

U.S. FARM POLICY AND ENVIRONMENTAL DESTRUCTION: THE DEADLY CONNECTION

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The catastrophic implications of continued destruction of the earth's environment have finally captured global attention. World opinion now urgently demands an end to the destruction and the restoration of air, water, and land resources already poisoned or damaged. Lasting solutions to global climatic and ecological damage will, however, require more than simplistic rhetoric and attractive promises. Root causes, including the economic dynamics and power relationships which underline almost all major environmental changes, must be addressed. One of these root causes is U.S. agricultural policy.

In both the international and domestic arenas, the deadly connection between current federal farm legislation and widespread ecological degradation can be seen. This article takes a look at only two of these environmental issues, toxic hazards here in the U.S. and rainforest destruction in the tropical countries, to highlight the seriousness of the situation, and to outline a few of the changes in farm policy necessary to break these deadly connections.

U.S. FARM POLICY AND TOXIC HAZARDS THE DOMESTIC CONNECTION

Toxic hazards associated with agriculture, including pesticides, herbicides, fertilizers, and manure run-off from intensive poultry and livestock operations are the most widespread toxic hazards in the United States. Life threatening risks to human health occur at numerous places in the food production chain, including:

Direct Pesticide Exposure - At each stage of the production, transport, storage, and use of agricultural chemicals there is significant danger. Pesticide exposure alone is responsible for poisoning thousands of workers in the U.S. each year, including 3,000 people hospitalized and 200 deaths.^{1/}

Poisoning of Water Supplies - Once applied to crops, toxic pollutants often find their way into rivers, lakes, and underground water supplies. The U.S. Department of Agriculture has estimated that wells and other water supplies in at least one-third of the counties in the U.S. are either already partially contaminated or appear to be very susceptible to contamination.^{2/}

Poison Residues on our Food - Elevated levels of toxins carried by the foods we eat are also a serious threat. A National Academy of Sciences study estimated that "pesticides contaminating the most common American foods may be responsible for as many as 20,000 cancer deaths a year," over 100 times more than death caused each year by direct pesticide exposure.

Airborne Toxins - Even the air we breathe is affected. For example, residents of Southern California are being threatened with both contaminated water supplies and deadly levels of the heavy metals in the air they breathe. The sources of these heavy metals are the corporate farms which dominate the Central Valley, where both water reservoirs and the soil have become contaminated with a number of toxins, including heavy metals. Strong winds carry a portion of these hazards all the way down to Los Angeles.

Ozone Damage - The toxic hazards associated with agricultural production don't just stop here on the Earth itself. The massive amount of anhydrous ammonia fertilizer being spread over farmland is believed to be a significant factor in disrupting the ozone layer of our atmosphere.^{3/}

The threat to life from agriculture-related toxins is clear and present - hardly the subject of debate any longer. However, the measures needed to reduce or eliminate these risks are hotly contested. The central debate is over the relative emphasis that should be given to each of the two primary means we have to reduce the risk from these toxic hazards. On one side of the debate are the chemical manufacturers and some government officials who place an emphasis on the need for improved "control devices" to more effectively trap and contain toxic chemicals before they leach into the environment. Directly challenging these chemical companies, many farmers, environmentalists, and consumer groups argue that the emphasis must be placed on policy changes that eliminate or significantly reduce the use of toxics in agriculture.

Clearly both measures are needed. Better "control devices" are a must, but they are not an adequate long-term solution. Reducing the use of toxic substances is the only way to reduce both the on-farm hazards, and the hazards that accompany the manufacturing, storage, transport, application, and disposal of these toxins.^{4/}

Policy Changes Needed to Reduce The Threat of Toxics

There are three major ways to reduce the dangers of toxics associated with agriculture.

First, the use of some toxins must simply be banned, as was Alar in 1989 and DDT in the 1970'S. Less dangerous substitutes must be found for the most toxic pesticides, herbicides, and fertilizers now in use.

Second, a wide range of farming practices must be changed to reduce the need for toxins. For example, a simple rotation of corn and soybeans on the same field, instead of year after year of corn, can greatly reduce the need for some of the most dangerous insecticides now used to control rootworm. Integrated pest management must be a centerpiece of these new practices.

