1. Crisis and Change in U.S. Agriculture: An Overview

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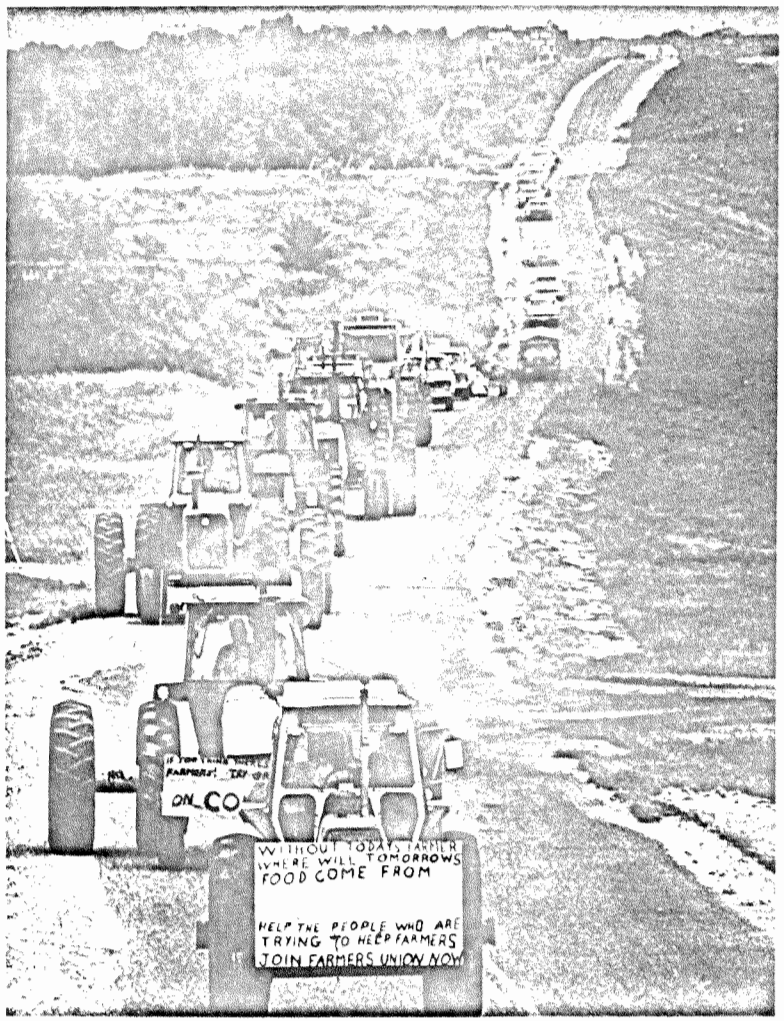

During the winter of 1978–1979, the nation's capital witnessed one of the largest and most militant demonstrations in recent years. The protest came from an unexpected direction. Family farmers, from the heartland of America, had organized a "tractorcade" to Washington and were blocking traffic in the capital to call attention to the crisis in the U.S. agriculture system which threatened the survival of the family farm. As their bright yellow, green, red, and blue tractors dotted the mall stretching west from Capitol Hill, the farmers lobbied intensely for a "fair price" on farm commodities in hopes of forestalling their economic ruin.

The farmers who participated were part of a loose-knit organization, the American Agricultural Movement (AAM), which came together in the fall of 1977 around a call for a nationwide farm strike. Originating in Colorado, the AAM gathered wide support in Kansas, Nebraska, Oklahoma, northern Texas, southern Georgia, Maryland, and Virginia. It caught on largely among grain, cotton, and small livestock farmers.[1] The movement grew rapidly in response to a sequence of lean years in which real farm incomes and profits plummeted. The last season that farmers did well was 1973–1974, and that was primarily due to crop failures in foreign countries and large wheat purchases by the Soviet Union which gave farmers new markets. From their peak in 1973, farm prices had fallen roughly 33 percent by 1977.[2]

The farmers' protest reflected a deepening crisis in American agriculture, one of the recurring bouts of "hard times" that periodically strike the farm sector. The farmers of the AAM are suffering from a "cost-price squeeze," caught between declining farm prices and rising high costs. This is not a chance occurrence: economic forces that have been at work in U.S. agriculture for over a century trap farmers in a vicious circle. They constantly try to increase productivity, but in so doing tend to overproduce for the market, driving down prices and incomes. When this

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happens it leads to bankruptcy for the weakest competitors, typically those who have gone deepest into debt in order to buy the very machinery, fertilizer, and other inputs which are essential to advancing productivity and staying competitive.

