a myriad of global trade rules have eliminated any nation’s right to enact quota and tariff mechanisms that could help protect and sustain domestic farm economies and natural resources. California’s experience is basically little different from that of other countries and regions.
PART TWO

National food systems of many nations are in collapse as cities, states and countries are inundated with cheap food from around the globe. Cheap imports force farmers into severe economic hardship and even bankruptcies. “I tell people that under the best conditions, the worst farmers make money. Under the worst conditions, even the best farmers lose money; that’s what we’re seeing now,” says George Leavitt, a farm adviser specializing in vineyards with the University of California extension office in Madeira County.

The “worst conditions” in a global economy mean that California growers must compete with commodities grown in countries where land, labor, energy, and water are often far cheaper than in California, as well as the rest of the United States.

It is only expected to get worse, as China’s recent entry into the WTO will most certainly affect California agriculture in a major way. According to an internal Farm Bureau memorandum: “With its large number of farms, ample resources and central planning, China is a continued threat as a major exporter of agricultural products at levels that could be harmful to the U.S. and California specifically.” That threat is already being felt. For example, even though the U.S. is still allowed to maintain a tariff on garlic—nearly 400 percent—and despite increasing transportation costs, fresh Chinese garlic is being sold in California at prices considerably lower than the local cost of growing garlic.

In addition to opening borders to cheaply produced food, new global investment rules have enabled a few multinational corporations to control commodity prices, cause a dramatic drop in the price of most commodities worldwide, and force extreme overproduction as farmers try to make up their per unit losses with volume. It is a dead-end street.

GLOBALIZATION’S IMPACT ON CALIFORNIA’S ORGANIC COTTON

The tragic history of California's organic cotton industry serves as a good example of why it is so critical to understand global-to-local links before any systemic change favoring local systems of food production can occur. Before NAFTA and the WTO, many California cotton farmers joined a movement to grow organic. By 1994, over 17,000 acres of traditional cotton grown with heavy use of toxic pesticides were converted to organic cotton. This represented almost one-quarter of all U.S. cotton production. But a few short years after NAFTA and the WTO were enacted, only 130 acres remained of organic cotton production.

Why? To increase their margins, manufacturing companies chose to purchase internationally produced cotton at a lower price than they would have to pay U.S. growers. Pre-WTO, the U.S. restricted the quantity of imported cotton (organic as well as non-organic) and enacted import tariffs at levels that assured that U.S. cotton farmers would remain viable. These mechanisms are now WTO-illegal.

Turkey, Pakistan, and other countries produce organic cotton at a fraction of the price of California cotton because of much lower labor, land, and water costs. Free trade proponents might call this a “comparative advantage”; however, some “advantages” are questionable. For example, in some instances, water is cheaper in these countries only because of IMF and World Bank loans that effectively subsidize the diversion of water resources toward crop production. This water diversion itself
brings many environmental harms. Additionally, the true environmental costs from the massive use of fossil fuels, and the need for increased transportation infrastructure, are not figured into the so-called comparative advantage equation.

GENETICALLY MODIFIED ORGANISMS

Just as menacing to California farmers as corporate consolidation, shrinking export markets, and an influx of imports is the introduction of genetically modified (GM) seeds and crops. International agreements such as the WTO’s Agreement on Trade Related Intellectual Property Rights make it much easier for GM technology to rapidly advance around the globe. GM crops are the ultimate expressions of a corporate-led industrial agriculture system. Under a GM dominated agriculture system, a handful of corporations can own genes and seeds, further diminishing farmers’ options and, in effect, controlling the world’s food and fiber supply.

In California, there is deep concern about GM crops. The state now has the largest number of organic farms in the U.S. and leads an industry that is growing at 20 percent per year. But GM crops threaten to contaminate non-GM organic crops, destroying the future viability of those farms and the gene pools of many crops.
Part Three

COUNTERTRENDS—RESISTANCE, RENEWAL, AND ALTERNATIVES

Reversing Course: The Global Movement Toward
Regenerating Local Agriculture

Any system that deliberately sets out to separate from their lands the farmers who have been feeding their families and local communities, replacing them with ecologically unsustainable export production, is absurd on its face – and tragic for millions of people and the environment. In the name of “progress,” family farms and rural communities are being driven to extinction. Millions of people are being pulled off the land and moved into ever-expanding cities. This process must be reversed, and there is now a very impressive global movement to do just that. As the additional outrages of climate change, and peak oil become ever more apparent, there will be increasing need and opportunity for viable alternative models.

Even now, millions of people around the world are already mobilizing to reverse the globalization of industrial agriculture. South Korean farmers have become particularly famous for their dramatic recent protests at World Trade Organization meetings. At the most recent WTO Ministerial in Hong Kong in December 2005, hundreds of them dove into the frigid waters of the city’s harbor in a symbolic effort to swim to the convention center where trade negotiators were determining the fates of small farmers around the world. In India, millions of farmers have been protesting for years about corporate biopiracy of their biodiversity and their seeds, and the eventual commercial patenting of indigenous varieties.

The growing resistance movement also includes tens of thousands of farmers in Japan, the Philippines, Bolivia, Germany, and most significantly, the growing international movement of landless peasants throughout the Global South who are demanding a meaningful land reform process. Evo Morales, a
farmer and indigenous leader was elected as president of Bolivia in 2005, South America’s poorest country with a majority indigenous population. President Morales began his term in office by immediately taking actions to implement long overdue land reform.

