

Dangers of Cartel Monoculture Threaten Nations' Food Supplies

Interview with Dr. William Heffernan

For three decades, Dr. William Heffernan has led research into documenting the increasing degree of concentration of control over U.S. farm and food sectors by a small number of firms. In January 1999, the National Farmers Union released a 20-page report, "Concentration of Agricultural Markets," by Heffernan and colleagues Dr. Mary Hendrickson and Dr. Robert Gronski, at the University of Missouri, Department of Rural Sociology. In March that year, a bipartisan group of 23 farm-state U.S. Senators, led by Byron Dorgan (D-N.D.) and Chuck Hagel (R-Neb.), sent a letter to President Bill Clinton, asking for anti-trust investigation of the mega-companies then headed toward near total control over agriculture and food as of the end of the 20th Century. Since then, that process of concentration of control has worsened. Dr. Heffernan is now engaged in a review of the global patterns and implications. He was interviewed on Nov. 17, 2004, by Marcia Merry Baker.

EIR: Five years ago, you did a comprehensive review of concentration in the farm and food system—seedstocks, inputs, milling, meat processing, handling, dairy, and many other aspects—for the National Farmers Union. This has been very important for lawmakers and the general public. What would you point out about any patterns of note since 1999?

Heffernan: The major change—since the one study we wrote in 1999, is then we went to the retail in 2002, because we'd not previously been involved in doing the retail. But we realized that in about a three- or four-year period, the top five firms—usually we use top four, but in this case, the top five firms—had basically gone from 24% of the market share to about 42%. And now it's moved, depending on which data you use—and one of the problems with that data is, that it's really hard to separate the food part out of the retail, for in-

stance with Wal-Mart and so on, and get it just for food. So you see some variability. But it's approaching 50% now for the top five.

EIR: Wal-Mart is one of the phenomena of the era, isn't it?

Heffernan: That is exactly right. And we understood in that report, that in a sense, the retail stores, since they're closer to the consumer, really have probably the most power in that whole system, other than maybe the firms that control the seeds or the genetics stock.

Let me say one other thing. Since that time, the big story is—and some of our friends at Michigan State and so on have really been working on this—is the globalization of the retail firms. So that Carrefour out of France, Royal Ahold out of the Netherlands, and Wal-Mart are, basically, just going gangbusters in Central and South America.

In Africa, the Big Three global players are not there yet, but firms out of Southern Africa, especially the Union of South Africa, are doing the same in Africa even. So that suddenly the vendors out in the streets and the kind of mom-and-pop grocery stores and so on, are simply being pushed out by the retail stores there. And it sets the stage for these other three to probably move into Africa, once the chains get established.

