

Growing Home

**A Guide to
Reconnecting
Agriculture, Food
and Communities**



← RIVERHEAD 4
GREENPORT

**By Joanna Green
and Duncan Hilchey**

CORNELL

**Community, Food and Agriculture Program
Department of Rural Sociology
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Community, Food and Agriculture Program Cornell University

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Cover photo: Long Island peppers going to market. Suffolk County, on Long Island, has the highest value of agricultural sales in New York state. It boasts the state's largest horticultural sales and service industry, a wine industry ranked second only to California, and many other forms of agriculture.

Photo by Lori McLaughlin, Suffolk County, and used courtesy of NY Farms!

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Dedication

This guide is dedicated to all those who are farming today in the U.S., and to all others who care passionately about the future of farming and food systems in their communities.

Whether we are farmers, educators, elected leaders, or concerned neighbors, whether we grew up on a farm or only wish we had, those of us who share a commitment to agriculture and rural communities must sometimes feel like Don Quixote tilting at the windmills of change. It's easy to feel powerless in the face of "inevitable" trends like the demise of farms around us and the globalization of our economy. We need to remind ourselves that preserving anything of great social value—justice, equal opportunity, economic equity, environmental quality, cultural vitality, democracy—requires struggle.

Margaret Mead once said, "Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has." With vision, vigilance, passion and perseverance we can, and will, make a difference for the future of farming in this nation.

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Introduction

What kind of future is there for farming in our town? How important is agriculture to the quality of life in our community? What can we do to strengthen agriculture? How can we ensure access to wholesome, affordable food for everyone in our community?

A growing number of communities are asking these questions. People are actively seeking and finding new ways to support local agriculture, not just in the Northeast, where we have done most of our research, but all across the U.S. and indeed the world. In 1994 the Farming Alternatives Program (FAP) at Cornell University profiled 32 of these community-based agriculture development initiatives in New York State (Booker, 1994). Since that time, many more communities have undertaken agriculture development initiatives.

Growing Home means nurturing the connections between farmers, local communities, and regional marketing systems.

Cornell's Community, Food, and Agriculture Program, which grew out of the Farming Alternatives Program, maintains a focus on **community-based strategies for food and agriculture systems development**. This community-based approach, which we've nicknamed the "**Growing Home**" approach, combines community organizing, economic development, public policy and education. It emphasizes the process of rebuilding connections between farmers, local communities, and regional marketing systems. It seeks to

enhance the working relationships among individuals and organizations, and to nurture the institutional, business, and policy infrastructures needed to support a thriving agriculture in the region.

The local initiatives we've studied involve a wide range of participants: farmers, Cooperative Extension educators, local governments, state and federal agency staff, planners and economic developers, the business community, consumers, environmental advocates and many others. Some operate as informal networks, while others are local government initiatives or have become formally incorporated not-for-profit organizations. Some peter out after an initial burst of enthusiasm, but others continue to build momentum year after year.

Their strategies range from improving farmer-neighbor relations to recruiting new farmers, from organizing farmers' markets in inner-city neighborhoods to developing ethnic specialty products. What they have in common is the desire to see local farms thrive, to make fresh, local foods more available, to maintain open space and the beauty of the working landscape, to preserve the heritage of rural communities, and to encourage farming in ways that protect natural resources and the environment.

The purpose of this guidebook is to help strengthen this community-based movement by offering some general guidelines for planning and organizing, and by sharing some examples of development strategies being used by communities around the region. It is built on the experiences of existing groups, combined with general principles of effective group action and strategic planning.

We believe the approach taken here, based on the experiences of Northeastern communities, is relevant in other regions as well. The particular opportunities for supporting local agriculture may be quite different, but the general principles and processes of engaging the wider community in shaping agriculture's future remain.

Whether you are a farmer, planner, public official, committee member or simply a concerned citizen, we hope you'll find this guidebook a valuable tool that can help you make a difference for the future of farming and food systems in your community.

A note about terminology

Throughout this publication we use the term **community-based food and agriculture system development** to refer to a diverse array of development strategies. The **community** involved might be a county, a city, a small village, or a region. Or it might be a community of learners, a group of farmers or residents, or a coalition of organizations and agencies. The community may cross humanmade boundaries; it may be determined by landscape, geography or watershed.

Whatever the nature of the community, agriculture development is **community-based** when it is *generated internally* by the community itself, in response to the community's own sense of its needs and priorities, and not simply *delivered to* the community by an external agency. This requires a foundation of democratic decision-making skills and organizing capabilities within the community.

We use the term **food and agriculture system** to encompass the full range of processes and issues relating to food, fiber, forestry, floriculture, landscape gardening, aquaculture, and any other natural/biological resource-based enterprise.

Finally, we think of **development** as the unfolding of potentialities within the food and agriculture system. Development does not necessarily mean expansion. It is more akin to the concept of evolution, in which the multiplication of species and ecological niches over time leads to an increasingly diverse, productive, and resilient biological system. This notion of development implies that, rather than looking for the silver bullet—seeking the monolithic expansion of any individual sector within the system—we should nurture multiple, unique opportunities that together create an increasingly rich and productive food and agriculture system.