Third, and by far the most important, there must be a change in the federal farm policies which are now actually forcing farmers to dramatically increase their use of toxic chemicals.

One vivid example of how the current farm policies creates toxic hazards is the system of target prices and deficiency payment subsidies used for most major crops, including corn, wheat, cotton, rice, barley, oats, and sorghum.

Under this program, Congress sets a "floor price" for most crops at roughly 50-60% of the farmer's cost of production. At the same time, Congress sets a "target price" at roughly 70-80% of the cost of production. The difference between the "target price" and the "floor price" is made up by a direct subsidy called a "deficiency payment," which is paid to the farmer for each bushel produced.

For example, corn that costs the average farmer around \$3.00 per bushel to grow has a floor price between \$1.60 and \$1.80, depending on the location.^{5/} The target price for corn is roughly \$2.80 to \$2.90, resulting in an average deficiency payment of around \$1.20 for each bushel produced, and

a loss to the average farmers of 20¢-40¢ per bushel. Only the farmers who can afford to maximize their yields through intensive chemical use can hope to survive these policies.

This system also makes it possible for corporate cattle feeders and dairy factory-farms to "out-compete" the small family farms by allowing them to buy this cheap corn for feed for only \$1.60 since it costs a diversified family cattle producer or dairy farmer over \$3.00 per bushel to grow corn, it puts the huge operators at an enormous advantage. As a result, thousands of family livestock and dairy producers are being wiped out, with tremendous environmental impact on the hillsides that were once covered with grazing cattle.

Without cows grazing on these hillsides, most will be plowed and planted to corn or soybeans by financially strapped farmers seeking immediate economic returns. Without the grass cover on these hillsides, they quickly erode. Enormous amounts of both irreplaceable topsoil and chemically contaminated water will eventually run off from these hillsides into our streams, rivers, and lakes.

Vicious Circle

For both the farmers and the environment, increasing toxic chemical use is a vicious circle. As ever greater amounts of chemical fertilizers are applied to boost yields, the organic matter in the soil is dramatically reduced. Without living matter, the soil becomes even more highly prone to erosion. Heavy erosion eventually changes the physical properties of the soil, reducing fertility by washing away the nutrients and exposing subsoil that is less fertile, further increasing the need for artificial fertilizers. The loss of the organic matter also means that the crops are much more likely to be damaged by herbicides, since it is often the organic matter which absorbs and inactivates excess herbicides.

At the same time, years of heavy applications of numerous insecticides has bred resistance into more and more pests, requiring stronger, more poisonous and even more expensive chemical doses to achieve less and less control. As a result, the economic productivity of agricultural chemicals (the crops produced per unit of chemicals used) has fallen in half since the early 1960's, and is continuing to fall.

The end result is that the toxic chemicals now being applied will be needed in ever higher dosages, and as a result, the soil will become less and less able to protect the water beneath it from leaching and run-off.

Replacing Family Farmers With Factory Farms

Not only has the economic crisis created by federal farm policies forced farmers to use more chemical-intensive methods of production, there have been other dangerous environmental effects. For example, most farmers have not been able to earn enough from their crops to maintain other necessary soil and water conservation practices, like windbreaks and safe manure disposal. Nor are they likely to have kept their chemical application machinery as finely-tuned as required to minimize chemical drift and misapplication.

For many farmers, their hopes of maximizing production in order to survive has failed. The increases in production achieved by all the farmers have simply flooded an already glutted market, pushing farm prices down ever further. In addition, the skyrocketing costs of the fertilizers and chemicals applied -

not including the long-term social, health and environmental costs - have meant that farmers have had to borrow even more money to put in their crops, making them even more vulnerable to foreclosure or bankruptcy.

