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# **STAFF PAPER SERIES**

## **An Essay on Farm Income**

**Richard A. Levins**

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**DEPARTMENT OF APPLIED ECONOMICS**  
**COLLEGE OF AGRICULTURAL, FOOD, AND ENVIRONMENTAL SCIENCES**  
**UNIVERSITY OF MINNESOTA**

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**Richard A. Levins**

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## **An Essay on Farm Income**

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### 1. FARM INCOME: MYTH AND REALITY

The perpetually low income of farmers has kept agricultural economists busy for most of the twentieth century. Policy after policy has been tried, rejected, then tried again in an attempt to solve the farm income problem. Ever since the New Deal, we have had price supports at various levels for many farm products. Since the Kennedy years, we have supplemented relatively low price supports with direct payments to farmers. All the while, supply control has been attached to most farm bills in one form or another. None of this has provided a lasting solution to the problem of low farm income.

Some see the failure of public policy as clear evidence that we should “get the government out of agriculture” and embrace free market philosophies. The 1996 “freedom to farm” bill is very much of this tradition. Global competitiveness, level playing fields, farmer freedom, and increased efficiency became the battle cries in this new way to make farmers better off. Within a few years, government payments to farmers were at record high levels, and getting the government out of agriculture had proven to be more expensive than keeping it in agriculture. Policy experts around the country are now busily crafting ways to go back to the future.

Government or free markets, free markets or government? The dismal history of this debate does little to dampen enthusiasm for it. In spite of their polar differences, these two approaches have something important in common: the assumption that farmers

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*Acknowledgment: I am grateful to Willard Cochrane, Jane Dickerson, Carmen Fernholz, and Turner Oylo for their help in preparing this essay.*

working together to increase their own well-being cannot, or will not, happen.

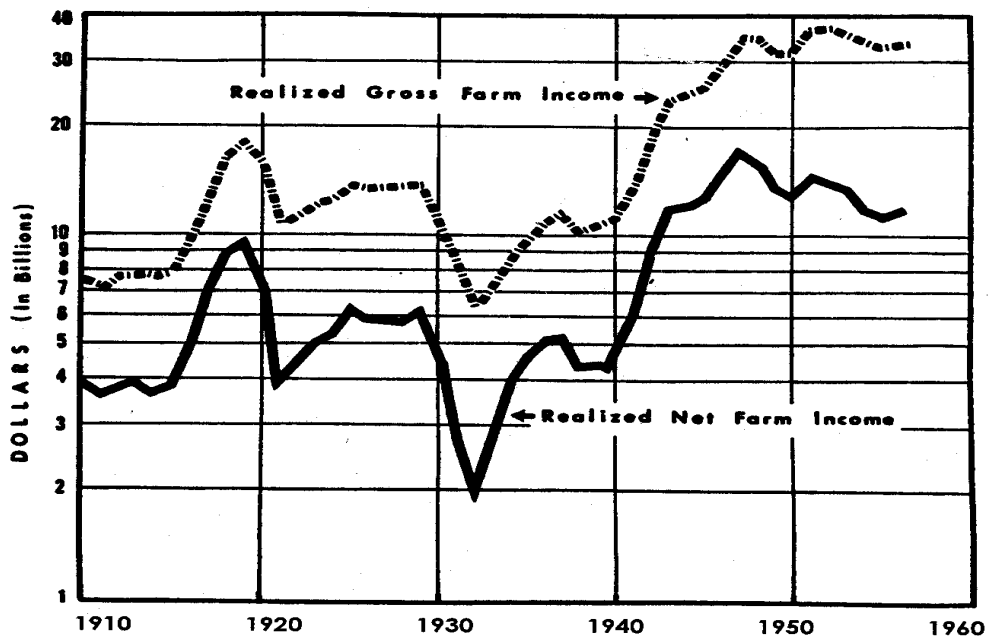
Government programs are based on the view that farmers are unable to act together in their own best interest. Thus, the government must act on their behalf. Free marketers see collective action as unnecessary and a general affront to the individual freedom they hold dear. As a result, the possibility of farmers acting collectively to take charge of their own economic interests has received virtually no attention in almost 70 years of farm policy debates.

This essay is about that third option, one by which farmers would not be so dependent government programs to support their income. It is also an approach by which farmers would recognize that the food and agricultural system has become so dominated by economic giants that acting alone is suicidal.

#### Farm Income in the Twentieth Century

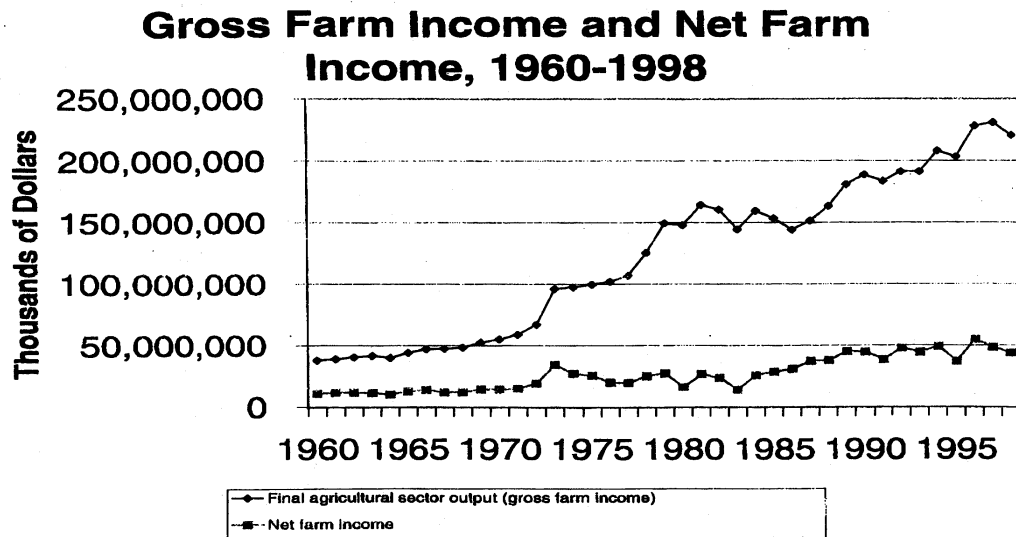
President John Kennedy once told Willard Cochrane that he had read his book Farm Prices: Myth and Reality, and that was why he chose him to serve as his Chief Agricultural Economist. In the middle of chapter two, Cochrane displayed the graph reproduced here as Figure 1 and observed “net farm income of all farm operators in the United States behaves in the same general way as does gross farm income.” Both common sense and the graph supported his conclusion. The two lines in the graph, gross income and net income, moved gracefully together from 1910 to 1950. But then something started to change. Beginning in the late 1940’s, gross farm income went one way and net farm income went another: a higher gross income seemed to mean a lower net income. At the time Cochrane was writing, there would be no reason to make much of this. History was heavily on his side, and even the most solid of trends has its quirks.