Introduction

Sweeping changes are taking place in agriculture and the food system. Powerful trends and forces are affecting farmers, communities and landscapes across the world, and not always in ways we would like to see.

Here in the U.S., many of us have seen farm neighbors go out of business. We have seen farming landscapes turned into shopping malls. We've seen giant, industrial-style farm operations take the place of smaller, more diversified farms. We've seen fast food take the place of wholesome, home-cooked meals. We've seen rural towns withering as the businesses that once supported local farms—and were supported by them—close their doors. And we've seen urban communities that can't get an adequate supply of fresh, affordable farm products.

At the same time, many farms and communities are bucking these trends. Farmers are developing all sorts of innovative strategies to survive and thrive. The number of very small farms is increasing for the first time in decades. Consumers are going out of their way to support local farmers. Across the

Farmers and communities face some serious challenges. But many are bucking the trends.

the emerging alternatives that provide a more durable foundation for sustaining local agriculture in the U.S. and abroad.

“We are in the midst of an incredibly rapid and incredibly massive reorganization of global agribusiness companies that is unprecedented in the history of agriculture...The emerging structure of agribusiness puts farmers well down the road to serfdom, and renders food consumers vulnerable to exploitation.”

—C. Robert Taylor,
*Alfa Eminent Scholar and Professor
of Agricultural and Public Policy,
Auburn University (2000)*

nation, creative food and agriculture development strategies are helping to reinvigorate communities and boost local economies.

In this chapter, we will look at today's fast-changing food and agriculture system and its impact on farmers, consumers and communities. The case of industrial hog farming will illustrate some of the negative consequences of poorly planned agriculture development. Finally, we'll take a glimpse at some of

Understanding the Global Food and Agriculture System

One thing above all describes today's food and agriculture system: it is changing at an unprecedented rate. The figures presented in this chapter are likely to be obsolete in a very short time! Sources of information are listed at the end of this chapter in case more up-to-date data is desired.

Farmers are getting less of the food dollar

Today, the average household in the U.S. spends only about 10 percent of its disposable income on food. A decade ago it was 12 percent, and in 1950 it was 21 percent (Economic Research Service, 2001). At the same time, farmers have been receiving a declining share of each dollar spent on food. In 1999, only 21 cents of the food dollar went to farmers. Ten years ago, it was 32 cents (USDA Factbook, 1998). This is during a period when the costs of production have been increasing for farmers.

One reason for farmers' declining share of the food dollar is that our eating habits have changed. A generation ago, 75 percent of the average U.S. household's food budget was spent on meals prepared at home. Today, about half is spent at restaurants—mainly fast-food restaurants (Schlosser, 2000). We now pay more for packaging and advertising food than we pay farmers to produce it (Ikerd, 1995).

Fast Food Nation

- In 1970, Americans spent about \$6 billion on fast food. In 2000, they spent more than \$110 billion, more than on higher education, personal computers or new cars.
- In 1968, McDonald's operated about 1,000 restaurants. Today it has about 28,000 restaurants worldwide and opens almost 2,000 new ones each year.
- McDonald's is the nation's largest purchaser of beef, pork, and potatoes—and the second largest purchaser of chicken.
- The injury rate in slaughterhouses today is about three times higher than the rate in other American factories.
- Every day in the United States, roughly 200,000 people are sickened by food-borne disease, 900 are hospitalized, and 14 die.

Source: Schlosser, Eric. 2000. *Fast Food Nation: The Dark Side of the All-American Meal*. Houghton Mifflin.

But it's not just our eating habits that have changed. The price farmers are paid for their products has dropped dramatically over the years. Unfortunately this has not been reflected in falling food prices for consumers:

- Between 1984 and 1999, the price of a “market basket”—a standardized selection of food products—rose by 3 percent. In the same period, the prices paid to farmers for the ingredients in that market basket decreased by 38 percent (Taylor, 2000).
- Between 1994 and 2001, U.S. consumer food prices (not adjusted for inflation) increased by almost 20 percent, in spite of the fact that corn prices decreased 20 percent, wheat prices decreased 28 percent, and soybean prices decreased 15 percent (Public Citizen/Global Trade Watch, 2001).

Where is all the profit going?

In short, an increasing share of the food dollar has shifted away from farmers and over to the large corporate players in the food system. At the same time that grain farmers have been enduring low prices, with many earning negative returns and some going into bankruptcy, the breakfast cereal companies Kellogg’s, Quaker Oats and General Mills have enjoyed return-on-equity rates of 56 percent, 165 percent and 222 percent, respectively. In 1998, a bushel of corn sold for less than \$4, while a bushel of Corn Flakes sold for \$133. Cereal companies were 186 to 740 times more profitable than the farms that supplied them. On average, during the 1990s food retailers saw an 18.0 percent return on equity; food manufacturers 17.2 percent; and banks 10.8 percent, compared to an average 2.4 percent return on equity for farmers (Christison, 2000).

An increasing share of the food dollar has shifted from farmers to agribusiness and food corporations.