In Brazil, the landless peasant movement (Landless Workers Movement, or MST) has won actual title to over fifteen million acres of farmland that are able to serve 250,000 families. The Brazilian government has recognized that legalizing MST land occupations—especially when lands were formerly idle—is far less costly (even including compensatory payments to prior landowners) than to have millions of people in abject poverty, without food, without work, edging toward violence, terrorism, and public health disasters, and filling overcrowded cities even further.

Western industrial nations are also seeing small farmers and artisanal producers increasingly sacrificed to production and distribution rules and standards that favor large, monocultural, industrial producers while inhibiting the options of small farmers. In the United States, the National Family Farm Coalition, the Rural Coalition, and many other groups have worked with the Via Campesina, an international movement of small farmers, to promote policies that favor small-scale diversified farming and healthier food. French farmer José Bové, famous for dismantling a McDonald’s under construction in France, has become an international leader protesting these rules in western countries.

The demands of these civil society groups go far beyond minor tinkering with the WTO and other agreements. Rather, the goal is to promote alternative approaches at the international, national, and local levels that would reverse many of the current global rules related to agriculture. In a recent report on *Alternatives to Globalization*, the IFG framed the discussion around seven central convictions:

- Governments should have the authority to apply rules that emphasize support for local production, local self-reliance, and real food security. This authority should supersede that of the WTO. This means applying the principle of *subsidiarity*: whenever production can be achieved by local farmers, using local resources for local consumption, all rules and benefits should favor that option, thus shortening the distance between production and consumption. We are not suggesting that there should be no trade in food products, but that trade should primarily be with foods that cannot be produced locally.
- Access to land for self-reliant food growing is a fundamental human right; it cannot be denied to communities or nations by global trade regimes or in the interests of international trade processes; it must be stopped.
- Loss of small holders’ farmlands to highly concentrated large corporations is a primary cause of poverty and hunger in the world, as well as of environmental devastation.
- Wherever people are still living and working on their traditional lands, incentives and policies should help them remain in place, working for their families and communities, as a first priority, before entering the global market. Where communities have been deprived of their lands, *distributive land reform* is crucial.
- The bias of international bureaucracies such as the World Bank, IMF, and WTO toward large-scale, export-oriented monocultural production must be reversed. Rules should invigorate small farms and indigenous agricultural practices that protect local biodiversity and innovation devoted to sustainable use for local populations.
Solutions must serve to shorten “food miles”—the distance between where food is grown and where food is consumed.

The ultimate sustainable agriculture solution is transition away from large industrial-based agriculture models toward smaller-scale, diverse, and organic farming.

In sum, most international trade rules now favor export production and the global corporations that dominate and benefit from such a system. Agriculture should not be considered an economic sector like any other. Agriculture fulfills essential functions for the stability and security of nations: to preserve the cultural richness and multi-ethnicity of societies, to preserve biodiversity, to generate employment and sustainability, to maintain the population of rural areas, to ensure basic food security and to contribute to economic, social and political stability. For these reasons, national governments should have unmitigated authority to apply restrictions on agricultural trade that are designed to support domestic social and environmental goals. This change must come as part of a much larger package of fundamental reforms in three main categories:

Those related specifically to the WTO. Many critics doubt the legitimacy of the WTO and argue that agriculture rules should not be part of this institution, and instead should be governed by international commodity agreements and/or bodies under the purview of the United Nations. Some believe that it is critical to reform WTO agriculture rules (as well as World Bank and IMF policies) because, for the moment, this is the existing global governance system. The alternatives outlined below incorporate both views: Ultimately, agriculture rules may be best governed via another institution(s); however, in the short term, it is critical to push for immediate reforms within the WTO.

Other reforms at the national and global levels.

People’s alternative initiatives. Fortunately, millions of people around the world are not waiting for changes at the institutional levels but are taking action to promote alternative agricultural models right now, on their own.

I. TEN KEY WTO REFORMS

1) Allow Quantitative Restrictions (QRs): Because richer nations have not done much to reduce the level of subsidies they provide to their agricultural sectors, all countries should be allowed to respond to subsidy distortions by applying quantitative restrictions on imports, as they see fit to serve their local needs. As part of the market access commitments of the Uruguay Round of GATT (Article XI), along with rules in the AoA, countries were forced to remove all bans, or quantitative restrictions, on imports and exports. Developing countries had traditionally used import restrictions to protect their domestic food production and producers against a flood of artificially low-priced imports; now this mechanism has been stripped away. According to Dr. Vandana Shiva, “Bringing back quantitative restrictions is the only secure mechanism to start building food sovereignty and food democracy to protect the livelihoods and lives of our rural community.”

2) Allow Selected Tariffs and Quotas: New rules must permit the judicious use of selected trade tariffs, as well as import quotas, to regulate imports of food that can also be produced locally. For developing
countries, this is called “Special and Differentiated Treatment” (SDT). SDTs recognize the reality that some countries, because of colonialism or past exploitation, need additional help to reach a level playing field—they cannot survive some rules that wealthier countries can. SDT mechanisms that facilitate developing countries to meet their food security, rural development, and livelihood needs should be enacted. SDTs can further help offset dumping below actual cost of subsidized commodities from rich countries. And they can help guard against fluctuating commodity prices.

3) Agreement on Agriculture (AoA) Exemptions: Martin Khor of the Third World Network advocates that food produced for domestic consumption, as well as products of small farmers in developing countries, should be exempted from AoA’s disciplines on import liberalization (market access), domestic support, and subsidies. Similar concessions could be made to small producers in industrial countries that grow crops exclusively for domestic markets.