In fact, one-fourth of America's small and medium-sized family farms will have been wiped out between 1980 and 1990. Many of these farms have already been taken over by insurance companies, speculators, corporations, or wealthy landowners. This massive liquidation has been devastating for the displaced families, the rural communities who depended on these farms, and for the environment. In one infamous case, John Hancock Insurance Company foreclosed on a medium-sized organic-method farm in the state of Minnesota, a farm with one of the most sophisticated soil and water conservation programs in the country. The first day after repossession, in front of a delegation of local clergy and a video film crew, John Hancock's bulldozers ripped up hand-crafted hillside terraces that had effectively prevented water run-off and soil erosion from this hilly terrain. They planted corn and soybeans on those fragile hillsides, demanding large doses of both fertilizer and chemicals.

U.S. Farm Policy Must be Changed to Reduce Toxic Hazards

U.S. farm policy must be changed to allow efficient family farmers to de-intensify their farming practices while earning enough money to both pay their bills and to maintain proper soil and water protection measures.

At the federal policy level, this will require three major changes. First, family farmers must receive a fair price for the crops and livestock in the market, not from government subsidies which encourage intensive chemical use. Second, all fragile land must be taken out of production and placed into a long-term reserve to make sure it will still be productive in future generations.

Third, we must have effective quota-based supply management programs for all major commodities in order to eliminate the pressure on farmers to maximize their per acre yields. For example, in years when there is a surplus, an effective supply management program would limit the total amount each farmer could market, thereby reducing or eliminating all incentives to further intensify chemical use in hopes of boosting production.

Farmers and Environmentalists Must Lead the Way

Farmers and environmentalists have often been pitted against each other by chemical companies and some politicians, attempting to cover-up the real dangers created by many farm chemicals. This strategy has been quite effective over the years, often creating distrust and hostility between farm groups and environmental organizations.

But the growing health and safety crisis associated with farm chemicals has forced a growing number of farmers and environmentalists to search for their common interests. For example, among the farmers surveyed in a recent major poll in the key farm state of Iowa, over half identified farm chemicals as the leading threat to water quality and favored placing limits on farm chemical use.^{6/} At the same time, major national environmental groups like Clean Water Action and the National Toxics Campaign have given strong support to farmers fighting to reform federal farm policy.

Perhaps the most comprehensive statement by farmers on these issues came out of the historic United Farmers and Ranchers Congress held in 1986. Roughly 20,000 farmers, ranchers and rural residents met together in local caucuses in nearly 40 states to draft resolutions for consideration at this National Congress. The following resolution on toxic hazards was part of the "Conservation and Protection of the Environment" platform hammered out and adopted by the 2,000 delegates at this Congress.

WHEREAS, Low farm prices set by federal farm legislation have forced many producers to attempt to maximize yields in order to maintain adequate cashflow to pay their bills;

WHEREAS, This system of deficiency payment subsidies has been based on the number of bushels produced, thereby encouraging producers to maximize yields to receive the largest subsidy possible;

WHEREAS, This intensification of production has included the plowing and planting of unsuitable land, including wetlands, fragile prairies, and other highly erodible land causing severe soil erosion problems;

WHEREAS, This intensification of production has included the overuse of fertilizers and chemicals, often resulting in contamination of our water;

BE IT RESOLVED, That set-aside acres once designated cannot be used as such again until all other cropable acres of that farm have been set aside, without the permission of the county committee;

BE IT FURTHER RESOLVED, Farm commodity programs which force producers to intensify their production, including the setting of low prices and payment of subsidies based on quantity produced, must be abolished.

WHEREAS, Increased pollution of water and soil from pesticides, herbicides, and fertilizers possess a threat to society;

BE IT RESOLVED, That stricter standards for testing and licensing of all these products be established and all entities, including government agencies, be required to meet the same standards and be accountable for the testing and licensing of these products.

WHEREAS, Disposal of toxic and hazardous materials is damaging human health and the environment.

BE IT RESOLVED, That all waste shall be disposed of responsibly, or not produced at all.