Those farmers who rely on commodity markets are essentially at the mercy of both the food-processing firms and cooperatives which buy their products, and the agribusiness firms which sell them the inputs they need, such as feed, chemicals, equipment and insurance. It’s said that farmers are the only business people who sell wholesale and buy retail. They are caught in a price/cost squeeze that is getting tighter and tighter as the inputs, processing and marketing sectors capture the lion’s share of profits in the food system.

Concentration and control in the food and agriculture system

One of the most disturbing features of today’s food and agriculture system is the consolidation of control over it by a shrinking number of multinational corporations. In the last decade, the breakneck pace of corporate mergers and acquisitions among agricultural input, processing and marketing firms has created an unprecedented concentration of economic power in the system. This concentration is seen both horizontally (within a sector or an industry) and vertically (within the supply chains, leading from inputs to production to processing to marketing). Agricultural coopera-

Fewer and fewer firms control the production, processing and marketing of our food.

tives, which were intended to benefit farmers by balancing the market power held by large corporations, are increasingly becoming integrated into these corporate-controlled supply chains.

University of Missouri sociologist William Heffernan likens the food system to an hour glass. Farm commodities produced by tens of thousands of farmers must pass through the narrowest part of the glass, that is, the few firms that control the processing of those commodities, before the product is distributed to millions of people around the world. In the mid-1980s, economists generally agreed that if four firms controlled 40 percent of a market, then that market was no longer competitive. In many sectors of the food and agriculture system, this level of concentration has already been surpassed (Heffernan, 1999). The rate of consolidation is now increasing almost exponentially.

In the grocery retailing sector, for example, the share of the market controlled by the ten largest firms increased from 27 percent to 50 percent between 1994 and 2000 (Drake, 2001). In many food and agriculture industries the percentage of the market held by the four largest firms now exceeds 70 percent. In the fed beef slaughter industry it is 80 percent, with just two firms, IBP and Cargill, controlling about 60 percent of the market. Four companies, DuPont/Pioneer, Monsanto, Novartis, and Dow, control 69 percent of the North American seed-corn market and 47 percent of the soybean-seed market. At the end of 1998, Monsanto controlled 87 percent of the U.S. cotton-seed market and sold 88 percent of the genetically engineered seeds in the U.S. (Taylor, 2000).

Figure 1: Consolidation in U.S. grocery retailing

	1994	2000
Grocery Sales (\$ Billions)	\$401.7	\$490.0
Market Share of 10 Largest Firms	27.3%	50.0%

Source: Drake, Bill. 2001. "Marketing Implications of Retail Food Industry Consolidation." *Smart Marketing Series*, September 2001. Department of Applied Economics and Management, Cornell University.

In terms of vertical consolidation, corporate "clusters" are emerging, which control increasingly integrated chains of supply throughout the food system. ConAgra is an example, controlling an unbroken chain from the farm-inputs sector all the way to the grocery store. Its United Agri Products business is a leading distributor of crop chemicals, fertilizers, seeds and biotechnology products in North America, Mexico, Chile and the United Kingdom. ConAgra also owns about 100 grain elevators and 1,000 barges and 2,000 railroad cars. It produces its own livestock feed and ranks third in cattle feeding and second in cattle slaughtering. In 1998, it ranked third in pork processing and fifth in broiler production and processing. It's the second largest food processor in the U.S., with labels such as Butterball, Healthy Choice, Peter Pan Peanut Butter, and Hunt's. How did ConAgra accomplish all this? In 1998, ConAgra reported that it had acquired or created

joint ventures with about 150 companies during the preceding 10 years. Its CEO boasted 18 consecutive years of earnings-per-share growth at a compound rate of 15 percent (Heffernan, 1999).

A cluster may involve a single corporation, like ConAgra, which owns and controls multiple links in the supply chain, or it may involve joint ventures and agreements among several corporations. Either way, the result has been a dramatic erosion of true market competition in the food system over the past decade.

The rise of contract farming

Increased vertical integration of the food and agriculture system means that farmers are under increasing pressure to ally themselves with agribusiness partners through contractual arrangements, which are typically nonnegotiable and not very favorable to farmers. For example, contract poultry farmers have been required to invest more than 50 percent of the capital in the industry, yet they have captured only a small portion of the profits (Taylor, 2000). While giving farmers some assurance of having a market, contracts often take important management decisions out of farmers' hands

and essentially transform them from independent business managers into contract laborers. And advanced technologies such as "precision farming" (which uses satellites to guide mechanized crop operations) may make it even easier to bypass farmers, shifting management decisions to corporate headquarters. Heffernan warns us that:

In the not-too-distant future the person operating the corn planter will not know much about the genetic material of the corn being planted—just like the [contract] broiler grower does not know about the genetic stock of the birds he/she feeds. As the "farmer" watches the big truck with the computer on board reading from a satellite, he/she will not know much about the fertilizer or chemical being applied to the field—just like the grower does not know much about the feed fed to the birds he/she cares for, but does not own. The crop farmer will be paid on a piece rate basis just like the grower...Any decisions that can be made without contact with the land and the crop can be made in an office in a distant city. (Heffernan, 1999)

Globalization of the food and agriculture system

The concentration of economic power described above is reflected in the power to shape policy. This might not be such a bad thing if the interests of corporate agribusiness were the same as the interests of farmers, consumers and communities. But unfortunately they are often not.