As a result, the numbers of family-owned and -operated farms has long been on the decline. Today the whole rural class structure is undergoing dramatic changes. Those who are likely to survive the crisis are not necessarily large agribusiness corporations, but a new breed of farmers, a prosperous agrarian bourgeoisie with roots in the traditional family farm. This new capitalist class will become more and more dependent upon wage labor and their farms will increasingly resemble factories in the fields. A different kind of survivor is the growing part-time farmer class which combines wage work in nearby towns and cities with farm work on its own land in an effort to hold off bankruptcy. Although the family farm still predominates in rural America,[3] it is conceivable that within a decade agricultural communities will be characterized by a polarized class structure, dominated by a small but powerful agrarian bourgeoisie on one side, with a large number of part-time farmers, or semiproletarians, on the other. What are the economic forces behind these developments?

Economic Pressures on the Family Farm

The farmers protesting the threat of bankruptcy and ruin are only the latest victims in a long tradition of cost-price squeeze casualties. Their plight recalls that of hardpressed farmers in the 1920s and 1930s whose mortgages were foreclosed by the millions after the Great Crash, or of the independent families of the 1880s and 1890s forced to convert in great numbers to tenants and sharecroppers. For decades, the family farm has been declining in numbers, yet the system of family farming still characterizes the overall structure of production in U.S. agriculture. The corporate farm has until recently made few inroads into farming.

A system of production characterized by family farm units may be called an "independent mode of production" (IMP)[4], a system

of household producers who, owning their land and utilizing their own labor, produce commodities for commercial markets. With certain exceptions, most notably the southern plantation system, American agriculture has for over three centuries approximated the independent production system.

The critical feature which distinguishes a system of family farming from corporation-based factory farming is the use of family labor rather than wage labor. The family farm unit differs significantly from the capitalist farm unit in that no matter how mechanized, or how extensive the acreage, or how large the income, the primary input of labor on the family farm comes from family members. In contrast, large agribusiness firms owned by such companies as United Brands employ hundreds of wage laborers.

In spite of its persistence the family farm of today would be barely recognizable to a family farmer of 1830. The United States is unique in that it was settled by independent family farmers steeped in a commercial economy tied to the world market, who had access to vast reaches of land without feudal ties. The family farm system grew dramatically during the nineteenth century as millions of settlers spilled over the continent. Over the last century, however, with the development of capitalism in the industrial and manufacturing sector, farming practices have been tremendously affected. While the family farm has remained intact through all of this, the stress placed on its ability to survive has increased. Table 1 presents the long-run trends toward fewer and larger farms, increasing farm output and capital inputs (land, buildings, machinery), which provide a background for understanding the current squeeze on the family farmer.

The Productivity Treadmill

The most dramatic trend has been the rise in labor productivity. In an economy of small producers there is a built-in tendency for every family farmer to try to expand farm output, primarily by increasing the productivity of family labor. Besides the obvious

goal of raising family income and purchasing power, other pressures work on the family to the same end: the need to pay off past debts, the need for a cushion against calamity, or the need just to maintain income in the face of periods of falling prices.

Most important, market competition forces all farm households onto a treadmill on which they must each run as fast as the rest in order not to fall behind—and faster than the others to get ahead. For example, if demand for farm commodities is constant and output rises, either because of new farms coming into production or old farmers producing more than before, prices will fall, reducing the income of any farm that does not increase its output proportionately. Even if demand is rising, the same dilemma occurs as long as production expands faster than demand. Paradoxically, fear of falling behind in the production race becomes an additional reason for every farmer to run a little faster.