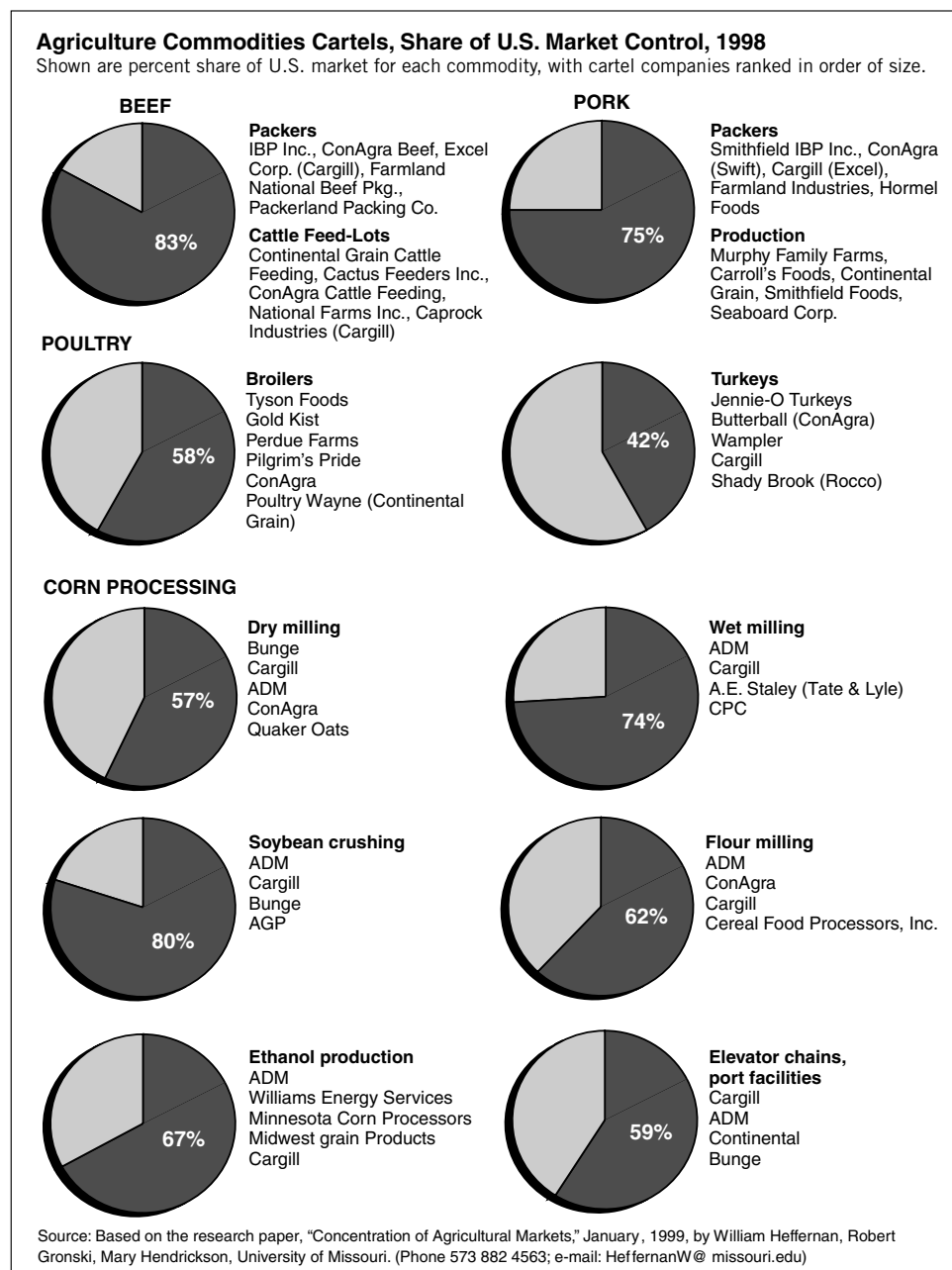
So now we're really talking *on a global basis*—the system that we talked about earlier in terms of those who provide the chemicals, and the seeds and those type of things, now it really is all the way to the retail sector.

EIR: So, it's from the seeds to the cereal bowl.

Heffernan: That's right.

EIR: On seedstocks, and including livestock strains, like the hogs and others, the patent laws have been changed over the

FIGURE 1



The high degree of market domination in U.S. food processing and handling was illustrated in the March 29, 1999 issue of the New Federalist newspaper, based on the January 1999 study by Dr. William Heffernan and others for the National Farmers Union. Other studies by the Heffernan team document the same degree of control over dairy, retail, and farm inputs, especially seedstocks.

past few decades. So that you have had companies such as Monsanto, or Delta and Pine Land Co., not only getting rights to strains, but also even to the *procedures themselves* to genetically alter soy or cotton or other plants. Along with the merg-

ers and acquisitions in this area, this seems a terrible threat to have so much control and consolidation.

Heffernan: It really is. You basically have five firms at the global level now that really control the seed stocks.

EIR: Would you please name them?

Heffernan: Monsanto; DuPont; Dow; Syngenta, which is out of Europe; Bayer.

EIR: You have looked at this growing control for decades. On the history of this, what needs pointing out? *EIR* has pointed out that the original, traditional American System—for example, from 1862 with the founding of the Agriculture Department, up through even the 1930 Plant Patent Act, which allowed patents to ornamental strains, but specifically not food plants—food strains could not be patented. So the big changes came later, in 1985, and then in 1994, to suit the so-called free trade era. Is this your view?

Heffernan: That's right. Once we gave the patenting of the intellectual property rights—. The trade journals were full of stories at that time by the experts, that those seed companies that did not have access to biotechnology—that included Cargill, incidentally, which had seed research companies in 23 countries of the world, to give you an idea

how big Cargill's operation was—but they were basically told: If you do not have access to biotechnology, you will not survive.