WHEREAS, Many traditional pesticides, herbicides, and fertilizers are proving to have damaging environmental and health effects;

WHEREAS, Farmers seek alternatives to these products;

BE IT RESOLVED, That increased research and education be undertaken in USDA, Land Grant colleges, and other educational facilities in biological farming, appropriate small farm technology, transitional and non-chemical practices.^{7/}

U.S. FARM POLICY AND RAINFOREST DESTRUCTION: THE GLOBAL CONNECTION

During the last decade, the U.S. has controlled the lion's share of world grain exports. The marketshare controlled by the U.S., between 1982-84, has been roughly 70 percent in corn, 65 percent in soybeans, and nearly 40 percent in wheat.^{8/} By comparison, OPEC normally controls around 38 percent of the world's petroleum shipments. As a result of this market dominance, internal U.S. prices tend to set world prices. U.S. federal farm policies designed to deliberately lower the internal price of U.S. grain also results in lower world commodity prices. This relationship can be seen by looking at the statistical correlation between the U.S. minimum price and the world price over the past ten years.^{9/}

Low World Prices Push Developing Countries Further into Debt

Forcing down world prices often results in significantly reduced foreign earnings for Third World exporters of agricultural commodities, such as Brazil, Argentina, and Thailand. This has been a major factor in the creation of the problem of un-repayable Third World debt. Many of the original World Bank and other commercial bank loans were made for large-scale export-oriented agricultural development projects, based on the expectation that world prices would be higher than those set by the U.S. in the 1980s.

When first confronted by the problem of lower than anticipated prices, some of these countries attempted to increase their production and exports, in hopes of making up in volume for the lower prices. Some even borrowed more money to develop larger projects. But it became increasingly difficult to repay these loans with world prices continually falling. In fact, the additional expansion eventually had a "boomerang" effect, as the larger volume of exports drove world prices even lower.

The pursuing of U.S. farm policies which would have these negative effects on Third World exporting countries was not an accident. For some policymakers and multinational grain trading corporations, it was a conscious objective. For example, Senator Rudy Boschwitz, a close ally of the Cargill grain corporation, argued tirelessly for setting prices low enough to drive other countries out of business, during the debate over the 1985 Farm Bill. He went so far as to argue, in a letter to Time magazine, that "If we don't lower our farm prices to discourage other countries now, our worldwide competitive position will continue to slide and be much more difficult to regain. This should be one of the foremost goals of our agricultural policy."^{10/}

Low Prices Increase the Pressure on the Rainforest

These U.S. policies which lower world prices dramatically increase the pressure on the rainforests in at least five ways.

- Countries trying to increase production in hopes of making up for the lower prices, often slash and burn additional forestlands to create more pasture and arable cropland.^{11/}
- Some Third World governments attempt to expand production by taking prime agricultural land away from small peasants. As these peasants are forced off their land, many find that their only option may be to move into the rainforest and to clear parcels to grow food for their families.
- Declining revenues from agricultural exports leads some countries to try to increase their shipments of hardwoods or other products which must be taken from the rainforests. Strapped for cash, most governments are not in a position to bargain with the multinational lumber corporations for sustainable harvesting practices.
- Heavily subsidized world food prices have lead some Third World governments to greatly increase their food imports. As these cheap foods flood into local markets, many of the farmers in these countries are unable to compete against these imports. As a result, many of these farmers find themselves unable to keep up the land payments. Ultimately, many of these local farmers will lose their land to foreclosure. They are then forced to move into the rainforest or onto fragile mountainsides in the mountains.

- Imports of foodstuffs increase the outflow of foreign exchange earnings. There must be, therefore, a rise in export earnings to pay for them. Whenever locally grown food products are replaced by imports there must be a corresponding increase in exports of cash crops, hardwoods, or some other products. Too often it is the rainforest that suffers.

The long-term solution to rainforest destruction must, of course, be multi-faceted, and comprehensive but changing U.S. agricultural policy is an important element.

Changing U.S. Farm Policy to Protect the Rainforests

Fortunately, pressure is building to transform U.S. farm policy in ways which could dramatically reduce the pressure on tropical forests. One alternative, supported by progressive farm organizations and a large percentage of farmers, would require the U.S. government to set minimum commodity prices at levels roughly equal to the U.S. cost of production. The higher prices would be linked with an effective supply management program to minimize shortages and surpluses. This is particularly important to prevent price-depressing surpluses from being dumped onto world markets, and to prevent the kind of shortages that create skyrocketing prices. Such a system would dramatically raise world commodity prices, providing an economic boost to all agriculturally based economies. The increased income for commodity exporting tropical nations could begin to provide them with the economic capacity to respond in a positive way to international calls for an end to the destruction of the rainforests.