Figure 1. From Farm Prices: Myth & Reality (p. 21)



The same graph, drawn for more recent times, shows a different story. Gross farm income and net farm income during 1960-1998, shown in Figure 2, seem to sometimes be related in a positive way, sometimes in a negative way, and sometimes not at all. The one consistent part of the story is that farmers, as a group, have been left out of the enormous growth in the value of what they sell. It seems that the modern food system brings a new myth to farm economics. That new myth is Cochrane's observation that "net farm income of all farm operators in the United States behaves in the same general way as does gross farm income." The corresponding reality is that gross farm income has less and less to do with the net income of farmers in a twenty-first century world. Cochrane's observation was true when it was made, but the agricultural economy has changed so much that it is now better termed myth than reality.

Figure 2.



The years pictured in Figure 2 were times of great change in U.S. agriculture. Wave after wave of new production technologies washed over the Heartland. Farm output almost doubled. Prices levels for farm production also increased, but not so much as to stay ahead of inflation and production costs. Growth in financial returns to landowners and to many of the largest agribusiness corporations exceeded the growth in net farm income. These years were also ones in which economic power became more and more concentrated into fewer and fewer non-farm hands. Economists often disagree on the roles and relative importance of these and other forces that together shaped the financial future for U.S. farmers. In this essay, I will be mostly concerned with only one of them: economic power.

#### Economic Power

The years covered by Figure 2 were also a time of rapid growth in size of agribusiness concerns. Cargill, for example, entered the 21<sup>st</sup> century with sales in the \$50

billion range and assets in the \$25 billion range. For comparison, all U.S. farms combined had sales about four times as large and non-real-estate assets about 10 times as large. Such enormous size gives companies a special advantage that economists refer to as “economic power.” I think most farmers have a basic understanding of economic power: Cargill’s sales are almost 600,000 times larger than sales for an average farmer in Minnesota. When Cargill buys corn from an individual farmer, does the world’s largest privately held company have an edge? Most farmers would think it does. There are other sources of economic power, too. For example, farmers need land to farm, but there is only so much to go around. When individual farmers bargain with landlords over rental rates, the landlord almost always has the upper hand.

Economic power can be used to manipulate prices, to influence terms of contracts, and to affect how the “rules of the game” are set by government agencies at all levels. Traditionally, economic power is thought of as resulting from monopoly, so a good deal of policy energy has been spent on anti-trust issues in the past few years. However, economic power can also arise from sheer size of operations. In the example just given, Cargill may not be a global monopoly, but its massive size allows it to do things a smaller company could not. But whether economic power arises from monopoly, from bigness, or from land ownership, it allows profits to be earned that are not available to those who do not have economic power.

While size, monopoly, and land ownership can increase economic power, there is one thing most certain to reduce it: competition. And it is here that farmers stand out. Of all the economic sectors of our food system, farmers are universally regarded as being the most competitive among themselves. Such competition, in a world of giants, works



against farm income in many ways. For example, why do farmers rush to adopt technology that will benefit a few in the short run, but hurt everyone in the long run? Competition among themselves. Why do farmers constantly produce more than markets can reasonably be expected to take at reasonable prices? Competition among themselves. And why do farmers have such low economic power that they lose profits to landowners and agribusiness giants? Again, the answer is competition among themselves. The principal theme of this paper will be simply this: the farm income problem and the failure of government policies to solve it are mere symptoms of farmer competition. Until the cause is addressed, the symptoms will always be with us.

### Summary

The farm economy of the latter half of the twentieth century behaved very differently than it did in the first half of the century. The story that “farmers need a higher price” may once have been appropriate, but it is far too simple for today’s world. Higher prices will introduce additional profits into the farming system, but those new profits will eventually be claimed by sectors of the agricultural economy that have greater economic power than farmers. The essential problem for farm income is not one of low profits in the system. Rather, it is one of farmers not being able to claim those profits. Until farmers act collectively in their own economic interests, and thereby gain economic power, the benefits of higher prices will go elsewhere.

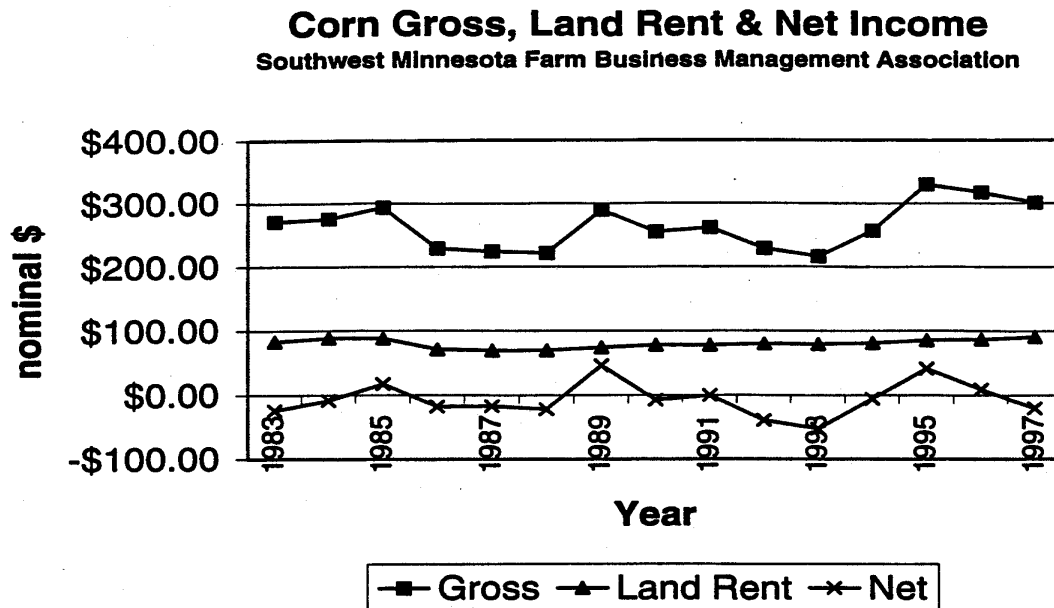
## 2. LAND AND FARM INCOME

Unlike most other things required to produce a crop, land is in fixed supply. As Will Rogers once said, “Land is a good investment: they ain’t making it no more.” Because of this, economists generally believe that land costs are not determined by how much it costs to make more land, but by the current value of the products produced on that land. Nobel economist Paul Samuelson, writing in the 16<sup>th</sup> edition of his classic text, put it this way: “the price of land is high because the price of corn is high.” This presents obvious problems for those who want to raise farm income. For example, a government program to raise the price of corn will also raise the cost of producing that corn because the land cost goes up.

Because there is only so much land to go around, those who own land are in a better bargaining position than farmers who want to use that land. This translates into land prices that favor landowners over farmers. For example, net farm income was less than three times as high in 1997 as it was in 1951. During those same years, the income of non-farm landlords increased by a factor of ten. The advantage landlords have can also be seen in Figure 3, which shows the gross income, land rent, and farmer profit per acre for growing corn in southwestern Minnesota during 1983 to 1997. The farmer income never exceeded that of the landlord, and only came close in two of those years.

Why does a Minnesota farmer pay \$80 to rent an acre of land? Why not \$180? Why not \$18? Or, if you prefer thinking in terms of sales prices rather than rents, why does land in southwest Minnesota sell for \$1,200 per acre instead of \$12,000 or \$12 per

Figure 3



acre? Carefully thinking about questions such as these is a good way to begin to understand the role economic power plays in the agricultural economy.