Family farmers have two ways of increasing production: tilling more land (long the most common method) and improving yields per acre (see Table 1). Both require mechanization, given that continuation of the *family* farm means, by definition, that one must get the most out of the labor of the household. Higher yields per acre also depend on irrigation, fertilization, and improved varieties of seed. In other words, the production treadmill becomes a *productivity* treadmill, in which the way to prosperity and survival is to increase labor productivity and the size of landholdings (see Table 1).

As a consequence of the productivity race, the family farm system can, under the right conditions, be a dynamic one in terms of agricultural development. But this same drive to increase productivity also contributes to the financial undoing and gradual elimination of large numbers of family farms. The unplanned nature of the market, coupled with the desire of families to raise their income, ensures that there will be a tendency to overproduction relative to demand. Overproduction ~~which~~ in turn leads to falling prices and hence declining incomes. When income drops, many family farmers are unable to meet the costs they incurred in trying to compete. This is the essence of the cost-price squeeze that periodically plagues the ~~small~~ family farmer.

When prices are strong, each individual farmer hopes to take

Table 1
Basic Trends in U.S. Agriculture

A)	*Non-Urban Population (percent)*	
	1840	90
	1890	50
	1970	25
B)	*Farm Population (percent)*	
	1890	42
	1910	35
	1930	25
	1950	15
	1970	5
C)	*Total Farm Acreage (millions)*	
	1850	293
	1870	407
	1890	623
	1910	881
	1930	990
	1950	1161
	1970	1102
D)	*Numbers of Farms (millions)*	
	1850	1.4
	1870	2.7
	1890	4.6
	1910	6.4
	1930	6.3
	1950	5.4
	1970	2.9
E)	*Average Size of Farm (acres)*	
	1850	203
	1870	153
	1890	137
	1910	139
	1930	157
	1950	216
	1970	373
F)	*Size Distribution of Farms Over 1,000 Acres (thousands)*	
	1880	29
	1969	151
G)	*Total Farm Output (index, 1947–49=100)*	
	1870	23
	1890	43
	1910	61
	1930	72
	1950	100
	1970	140
H)	*Total Farm Employment, Family Hired (millions)*	
	1910	13.5
	1930	12.5
	1950	9.9
	1970	4.5
I)	*Family Labor-to-Hired Ratio*	
	roughly constant at 3:1 1910–1970	
J)	*Commercial Fertilizer (short tons, thousands)*	
	1850	53
	1870	321
	1890	1,390
	1910	5,547
	1930	8,171
	1950	18,343
	1970	39,591
K)	*Machinery (thousands)*	
	Gasoline Tractors	
	1910	1
	1930	920
	1950	3,394
	1970	4,790
	Combines	
	1910	1
	1930	61
	1950	714
	1970	850
L)	*Average Value Per Farm*	
	Land & Buildings	
	1850	$ 2,258
	1870	2,799
	1890	2,909
	1910	5,480
	1930	7,624
	1950	14,005
	1970	70,485
	Implements & Machinery	
	1850	$ 105
	1970	11,530
M)	*Value of Real Property and Machinery Per Person (Family & Hired)* (fixed capital to labor ratio)	
	1910	$ 2,621
	1970	53,500
N)	*Output Per Worker, 1910 vs. 1970*	
	increased by 770 percent	
O)	*Output Per Acre, 1910 vs. 1970*	
	increased by 185 percent	
P)	*Gross Farm Income vs. Expenses*	
	1910 7.495/3.531 billions	= 2:1
	1970 57.925/41.091 billions	= 3:2

Source: U.S. Bureau of the Census, *Historical Statistics of the United States* (Washington, D.C.: Government Printing Office, 1975).

advantage of the situation by planting more, acquiring new lands, and so forth. The net effect is likely to be general overproduction, with the market unable to absorb expanded output without lowering the price. Even though farmers try to take their competitors and future conditions into account, their ability to plan is undercut by factors beyond their control, such as the weather. The likelihood of guessing wrong is increased by the time lag between planting and harvesting, or between calving and slaughtering. Wars, business cycles, or grain shipments to the Soviet Union may generate strong market conditions at the beginning of the production cycle which spur farmers to increase production in the expectation of higher prices. When it comes time to sell, however, market conditions may have changed, leaving farmers overcommitted.