4) Eliminate Minimum Access Requirements: The WTO “minimum access rule” by which each member nation must accept imports of up to 5 percent of the volume of domestic production in each commodity and food (based on 1986-88 quota levels) should be eliminated. This rule directs domestic agriculture policies toward an import/export model, instead of encouraging policies that favor local production for local consumption. For example, a country like South Korea, which is self-sufficient in its staple food—rice—should not be forced to open its market to subsidized U.S. rice exports. Such policies destroy the livelihoods of Korean farmers and their communities and at the same time, render American farmers vulnerable to the volatility of the global pricing system. In both Korea and the United States, the bias should invariably be to strengthen local production for local consumption and to reduce long-distance food shipments.

5) Allow Export Bans: Countries must also be allowed to impose export bans that protect natural resources. For example, it is currently WTO-illegal for member nations to ban the export of unprocessed logs. Nations have sometimes banned export of raw logs so as to discourage rampant logging. Because of the WTO rules, it is often now more profitable for governments and landholders to log forests and convert the land into industrial agriculture crops, or cattle grazing. Existing export ban rules in the WTO also conflict with specific bans on trade in endangered species or hazardous waste, and potentially undermine international environmental treaties such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora; Convention on Biological Diversity and others.

6) Reform the Most Favorited Nation (MFN) and National Treatment (NT) Principles: As discussed in Part Two, these principles, within WTO agreements, prohibit countries from setting environmental standards or developing set-aside programs, and other tools that can be critical to preserving natural resources and socio-economic values.

Countries should be encouraged to apply trade controls that increase local employment with decent wages, enhance environmental protection, ensure adequate competition and consumer protection, and otherwise improve the quality of life in communities and regions.

States, provinces, and regions should be urged to give favorable treatment to domestic industries and services. Any requirements to treat foreign goods and services as favorably as domestic producers should be prohibited.
7) Reform the Agreement on Trade Related International Property Rights (TRIPs): Many governments, NGOs, and others recommend that intellectual property rights be taken entirely out of the WTO, and that the historical practice of national governments determining their own intellectual property rights systems be restored. Also, if the WTO is not abandoned in the immediate future, as many people wish, some amendments must be made to existing articles, as follows:

Article 27.5.3(b) of TRIPs:
This article deals with the patenting of life forms and the intellectual property protection of plant varieties. While it allows countries to exclude from patentability plants and animals, and essential biological processes for the production of plants and animals, the WTO rule now makes it compulsory for countries to permit the patenting of microorganisms and microbiological and nonbiological processes.

The problems with Article 27.5.3(b) are the following: 1) It does not make scientific sense to distinguish between microorganisms (which must be patented) and plants and animals (which may be excluded) because all are life forms and should not be allowed to be patented; 2) It does not make scientific sense to mandate the patenting of microbiological processes because they are also natural processes.; and 3) There is ambiguity about the sui generis system option for plant varieties.

To correct these problems, the Article should be amended to clarify that: 1) No life forms of any kind can be patented; 2) No natural processes for producing plants and animals can be patented; and 3) A sui generis system can include national laws that recognize and protect traditional knowledge of indigenous and local communities.

Article 27.1 Agreement on Patentable Subject Matter:
This Article effectively enables large foreign corporations to obtain control of production and distribution of seeds. It states that patents may be given for any inventions, whether products or processes, in all fields of technology provided that they are new, involve an inventive step and are capable of industrial application.

Article 27.1 should be changed to allow countries to elect to not patent food and medicine, and to limit the time scope of a patent or process (most often applicable to medicines).

The Article also should explicitly and unambiguously acknowledge generations-old knowledge of farmers and indigenous peoples as “innovation.” The current lack of definition allows corporations to make slight modifications to and then patent materials such as seeds that have been cultivated for centuries by communities.

Benefit Sharing Clause:
Global patenting rights should not override the rights of indigenous communities to genetic and biological resources that are held in common. Some governments and NGOs advocate that for products, patent holders should be able to claim fees to cover the cost of legitimate development, plus a reasonable level of profit, but such patenting rights must have a limited time frame and fully reimburse the parties whose knowledge contributed to the patented entity—also referred to as “benefit sharing.”
8) Reform the Trade Related Agreement on the Application of Sanitary and Phytosanitary Standards (SPS) and the Agreement on Technical Barriers to Trade (TBT): As mentioned earlier, the WTO’s Agreement on the Application of Sanitary and Phytosanitary Standards (SPS) and the Codex Alimentarius enforce food processing standards that work directly against local and artisanal food producers while favoring the global food giants. Additionally, the SPS constrains member nations from setting food and public health standards that are higher than SPS criteria.

Communities and nation states should be allowed to set public health and safety standards at levels higher than existing SPS and Codex rules, and the present harmonization requirements of the TBT agreement. No such efforts to raise national standards above those of SPS and Codex may be challenged by WTO member nations. Countries should also be allowed and encouraged to apply the Precautionary Principle as the basis for regulatory controls affecting trade, when the risks warrant action, even in the face of scientific uncertainty about the extent and nature of potential impacts.

All international environmental, safety, and social standards should be considered as effectively creating a floor for governing the conditions for trade between WTO members. Any country with higher standards or regulations should experience positive discrimination in terms of trade. Poorer countries for which such standards are at present too expensive should receive financial aid to help them improve their standards. Once they have set a future date for such improvements, they should be afforded positive discrimination in trade terms. In other words, the rules of trade should demonstrate support for efforts to protect safety standards and the environment.

9) Allow Supply Management Boards/Price Support Systems: WTO rules—in tandem with domestic farm policies, other trade agreements, and SAPs—have reduced and eliminated many supply control and price support systems that ensured farmers made reasonable profits while discouraging oversupply. Such supports should be restored so that farmers are paid prices at full economic cost of production, plus profit.