#### The Cost of Land

Consider the cost of something farmers need other than land: a tractor, for example. In the theory of free markets, the cost of buying a tractor is closely tied to the cost of making a tractor. Simple enough. Now, instead of thinking about tractors, think about Deere and Company, the world's leading manufacturer of farm equipment. What does a share of Deere and Company stock cost? Even though Deere makes tractors, this is not a question about tractors. It is about owning a share of Deere and Company's profits. A share of Deere and Company stock can sell for a high price when the farm economy is doing well. When the farming economy is struggling, the same Deere stock will sell for less.

Land is closer to Deere and Company stock than it is to a John Deere tractor. It doesn't cost anything to make land, once it is cleared and made ready for plowing. Shouldn't the price of land be zero? In a slight variation, sometimes called "opportunity costs" by economists, we would price land at its best alternative use. Outside of agriculture, vast expanses of farmland in remote rural areas aren't worth much for anything but farming. Land would be cheap. To see why land is expensive, we are better off seeing an acre of cropland as a share of stock in our farm economy. The owner of such a share is entitled to some portion of the financial bounty generated by U.S. agriculture.

It is one thing to say that a share of a company entitles its owner to a share of profits, and another to determine what that profit will be. Once the total income from product sales and government payments is used to pay production costs, the remaining profits are divided among farmers and landowners. Here is a hypothetical example of per acre corn costs and returns:

Crop Income: \$300
Production Costs: \$200
Return to Landlord and Farmer: \$100

How does the return to landlord and farmer get divided? If the farmer owns the land, he or she gets the entire \$100 and in all likelihood lives quite comfortably. If the landlord and the farmer are not the same person, however, things are more complicated. The landlord, like the farmer, would like as much of the \$100 as he or she can get. At the

same time the landlord would be willing to accept a very low rent if there is no alternative use for his or her land—anything is better than nothing. On the other hand, the farmer must make enough to keep him or her from leaving farming. In the real world, farmers and landlords bargain with each other to determine land rents. Farmers have no effective bargaining unit and compete with each other to bid the most for whatever land is available. Landlords, on the other hand, have the advantage that there is only so much land to go around. If farmers want to farm, they must have land. To get that land, farmers must aggressively bid to get it. The result is predictable. No matter how much money is available for landlords and farmers to share, farmers keep just enough to keep them farming and landlords get the rest.

Suppose, for example, that one farmer offered \$10.00 per acre for the land. The farmer share would be \$90.00, the land would be farmed, and there would not be a farm income problem. Another farmer, however, is willing to work for \$80.00 per acre, so bids \$20.00 for rent. Still another thinks he or she can make it on \$70.00 per acre, so bids \$30.00 for rent. This process goes on until, finally, one farmer is willing to work for less than any of the others, say, for \$20.00 per acre. That farmer bids \$80.00 per acre and gets to farm the land. We see the final results like this:

Crop Income: \$300
Production Costs: \$200
Land Rent: \$80
Farmer Income: \$20

In contrast to the way the bidding started, the land is used but there is a farm income problem. Now, it is tempting to say that the crop income is too low to cover the price of land, so we need higher prices. We completely forget Professor Samuelson's analysis: "the price of land is high because the price of corn is high."

We must remember, however, that Professor Samuelson assumes that farmers will continue to compete with each other for land. If they acted together as an effective bargaining unit, they could obtain major concessions from landlords. Then we could say what everyone wants to say: "the income of farmers is high because the price of corn is high." In this example, the principal cause of low farm income is competition among farmers. The high cost of land is only a symptom of that competition.

#### Land Costs and Farmer Income

There is no rule that says farmers can't buy land shares in the farm economy, no more than there is a rule that says factory workers can't buy shares in the corporation that owns the factory. With factory workers, however, we never assume the workers own the factory. If they did, we wouldn't worry so much about minimum wages. Low wages would mean higher corporate profits, so workers would offset their wage losses with higher dividends. We see farming differently in most policy discussions. There is an implicit assumption that farmers own the land they farm. This is simply not true. Nationally, over 40 percent of our farmland is rented. That percentage is almost 60 for Iowa. For some farmers, low returns to their labor and management will be compensated by higher returns to land ownership. More and more, however, land benefits are going to people who do not farm.

How did it get this way? In the mid-nineteenth century, land was parceled out to new farmers in such a way that most farmers owned the land they farmed. So far, so good. But there was no regulation stating that only farmers could own land. As the generations rolled along, the land passed through estates to children who also farmed. Later on, new farm technology gradually made it possible for fewer farmers to use all available land. It became more common for farm children to leave farming and find work in town. When their parents died, these city children still inherited land. They, for the most part, have become today's non-farm landlords. Elderly widows in Phoenix and middle-aged citizens of Omaha are far more likely to own farmland than the giant insurance companies we sometimes imagine.

Put in different terms, imagine a corporation set up so as to be completely employee-owned. Those who worked there invested their own time and money to start the corporation and worked at the corporation to help generate its profits. Technically, some money would be due the workers as wage earners, and other money would go to them as shareholders. For all practical purposes, however, no one would care much. The workers would get the money either way. As time passed on, some of the original worker/investors would retire, die, or otherwise leave the corporation. They would, quite understandably, want to maintain ownership for themselves or for their heirs. New people would come in to work, but they would not automatically become owners. Instead, they would make a competitive wage for what they did for the corporation. If they wanted an owner's share of the profits, they would have to buy out someone who had that entitlement.

At this point, everything begins to change. What workers for the corporation are paid in wages becomes a hot topic. The less they make, the more is available for profits. And profits accrue to the owners, some of whom no longer work for the corporation. The owners ultimately make decisions for “their” corporation, however, so they try to keep wages down as much as they can. This, in turn, keeps the new workers in such financial straits that they cannot afford to buy out an owner even if they wanted to. Over the years, the great experiment in an employee-owned corporation evolves into a conventional, absentee-owned corporation in which employees have no special advantages whatsoever. If the type of work the corporation does is associated with relatively low wages, the workers can improve their lot by either acting collectively in a union or by asking the government for a higher minimum wage. The owners will resist either strategy for understandable reasons.

For farming, it is not only land ownership that evolves in this way. For example, farmers are often inclined to see processors or other “middlemen” as taking profits that should otherwise belong to farmers. Processors do this by paying less for farm products than what the farmers consider to be fair. The farmers therefore establish their own processing corporation, usually as a farmer cooperative. The farmer/owners make more if the cooperative pays more for their products. They also, however, make more if the cooperative pays less, for this increases processing profits. The farmer/owners get these profits, too. As with the land example, whether the farmer/owners make money as farmers or as owners seems like a technicality. Time passes on and ownership takes on its own life. Now, the technicality becomes very important. Owners want low grain prices to enhance the value of their ownership rights. Farmers want higher grain prices



and would be happy if the ownership rights meant nothing. Such battles are fought on a regular basis in cooperative boardrooms in modern agriculture.