So, many of the big seed companies literally went to firms

like Monsanto. Some of the trade journals at that time said that Monsanto went on a buying spree. Well, in a sense it did. But it didn't even have to leave its St. Louis offices. All it had to do is sit there, because these firms came to it and said, "Buy us."

Where Cargill had 23 research operations, they sold those operations to Monsanto, and then they put together a joint venture with Monsanto.

And you had big names like DeKalb and such that were bought by—

EIR: Northrup King, and all the rest. Pioneer—

Heffernan: That's right. DuPont got Pioneer, eventually. And so, the whole system just collapsed around that, and it was really the intellectual property rights that started that. I mean, it was moving in that direction. And those same five firms, and one other firm with them, probably have well over 75% of the agri chemicals.

And now come some changes in fertilizers. For instance, in this country, as of 2005, about 50 to 60% of the fertilizer used in this country will be from Cargill.

So all three of the major inputs are really—and Cargill has about 15% of the global production of potash and the potassium. So, fertilizer is a little bit behind, but it's coming down the same route now.

EIR: And on handling bulk shipments, and barges and so forth, Cargill is likewise huge.

Heffernan: Our best guess at this point is that the two firms, Cargill and ADM [Archer Daniels Midland]—I'm going to use the word, "handle," I'll come back to that in just a moment—handle probably *close to three-fourths of the grain that moves between nations*. And I separate "between nations," as opposed to the figure they like to use of the grain that moves "in the world" today. They say they only have about 8 or 9%. That is within countries, as well as between countries. So I'm looking at what moves between countries, and they're up over three-fourths.

But when I say, "handle"—Cargill has their own steel mills. They make their own barges. They have their own barge lines. They have their own shipping lines. They have their own telecommunications system basically all set up. They're in commodity markets all over the world.

So yes, they have the whole thing, basically.

EIR: So on the geographic patterns that follow from that—where things are cultivated, what livestock is produced and all, there are some obvious things to get your view on. For example soybeans.

When you mention Cargill, in the way of soybeans, or soy meal or oil for export, the concentrations in soy farming over the 20th Century came to be in North America for export, and that means Cargill and ADM, and I suppose you could specify a few more at certain times, maybe Central

Soya, or Mitsubishi—

Heffernan: Yes, we'd add Bunge to it to now.

EIR: But around five years ago, came the quite open discussion in Washington, D.C., at the U.S. Department of Agriculture Annual Outlook Conferences, for example, of the intended re-positioning of these companies, of their major focus away from the U.S.A., and into Brazil and Argentina. And now that's come to pass. So at present, to be nominal about it, only three nations—United States, Brazil, and Argentina—account for 80% of world soybean production and 90% of all soy exports.

So this means vulnerability for the food supply, when it comes to such widespread usage of just a few seed strains, namely, the Monsanto/Cargill-approved Roundup Ready soybeans. Some new disease can come along, or just some old disease, like the soybean rust that was just reported in Louisiana. What implications would you draw out about all this? This is a dramatic global pattern.

Heffernan: Absolutely. The whole global system—incidentally, I am a part-time farmer. When I thought I was retired, I was almost a full time farmer! And I do raise soybeans.

What's happened—I mean, this is really the production part of the food system following the old industrial system. And it's really sort of one vast system.

Most anywhere you go across the Midwest now, there's about three different brands of corn planters in use. This year, 50-60% of the fertilizer is going to come from Cargill. The seed comes from one of these five firms, basically. Everybody across the Midwest is planting soybeans basically, the same varieties, the same chemicals—everything is the same.

Well, what that leads to, of course, is then we lose all—the question is, who's going to keep the other varieties going? And so we end up, basically, with everybody with the same gene stock, and thus if we have another Southern Corn Blight like we did back, what, three decades ago now or something, we're terribly vulnerable.

And like you said, rust is one of those kinds of things coming along. And this happens in the grain sector, and it also happens in the animal sector.

I happen to be on the board of the American Livestock Breed Conservancy. We're concerned about saving—we've got a hundred breeds listed, that were formerly a major part of agriculture, and now they are being lost.