Programs that permit and encourage low-interest loans to small farmers, maintenance of domestic seed banks, and emergency food supply systems should be allowed and encouraged.

10) Eliminate Direct Export Subsidies and Dumping: WTO rules allow rich countries to continue subsidizing export commodities (while at the same time IMF and World Bank programs have pressured poor nations to eliminate direct payments to small farmers). For example, the U.S. Overseas Private Investment Corporation, supported by U.S. taxpayers, provides vital insurance to U.S. companies investing overseas. Even loans from the IMF to Third World countries have been channeled into export subsidies for U.S. agribusinesses. Such subsidies help multinational corporations dominate smaller local businesses both domestically and abroad. Subsidies also contribute to export dumping, a major grievance of poor countries. Such export subsidy policies should be eliminated. No country should have the right to dump subsidized commodities.

Apply “Fair Trade Mile” Standards

For all trade in foods that cannot be produced in every region—such as traditional specialty “cash” crops like coffee, tea, bananas, mangos, etc.—the principles of Fair Trade Miles should be honored. A Fair Trade Miles agreement would set up a guaranteed quantity of goods from specified exporting countries and a guaranteed price range. This will allow exporting nations to have secure levels of earnings and eliminate multinational corporations’ ability to play off one producing country against another, adversely affecting farmer incomes.

Re-instate Global Commodity Agreements

As noted earlier, many developing countries are facing steep and in some cases catastrophic declines in the prices of agricultural commodities that make up a large portion of their exports. From 1980 to 2000, world prices for 18 major export commodities fell by 25 percent in real terms. The decline was especially steep for cotton (47 percent), coffee (64 percent), rice (61 percent), cocoa (71 percent) and sugar (77 percent).

The United Nations Committee on Trade and Development (UNCTAD) should again be given full authority to negotiate agreements aimed at providing a more stable export environment for commodity producers by maintaining price bands agreed to by the producer and consumer countries. WTO rules should clearly articulate and acknowledge UNCTAD’s authority in this realm.

Introduce International Commodity Related Environmental Agreements (ICREAs)

Another alternative solution can be found in ICREAs, which were developed in the early 1990s—the brainchild of a Dutch economist Henk Kox of the Free University of Amsterdam. The aim of ICREAs is to help commodity exporting countries to implement more sustainable production methods. They do this through financial support for environmentally improved production methods, or by providing a price premium for more sustainably produced commodities.

(Note: Unfortunately, since ICREAs were proposed in the early 1990s, little progress on implementation has been made. A 1995 proposal by UNCTAD that countries start preparing ICREAs was effectively squashed by the EU (which asked that more research to be done). The U.S. sided with the EU citing that ICREAs would interfere with international commodity markets. However, the initiative had broad support from the developing world (especially Asian countries).

Democratize Access to Land via Redistributive Land Reform

Shortly after taking office in 2006, Bolivian president, Evo Morales, gave nearly 19,000 square miles of land to indigenous peasant communities under a program of agrarian reform. This land was owned by the government. Morales has also pledged to parcel out unused privately owned land to meet his goal of redistributing one-fifth of Bolivia’s total land area over the next five years.
More countries with extremely unequal land distribution should be encouraged to take such bold action. History shows that the redistribution of land to landless and land-poor rural families is a highly effective way to improve rural welfare. Dozens of successful land reform programs were carried out after World War II. According to a report by the Oakland-based think tank Food First, “When a significant portion of quality land was distributed to a majority of the rural poor, with policies favorable to successful family farming, and when the power of rural elites was broken, there have been measurable poverty reduction and improvement of human welfare. The economic success of Japan, South Korea, Taiwan, and China has partly resulted from such reforms... Our research shows that small farmers are more productive and more efficient, and contribute more to broad-based regional development than do the larger corporate farmers. Given secure tenure, small farmers can also be much better stewards of natural resources, protecting long-term productivity of their soils and conserving functional biodiversity.”

It must be done properly, however. The following are several crucial ingredients that must apply if land reform is to be successful:

- Government grants of land must be debt-free.
- Women must have full rights of title and use.
- Only good quality land should be used (past failures have often resulted when lands were of poor quality).
- There must be a highly supportive policy environment—reasonable credit terms and good infrastructures for sound local environmental technologies.
- There must be easy access to markets.
- The power of rural elites must be broken so they can no longer block and distort policies, subsidies, and profits in their favor.
- Reforms must apply to the majority of the rural poor so they have sufficient strength in numbers to be politically effective.
- Most important, a new farm economy should be the centerpiece of a country’s entire economic development model. When land reform is viewed as welfare, failure is inevitable.

Recently, even institutions like the World Bank have begun to admit the benefits of land reform, but tend to avoid redistributive models and are therefore courting failure. (See also Box 4.)

**Initiate Anti-Trust Action Against the Agribusiness Giants**

While corporate concentration is occurring in nearly every sector, it is extreme in the food sector, from the seed producers to the grocers. (See also Box 1.) Globally, the top 10 firms control:

- more than 50 percent of the total seed market;
- more than 75 percent of the GMO market; and
- 80 percent of the agrochemical market.
Box Four

PSUEDO LAND REFORM: WORLD BANK PRIVATIZATION

Serious land reform has been so successful that even the World Bank has grudgingly accepted the principle that it can help offset the grossly inequitable ownership of reproductive resources in many countries. The Bank has begun to include “land” reform among its requirements in some policy packages when dealing with Third World countries. But, “what the bank calls land reform is essentially privatization and ‘market-led’ mechanisms of redistribution,” according to the agriculture think tank, Food First. “These reforms are a far cry from what Via Campesina, Food First, and others are calling for. But at least the Bank is making it legitimate again to call for land reform and to struggle over its definition.”