In the 1990s global free trade became the centerpiece of U.S. agricultural policy, driven largely by those corporate interests which increasingly shape the food system. Global

agribusiness firms benefit directly from low farm prices. They obtain products from those countries where they can get the cheapest price, and sell them in the countries where

Global free trade undercuts local producers all over the world.

they can make the most profit. Trade liberalization and related federal policies, such as the removal of effective commodity loan rates and reserves, have had the effect of lowering farm prices to levels that are unsustainable for farmers, both in the U.S. and abroad (Christison, 2000; Rossett, 1999; Heffernan, 1999; Public Citizen/Global Trade Watch, 2001).

Countries around the world have been encouraged, cajoled, threatened and otherwise pressured to reduce the levels of protection they offer their domestic agricultural producers from foreign competitors. Tariffs, quotas and other barriers to unlimited imports of food products have been reduced or eliminated through the General Agreement of Tariffs and Trade (GATT), the North American Free Trade Agreement (NAFTA), the World Bank, the International Monetary Fund (IMF) and the World Trade Organization (WTO) (Rosset, 1999).

Proponents of NAFTA touted its benefits to U.S. farmers and consumers. Now, the data show that U.S. imports have outstripped exports, farm income has declined, consumer prices have risen, and agribusinesses have reaped large profits. In 1994 the U.S. exported

Farm prices have dropped, but consumers aren't paying any less for food.

\$22.5 billion more in agricultural products than it imported. By 2000, that trade surplus was down to \$12 billion—a 47 percent decrease. Corn exports decreased 11 percent, and corn prices dropped 20 percent. Wheat exports decreased 8 percent, and wheat prices dropped 28 percent. Cotton exports decreased 28 percent, and cotton prices dropped 38 percent. Soybean exports increased 16 percent, but the price fell by 15 percent, creating a net loss of 2 percent in

the value of our soybean export market. The \$416 million dairy deficit climbed to \$796 million. A \$21 million beef surplus became a \$152 million beef deficit (Public Citizen/Global Trade Watch, 2001; Scott, 2000).

However, these depressed farm prices have not produced the price cuts for food promised during the NAFTA debate. At the same time that farm prices for grains, livestock, vegetables, flowers, fruit and poultry were falling to record lows, U.S. consumer food prices increased by almost 20 percent. The price of staple foods in Mexico, such as tortillas, also increased even as the prices paid to Mexican corn farmers dropped 48 percent (Public Citizen/Global Trade Watch, 2001).

It's important to note that global trade is not inherently bad. It's possible to imagine a system in which global trade is thoughtfully managed to produce benefits for local communities around the world. The problem is that trade is increasingly controlled by multi-

national corporations and managed for the short-term benefit of shareholders, rather than for the long-term benefit of communities.

How Does the Emerging Global Food System Affect Farmers, Communities and Consumers?

Society is increasingly ill-served by our global, highly concentrated food system.

It's becoming evident that today's highly concentrated global food and agriculture system does not serve the interests of the majority of farmers, consumers and communities throughout the world. As University of Missouri agricultural economist John Ikerd explains:

Corporate agriculture today is designed specifically to generate profits and growth for corporate investors. In fact, we no longer have a competitive, capitalistic agricultural economy. Capitalism requires that individuals make individual decisions in a competitive market environment. As corporations extend their control horizontally "within" the same functional levels...they increase their ability to protect profits from competitors. As corporations extend their control vertically, "across" functional levels...they gain control over decisions concerning how much of what is produced, when it is produced, how it is produced and for whom. Those decisions are made to maximize their short-run profits and growth, not to meet the long-run needs of society. (Ikerd, 2001)

Impacts of the corporate-controlled, global food system

- Loss of farms, especially mid-sized farms.
- Expansion and industrialization of farms, with the very largest farms controlling an increasing share of the market.
- Increased contract farming, in which farmers essentially become laborers in a vertically integrated system controlled by agribusinesses.
- Increased environmental and public-health risks, with risks increasingly shifted to farmers and communities.
- Increased public opposition to large-scale, industrial farm operations.
- Diminishing benefits of agriculture to local communities.
- Restriction of farmer access to competitive markets.
- Restriction of consumer choice through the deliberate withholding of information about food by agribusinesses and governments.
- Decreased public confidence in food and agriculture. *(continued)*

- Increasing hunger and food insecurity both in the U.S. and abroad.
- Emergence of alternative systems, which circumvent the global system to provide greater benefits to farmers, consumers and communities.