On the other side of the ledger, farmers are bound by fixed costs. Commercial agriculture means that they must buy certain necessary inputs, such as seed, equipment, fuel, or land.[5] It is the exceptional family farmer who is not burdened with debt. Farmers go into debt to buy their farms, to buy the current season's seeds and fertilizer, to buy equipment to last for years. Credit is as basic to farming as are seeds and sunshine. Moreover, credit is the lever which allows farmers to purchase the land and capital equipment to improve their productivity. But debts bring payments that must be met, regardless of the fortunes of the harvest and the market. As a result, they also become the principal cause of financial insolvency when crops fail or prices fall.

Because the tendency to overproduction occurs in a cyclical fashion, severe cost-price crunches do also. Periods of high prices trigger new investments and new debts which cannot be met by many farmers when prices fall again. This sequence has been repeated many times. For example, the boom of World War I was followed by worsening prices in the 1920s and finally a disastrous drop in the market in the 1930s. Recently, the export boom of the early 1970s precipitated the overcommitments by farmers now joining the AAM. Each time the crunch comes, many farmers go bankrupt or are forced to sell out. Their land and equipment is bought by competitors, who consolidate their gains, waiting for demand to pick up again. Then the cycle begins anew, with fewer farmers than the last time, more equipment per farm, and higher levels of productivity. The treadmill rolls on.

The "productivity treadmill" helps explain such long-run trends in the United States as the declining number of farmers and increasing size of farms. But this dynamic has additional consequences for the nature of agricultural production and the class structure of the farm sector in the United States. To begin with, it has meant the increasing industrialization of American agriculture. With every cycle of expansion and contraction, farmers buy more machinery, apply more fertilizers, and increase the size of their operations. As they do so, the nature of farming itself undergoes fundamental changes which make it resemble in some ways industrial factory production.

The Industrialization of Farming

In areas where industrialization is most advanced, such as California, farming can be described more as a system of "factories in the field" than as one of family farms, owing to the degree of mechanization and use of hired labor. Highly industrialized tomato production in California, where specially bred varieties of bruise resistant tomatoes are harvested entirely by machine, is an example of how mechanical and genetic engineering has transformed production. This process of industrialization in U.S. agriculture has been underway for about 150 years.

Industrialization begins with the introduction of machines into the production process, where they perform the same functions previously carried out by workers.[6] Classic examples of such machines in farming are the mechanical reapers, threshers, and cultivators introduced in the mid-nineteenth century by McCormick, John Deere, and others. These machines began as imitations of the simple tools used by farmers. By increasing the number of tools in each machine, perfecting their performance, and increasing their speed (with the aid of mechanical power), the productivity of the farmer rapidly multiplied . Mechanization enormously increased the acreage that one person could plow, disc, harrow, or reap. Adding tractors as the motive force for such machines raised their capabilities still more. Not surprisingly, today's 2.7 million farms own 4.4 million tractors.[7] Yet the

basic process of production on the family farm has not been as radically changed as might appear. *Individual* machines have been employed to magnify the labor power or productivity of the farmer at his or her various tasks, but the overall labor process remains much as it has for centuries: plowing, planting, harvesting, threshing. It is still caught up in the rhythms of nature.

By contrast, in true factory production, work is organized around the rhythms of machines. Such a production system means continuity of flow from raw material to finished product, automation of control, subdivision of work into detailed functions, unitary power source, and the continuous refinement of all these through the application of science.[8] Agriculture involves both mechanical and biological processes, and whereas the former have been mechanized, the latter consists of natural rhythms of growth that are not easily changed into a machine production system.[9] The problem for agriculture, then, is how to make nature step to the tune of the capitalist clock, that is, how to revolutionize the biological processes themselves, not just how to use machinery or fertilizer to augment natural processes.