When communal lands are privatized, as has happened among Mexico’s formerly communal ejidos, and as current World Bank policies promote, systems of individual land titling, registries, and land market schemes can result in mass sell-offs of small holders’ plots. This increases landlessness, land ownership concentration, and migration to urban areas. Even when lands are not sold off under these schemes, the privatization of small holdings negatively affects the sense of community management and the construction of community-style agricultural systems like terracing and small-scale irrigation. The traditional community approaches bend to a new individual profit motive that undermines collective activity and community welfare.

As for “market-led redistribution”—the current favorite of the World Bank—it is fraught with risks, as landowners often choose to sell only the most marginal plots (steep slopes, dense rainforests, desert margins, and so on) often at exorbitant prices. Trying to farm these kinds of lands can often lead to ecologically unsustainable practices to attempt to eke out some productivity. Also, loans offered to purchasers under World Bank financing schemes may leave poor farmers with high debts on marginal lands, thus leading to deeper poverty and land degradation, as with many of the failed reforms of earlier decades. In addition, World Bank loan packages often require a commitment to pesticide and chemical production and to the use of nontraditional export crops.

All of these policies have been prescriptions for failure, as was the case with market-led reforms in Brazil, which the World Bank is still trying to duplicate in the Philippines and elsewhere.

Many activist groups oppose that kind of pseudo “land reform” and are fighting for a truly redistributive land reform that has worked very well where it has been fully supported by government policies, as described in Point Four elsewhere in this section.
In the United States, three to four firms control:
- more than 80 percent of the country’s beef packing, corn trading, and soybean crushing market;
- more than 60 percent of grain facilities, flour mills, and soybean trading; and
- more than 50 percent of broiler chickens and pork packing.

With so few companies controlling so much of the food industry, consumers stand to lose. Giant firms can also put the squeeze on vulnerable suppliers, putting downward pressure on environmental and working conditions. Particularly since the administration of President Ronald Reagan gutted the U.S. anti-trust division in the 1980s, regulations and enforcement to deal with corporate concentration are woefully lacking.

A number of measures have been proposed that would contribute to reducing market concentration by strengthening national and international anti-trust (or “competition”) law and enforcement. In 2003, Tanzania, Uganda and Kenya requested that the WTO examine steps to deal with anti-competitive behavior of large foreign firms and to improve the bargaining position of small producers vis-à-vis these firms. However, many civil society organizations and developing countries argued that these matters should be dealt with by the UN or another independent body, fearing that the WTO agenda is more likely to be driven by transnational corporations’ desire for improved market access than by a concern for developing countries or small producers. As a result, “competition” was dropped from the WTO agenda in 2004.

According to Duncan Green of Oxfam U.K., national competition law could address some of these issues, but only if it shifts from its current focus on consumer welfare and retail prices (i.e. monopoly/oligopoly) to producers and farmgate prices (monopsony/oligopsony). He points to the example of the Brazilian anti-trust agency blocking Nestle’s acquisition of Garoto, a local chocolate manufacturer, on grounds of concern over Nestle’s 58 percent market share.

Hand in hand with restoring anti-trust laws, other mechanisms can be implemented. The following are recommended by the National Family Farm Coalition mostly concerned with meat and poultry products:
- Placing a moratorium on mergers and acquisitions in agribusiness, transportation, food processing, manufacturing and retail companies.
- Holding vertically-integrated companies accountable for unfair and deceptive practices. Arbitration could be used to settle contract disputes only if both parties consent in writing after controversy arises.
- Providing the opportunity for contract growers to join together in a de facto Grower’s Union and be legally recognized to negotiate better collective contracts, and legally mandated fair agricultural contracts.
- Enacting a ban on meat packers’ ownership of livestock.
- Requiring that contracts for livestock be competitively offered in an open market.
- Requiring a fixed-base price for contracts.
III. PEOPLES’ ALTERNATIVE INITIATIVES

In the following paragraphs we provide snapshots of a dozen examples from within the tremendous global community of living, breathing alternative systems that people around the world are creating, right now, without awaiting approval of governments or rule changes. From Wisconsin to Kenya, from Bangladesh to Argentina, and from Indonesia to Italy, the communities listed here are only a small representative sample of countless others that are directly challenging the “inevitability” of economic globalization and industrialized agriculture. They are reclaiming their rights to land, healthy food, water, dignity, biodiversity, political autonomy, and a safe and sustainable environment. *(For further examples go to www.ifg.org)*

**Fair Trade**

Several hundred million dollars worth of trade is now handled outside corporate channels by firms that link small-scale, often worker-owned, producer groups in developing countries directly to consumers. This “fair trade” eliminates profiteering by distributors, middlemen, and wholesalers and often provides financing, marketing and other skills training.

The goal is to pay producers a stable price, educate consumers, and demonstrate that socially and environmentally responsible products can also be profitable. The fair trade coffee system alone benefits over 350,000 farmers in 22 countries. More than 40,000 cocoa farmers are organized into cooperatives in eight different countries. The business generated by fair trade organizations in Europe and the United States now accounts for only about one-tenth of 1 percent of all global trade, but the market is growing rapidly.