The point of all this is that ownership income is very different from income due to labor and management. Land, like a stock market for U.S. agriculture, allows owners to make money. What we normally think of as farming, that is labor and management, also has its financial rewards. Economic power plays an important role in balancing those rewards.

### Land Values and Politics

By now, one might be asking the question: why not somehow use policy to make land cheaper? Wouldn't this put an end to the farm income problem? The answer is "probably not." First, it would be immensely difficult from a political standpoint to lower land prices. Second, it might not help farm income.

The political difficulties arise, in part, because there are few huge landholders to take the role of "bad guy" in a political debate. Instead, there are many more landlords than farmers in U.S. agriculture, and the average landholding is not all that large. Many landowners are also farmers, and that poses obvious difficulties. Others are retirees who depend on land rental income. A land rent control program would soon be presented with political images of a hapless widow being cast out of her nursing home into the cruel winter snow. Still other rental payments support college incomes for the children of city folks and other worthy activities. And what about farmers who have spent their lives making payments on an expensive land mortgage? Will they embrace a program that makes that land worth less than what was paid for it?

The political difficulties would not end there. In rural areas, farmland is the principal collateral on many bank loans. If a bank lends someone \$1 million to buy land that is worth at least that much, no special problems arise. But if the value of that land falls to, say, \$500,000, the bank has a big problem. The bank's assets, which include the value of land held as collateral against mortgages, are no longer as large as the loans outstanding. If enough such loans are outstanding, the bank can be forced by banking regulations to close its doors. The farm crisis of the mid-1980's presents a good example. As farm product prices slid ever downward, so did land values. As that happened, banks became insolvent and began closing in rural areas. This, for the general public, was far more frightening than farmers being forced off the land. We always seem to have fewer farmers. But bank closings bring back Depression fears, and nobody wants that. Any program that meant dramatically lower land values would have to address the potential banking problem. And lest we think that would somehow be easy, here is a sobering statistic: the total value of U.S. farmland routinely exceeds \$500 billion.

Now for the bigger question: if we could somehow pull it off, would lower land values mean higher income for farmers? Recall that farmers make what it takes to keep them in agriculture and landlords take the rest because of their superior economic power. If the landlords were eliminated, farmers would get the landlord's share only if there were no other economic force powerful enough to claim it. Would farmers be the most powerful force in a landlord-free agricultural economy? We are getting ahead of the story here, but the answer is likely to be "no." Forces in agribusiness are already shaping up to challenge landlords, much less farmers, as King of the Hill.

## Summary

Landowners have a natural advantage in bargaining with individual farmers. The farmer willing to work for the least will always get whatever land is available, and individual farmers are all too willing to participate in the bidding competition that drives down their collective incomes. High land costs, and resulting low farm incomes, are merely a symptom of this competitive process. The real cause of low farm income is the competitive process, and that can only be addressed by farmers working together in their own best interests.

### 3. AGRIBUSINESS AND FARM INCOME

Much has been made of the degree to which agribusiness has become concentrated into fewer and fewer hands. The lion's share of most non-farm sections of the food system, from seed production to food retailing, is held by no more than four or five major corporations. For example, the October 23, 2000, issue of Business Week carried an article entitled "Will Agribusiness Plow Under the Family Farmer?" The article noted that the nation's four largest beef packing companies hold 81 percent of the market (up from 36 percent in 1980) and that one of those four was a takeover target. Profits in agribusiness, when compared to those in farming, are also high enough to raise concerns. When agriculture economist C. Robert Taylor gave testimony to the U.S. Senate Committee on Agriculture, Nutrition, and Forestry in January of 1999, he showed how the rate of return on equity for retail food chains and food manufacturers had exceeded 17 percent during the 1990's. The corresponding figure for the farm sector, calculated with current income, was 2.39 percent. Along the same line, USDA has tracked profits in food marketing for several decades. Those profits grew by a factor of 10, from \$2.4 billion to \$22.2 billion, between 1963 and 1998.

In evaluating high profits in the food business, Taylor said that "these comparative returns reflect comparative market power, and not relative economic efficiency." Business concentration and high profits are indicators of the growing economic power being wielded by agribusiness. In this chapter, I will look at the implications the growing economic power of agribusiness has for farm income.

## Agribusiness Mergers: Where Will They Lead Us?

Mergers and acquisitions have been the principal ways by which agribusiness has increased the size of its participants. That increased size, in turn, leads to greater economic power. As agribusiness corporations merge and grow bigger, most policy thinking remains mired in an old story of supply and demand. Such thinking may be accurate in a technical sense, but is not especially productive in terms of formulating workable farm income policy.

In the supply and demand story, farm products are usually thought of as being purchased by “consumers,” and these consumers are in turn conceptualized as people sitting down at the dinner table somewhere. In fact, most farm products are purchased by agribusiness giants in the processing sector and then converted into consumer products. Farm products are but one of the things necessary to make those consumer products. A casual observer might even question whether farm products are the most important component of final food products placed before consumers. In 1995, USDA estimated the farm value share of a market basket of food products was 24 percent. For bakery and cereal products, the number was eight percent. Looked at another way, the total farm value of food products in 1995 was barely twice the value of the packaging in which those products were sold.

In particular, many of the major commodity crops such as corn, wheat, and cotton, have virtually no retail demand. Instead, they are sold as inputs to industrial processes that yield livestock, sweeteners, bread, and clothing. With this in mind, consider the case of a bountiful harvest in a particular year. This certainly puts processors, that is, those who buy farm products, in an enviable position. There is more

product being offered for sale than is necessary during a normal year. The resulting lower prices paid for farm products mean higher profits in the processing sector. At the same time, less money is available in the farm sector to pay costs, so there is turmoil in the input supply sector. The public views this as a tragic problem for farmers, and not the bad luck of landlords or other input suppliers, so money is doled out to farmers so they can pay their bills. In this way, the input supply sector is able to continue to operate at full capacity and no land goes idle, no seed unplanted.

The opposite case is one of a short crop, perhaps due to widespread drought or disease problems. Then bidding wars among processors, and dramatically higher farm product prices, could result and depress profits among the processors. The input suppliers, on the other hand, are delighted with such developments. They immediately set themselves to raising land rents and charging higher “tech fees” on the hottest new seed varieties springing from biotech labs. This price adjustment takes a full season of crop production, so a brief period of this year’s high farm prices and last year’s lower costs creates the illusion that all is well for farmers. Soon, however, farmers are once again complaining of costs that are too high.

Rather than worrying about supply and demand, we should think of warfare among giant corporations. Those processors having the greatest economic power will be more profitable than those having less economic power. Similarly, profits available to suppliers will be claimed by the most powerful among that group. For this reason, processors will merge with and acquire other processors and input suppliers will merge with and acquire other input suppliers. For example, Monsanto has bought up many competing seed companies. On the processing side, Cargill has taken over the grain

division of its long-time rival Continental. Sooner or later, the largest, most powerful economic interests in the processing sector will face the largest, most powerful interests among the suppliers. What is of best interest to the one will not be of best interest to the other, and *vice versa*. A nasty and unproductive war between the two powerhouses could result. But, as any economics student who was still awake when bilateral monopolies were mentioned toward the back of his or her text knows, there is an easy solution. Vertical integration, the so-called “plow to plate,” “dirt to dinner,” “supply chain” craze now sweeping the food system, is the clear answer. Capture all the profits under one tent, and everyone will be happy. The last vestiges of ruinous competition among agribusiness interests will be eliminated.