Progress in agriculture in the past has, of course, involved various biological manipulations. Fertilization, crop rotation, multiple cropping, pest control, irrigation, and plant and animal breeding are all very old. Systematic efforts to control nature in these ways have sped up dramatically in the capitalist period, beginning in the eighteenth century in England. They were introduced in the mid-nineteenth century in the United States, side by side with the application of machinery. People often forget how "modern" agriculture had become even in the nineteenth century, with the use of commercial fertilizers (guano, phosphate rock), steam tractors, special cattle breeds, chemical pesticides (inorganic or plant-derived poisons), and local irrigation systems.

The twentieth century has seen further revolutions in agriculture, yielding large increases in productivity. These advances have depended on petroleum-based fertilizers and pesticides, irrigation by means of giant water projects and electric pumps, and petroleum-driven tractors and other machines. Central to the whole scheme are the so-called miracle hybrids of corn, wheat, and rice, bred to prosper under heavy applications of fertilizers,

water, and pesticides, and meant to be easily harvested by machine. All of these also made possible more intensive and continuous planting, as when irrigation allows growers in mild climates to harvest three or more crops per year. Such developments bring us closer and closer to real industrial agriculture.

For most types of agricultural production in the United States (especially those where the family farm predominates), these technical advances have not yet succeeded in completely wedding mechanical and biological processes into factory type production. The one sector where significant advances in this direction have been made is in animal husbandry (livestock).

The modern feedlot, for example, bears little resemblance to the old-style cattle range. Production is no longer dependent on land and nature. Once the calves are brought to the feedlots for fattening they never see green pastures again. Thousands of head of cattle are crowded onto a few square acres where they are fed computer-monitored formula feeds. To stimulate weight gain and control diseases, massive doses of antibiotics and artificial hormones are either put in the feeds or injected into the animals. Thousands of cattle a day are run through special pens that operate with assembly-line efficiency.

Poultry production today is an even more factory-like operation. One person working on a modern chicken farm can take care of up to 75,000 chickens.[10] Some of the big food corporations, such as Ralston Purina, Cargill, and Allied Mills, run huge poultry operations that produce tens of thousands of chickens each day. As in plant production, the keys to such output are special breeding, intensive enriched feeding, and chemical stimulation (hormone) and disease control. Moreover, animals can be packed together in artificial environments, where their bodily functions can be dealt with mechanically and continuously very much like a true factory. Egg production, in particular, uses a fully automated assembly line operation. Feed passes in front of the immobile hens on one belt, while eggs and droppings are removed on other belts. Artificial lighting overcomes the natural daily cycle and keeps the hens laying continuously. Some chicken farms produce over half a million eggs a day.

Dairying too is coming under the sway of industrialization.

California and Florida dairy operations set the pace years ago by developing large-scale milking parlors capable of extracting tens of thousands of pounds of milk from a dairy herd in a matter of hours. Even the biology of the dairy cow has been altered. Special breeding combined with formula feeds—now delivered by computer in "personalized" doses to the cows' stalls—has led to the development of cows that produce 75 percent more milk than thirty years ago.[11]

Most sectors of U.S. agriculture have undergone only a limited amount of industrialization compared with livestock production, however. The ordinary American family farm is not fully industrialized, in spite of its relatively high productivity. There are no assembly lines, little detailed division of labor, no continuous flow processing, no massing of workers, except seasonally: in short, little of what one normally associates with the factory system of manufacturing. In terms of technical progress, then, American agriculture remains only semi-industrial.

There is another sense in which U.S. agriculture may be called semi-industrial: it depends on the fully industrialized economy that surrounds it for machines and other sophisticated inputs. Farmers have taken the fruits of industrialization of factory production and applied them to agriculture to revolutionize the productivity of labor there. They have also depended on the urban-industrial sectors of the economy for such things as the building of transportation systems, the marketing and processing of produce, and the overall growth of the demand for food from the urban masses. A handicraft and small manufacturing economy could never have spawned the semi-industrialized, tremendously productive agriculture of today.