One of the most innovative fair trade agricultural projects is Divine Chocolate. Launched in 1998, Divine is the first ever fair trade chocolate bar aimed at the mass market. A Ghanaian farmer co-op called Kuapa Kokoo has an ownership stake in the company that produces Divine, The Day Chocolate Company, a first in the fair trade world. This means that Kuapa Kokoo has a meaningful input into decisions about how Divine is produced and sold. Two representatives from Kuapa Kokoo are directors on the company’s Board, and one out of four board meetings every year is held in Ghana. As shareholders, the farmers also receive a share of the profits from the sale of Divine. Kuapa Kokoo’s objectives are to provide dignified livelihoods, increase women’s participation in all co-op activities, and develop environmentally friendly cultivation of cocoa. It now has upwards of 45,000 members in approximately 1,200 village societies.

Fair trade rice is also taking off in Europe. For example, the Khaddar Farmers’ Federation, which represents smallholder farmers in the foothills of the Himalayas in North India, is now exporting basmati rice to several European countries. The Federation includes 572 rice growers and is one of three farmers’ groups in India to be certified by the Fair Trade Foundation, which gives them a guaranteed price per ton. Profits are invested in business, social or environmental projects agreed by a committee of elected representatives. Revenues from European sales since 2003 have allowed the Federation to make improvements to local schools, roads and other infrastructure.
The National Family Farm Coalition (NFFC) represents family farm and rural groups in the United States whose members face the challenge of the deepening economic recession in rural communities. The NFFC works closely with international farm organizations to ensure that agriculture policies on both domestic and international fronts maintain farmer livelihoods and rural communities. NFFC promotes an alternative to the current U.S. Farm Bill—The Food From Family Farms Act. This Act would establish fair farm prices, create a food security reserve so that bountiful crops won’t depress markets, conservation set-asides to avoid wasteful overproduction, loans to help farmers own their land and adopt sustainable farming practices. Most importantly, The Food From Family Farms Act includes goals of trade cooperation based on the principle of food sovereignty—the right of every nation to devise farm and food policy ensuring food security in keeping with its traditions and need for sound social and environmental goals.

Urban Gardens

Urban gardens are one of the most original and revitalizing movements among urban dwellers. Making use of empty lots, small patches of private property, and public parks, urban gardens in dozens of countries in the world, enable city dwellers to grow their own organic foods. Such projects are helpful in educating urban children about how food is grown. Many schools are initiating such gardens on their own property, teaching a survival skill that can bring confidence, self-reliance, and joy.

In Argentina, community gardens initially created to help confront the effects of the late 2001 economic collapse have developed into a government-run urban agriculture program. Some 7,000 people who were out of work before entering the program have joined forces to clear the land, plant and harvest vegetables, and sell their produce in street markets. Many of them are also now involved in agricultural development projects aimed at supplying the market with organic produce, grown without chemical fertilizers or pesticides.

Implemented by the government of Rosario, a city of 1.3 million in eastern Argentina, the Urban Agriculture Program involves over 600 community gardens created on formerly vacant lots, on both public and private lands, as well as a distribution and sales network and projects designed to develop related industries.

In Cuba, urban gardens have played an increasingly important role because of the downturn in the country’s economy since the loss of the Soviet market for its products, and since the tightening of the U.S. embargo. An Urban Agriculture Department oversees these efforts. By 1998 there were over 8,000 gardens in Havana, cultivated by over 30,000 people. The Ministry of Agriculture replaced its front lawn in Havana with a garden of lettuce, bananas, and beans, and many of the ministry’s employees work in the garden. These urban gardens have reduced the burden on rural areas and led to a reduction in food transport and storage while increasing quality and variety of produce in cities.

Although Cuba may abandon some of these changes when the nation is not as isolated, its experience is nonetheless encouraging. It demonstrates the possibilities of enacting ecologically and socially sensitive
agriculture on a national scale. With political will, governments can shift from a focus on global food to local food and implement policies that are good for people, communities, and the environment.

**Seed Saving and Biodiversity in Bangladesh and India**

The Nayakrishi farmers’ movement in Bangladesh is reviving traditional crops by saving, storing, and sharing seeds as the basis of household food security. In response to the harmful effects of industrial agriculture, farmers gathered together to implement alternative farming methods that are community based and organic. These methods mix traditional knowledge and wisdom with newer ideas and scientific innovations that are suitable for farmers as well as the environment. Approximately 65,000 families across Bangladesh follow a set of ten simple principles for Nayakrishi farming, all focusing on the use of locally available resources to enhance the efficiency of land, water, biodiversity, and energy, as well as the control over seeds in the farming community.

In addition to using chemical-free agricultural practices, the production of biodiversity is built into the Nayakrishi method of food production. As a fundamental principle, Nayakrishi farmers reject monoculture and base their practices on mixed cropping and crop rotation. In Nayakrishi villages, farmers derive more varieties of fish, together with a wide range of uncultivated crops, which either come as accompanying crops due to multiple cropping in the fields, or grow on the common land where no herbicides are used. Livestock and poultry also grow more rapidly, thereby enriching the food security of the people. Similarly, planting a local variety trees is an integral part of the practice in Nayakrishi villages. The trees attracts birds, butterflies, and other pollinators and predators.

In India, in response to growing threats to traditional farmers from economic globalization, Dr. Vandana Shiva’s Research Foundation for Science, Technology, and Ecology initiated the Navdanya. Navdanya, or nine seeds, represents a diverse ecological balance. Navdanya facilitates conservation and exchange of traditional seed varieties by local groups and communities through a national network of community seed banks and *in situ* (on-farm) conservation programs. Navdanya has pioneered community biodiversity registers to document the resources and knowledge of local, regional, and national communities. These registers help rejuvenate the ecological basis of agriculture, while asserting farmers’ prior intellectual innovations to set limits on intellectual property rights monopolies.