And we've been working with turkeys, for example. We got some funding, and they did some research down there out of Pittsboro, North Carolina, looking at putting turkeys out on the range.

And incidentally, there are only basically three breeding flocks in the world, from which about 90-95% of all the commercially produced turkeys in the world come.

EIR: Where are these three?

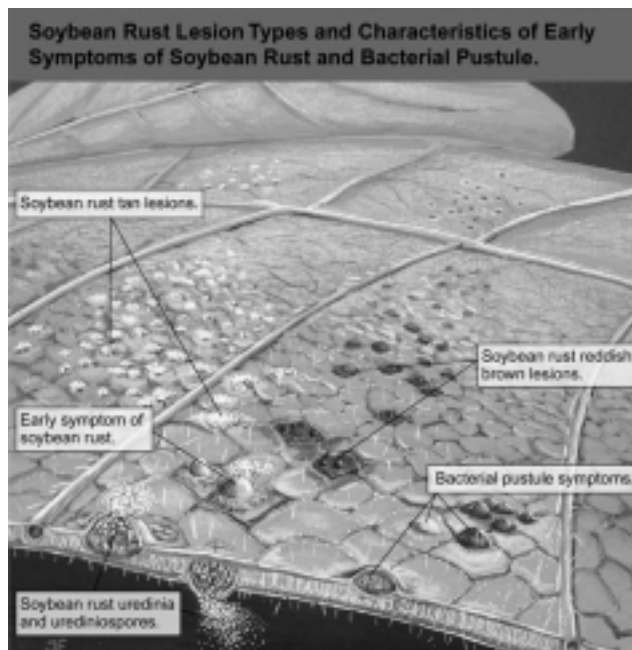
Heffernan: One is out in California; I think it's Arbor Acres,

FIGURE 2

Western Hemisphere Soybean Crop: 80% World Production, 90% World Exports



Source: EIRNS/2004.



*Cartel-dictated “free” trade practices have forced into being extensive areas of soy monoculture in the Americas, enhancing disease vulnerability. In 2001 soybean rust (*Phakopsora pachyrhizi*) hit crops in South America; as of November 2004 it has arrived in North America, confirmed so far in five southern states. Yields can be cut by half; timely, costly fungicide application is necessary.*

but their name changes so fast, I hate to use that. But there’s one in the United States. There’s Hybrid turkeys up in Ontario. And then there’s Pure Bred over in Europe. They were owned by British Petroleum not too long ago. Not now.

Work done at Ohio State University, probably six or eight years ago now, on DNA testing, found there was very little variation in the breeding stock on those three operations. So what we’ve done, there again, is narrow the base.

I have to just tell you, since we’re approaching Thanksgiving, that when I was teaching, my lecture on the day before the students got released for Thanksgiving was always on this issue. And I would talk about the turkeys, how concentrated it is. And then before I’d release them, I would say: Now remember, go home and eat lots of turkey. And ask for seconds. And if you finish your pumpkin pie and still have room, get a third helping! And have mom pack you some turkey sandwiches to bring back to college. Because, theoretically, it’s possible there won’t be any turkeys next year for Thanksgiving.

EIR: I don’t want to change subjects to the Christmas ham or anything, but I am calling you from the headquarters state of Smithfield.

Heffernan: Virginia.

EIR: When it comes to hog strains, there were the old breeds—Chester Whites, Durocs, and so on.

Heffernan: They don’t talk about breeds; they call them by numbers now. And again, the same thing. In fact, the turkey and the broiler model is what the hog people—and the cattle people, I might add—are trying to achieve.

EIR: Reduction to practically single varieties.

Heffernan: Right. If we switch to dairy quickly: Something over 90% of all the dairy cows in this country are the Holsteins. And I understand—and I think I’m being conservative on this—I think it’s worse than even this: something over 60% of the Holsteins go back to what we call four family names right now.

And there are already problems in this. They are having reproduction problems, because they got so narrow, they focussed so much on production of milk, they sort of forgot the reproduction part of this. So a lot of cows give birth to maybe only two calves in their lifetimes.

EIR: And the few others, are they Guernseys, or Ayrshires, or—?