In other words, the farm sector must be seen as part of the overall system of American capitalism.[12] Capitalist development in manufacturing and agricultural development based on the family farm have proceeded hand in hand in this country. Indeed, it is hard to imagine the progress of one without the other: the agricultural sector provided a major market for industrial goods, cheap food for industrial workers and a flow of surplus labor to the cities, while capitalist industry supplied inputs to raise farm productivity, purchased farm products, and absorbed the sons and daughters of farmers into its army of labor.[13]

Corporate Farms and Agrarian Capitalists

One of the burning questions in agriculture over the last decade has been whether large corporations have been moving into farming, the last American bastion of free enterprise, and driving family farmers out. The popular view is that this is so. Yet, as the *Economist* stated recently: "The idea that faceless corporations are taking over American agriculture is a myth."[14] Corporate farms account for only 1 percent of all farms, and their income for only 15 percent of total cash receipts. Contrary to public perceptions, the modern agribusiness farm is not typically owned by corporations on the Fortune 500 list. Tenneco, Del Monte, and United Brands are still anomalies as corporate farmers; most agribusiness companies are family corporations. This is even true in California, the richest farm state in the nation, and long in the forefront of agricultural mechanization.[15] Forty-five corporations own 3.7 million acres, or nearly half the state's crop land. But most of these large agribusiness outfits are family companies like the giant and wealthy DiGiorgio Corporation. A similar kind of large-scale agribusiness is also prevalent along the southern rim of the United States, from Florida to Louisiana, Texas, and Arizona.

Industrial corporations do not want to be bothered with *direct* agricultural production. Big capital, including Tenneco Corporation and Del Monte, has found it more advantageous in certain crops to contract with small farmers for their products than to invest directly in production. A Tenneco spokesman observed as the company was selling off some of its holdings acquired during an ill-considered expansion into farming, "Agriculture is a high risk business and typically shows little if any profit, especially for large corporations."[16]

Indeed, the key to why the family farm *system* has been able to survive so long while the number of *individual* family farmers has declined continuously is the inability of agriculture to make the leap to fully industrial production. This keeps the rate of profit in agriculture sufficiently low that it is not an attractive investment for corporate capital.[17] Tenneco can make better profits supplying fuel and equipment to farmers, while Del Monte can do better processing and packaging farm produce. Given the semi-industrial nature of most farming, household labor, supplemented by sea-

sonal wage labor, has remained viable and competitive with the use of full-time wage labor by capitalist farmers.

But this is changing. A gradual expansion of corporate farming is taking place, but it is spearheaded by the larger *family* farms who are enlarging their acreage, making heavy capital investments, and relying increasingly on wage labor. The example of Pat Benedict, from Sabin, Minnesota, is illustrative.

Benedict runs a 3,500-acre "farm," on which he grows wheat and sugar beets. Besides managing a $3.5-million farm operation, he directs a regional sugar beet processing firm and owns a part of a local grain elevator company. Benedict, a true entrepreneur, spends a good part of his day in an office, handing out farm work assignments and analyzing computer printouts so he can plot his planting and marketing strategies. Every day he draws up precise operating schedules of the $.5 million in machinery he owns. Although his family does help in the farm work, Benedict also has several permanent workers, along with migrants and students hired during the peak planting and harvesting periods. Pat Benedict is part of the new farm capitalist class whose operations show, in the words of *Time* magazine, that "revolutionary changes are sweeping the crop lands, making agriculture an increasingly capital-intensive, high technology, mass production business."[18]

The rate of change in farm ownership and operation has been particularly rapid in the area of livestock raising and dairying. Concentration of ownership has taken place very rapidly in beef, poultry, and dairying over the last two decades. In 1962, almost two-thirds of the cattle slaughtered in the United States came from feedlots with less than 1,000 head; by 1973 this pattern was reversed, with two-thirds coming from lots with over 1,000 head. Over 20 percent of the beef came from feedlots of more than 32,000 head.[19] In egg production there were 1.2 million farmers in 1964; it is projected that by the early 1980s a mere 500 producers will provide almost all the eggs sold.[20]

The Changing Rural Class Structure

As industrialization has made inroads into the agricultural sector in recent years and family farming has been further eroded and modified, trends are emerging which mark a critical departure from traditional social structures in rural America. In the 1970s and 1980s, we are witnessing the development of three distinct sectors in the farmowner class. At one pole we find a semiproletarian class of small part-time farmers, at the other a true agrarian bourgeoisie. In between lie the remaining family farmers who are rapidly decreasing in number. And beneath all the owning classes can be found an increasingly permanent agricultural working class.