Loss of farms

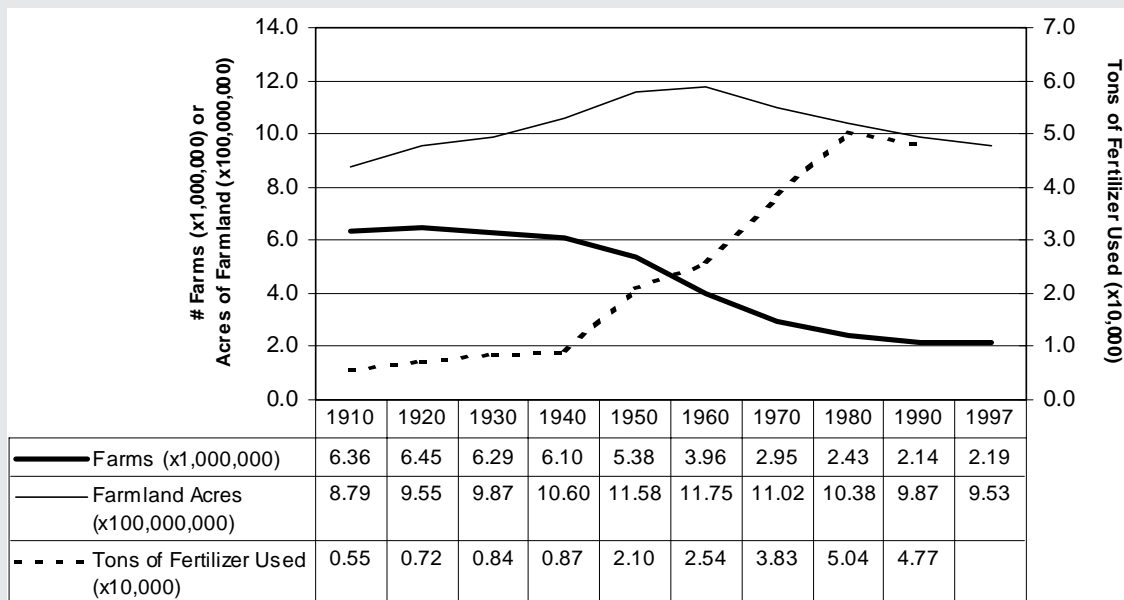
Over time and throughout the world, advances in agricultural science have boosted farm productivity tremendously. However, the resulting decline in prices for farm products has meant that farmers must continually adopt the latest production-boosting technologies or risk going out of business.

Farm closures today continue the historical trend of diminishing farm numbers.

Ironically, this “technology treadmill” has led to dwindling farm numbers, as advances in farm machinery, chemical fertilizers, pesticides, antibiotics and growth hormones fuel a repetitive cycle of oversupply, decreasing farm-gate prices, and loss of farms. In the U.S., the number of farms has been

declining since 1920. Total farmland acreage peaked in the 1950s and is now also declining (Figure 2).

Figure 2. Numbers of farms, acres of farmland and fertilizer use in the U.S., 1910–1997



Source: Lyson, Thomas A. 2001. Agricultural biotechnologies, the structure of agriculture and the future of the food system. In *Perspectives on Biotechnology: Proceedings from “Biotechnology: Progress or Problem? A Conference for Developing Community Leaders.”* Natural Resource, Agriculture, and Engineering Service (NRAES).

The continuing demise of midsize farms is linked to increasing concentration and vertical integration in the food system. Farmers are “price-takers” in the system, having virtually no leverage over farm prices. Because of their raw economic power, supply-chain corporations are able to extract virtually all of the profits in the system, leaving farmers with a subsistence level of income composed of very low returns to management, labor and capital (Taylor, 2000).

Expansion, industrialization and vertical integration of “family farms”

As farms go out of business, many of those remaining on the land attempt to cope with low prices by expanding their volume of production. They may buy more land, or more cows, they hire low-wage laborers, and they continue to seek production-enhancing technologies to survive the ever-declining prices they receive for their products. And increasingly, they turn to contractual arrangements with processors in order to secure a foothold in a marketplace that is increasingly inhospitable to independent producers.

The farmer’s choice to “get big” is entirely rational.

As economist C. Robert Taylor points out, “Supply-chain corporations and cooperatives will not want to contract with two million farmers...Rather, selected farmers—the chosen few—may be given favorable contracts, with the other farmers left behind to sell their products in rapidly disappearing and increasingly manipulated markets. Thus, through selective contracting, the few supply-chain corporations and cooperatives can accelerate the consolidation of small and midsize farms” (Taylor, 2000).

Very large farms account for an increasing proportion of production.

The result is that fewer and larger farms are providing more of the food we eat. This trend appears to be escalating with the recent rapid consolidation and globalization of the food system. In 1987 large farms, as defined by annual sales over \$1 million, accounted for 27.8 percent of all farm sales. By 1997 the large-farm share had risen to 42 percent. Even considering the effect of inflation on these sales figures, the increases are startling.

The processes of industrialization, consolidation and vertical integration are transforming virtually every agricultural industry in the U.S. About 85 percent of processing vegetables are now grown under contract, and 15 percent are produced on large corporate farms (Welsh, 1996). Ninety-five percent of broilers are now raised under production contracts with fewer than 40 firms. The situation is similar for eggs and turkeys (Heffernan, 1999).