Once agribusiness is able to act with a single purpose, it can turn its attention in one of two directions. First, it can take actions and support public policies that will capture a larger share of existing profits in the food system. Most likely, this would mean finding ways to reduce land values and transfer landowner profits to agribusiness interests. For example, a tightly-held monopoly could restrict the supply of seed so that seed became more valuable than land. Or, farmer access to markets could become so restricted that farm product prices can be made much lower. This, too, would mean lower land values and higher profits in a unified agribusiness system. The second way agribusiness could act is to increase the amount of profits available system-wide. Here, the path is clear: make food more expensive.

The direction of agribusiness mergers leaves little room for optimism concerning farm income, even if farmers are fortunate and own the land they farm. As agribusiness appropriates those profits now available to landowners, land will become less valuable.

The value will instead lie in patented seeds or captive markets, things farmers do not and cannot own and control. This is a plausible explanation for why large corporations don't own farmland. Control of that land, and the amount which it will be paid, can be manipulated from the outside by corporations that are sufficiently large and powerful. The move to supply chains and contract farming is also troubling for farm income. With such arrangements, management at the farm level will be a thing of the past, and those who "farm" will be paid no more than is required to attract those willing to work for the lowest possible wages. Here, it is worth noting that USDA estimated that there were 989,000 hired workers on farms in 1999. These people averaged \$7.83 per hour in which they worked.

### The Rules of the Game

The most important role played by agribusiness in the food system is that of controlling the rules of the game. Most often, we think of this in terms of the considerable influence agribusiness has wielded in public policy. The CEO's of agribusiness firms, like those of any other businesses, use the resources of their respective corporations to influence everything from tax laws to environmental regulations in ways that would be of most private benefit.

The grain trading industry provides a good example. Quite understandably, companies that buy grain from farmers have no interest in paying high prices for it. Code words like "global competitiveness," "feeding the world," and "avoiding market distortions" have been carefully crafted and used to gradually eliminate effective farm product price supports from public consideration. Other programs, such as public expenditures to improve transportation systems that corporations use to move their



products, receive similar close attention. And, of course, there is constant clamor for a global “level playing field” in which multinational grain companies have free reign to play the interests of one country against another in ways the companies find most beneficial.

The agribusiness corporations on the farm supply side are also active everywhere public policy is determined. A company supplying farm chemicals will pay particular attention to environmental regulations. Another company selling big-ticket equipment items will lobby for investment tax credits and subsidized interest rates for those who buy their products. Corporations hitching their wagons to the biotech boom will want loose oversight on food safety and environmental issues, will oppose consumer labeling of biotech food ingredients, and will be especially interested in tight patent protection and minimal anti-trust enforcement.

The impressive size and effectiveness of this assault on the rules of the public policy game by agribusiness is well documented. Archer-Daniels-Midland is reported to have spent over \$2 million in political contributions during 1995-1999 alone. Such activities bring about the usual cries for political reform and cleaning up government, all of which is well and good. But that is not the only way agribusiness affects the rules of the game. It is easy to overlook the fact that most of what agribusiness does to influence the direction of the food system does not happen in Washington.

Consider, for example, the question of U.S. competition with South America for grain markets. ADM’s 1999 Annual Report showed that 35 percent of its operating income and 21 percent of its long-term assets were outside of the United States. The company is heavily invested in grain elevators in Brazil, Bolivia, and Paraguay. A

company document said that these investments “have added significantly to the company’s ability to trade grain from optional origins to destinations around the world.” This is but one of many examples that could be used here. Mergers that consolidate meat packing into very few corporate hands, the use of biotechnology to develop and promote patented seeds that carry restrictive contracts for farmers who plant them, and the parade of larger and larger farm equipment, requiring fewer and fewer farmers, come immediately to mind. All perfectly legal, but all taking their toll on farm income.

Does agribusiness have a stated goal of making independent farmers worse off financially? It is sometimes easy to think so. Monsanto, for example, has recently sold its proprietary soybean seeds to farmers in Argentina at prices lower than those paid by farmers in the United States. In addition, agribusiness has all but eliminated the option of independent poultry farming in the United States, and pork production is headed in the same direction. Throughout all this, agribusiness claims that it is acting in ways that will benefit farmers and, for all I know, they may actually believe such statements. The fact of the matter, however, is that agribusiness acts neither for nor against independent farmers: agribusiness acts solely in its own best interests. Farmers must do likewise.

#### The Treadmill and Farmer Cooperation

In the 1950’s, Professor Cochrane developed the “treadmill” theory to explain the problem of persistently low farm income. Cochrane wanted to show why farmers would adopt new production technologies that would surely, in the long run, lead to surplus production, lower prices, and lower farm income. He imagined farmers caught on a “technology treadmill.” When a new technology was introduced, the first farmers to adopt it would benefit by lowering their costs per unit of production. Furthermore, since

only a few farmers initially used the technology, yield increases in the aggregate were not enough to cause lower prices. “Mr. Early Bird,” as Cochrane called him, would therefore be more profitable. But now more farmers would also take on the new technology, aggregate production would increase and prices would start to fall. Then, the average farmer would be forced to adopt the technology, not to become more profitable, but simply to maintain the income he or she already had. Along the way, some farmers would be lost altogether.

In the original treadmill theory, the benefits of low farm prices went directly to consumers as lower food prices. Later, Cochrane rethought his idea and concluded that public efforts to counteract low prices with price supports would fail—farmers would simply bid up the price of land. This was an important change, for it officially acknowledged that there was more to the food system than farmers and consumers, and that other sectors could benefit from technology. For Cochrane, the new beneficiaries were landowners. He struggled with the idea of limiting technology itself, but advanced no serious ideas on how that should be done. Again, he was caught in a “government vs. free market” dilemma. In free markets, technology is automatically used as it should be; with government, regulating the everyday use of technology is seen as interference with progress.

Today, we must recognize that technology is developed and promoted by agribusiness. The purpose of doing so is to promote the profitability of agribusiness. Whether the new technology is in the long-run best interests of farmers is not considered. Whether farmers will adopt and use the technology is as easy as understanding the treadmill—if it makes sense for some in the short run, all will be forced to use it in the

long run. But by then, the benefits will not go to farmers; rather, those who own the technology will profit most.

Here, too, we see a case where low farm income is a symptom of a greater problem. The problem once again involves farmers competing with each other. The treadmill is a problem only if farmers make decisions as individuals. A collective decision on various technologies would weigh the long run implications, pricing, and business arrangements of a technology before any farmer put it to use. Such actions are the obvious, and necessary, steps to get off the treadmill. Doing so will involve a recognition that the interests of agribusinesses and farmers are not always the same. Farm groups have become very good at working with agribusiness to do such things as promote the use of biotechnology. Those same farm groups have been far less effective in seeing that the benefits of biotechnology go to farmers.