Heffernan: They're Guernseys and Ayrshires, that's right, and milking shorthorn, Brown Swiss, and others.

EIR: But they're insignificant because of the whole mode you've been describing.

Heffernan: One of the little issues that never gets brought up on the Mad Cow Disease, is why were we bringing down Holstein cows from Canada? Why did they bring that cow in to begin with?

The reason why is, that with all these large commercial dairies, given the low reproduction rate of the Holsteins, given the treatment—the cattle do not last long in the dairies, they last only for maybe three or four years at the most. Some say only two, but, whatever. That since they only have two calves in their lifetimes—and they don't save all those, in fact, one of the problems is the loss of calves at calving and so on is very high. So, they're not reproducing the numbers.

Right now, basically, the large dairy farms—and they are becoming the majority—are not reproducing enough females to resupply the herds. And that's why they're having to buy cattle from up in Canada where they still have family-sized dairies, and so on, and they still have a much more diverse genetic base.

EIR: Another question on the milkers: You are bringing out the point that this all has to do with breeding and the genetic base and agricultural practices. Not simply with some single, much publicized "issue" such as bovine growth hormone or such, but what characterizes the whole system.

For example, I understand that in Maryland there is a famous big dairy operation that has entirely robotic milking machines—"voluntary" automated machines. I understand some of the cows choose to walk over and be milked five times a day, because they feel good that way.

But you are stressing that it's the breeding question, amidst a whole combination of factors?

Heffernan: That's right. But as the industry concentrates, they want to produce—again, following the industrial model—the same thing everywhere.

Now, with environmentally controlled buildings, like for broilers, turkeys, and hogs, they can make that work fairly well. The issue we just talked about—the disease problem and so on—they can't handle that. But the rest of it they can.

But where you've got crops, and in the beef cattle, where you've got cows out on pasture, for example, in different environments, that industrial model just plain doesn't work.

EIR: By "industrial model," do you mean some modern version of the British East India Company? Or are you referring to just plain verticalized, contractual arrangements in producing food commodities?

Heffernan: Mainly what I was referring to is mass production. And they want it set up so that every animal, everything coming out, is exactly the same. That means, everything going in is exactly the same.

EIR: Therefore they specify the hogs, because they want them leaner, or want them this or that way?

Heffernan: That's right. The same size exactly, then they can use robotics a lot also. So there is a reason why they want that.

One of the problems with some of the *listeria* and some of the other health problems in the cattle and beef, is because animals come in different sizes, and the robots miss where they're supposed to be, and hit the intestine or something, and drop out the contents of that. That's where some of the problems are coming from.

EIR: The contamination is then spread.

Heffernan: You have the whole contamination issue.

EIR: So the attempt to over-robotize the processing gives problems?

Heffernan: That's right. So that's one of the problems. So they want a standard product, if they could. And at one point, IBP started down the route of trying to get the Angus breed, and certain breeders—in a few of the Midwest states, they had even begun to identify two or three big Angus breeders in each state, to sort of be the foundation for a special brand that they were going to carry. Now, they backed off of that, but again, that's that model of going to really a narrow genetic base, so everything is just the same.

EIR: So that was probably in the 1980s, before—

Heffernan: That's right. I think it was about the late 1980s.

On the beef, the problem with that model is the animal might be doing quite well up in Colorado, in cool weather and so on, but that genetic stock doesn't do worth a darn—and our annual meeting of the American Livestock Breeds Conservancy was down in Florida about a month ago—

EIR: And it doesn't do so great down there!

Heffernan: Oh, yes, you've got to get some Brahmin blood in them. And so, it doesn't work in agriculture like it does in building automobiles.

EIR: You are now bringing up the reality of where you do or don't have soy, or where you try to have certain breeds, and this is another aspect of the danger of monoculture.

On the world chicken situation, I am sure you have been getting many phone calls because of your work, given the fact



U.S. commercial turkey operations are today based, essentially, on only three parent flocks.

that Cargill is so prominent in Thailand and elsewhere in the world, and it's true that we have often had flu pandemics that have to do with mutations of the microbe that involve animals. In Asia there are a lot of animals, and a lot of people. So these practices you have been describing, potentially add to the vulnerability.