In late 1996, Navdanya Foods was initiated, with the aim of bringing sustainably grown, chemical- and pesticide-free, healthy and nutritious, diverse organic food to the urban Indian consumer. Navdanya Foods specializes in grains from indigenous crops threatened by extinction. The program bridges the gap between the small-scale farmers who want to continue practicing ecological and sustainable agriculture and urban consumers wanting to purchase nutritious and safe food for their families.

Currently, Navdanya is implementing Bija Yatra, a nationwide campaign aimed at creating debate and awareness of the erosion of genetic diversity, the devastating effects of the Green Revolution, the threats posed by the WTO-promoted intellectual property rights regime, and the links to diminishing food security in India. The Bija Yatra campaign protects farmers’ rights to use and conserve their own seeds, strengthens local communities, and creates a real alternative to corporate globalization.
**Farmers Markets and Community Supported Agriculture**

Thriving in many parts of the world, farmers’ markets are now also being rediscovered and supported throughout industrial countries. These markets are ways of directly connecting consumers with local producers, often organic farmers, who can keep prices lower by avoiding distribution costs.

Another way of making these links is through Community Supported Agriculture (CSA). In a typical CSA farm model, local community members purchase a share in a local farm’s operation at the start of each growing season and in return receive a fresh, nutritious box of produce directly from their grower on a weekly basis. In this arrangement, members agree to pay the costs of production regardless of the actual harvest. This allows the farmer and consumer to share many of the financial burdens typically borne by the farmer alone and for both to bypass the conventional industrial-agriculture marketing and retail system.

CSAs range from small gardens with five to twenty members to large farms serving nearly a thousand families. CSAs create direct and personal relationships with the farmer—and often the land on which the food is grown—offering a positive alternative to systems where consumers have no choice but to purchase days- or weeks-old produce from the supermarket shelf. They also provide farmers with a viable economic alternative, allowing them a greater percentage of the food dollar (close to or at 100 percent) and a stable revenue stream.

CSAs emerged in the mid-1960s in Germany, Switzerland and Japan in response to concerns about food security and urbanization. They did not begin to appear in the United States until the mid-1980s, but today there are as many as 3,000 CSAs in the United States. In Japan, millions of people are part of the CSA system, which is a major source of the country’s fresh produce.

**Slow Food Movement: Italy**

Founded in 1996 in Italy in response to the homogenous, unhealthy, and socially and environmentally destructive processes of industrial agriculture, the Slow Food Movement has generated renewed appreciation of local and regional food specialties and is reviving threatened agricultural varieties. In 1996, Slow Food launched the “Ark of Taste,” a project that documents, catalogues, and safeguards small and quality agricultural diversity that is threatened, or potentially threatened, with extinction. Safeguarded products include plant species, varieties, and ecotypes, as well as well-adapted animal populations in a specific territory.

Local producers promote their products, preserve degraded land, and create employment through presidias. The presidias set production regulations taking into consideration a product’s cultural and historical aspects, biodiversity, environmental problems, and the needs of small-scale economies. Agronomic and livestock practices are proposed that are not aggressive to the natural environment. In some cases, the production regulations are explicitly organic and prohibit synthetic fertilizers and pesticides. Examples include Saraceno grain from Valtellina, Italy, and the Zolfino bean from Pratomagno, Italy. Slow Food went international in Paris in 1998 and now the movement is found in forty-five countries and has over 80,000 members.
White Earth Land Recovery Project: U.S.A.

The WELRP was founded in 1989 by White Earth tribal member Winona La Duke. In 2004, WELRP received the prestigious International Slow Food Award at the Fourth International Slow Food Congress in Naples, Italy. The project was recognized for its work to preserve wild rice and biodiversity and to restore local food systems on the White Earth reservation in eastern Wisconsin. The project works to facilitate recovery of the original land base of the White Earth Indian reservation while preserving and restoring traditional practices of sound land stewardship, language fluency, and community development and strengthening their spiritual and cultural heritage.

The White Earth reservation, home to the Anishinaabeg people, is also home to one of the oldest wild rice pollens known today—pre-dating the Anishinaabeg people by a thousand years. According to the oral history of the Anishinaabeg, manoomin, or wild rice, was a gift given by the Creator and is a centerpiece of the nutrition and sustenance of the community. The project works to oppose the genetic modification and patenting of wild rice in White Earth but also around the world, working in collaboration with indigenous communities and other peoples’ movements to ensure that native rights, natural harvesting, and food security are guaranteed for generations to come.

Rice Diversity in Indonesia

In response to the near-extinction of many local rice varieties, in 1997 Pusspaindo, a biodiversity organization, launched a project for the recovery of local rice varieties. The goal was to promote farmers’ independence through the use of local varieties, local wisdom, and traditional production systems. Farmers each gave one kilogram of a local rice variety that was then planted, multiplied, and redistributed among other farmers. Pusspaindo promotes the production of rice using organic methods of pest control and has shown that local rice varieties can achieve higher yields than the new varieties. Yields of ten to fourteen tons per hectare have been achieved. The local rice has also been found to have excellent qualities: it has a better flavor, is more nutritious, can be grown continuously throughout the year, is easier to plant, and is more economical, especially if grown organically. Furthermore, some local varieties have medicinal properties helpful for common diseases.