### Summary

The illegal actions of agribusiness, such as environmental contamination or price fixing, always receive attention. Many of the actions agribusiness takes that work against higher farm income are, however, legal. Corporations are free to invest in South American grain facilities and to price and license proprietary seeds under any business arrangements they choose. This poses significant problems for both free marketers and government policy. Both would have to change the legal behaviors of agribusiness to increase farm income. Free marketers hate regulations of any kind and, in general, try to believe that whatever the market brings about is the best of all possible worlds. Government policy has no problem with some regulation of business, but shudders at the thought of the level that would be necessary to completely control the actions of

agribusiness. Something akin to public utility regulation of the entire food system would be required.

The farm income problem is often blamed on failed government programs. This is misleading. That government programs have failed to solve the farm income problem is clear enough. But those programs have tried to deal with a symptom of a much larger problem. Agribusiness, through decades of self-promoting actions, has guided the food system in the complete absence of an effective economic counterforce in the farm sector. That government programs acting alone have not been able to counter these actions should not necessarily surprise us. As agribusiness uses mergers and acquisitions to advance its economic power in the food system, we can expect that power to be used to further change the rules of the game. Unless farmers accept the existence of the growing economic power, and act accordingly in their own best interests, low farm income and failed public programs will be our constant companions.

#### 4. SUPPLY CONTROL AND DEFICIENCY PAYMENTS

It should be evident from the discussion thus far that price supports, a perennial favorite in the policy world, cannot help provide a lasting solution to the farm income problem. The argument against a free market approach also should be clear. Free markets encourage competition among farmers. That competition, in turn, keeps the economic power of farmers low. Two other standards from the world of government policy deserve our attention. One is supply control; the other is deficiency payments. In this chapter, I will show that the failure of both is directly related to the lack of economic power held by farmers.

##### Supply Control

The modern U.S. farm program was born in 1933 with the Agricultural Adjustment Act. The country was in its worst depression of the century and farm incomes were disastrously low. This low income was blamed on low prices for farm products, which were in turn thought to be the result of surplus production. Under the “AAA,” the government supported the income of farmers, but only if they agreed to reduce the amount they produced. For most major crops, this took the form of a land retirement program. U.S. farm programs have seen variations on this theme ever since.

We can see most of the elements, and most of the difficulties, with supply control as it played out in the New Deal. First and foremost, supply control was seen as a remedy for low farm prices. Farm prices were low, it was said, because food was too plentiful. The solution was to reduce the supply of food so consumers would pay more for it. This was being said, by the way, as people were standing in soup lines across the

country. To make matters worse, the farm crisis of 1933 was viewed as a national emergency for which immediate action was needed. There was not time for acreage reductions in following crop years to work their magic. More drastic, though temporary, measures were needed. The 1933 contracts with cotton farmers called for them to plow under anywhere from 25 to 50 percent of their acreage. More dramatically, the pork program resulted in the immediate government purchase of millions of pigs. Some were slaughtered and used for food relief; others ended up as tankage. Wasted cotton, and worse yet, the squeals of “murdered” baby pigs, would come to haunt proponents of supply control for decades to come.

The New Deal political sales job for supply control also looks familiar. Then, as now, it had two primary components. The first of these was food relief. As part of its price support program, the government bought surplus farm products. These products were then distributed to the poor. The second was conservation. The general public was sympathetic to the idea of soil conservation, and removing land from production was far easier to sell as a way to reduce erosion than as a way to reduce food production.

We take it for granted that the government administered AAA supply control programs. Before the AAA was enacted, however, Henry A. Wallace was advocating supply control of a different sort. To his mind, supply control should be accomplished by direct farmer action. He likened supply control to union workers going on strike for higher wages or to United States Steel reducing production in the face of falling prices. Both were perfectly acceptable ways for economic interests to take care of themselves in the marketplace; supply control was no different. We will return to the ideas of Mr. Wallace later.

As time went on, agriculture in the United States became increasingly productive. Prices were often low and the income of farmers became a perennial political issue. So, too, did the cost of administering farm programs. During the 1950's, government stocks of surplus farm products grew enormously as farm products moved into public hands through price support programs. Meanwhile, companion supply control programs which relied on land retirement were increasingly ineffective. Finally, as part of the 1960 presidential campaign, a new type of supply control program was proposed. Agricultural economist Willard Cochrane outlined a method of supply control in which the government would not take land out of production, nor would it buy up farm products. Rather, the government would assign marketing quotas to farmers that would limit the amount of product that could be marketed. Each year, the quotas would be adjusted in order to keep anticipated supply and demand in balance. The program was part of the initial farm bill proposed by President Kennedy, but was never enacted into legislation. Instead, various forms of voluntary land diversions with payments for participation were used during the remainder of the twentieth century. Most economists agree that these programs have been ineffective.

There are many potential objections to supply control: making food more expensive, limiting production in the face of starvation, and remaining competitive in a global economy must all be addressed. The objection used to sink the Cochrane quota system, farmer freedom, is of most interest here. Farmers are perceived as being fiercely independent, so only a government-administered supply control program can work--the discipline to control supply must be imposed from the outside. The way to get around this has been to present the programs as being voluntary, while at the same time making



the rewards for participation so lucrative that virtually all farmers will take part. But Cochrane recognized that voluntary supply control could not work. The political price for Cochrane, who also believed that supply control should be publicly administered, was being branded a “killer of freedom.”

The voluntary aspect of government supply control efforts has other problems. We usually say supply control programs based on land retirement have failed because they are too easy to get around -- farmers retire the worst land and plant the best. An implication is that perhaps some control mechanism other than land might have worked better, but this is doubtful. Any time a program is presented as enforced from the outside (which farmers hate) and voluntary (which trivializes what is being done), we should expect it to fail. The program is reduced to a regulation, be it to set aside land or to do something else, instead of being elevated to a plan of collective salvation from low incomes. Farmers come to see the program as a payment to meet a regulation, and a voluntary one at that. USDA extension economists spend hour upon hour helping farmers evaluate if program participation will be to their individual economic advantage. The price advantage of effective supply control is seldom, if ever, even mentioned in such sessions.

We now return to the issue of farmer economic power. Supply control is presented as a way to raise farm product prices, which will in turn lead to higher farm incomes. As we have seen, things are not that simple. Higher farm product prices don't necessarily lead to higher farm incomes in a modern agricultural economy laden with economic power in non-farm hands. Farm economic problems do not arise from low prices *per se*, but from low levels of economic power in the farm sector. The question

should not be “will supply control lead to higher prices?” Rather, the question should be “will supply control lead to greater economic power in the farm sector?”

The evidence so far is clear: over sixty years of supply control efforts of one sort or another have left farmers with the lowest economic power among major food system sectors. This should not be surprising. For one thing, the programs were never intended to increase farmer economic power, nor have they been monitored to see if they were affecting economic power. For another, a program that attempts to preserve individual autonomy, that is administered from the outside, and is presented as voluntary could never strengthen those it is intended to help.

Before leaving this topic, I would like to reset the clock to when Henry A.