Other livestock industries, including dairy, are now following suit in what may appear on the surface to be an inevitable process of industrialization. Concentrated Animal Feeding Operations, or CAFOs, is the generic name given to the large-scale, highly mechanized confinement systems that characterize industrial-type production of poultry, hogs, beef

Industrial-style production systems are increasingly common.

but many are owned by farmers operating under contracts with processing firms or cooperatives.

and dairy. In these systems, thousands of animals are raised and/or fed indoors in controlled environments. They generate huge volumes of liquid manure that is typically stored in lagoons until disposed of on surrounding cropland. Some CAFOs are owned outright by agribusiness corporations,

Understanding Local Impacts: The Case of Industrial Hog Farming

The industrialization and vertical integration of hog farming during the 1980s and 1990s serves as an example of the potential negative economic, environmental and social impacts of industrial agriculture development. In presenting this case, our purpose is to suggest that communities and policy makers should be very cautious about agriculture development strategies, distinguishing between those that primarily serve the interests of corporations and those that serve the interests of the community. Much of the information presented here was compiled by the Missouri Rural Crisis Center in a study entitled *Hog Wars: The Corporate Grab for Control of the Hog Industry and How Citizens Are Fighting Back* (Cantrell et al., 2000). Additional sources are noted in the text.

Economic impacts. In North Carolina, industrial hog farming became a centerpiece of agriculture development efforts in the 1980s and 1990s. This was due in no small part to the leadership of state legislator Wendell H. Murphy, whose Murphy Family Farms became the nation's biggest hog producer during his 10 years in office (Raleigh, N.C., *News and Observer*). And while the state has increased its hog inventory by more than three million since 1986, its number of hog producers fell from 15,000 to roughly 6,000. Nationwide, 70 percent of independent hog farmers in the U.S. have gone out of business in the last 15 years as corporations like Murphy Family Farms, Carroll's Foods, Continental Grain, Premium Standard Farms and Smithfield Foods have taken over the pork business (Heffernan, 1999; Christison, 2000).

Industrialization of farms can result in a net economic loss to the community.

as many people involved in livestock production (Ikerd, 1994).

Although hog industry officials and boosters often boast about job creation, in reality any employment gains are overshadowed by the displacement of independent producers and the local businesses they support. A 1994 study by John Ikerd showed that, while nine jobs are created for every 12,000 hogs raised in a large CAFO, another 28 livelihoods are displaced. The local economy winds up with one-third

In addition, the jobs created in industrialized hog systems are mainly low-wage, unskilled

and dangerous, and the turnover rate is extremely high. Many of these jobs become filled by immigrants rather than local residents. At Smithfield's Carolina Foods slaughterhouse

The jobs created in industrialized hog systems are low-wage, unskilled and dangerous.

in Tar Heel, N.C., about half the workforce is made up of immigrants from Latin America. The company also brings in inmates from the county jail to work at the plant. Company officials say they need the jailhouse workers because of high turnover at the slaughterhouse. And three Missouri counties which host Premium Standard Farms hog operations have seen a 20 percent increase in Food Stamp recipients since 1991, despite the much touted new employment.

Large CAFOs tend to further deplete local economies by buying most of their inputs out of town. This is in contrast to smaller farms, which typically buy from local feed and seed stores, farm machinery dealers and hardware outlets. A study of Minnesota farms found that those grossing less than \$400,000 made 79 percent of their expenditures within a 20 mile radius. Larger operations made just half of their purchases within 20 miles.

The bottom line is that large-scale, industrial hog producers actually drain their local economies through job loss, reduced local spending and a flow of profits out of the community. The result is a net loss for retailers, bankers, real estate and the local tax base. A Virginia study compared the addition of 5,000 sows to a local economy by independent producers versus corporate producers. The independent producers' investment created 10 percent more permanent jobs, 20 percent more local retail sales, and a 37 percent larger increase in local per-capita income.

What about economic benefits to consumers? Proponents of large-scale, industrial-style livestock operations claim that their scale makes them more efficient than smaller farms.

Smaller-scale farmers can produce pork as cheaply, or cheaper, than very large producers.

However, recent studies of the pork industry in Iowa, Kansas, Minnesota and North Carolina show that, *when given fair access to markets, small to moderate-sized pork producers can actually produce pork more cheaply than the factories.* For example, the cost of pork produced by relatively small Iowa farms (averaging 1,260 hogs per year) was 5 percent less than large North Carolina farms (producing 5,000 hogs per year) according to *Hogs Today* magazine. The most

profitable small hog operations in Iowa averaged \$12.93 profit per 100 pounds, while the most profitable large operations earned only \$12.32, according to Iowa State University.

Although smaller farms may produce food as cheaply as larger farms, they can't compete well when their corporate competitors have the exclusive contracts, vertical integration, tax breaks, political favoritism and deep pockets. Processors, even those that are cooperatively owned by farmers themselves, find it easier to deal with a few very large producers than with a large number of smaller producers. The largest producers often lock in exclu-

sive contracts based on volume, and may even own shares of packing and processing facilities. Smaller producers without such contracts may be paid less for the same product, and may be squeezed out of markets altogether.