Heffernan: Oh, absolutely, they make us more vulnerable. All you have to do is have some avian flu variety, for which birds, or even the wind, can carry that.

In regions where they have high concentrations of these big buildings with no—with animals that have a narrow genetic base, and thus, with no resistance to it, a new strain can just wipe them out.

EIR: So the food supply itself is vulnerable.

Heffernan: The food supply is very vulnerable when we move to this kind of situation.

EIR: So, the potential for the influenza strain to mutate, and then come back to people, is heightened? There is a contributing vulnerability if you have small genetic base or inbred livestock?

Heffernan: Some of the specialists on this are really worried, where in places—. I was up in Iowa on a meeting kind of focussing on this. They were focussing on spots in Iowa. But certainly down in North Carolina, and places like that, where you have enclosed broiler operations and enclosed hog operations—these big, mass operations, when you move between those species and then on to the humans who interact with them. And some of the specialists were just really, really concerned about that.

EIR: So, some of the very premises of the last 40 years—axioms, but also presented as rationalizations, for example, “free trade will be good for you,” “it will be competitive,” “you can get food cheaper if it's global sourced”—in fact, all

it means is that there is less infrastructure, even when it comes to pathogen dangers and botanicals. You saw that big Hepatitis A outbreak in western Pennsylvania last year—biggest single source ever in the United States—and it came from scallion imports.

So one marker I want to ask you about—you may have others—is the BSE outbreak. This is a major disease event. In 1979, we went looked at the statements from the British livestock experts, and from their association, called something like the Royal Commission for Environmental Pollution. After the 1970s research by the USDA and others, on what was then called “transmissible dementias” and such things as sheep scrapie, the British Commission in 1979 said you should not be recycling sheep parts into cattle feed or other livestock feed. There may be dangerous consequences. You should tighten controls over what goes into livestock feed.

But Prime Minister Margaret Thatcher came in, and Lord Peter Walker, her Agriculture Minister, and they were the definitive free-marketeer ideologues, and said, “No,” on principle. “All industries should regulate themselves. There should not be government regulation.” And by 1986, we know what happened.

So, since you've written the book on the process of of concentration and consolidation in agriculture, and given your understanding of these premises of the era of free trade that violate sound agriculture practices, and public health and animal health practices, what would you say about all this in summary?

Heffernan: Let me step away from U.S. agriculture, and take a quick world view of this thing. There are those talking about the retail business, and how all of this is going together and how it's really very rational, it leads to the most efficient food system and so forth. There is a whole host of issues among it. But when they write—and they tend to be writers from Europe and the United States who are talking about this, economists, and some sociologists, I might add—they take the perspective from the have-nations. And the fact is, those of us in the have-nations will continue to get food. We don't need to worry.

There's a book out by Steven Blank, *The End of Agriculture in the American Portfolio*, and he argues that since we can import our food cheaper than we can produce it in this country, we ought to import our food and use our land for its higher value, like recreation and urban expansion.

EIR: What a terrible premise, and view of the world.

Heffernan: But that is exactly the basis that our U.S. and WTO [World Trade Organization] policy is following.

About a week ago, the *Wall Street Journal* had the article—

EIR: Yes, that the United States will be a net food importer annually by 2006.

Heffernan: Yes, it's an article out of Purdue, which has been



A young dairy cow of the Holstein breed. Most of today's U.S. milking herds are Holsteins, and trace lineage to only four families of the breed. Attempts were made in the 1980s by IBP (now Smithfield) beef processors to impose only certain blood lines of Black Angus—shown on pasture—for uniformity in slaughtering and marketing. They failed.

around for about a year now. And the USDA at an Outlook Conference, said that the difference between exports and imports will be only about \$3 billion this next year. We are moving in that direction. So we'll get the food. But, and in one sense, we can argue therefore, that the system is working quite well for our consumers, *now at least*.

Here's the real issue on this: As we move toward trade liberalization, the governments have backed out of making any decisions about the food system. And instead, it's been turned over to these large corporations, the ones we've named. These corporations make their decisions on what is most profitable for the corporation.