A UNITED GLOBAL EFFORT

If policymakers can recognize that the exact same policies which are destroying the economic base of family farmers are the same ones which are ruining the environment, it will create the possibility of cooperation and united action between farmers and environmentalists. The goal must be to find mutually beneficial "win-win" solutions which protect family farmers and the environment.

Farmers and environmentalists are joining together to support farm policy changes designed specifically to reduce the intensity of farm production, including supply management on the basis of quantity reductions. Alongside these supply management provisions, farm policy reformers are demanding that farmers all over the world must receive a fair price for their crops and livestock, enough to cover the full costs, including care of the environment.

These two factors, quantity-based supply management and fair prices, are the basic building blocks needed to change agricultural production techniques in order to reduce agricultural toxic hazards, and to protect the rainforests.

Passing this kind of farm policy reform in Congress is possible only if the organizations fighting to save rural America and those fighting to protect the environment can join together in a powerful new coalition. It is absolutely crucial for the environmental movement and the family farm movement to join forces in this critical work. This is even more important as we look into the

near future. The rapidly growing bio-technological revolution threatens to add new toxic hazards - including genetically-altered microbes, artificial growth hormones, and new plants bred to be tolerant of ever stronger toxic chemicals.

If effective supply management and fair prices can be won, then the economic forces that are driving genetically-engineered production expansion will be greatly reduced. Perhaps the research dollars now devoted to creating more chemically-induced surpluses in the United States could be utilized to clean-up the poisons already released, or to develop less chemical and energy intensive methods of production in order to reduce and eventually eliminate the actual use of toxins.

Perhaps some of the scientists now devoting their time to expanding production through chemical use could re-focus their efforts to finding new ways for our agricultural abundance, to replace the non-renewable and high polluting raw materials we are now so dependent upon, like petroleum, coal, and uranium. Carbohydrate-based raw materials, produced by our farmers, must provide a more renewable and less polluting basis for our future industrial economy. This will become even more important as we enter the 21st century, when much more of our entire economy will be based on bio-industrial technology. The raw materials for this new economy will be largely harvested from our farms, forests, and oceans. Perhaps the most important environmental question of the next few decades will be whether these raw materials will be produced by a few giant agribusiness corporations using ever more deadly methods, or whether they will be produced by family farmers, under a sustainable ecologically renewing agricultural production system based on fair prices and effective supply management.

- 1/ O'Connor, John and Lewis, Sanford, Shadow On The Land, (Boston: National Toxics Campaign, October, 1988), p. 1.
- 2/ Nielsen, Elizabeth and Lee, Linda, The Magnitude and Costs of Groundwater Contamination from Agricultural Chemicals, (Washington, D.C.: USDA, USGPO, 1987). See also, Holden, Patrick, Pesticides and Groundwater Quality, (Washington, D.C.: National Academy of Science, Press, 1986).
- 3/ For more information on the environmental threat of ozone damage, see Makhijani, Arjun, Saving Our Skins, Washington, D.C.: Environmental Policy Institute, 1989.
- 4/ O'Connor, op. cit., Executive Summary.
- 5/ Rask, Norman, Production and Marketing Costs for Corn, Wheat and Soybeans, Ohio State, 1987.
- 6/ Pins, Kenneth, "Poll: Iowans Want Limits on Ag Chemicals," The Des Moines Register, November 16, 1986.
- 7/ United Farmer and Rancher Congress, St. Louis, Missouri 1986.
- 8/ Rask, op. cit., p.2.
- 9/ See, for example, International Wheat Council Market Report, July 6, 1988, Chart 1.
- 10/ Time Magazine, March 18, 1985.
- 11/ For a very complete look at the complete cycle of rainforest destruction, see "Rainforests and the Hamburger Society", James D. Nations and Daniel I. Komer, Environment Vol. 25, No. 3, 1983.
- 12/ O'Conner, op. cit., p. 26-28.