Organic Farming and Nutrition in Belo Horizonte, Brazil

The municipal government of Belo Horizonte, Brazil, runs a world-renowned series of programs to reduce food insecurity in the city. First, food was declared a right of citizenship. To help guarantee this right, the city provides plots for local farmers to grow their own food using organic practices. The farmers are now able to provide for themselves while the city helps keep prices for locally grown food low for others in the community. School lunches are made with these crops and the entire city is encouraged to purchase these products as part of a healthier, affordable diet. There is also the Restaurante Popular, a government-run cafeteria offering affordable meals to more than 5,000 people a day. The city offers farmers prime retail locations at cut-rate costs, with the agreement that the produce will be sold at half the retail price. Since the program began in 1993, infant mortality rates have dropped 41 percent in the city, compared to 7 percent for Brazil as a whole. All this costs the city less than 1 percent of its budget.
Backlash Against Genetically Modified Foods

Consumers have allied with environmentalists and small farmers to protest genetically modified (GM) foods on every continent, uprooting crops in Britain, staging grocery stores sit-ins in Brazil, and dumping symbolic bags of corn on the steps of South Africa’s parliament. The global consumer backlash against GM foods has resulted in significant legislative action:

- At least 35 countries have imposed limits on genetically modified food.
- India, the world’s second most populous country, has banned all GM seeds except for cotton.
- In the United States, governing bodies in at least seven cities and one county have either banned the growing or marketing of GM foods or called for federal labeling laws.

Consumer pressure also forced Monsanto, the largest GM seed producer, to announce in 2004 that it was abandoning (at least temporarily) plans to commercialize the world’s first GM wheat variety. However, consumers face a fierce battle with biotech firms. In 2003, Monsanto and other GM seed producers succeeded in pushing the governments of the United States, Canada and Australia to file a challenge under the WTO over the European Union’s 1998 moratorium on GM imports. In a partial response to this threat, in 2004, the EU began weakening its position by approving the use of a variety of GM sweet corn. Ultimately, the WTO ruled that EU’s requirement to label GM products was illegal. The EU will either have to rescind its labeling laws or face harsh trade sanctions.

Within the United States, the biotech lobby has successfully pushed state and local legislation, including at least 30 bills increasing the penalties for destroying GM crops.

Farmer-Owned Ethanol Cooperatives

In the 1980s Minnesota farmers demanded a greater share of the benefits of the ethanol industry. Instead of a partial gas tax credit, the legislature agreed to pay producers 20 cents per gallon, as long as the ethanol was produced inside the state, thereby spurring economic development. While there was no limit to the scale of the ethanol facility, only the first 15 million gallons received an incentive, which encouraged smaller farmer-owned biorefineries.

According to the Institute for Local Self-Reliance (ILSR), this policy allows farmers to escape their traditional role as simply raw material suppliers to an increasingly concentrated processing and manufacturing and retail sector. Farmer-owners receive, on average, about 50 cents a bushel in dividends per year, and more than $1 per bushel in very profitable years. Farmer-owners can also use their ownership in an ethanol plant as a hedge against a drop in the price of their raw material. If the price of corn falls, so does the production cost of ethanol; all other things being equal, refinery profits and therefore dividends will rise.

The skyrocketing price of oil has created new opportunities for the expansion of ethanol and other biofuels. The challenge will be to ensure that farmers who produce these products get a fair share of the benefits. The ILSR also points out the danger of a trend towards building larger scale plants, which dramatically increases the energy costs of making the ethanol.
Brazil’s Landless Workers Movement (MST)—Reclaiming Land for the Poor

Brazil’s Landless Workers Movement (MST) emerged in reaction to the evictions, expropriations, and displacements in Brazil during the dictatorial period of 1979 to 1983. MST is made up of diverse landless peasant organizations demanding the right to live and grow their own food on unused lands. Through “occupations” of idle land MST has settled more than a million people on fifteen million acres while forcing agrarian reform to the top of the national political agenda. Brazil’s government has formally recognized MST’s rights to farm these lands. MST’s 500 independent production cooperatives process, market, and distribute farm products while actively promoting organic farming methods. Their three credit unions have thousands of members.

Typical occupations consist of 1,000-3,000 families who turn idle land into productive farms. They sell their produce in the marketplaces of the local towns and buy their supplies from local merchants. Not surprisingly, those towns with nearby MST settlements are better off economically than other similar towns, and many mayors now actually petition the MST to carry out occupations near their towns. MST has succeeded in reducing malnutrition, joblessness, and poverty in its settlements while increasing literacy rates. The success story of MST in Brazil has been an inspiration to many similar movements in other countries.

The examples in this section represent a small but typical sample of the thousands of small farmers, citizen groups, and land-based peoples retaking control of their most basic needs, providing their own communities and families with access to fresh, healthy, nutritious local foods grown under conditions that they can understand and control, and in which they can have confidence. We could certainly fill a book with such examples. What is most important for our purposes here is that these are just the tip of an iceberg. This burgeoning movement also finds expression as internal protests within bureaucracies like the WTO that have been sustaining the opposite model; one that has been destroying the earth and communities of people who depend on it. With the poor nations of the world now aligned with poor peoples of the world, even within the wealthiest countries, there is an awakening on these matters that we doubt can be stemmed.

In any case, as we have pointed out, industrialized agriculture is so challenging to the inherent limits of nature, and so exacerbates a multitude of horrific global problems, that we are confident it can never be sustained over the long run. Now, with the advent of climate change, and the growing shortage of cheap energy, it is only a question of time before true reform becomes inevitable, and we return much closer to the kinds of local systems that have been lately undermined. Meanwhile, we can all work toward changing and/or eliminating the most oppressive of the current bureaucratic rules, meant to sustain a system that will not survive for long.