Wallace was encouraging farmers to act on their own to control supply:

Farmers have just as much right to organize to control their output as union labor had to organize for the purpose of shortening hours and increasing wages. They have just as much right to cease production wholly or in part as union labor has to strike. It is no more wrong for farmers to reduce production when prices are below cost of production than it is for the United States Steel Corporation to cut pig iron production in half when prices are rapidly falling.

Wallace was on the right track, for any collective action will help increase economic power in the farm sector. But I think his statement has also led many to confuse “supply control” with “collective bargaining.” As I will discuss in the next chapter, these two ideas are not the same thing. Collective bargaining will try to get a higher-than-market price from buyers regardless of current supply levels. It would make just as much sense to bargain collectively with buyers when a market is flooded as when it is short. Supply control can set the stage for collective bargaining by providing a higher market price from which to begin negotiations, but it is not an effective substitute for collective

bargaining. Wallace's comparison of "ceasing production" and a labor strike also needs careful thought. In collective bargaining, farmers would refuse to sell a product to a certain buyer, rather than refuse to produce it all.

### Deficiency Payments

The Kennedy administration was in some ways the last hurrah for programs that sought to keep farm product prices high. In the mid-1960's, a policy approach that more closely resembled free market theory made its grand entrance into the politics of farm policy. In this view, there were no surplus products, for at a low enough price, everything would sell on the open market. High support prices kept existing surpluses from getting sold, and further compounded the problem by signaling farmers to produce more than they otherwise would.

Fixing the farm income problem with *lower* prices was, as you might imagine, a tough sell. Proponents of the new idea tried to argue that the market would eventually adjust so that there would be fewer, more efficient farmers who would do just fine with the lower prices. The political cost of the low price experiment was too high, however; no one wanted to openly support a program of fewer farmers and take the risk that low prices would somehow support any farmers whatsoever. A compromise was reached. The price of farm products and the income of farmers would be dealt with separately. We would have low farm product prices to discourage surplus production and expand export sales. The income of farmers would be supported with direct payments to farmers.

As much as we take direct payments to farmers for granted, this was by no means the case during the Kennedy years. Farmers did not want to be "on welfare"; it was

much easier to pretend that they were free and independent business managers when government action happened off stage with price supports. But a check arriving in the mail from the government was much harder to explain away. In his book Cargill: Going Global, Wayne Broehl, Jr., tells how Cargill lobbyists took advantage of the Kennedy farm plan failure and began shopping a program around Congress called “deficiency payments.” No one, especially farmers, thought it was perfect. Nonetheless, it became the principal tool of farm income support for the next 40 years.

Conceptually, a deficiency payment is easy to understand. Just as with a price support program, the government determines what they consider to be a “fair” price for farm products. The fair price is often referred to as a “target price.” There is no effort to support the price at that level, however. Instead, the public agrees to make a payment to the farmer that amounts to the difference between the target price and the price the farmer actually received. If prices are above the target level, the government does nothing; otherwise, the government transfers money to farmers while at the same time allowing the price of farm products to stay low.

Deficiency payments are among the easiest to analyze with a conventional approach: if farmers are not making enough money, you give them some and their income goes up. But things are not that simple. Without deficiency payments, farm income is paid by the market. With deficiency payments, farmers are at least partially paid by the government rather than by the market. One might in some ways view the deficiency payment like a tip paid to a server in a restaurant. The tip does not, in my view, supplement the income of the server, at least not in the long run. Instead, it allows the restaurant owner to pay a lower base salary to servers than would otherwise be

required to keep them at their stations. The restaurant owner, not the server, claims the tip because of his or her greater economic power.

Deficiency payments, like tips in a restaurant, help pay for services which the market would otherwise pay. And, like tips in a restaurant, the payments will ultimately be claimed by the food system sector with the greatest economic power. That will not be farmers because their economic power remains low with or without deficiency payments. Even though they do not help farmers, deficiency payment programs represent a convenient way to reward powerful agribusinesses interests in both the processing and input supply sectors. Those who buy farm products are happy because they can pay lower prices for farm products. On the other hand, lower prices would normally mean lower profits for input suppliers. The payments, however, alleviate this unfortunate situation by keeping the amount farmers can pay to suppliers relatively high. To some degree, this explains how land prices and tech fees can remain high when farm product prices are low.

Meanwhile, two sets of books are kept for the farm sector. One reports net farm income “with government payments”; the second reports net farm income “without government payments.” Only the first of these two numbers is directly observed, of course. The second is calculated by subtracting government payments from the first number. The implication is that net farm income would be lower without the payments. I don’t think so, at least not in the long run. The more informative numbers would be “food system profits with government payments” and “food system profits without government payments.” These figures would paint a different picture of the effect of deficiency payments and are, perhaps understandably, not reported to the public.

Deficiency payments support a policy of low farm product prices and high farm input costs. Furthermore, they do not increase the economic power of farmers. It should therefore be no surprise that farmer income has not fared well under such a program. Still, farmers often cling to government payments for the most understandable of reasons. No restaurant server would support eliminating tips unless a better income support was in place. Similarly, the effect of eliminating farmer “tips” would be catastrophic in the short run. And, as the great economist John Maynard Keynes has said, “in the long run we are all dead.” No, it is not always enough to call for an end to faulty programs. Something better, something like economic strength in the farm sector, must be waiting.

### Summary

Over the years, an imbalance between the supply and demand for farm products has taken center stage in most farm income debates. A different view is presented here, one in which insufficient economic power replaces excess supply as the principal determinant of low farm income. The problem, in short, is that no traditional farm program has acted to increase the economic power of farmers. The income of farmers, like their economic power, has therefore stayed low.

## 5. THE CASE FOR COLLECTIVE ACTION

Most economists, and many farmers, doubt whether farmers can work together for their collective economic interests. History is on the side of the doubters. Throughout the twentieth century, most efforts to organize farmers have eventually fallen victim to the farmer's yearning for independence. The twenty-first century is different, however. There are fewer farmers. The farmers we have are better educated and better connected with information technology. And, last but not least, today's farmer lives in a world of economic giants. They have seen many farmers driven out of business, and many others lose their independence to contracting. They know that more of the same is on the horizon.

Will the new generation of farmers embrace collective action, or continue to try and make it on their own? I don't think this is for me to say. Farmers, and only farmers, can answer such a question. In this last chapter, I will provide some information and ideas that I hope will be helpful to farmers as they decide the best path to take in an increasingly hostile economic environment.

### Too Many Farmers?

An immediate objection to farmers working together is that there are too many of them. The United States Department of Agriculture reported that there were slightly fewer than 2.2 million farms in the United States in 1999. This seems like a lot of people to organize into an effective bargaining unit. A closer look at the data reveals a different picture. A "farm," according to USDA, is "any establishment from which \$1,000 or more of agricultural products were sold or would normally be sold during the year." It is

clearly not necessary to organize rural residences with minuscule sales in order to have effective economic power. In fact, there are no more than 350,000 family-sized farms that could possibly gross enough to make a decent living. These farmers would be the core of any bargaining unit. Is this too many to organize effectively? The American Federation of Teachers has one million members. The National Association of Letter Carriers effectively represents the interests of 315,000 postal workers. Consider, too, that all workers in an industry need not be in the same union: 59,000 airline pilots bargain together while others that depend on airlines for a living have other unions. How big is 59,000 members? For comparison, the American Soybean Association has roughly half as many members.