This polarization of farm classes grows directly out of the old system of family farming. The distribution of resources among family farms has never been equal, and some small semiproletarian and large bourgeois classes—not to mention sharecroppers and other forms of tenancy—have always existed. But in the past, divisions between social classes have been blurred, with all farmers appearing as a continuum within a broad social grouping ranging from the small family farmer through the medium-sized farmer to the large commercial farmer. Generally, all of these farmers were family owner-operators. As farms expanded and productivity rose, the tendency was for the small to medium-sized farmer to be edged out of the agricultural sector, yet family farm production was maintained overall through increases in family-labor productivity.

Government statistics have typically distinguished among three descriptive strata of farms—small, medium, and large—based on amount of sales:

Small farms	under $20,000 in sales
Medium farms	$20,000 to $100,000 in sales
Large farms	$100,000 and over in sales

While the small farm sector is the largest in terms of number of units, the telling figure is that large farms, which comprise only 6 percent of the total number of farms, produce over 50 percent of the agricultural output. Small farms, which make

up 69 percent of the farm sector, only produce 11 percent of the output.[21]

Small Farms and the Semiproletariat

All indications are that the small family farm which supports the entire family is fast disappearing. In its stead comes a new type of small farm, where one or more family member combines farm work with wage labor, such as in a nearby factory or small business. The result is a rapid rise of a part-time farm class with a dual class character—as proletarians and as independent producers.

Recent figures show that small farm households now receive on the average a majority of their income from off-farm sources, and as much as 85 percent in some cases. Net income per farm from outside sources has increased by 442 percent, while net income from farm sources has increased only 165 percent. This rapid increase in off-farm earnings has occurred primarily since 1970. In 1970 the Department of Agriculture reported that nearly two of every three people living on farms made their earnings entirely from their own farms. In 1976, the figure was reduced to less than one out of two. Farm earnings were supplemented with full-time work as secretaries, factory workers, and truck drivers.[22] Farms are worked in off-hours. Vacations are planned and extra leave taken from work for the more time-consuming tasks of planting and harvesting. Unwilling to give up farming completely, small farmers are hanging on as viable producers only by putting one foot outside the farm sector to cushion the impact of competition and to avoid being eliminated from farming altogether.[23] They have been aided in this strategy in the 1970s by another significant trend in the U.S. economy—the decentralization of industrial facilities and sources of employment to small towns.[24]

Middle-sized Farms and the Squeeze on Family Owners

The middle-sized farm in the United States is the category into which the classic family farm primarily fits. The owner or manager tends to be a full-time farmer and adult family members are all engaged in work on the farm. It is this sector that is currently

feeling the most intense economic pressure, which is why the middle-sized family farmer represents the most significant contingent of the American Agricultural Movement. As we will see later, the AAM's demand for higher support prices is the only course which many medium-sized farmers see left open to them. They have been forced into this sort of collective class action by their inability to seek alternative, individual solutions.

The fixed costs of middle-sized farms, particularly the debt load, have increased dramatically in recent years. To increase productivity, farmers have over the last decades assumed unprecedented debts in hopes that returns on their labor and products would increase (see Figure 2). The incredible jump in the total value of farm machinery reflects this: farmers in 1945 had $5.1 billion invested in farm machinery, a figure which had increased by 849 percent to $48.4 billion in 1974.[25] Even where the farm is in a position to earn enough income to support a family there are recurrent problems of adequate cash flow. Their deficits cannot be made up by outside income, as can those of the small part-time farm household, because the size of the operation makes it difficult to take off-farm employment and still keep up production. As a result, these families are being pinched by the decline of net yearly income per farm, down by an average of about $4,000 since 1973.[26]

Thus it is not uncommon to read about farmers such as the Nations family recently featured in *Forbes* magazine, who grow corn on 800 acres in Qulin, Missouri. They grossed a whopping $150,000, and netted only $3,400. Since 1971 they have invested $71,000 to buy new land and expand production, hoping to keep up. Added to that, they have bought $135,000 of farm equipment since 1970. The Nations participated in the tractorcade of 1979.[27]

For the smaller sized farms in this middle category who do not opt for combining family labor on the farm with wage labor in town, the solution to increased debt and low returns is to increase the exploitation of their own labor power. By increasing the working day and the intensity of labor and implicitly paying themselves less per hour, some of these farmers are able to temporarily survive a downturn in commodity prices.