Environmental and public health impacts. In spite of industry assurances of the safety and environmental integrity of CAFOs, these systems are plagued with technical problems. In the first nine months of 1995 alone, four states reported a total of 16 hog factory lagoon spills. In 1995, nine spills in Missouri killed a quarter of a million fish and poisoned 25 miles of stream habitat.

Industrial-style production can wreak havoc with the environment and health of workers and the public.

In the mid-1990s, tests of lagoons at three Carroll's Foods hog-farm sites in North Carolina showed significant leakage and resulting groundwater contamination. County and state regulators at that time were unable to take action against Carroll's because the operations were exempt from groundwater regulations (Wenzel, 2000).

Another study by North Carolina State University found that half of 11 lagoons that were seven or more years old leaked moderately to severely. Even around lagoons with "little" seepage, nitrate levels in groundwater were three times the allowable level. The study also checked three new lagoons, and found that two had begun leaking immediately. The Minnesota Pollution Control Agency estimates the average rate of leakage is 500 gallons per lagoon acre per day.

A big hog farm generates more sewage than many towns, and a really big operation can outdo a small city. But they are not usually required to treat their wastes in any way other than to spread it over farmland. Nor are they required to post bonds to cover clean-up costs in case they fail. The state of Missouri estimates the cost to clean up a typical 25 million-gallon lagoon at \$100,000. There is the very real possibility that taxpayers will get stuck with the bill. In Iowa, a beef and pork CAFO went out of business in 1980 and left behind three leaking lagoons. The largest, a 17-acre lagoon, will cost at least \$500,000 to clean up.

Other documented environmental and public-health impacts of industrial hog farming include:

- Serious air quality problems and odors which threaten worker safety, public health and property values;
- Soil contamination by excess nutrients, heavy metals and pathogens;
- Extremely high rates of water use, which drains aquifers, lowers water tables and dries up wells; and

- Overuse of antibiotics and other drugs because they are necessary to prevent disease in overcrowded, stressed animals.

Social Impacts. The case of hog farming suggests that the transition to industrialized agriculture can wreak havoc with the quality of life and the very fabric of civil society in rural communities:

The final result of crowding out family farmers and their community investments is something no economist or statistician can measure. When communities lose their family farming base, they lose parents' involvement in schools, and citizen involvement in churches, in civic organizations, and in independent-thinking government.

The transition to industrialized agriculture may weaken the social fabric of communities and diminish local quality of life.

Perhaps the biggest peril is that people in rural communities are being deskilled and underemployed. These communities are now filled with people who have hands-on skills and practical knowledge which have been passed from generation to generation. When those people are reduced to hosing out buildings and setting timers for feeders, these skills are lost. In the long run, a community is robbed of its potential for sustainability. Thus, the difference between family and corporate farming comes down to that between self-reliant, vibrant communities and company towns. (Cantrell *et al.*, *Hog Wars*, 2000)

Growing public opposition

A growing counter-movement is resisting the trend toward industrialized farming.

industrialization process.

The industrialization of hog farming—and its impacts—has spawned a growing local and national countermovement among family farmers, rural communities and environmental organizations. These groups are coming together in an unprecedented partnership to challenge the agribusiness corporations and policymakers who together are driving the

Lincoln Township vs. Premium Standard Farms. The landmark battle between Lincoln Township in Missouri and Premium Standard Farms (PSF) brought national attention to the conflict between industrialized hog farming and rural communities. It's a chilling example of how unrestrained corporate agribusiness can threaten a community's ability to protect its own interests and determine its own future.

In the early 1990s, Missouri legislators were pursuing an agriculture development strategy based on courting agribusiness "investments" such as CAFOs. PSF was the first to begin industrial hog production in Missouri, followed by Tyson Foods, Continental Grain and

Murphy Family Farms. In 1992, legislators flouted the state’s anti–corporate farming laws by giving PSF unprecedented authority to finance expansion of its hog CAFOs with Wall Street junk bonds. PSF went about these expansions, as allowed by law, with complete disregard for local opinion: no public hearings, no notification for neighbors, no need to meet the environmental standards required of other similar size industries, and no consideration of the impacts on family farmers, property values and quality of life.

Farmers and their neighbors in Lincoln Township were watching closely. When the state legislature passed a last-minute amendment exempting the three counties where PSF operated from Missouri’s corporate farming laws, they decided to take action to protect their community. The township passed planning and zoning regulations requiring CAFOs to keep a mile-wide buffer between facilities and residences and to secure bonding for sewage lagoon cleanup.

PSF promptly sued Lincoln Township for \$7.9 million. The people of Lincoln Township saw this as an arrogant challenge to local democracy. Rather than being intimidated, they became inspired to begin organizing with farmers and communities across Missouri to rally against the abuses of corporate agribusiness. Ultimately, PSF’s lawsuit provided the catalyst that launched the National Campaign for Family Farms and the Environment, a coalition that is taking up the challenge of curbing corporate control of agriculture and the food system.

Diminishing benefits of agriculture to local communities

Agriculture’s benefits to local communities are often diminished as it becomes industrialized.