Based on numbers alone, a “good news and bad news” picture arises. The bad news is that there are too few family farmers to add up to a powerful political force. Nonetheless, farmers continue to look to government for salvation. The good news is that the number of family-sized farms is within the range that could be organized into a powerful economic force. Organizing 350,000 farmers may be difficult. But the experience of many other industries, faced with similar business circumstances, says it is not impossible.

### Collective Bargaining

Collective bargaining is what a farmer organization with considerable economic power would do. In various conversations with farmers, I have heard some confusing ideas on what is meant by “collective bargaining.” Here is how the term is defined in the beginning economics text I use in my classes: “The process of negotiations between a group of workers (usually a union) and their employer. Such bargaining leads to an



agreement about wages, fringe benefits, and working conditions.” This definition may not fit farming exactly, but it is a good starting point.

For starters, the definition helps us understand what collective bargaining is *not*. For example, collective bargaining is not getting together and letting the smartest farmer in the group make the marketing decisions. As another example, collective bargaining is not about getting more efficient. Surely, farmers can try to “eliminate the middleman” or buy supplies as a group to take advantage of volume discounts, but they are not bargaining collectively by doing so. And, as we have seen, supply control is not collective bargaining. Farmers can dump all the milk and kill all the baby pigs they want, but without the targeted use of economic power, nothing more than a shocked public is likely to result.

Instead, collective bargaining is face-to-face negotiation between a powerful farmer group and some other food system powerhouse. Most obviously, those negotiations might be with a buyer of farm products. Farmers may reach an agreement with a certain company that no grain will be sold to that company for less than a certain price. Or, farmers might agree to sell no grain whatsoever to a company that is investing heavily in ways that will help foreign competitors. Success here could bring about higher prices in the long run.

Collective bargaining can also be used with powerful input suppliers. Here, the goal is not necessarily to use less of some expensive supply. Rather, it is to pay a lower price for whatever amount of that supply farmers are using. Bargaining with seed companies over “tech fees” presents a clear opportunity. Farmers could also bargain to change the behavior of suppliers. For example, as long as a company was charging less

for seed in another country than was being charged to U.S. farmers, a strong farmer group might boycott the products of that company.

Working conditions and benefits also appear in the definition I have used. Here, there are many opportunities. A bargaining unit could come to an agreement with its members that no farmer would farm more than a certain amount of acres. Or, collective bargaining with landlords could result in their participation in paying for health insurance for farmers and their families. Farmers, as a group, might bargain with suppliers to make safer chemicals or with equipment companies to make safer equipment.

Finally, a strong farmer organization could bargain with the government for laws that would better suit their purposes. For example, rather than asking for handouts, a bargaining unit could argue for beneficial trade agreements. Strong, well-enforced corporate farming laws would also be high on the list of legislative priorities. Or, organized farmers could demand that government food purchases for school lunches and other such programs be made only from farms that belong to the bargaining unit.

Are any of these ideas workable? That remains to be seen. My purpose here is simply to show the range of possibilities in which collective bargaining might be used, and to encourage farmers to think more broadly than they have in the past.

#### Government Policy versus Collective Bargaining

Even though traditional farm programs have not worked, aren't there some new government programs that could come to the rescue of farm income? For example, couldn't public policy set its sights on lower land costs for farmers? Or, could the government somehow persuade agribusiness to act in ways that would result in higher

incomes for farmers? Collective bargaining seems tame compared to the public actions necessary to effectively intervene in a modern food system.

I have previously discussed the difficulties facing those who would use public regulations to control land costs. The problems do not end there, however. As we have seen, land cost reductions could benefit agribusiness in many ways. Buyers might take advantage of lower farm production costs by paying less for farm products. Seed companies, or other input suppliers, might take the benefits intended for farmers by charging more for essential inputs. Farmers must not only be given an advantage over landlords for a program to be effective -- they must also be given an advantage over all sectors of agribusiness. This would involve what amounts to operating the entire food system as a public utility. With such an approach, profits in all sectors of the food system would be regulated to improve farm income. I will leave the difficulties in pursuing such a program to the reader's imagination.

In a modern food system, low farm income results from low economic power. Programs to improve farm income must directly increase the economic power of farmers. That economic power could come from collective bargaining on the part of farmers, or through broad public utility regulation of the food system. Neither is easy, but collective bargaining is, by far, most widely understood and more politically acceptable.

#### Collective Bargaining and Higher Farm Prices

The most common diagnosis for low farm income is low farm product prices. If prices were higher, farmers would make a better living. Otherwise, farmers will go out of business and we will all be greeted by food shortages. None of this is consistent with the analysis presented so far. For one thing, farmers cannot benefit from higher prices so

long as their economic power remains low. Gross farm income and net farm income have the relationship shown in Figure 2, not that of Figure 1. For another, in spite of staggering reductions in farm numbers, widespread food shortages have not been a problem in the United States for at least 75 years. We must recognize that higher farm product prices are only part of the story. If the economic power of farmers remains weak in relation to various input suppliers, any gains from bargaining with processors will be given up to more powerful input suppliers. Farmers must therefore be as vigilant in bargaining with, say, Monsanto, as they are with, say, ADM and Cargill.

There is more to economic power than getting it, as difficult as that might be. One must also use economic power strategically and to one's best advantage. This involves considerable political and economic thought and planning. For example, collective action for higher prices might endanger essential public support without a careful story about food price impacts. On the other hand, action against an input supplier could, if properly presented, increase public support and bypass the higher food price issue altogether. Collective action to improve the working conditions of farmers or to bring about more favorable public policies might also be fruitful avenues to pursue. A successful bargaining unit will always analyze many options and choose those that make the most sense at the time they are pursued.

### Summary

Farmers play an essential role in the food system. They provide the farm-level component of the labor, and sometimes the management, necessary to produce farm products. They are not, however, the only actors gracing the stage we call a modern food system. The modern food system, for better or worse, is composed of all sorts of

businesses, each influencing how the system operates, and each seeking a share of the overall food dollar. Farmers are therefore not completely independent individuals. What they do is considerably influenced by agribusiness and public policy. And what farmers do is also, often for the worse, influenced by competition with other farmers.

It would be nice if there were no giant agribusiness firms taking profits from farmers through higher production costs. It would be nice if there were no multinational food processors standing between farmers and consumers. It would be nice if farmers standing alone in the path of such leviathans were anything but suicidal. But being nice does not make something true. Instead, farmers must recognize the world in which they live and act accordingly. Working more hours and farming more acres are no longer solutions.

Should farmers choose to accept the analysis I have presented, then farmers, not the government or “the market,” must take more responsibility for improving farm income. This will require a new way of thinking, a great deal of organizing effort to gain economic power, and a great deal of economic analysis to learn how to effectively use that power. Success will be measured in renewed hope for farmers, a greater feeling of working toward a common purpose, and a larger share of the profits now reserved for more powerful guests at the food system table.