Up until this year—this year being the exception—Con-Agra for several years running had said in its annual report, "Our mission is to increase the wealth of our stockholders." That is the purpose of a corporation. And if you and I were working in a corporation, that's the way we'd make our decisions.

Sometimes I almost envy them. They have a simple definition. When you are working in a large university you've got lots of goals! You don't know which one to emphasize. They're pretty clear what they're emphasizing!

EIR: Well, 60 years ago, when you looked at the outlook of corporations, including in the industrial areas and smaller firms, local dairy plants, and so on, there wasn't the conflict.

Heffernan: That's right. That's where we're heading. Today in the world, and this is a conservative number, 40% of people have less than \$2 a day. This is from United Nations data. If you were executive director of a corporation, how concerned would you be to set up a system to provide food for these people?

EIR: I meant, 60 years ago, people would be concerned—

Heffernan: Yes, 60 years ago they would be concerned;

that's exactly right! Sure.

So the real dilemma we face in the world today is, the UN at the turn of the century, of 2000, basically made a commitment to reduce hunger by 50% by the year 2015. And at that time, it was moving down. And that was just about the time that the big retail stores started coming in globally, I might add.

EIR: You mean Wal-Mart went into food—

Heffernan: Yes, Carrefour, Wal-Mart, and Royal Ahold especially. Well, the last three years, it has been going in the other direction.

EIR: Even in places like Argentina, as you know.

Heffernan: Yes. So the point is, today, these firms we have been identifying, decide what gets produced, where it gets produced, who produces it, how it's produced, and, basically, who gets to eat. And that's the conflict that we're in. And hunger is going to keep going up, as long as we keep making the decisions solely on what makes the most money for these large corporations.

EIR: Yes, it is quite a turning point period right now.

Heffernan: And that's what we're seeing. And hunger is going to go the other way. And of course, you've got the quality of the food, the obesity issue, and so on that goes along with that too. But that's the real dilemma in the food system.

So number one, you've got that dilemma. Number two, my colleague, Mary Hendrickson, and I have said for some time, food is different from all other goods or services exchanged in the global economy, because it is a necessity, and it's needed on a regular basis. Even oil doesn't meet quite that criteria, although it comes obviously closest, and the one we hear the most about right now.

So, we've been arguing that, well, we just don't want to get into the larger globalization. Okay, I'm not smart enough to take on all globalization. I'll stick just with food. Maybe it's the bellwether; maybe it's the canary. But nevertheless, the point is: Do we, even as a country here, want to depend, given the unsettled nature of the whole world today, do we really want to depend totally on food coming in from other countries?

And most countries say, "No." We're not saying we should eat only what we produce in this country. But there needs to be, I think, an understanding that every country has a right to have some guideline. You know, we'll buy bananas and coffee and other things from other countries, to be sure, but there seems to be some need for every country to have some degree of—I hate to even use words so strong as "self-sufficiency"—but some security for their food.

And that's what the WTO doesn't understand. So you go back to, what was the issue at the first big—what I call the big international protest, was at Seattle.

EIR: I was there, yes,

Heffernan: And the faith community, and the humane society, and labor unions, some farm organizations, and a whole host of NGOs [non-governmental organizations] working with developing nations, and so on, all came together around one issue, and that was food.

Then again last fall, about a year ago in Cancún, the same thing happened. And in fact, it looked like the WTO may even come apart from that. And I've been saying for some time, either WTO is going to have to understand that food is different from other products, or they won't survive.

EIR: I think that gets back to the point of government. From the point of view of the situation of other countries—the hunger in Mexico under free trade, the situation in Argentina, where they are in essence, under orders from ADM and Cargill to grow soybeans on the Pampas and elsewhere to the point of insanity.

Heffernan: That's right. . . . These big companies come in, just as you're saying, essentially, in one way or another, and basically get control. Mainly, because they provide the inputs, the market, and so on. They don't have to own the land, but they can still pretty much control what happens on it, just as you're saying. So in fact, it's the poor nations of the world that will watch their food move to the have nations of the world. And that's where you really hook the faith community.

EIR: The traditional American System—as it was called in the 19th Century, regarding industry—had the premise for its economy and its foreign policy both, that it's good for the United States to be in a world of vigorous, healthy, developing nations.

Heffernan: That's right.