The story of the industrialization and vertical integration of hog farming is one that is being repeated in many different commodities, from beef and poultry to citrus, sugarcane and potatoes. The impacts on farmers and communities show the same patterns: the demise of independent farms and businesses, influxes of low-wage laborers, increased need for social services, loss of social capital and community self-reliance, and adverse environmental impacts.

Those of us who work to support agriculture are fond of reciting the multiple benefits it provides to local communities. We work hard to persuade public and elected officials that agriculture is important, that it’s really good for our community, and that it ought to have stronger public support.

The multiple benefits of agriculture to local communities

- Local farms provide jobs, and they purchase inputs and services from other local businesses. They achieve a high “economic multiplier effect” by recirculating dollars in local economies.
- They preserve open space, beautify our landscapes and attract tourists, providing further economic benefits.
- They provide fresh, wholesome foods with superior taste and nutrition.
- They benefit the environment by protecting watersheds and enhancing wildlife habitat and biodiversity.
- As independent small businesses, they contribute to a strong middle class and a healthy civil society.
- They provide a wonderful environment for raising families.
- They connect us with the rich cultural heritage of rural communities.

However, the fact is that these benefits are not necessarily provided by all farms. As we’ve seen in the example of hog production, some types of farming may actually have a negative impact in each of these areas. Fortunately, the majority of farms in the U.S. are still small and middle-size farms that do provide their communities with significant economic, social and environmental benefits. In the Northeast, 94 percent of farms fit the USDA definition of a small farm, with annual sales of \$250,000 or less.

At what point does a farm stop providing a net benefit to the community and start becoming a nuisance? The answer is not clear, and size is only one of many factors. But it is a question that should be taken very seriously as communities, and farmers, look to the future. Ultimately, we believe that public resistance to the more negative aspects of the industrialized food and agriculture system will result in legislation limiting its ability to externalize costs and monopolize markets. Reshaping the playing field in this way will allow our smaller, independent producers to compete more fairly in the marketplace.

The Role of Community-Based Food and Agriculture System Development

In our rapidly changing food and agriculture system, farmers and communities face not only challenges, but many opportunities for innovation as well. The last two decades have seen the emergence of creative new production, marketing and support systems that provide benefits to farmers, consumers and communities. Many of these efforts focus on developing stronger local and regional food and agriculture systems, which connect farmers more directly with consumers and food businesses. They

Farmers and communities have many opportunities for innovation in today’s food and agriculture system.

help farmers to capture a bigger portion of the consumer food dollar, while providing affordable, high-quality foods for consumers.

Farmers and communities need to decide for themselves to what extent they will put their energies into developing alternative systems, or pin their hopes on the global, corporate food system. Often those who identify with the sustainable agriculture movement or with small farms tend to focus on alternatives. Those who identify more with conventional agriculture or with large farms tend to be looking for ways to link into the global system. Some have suggested we are seeing the evolution of two parallel food and agriculture systems: one dominated by large, vertically integrated farms, the other characterized by smaller, diverse and independent farms linked primarily into local and regional markets (Lyson and Green, 1999).

In any case, there is no question that farmers need to find strategies that will sustain them in the face of the globalizing food system. And communities need to develop the capacity to define their own futures within a global economy. We all need to be grappling with questions like: What kind of farming does our community want to encourage? What should it discourage? How can farmers and communities be protected in a food system dominated by corporations? How can we forge partnerships with agribusiness that truly serve local needs?

Community-based food and agriculture system development—*Growing Home*—engages the community in thinking about these sorts of questions, and works toward locally generated solutions that meet the unique needs and opportunities of the community.

Summary

In this chapter we examined the globalizing food and agriculture system as the context for community-based food and agriculture system development. General trends, such as farmers' declining share of the consumer food dollar, increasing size and decreasing number of farms, increasing corporate control and consolidation within the food system and globalization of agricultural markets, are having profound impacts on local communities, economies and landscapes. The spread of industrial-style farming calls into question the benefits of agriculture to local communities. Rather than assuming that current trends are inevitable and unavoidable, the *Growing Home* approach asks communities to be proactive in defining—and creating—the future they want for food and agriculture.

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Useful Web Sites

National Campaign for Sustainable Agriculture: www.sustainableagriculture.net.
Site serves as a networking and information center, advocating specific policies to support a "sustainable food and agriculture system that is economically viable, environmentally sound, socially just, and humane."

Center for Rural Affairs: www.cfra.org.
Publications, programs, and free e-mail newsletter offers critical analysis of agricultural, rural development and policy issues.

Institute for Agriculture and Trade Policy: www.iatp.org.
Policy analysis and publications relating to agriculture and the environment; food and agriculture; forestry; global governance; agricultural trade; and biotechnology.

New Rules for Agriculture: www.newrules.org/agri/index.html.

This section of the New Rules Web site offers information on agricultural policies, and a library of innovative local, state, national and international rules that nurture vibrant and diversified rural communities.

Smart Ag and Smart Growth: www.smartag.net.

Shows the connections between agriculture development and Smart Growth strategies to strengthen town centers and prevent sprawl development.