For the larger middle-sized farmer, there is only one possible

solution to the debt-income squeeze: increased debt combined with exploitation of a low-paid wage labor force. It is at this point that the family farm is pushed to become a capitalist unit of agricultural production.

How does this happen? Driven to increase the size of their farm, purchase the most modern machinery, and use expensive production techniques, the farmer must expand production to the point beyond the capability of family labor power. A permanent wage labor force becomes essential to maintain production levels (as in the case of Pat Benedict). In addition, migrant and student labor is hired during peak harvesting weeks. As a result, when commodity prices drop, the farmer no longer exploits family labor power but instead maintains farm income through exploitation of a wage labor force. Layoffs, wage cutting, and other devices are used to shift the burden of the falling prices from the farm entrepreneur to the farm workers.

Large Farms and the New Agrarian Bourgeoisie

Large-sized farms with sales of $100,000 or more tend to be more industrial in character. In many commodities, such as poultry, they are employing wage labor to replace family labor for most of the farm work, thus coming to resemble their capitalist counterparts in manufacturing. In some cases, family members work solely as managers. Many of these farms are fully incorporated and a few are subsidiaries of nonagricultural companies. Large-sized farms have increased rapidly in numbers in recent years, from 23,000 to 162,000 between 1960 and 1977.[28]

Consolidation of larger and larger farms should continue, fueled by two additional economic forces: (1) the skyrocketing price of land and (2) federal tax laws.

High land prices, caused in part by the desire of investors to buy farm land as a hedge against inflation, limit the entry of new farmers into the business and make it difficult for older farmers (especially in the middle-sized category) to buy more land. For instance, if an acre of farm land in Illinois were to cost $3,000 today, the cash flow resulting from its crops would not be enough to service the debt needed to buy it.[29]

The Congressional Budget Office in 1978 warned that if certain tax laws (and support programs) favoring large-sized farmers were to continue, the number of farms would drop another 41 percent by the year 2000.[30] In 1979, Secretary of Agriculture Bergland reported to a Senate committee on agriculture that "the largest tax savings apparently accrue to the largest farms and to individuals investing in agriculture to take advantage of the special provisions."[31]

As this transformation away from family farming proceeds, so does the growth of new agricultural classes. In the future we may find not only an increasingly wealthy and powerful capitalist farm class, but at the opposite pole, a much poorer class of semiproletarian farmers and agricultural wage workers.

Agricultural Workers

For decades the ratio of family to nonfamily labor in American farming stood at approximately three to one (see Table 1). To be sure, the family farm system has always required a certain amount of supplemental wage labor owing to seasonal cycles of planting and harvesting and family life cycles (surpluses or shortages of children of working age). But the character of this labor has been unique, in that it consists largely of seasonal—frequently migrant—workers and children of other farmers.[32] Today this kind of labor force is being transformed more and more into a class of permanent, year-round wage laborers who are neither seasonal nor likely ever to move onto a farm of their own.

The development of U.S. agriculture is generating this transformation of the agricultural working class in three ways. First, as the growing size and industrialization of successful farms makes family labor insufficient, more farms are becoming capitalist, hiring permanent employees. Second, the overall decline in the number of families in rural areas makes the sharing of surplus children as temporary wage workers less feasible. Third, mechanization of harvesting and other labor-intensive tasks, as in the case of the mechanical tomato pickers in California, is lessening the demand for seasonal labor.

The size of the wage labor force in U.S. agriculture appears to

be growing: between 1965 and 1974 the Lake States reported a 12 percent increase in the use of hired labor, the Pacific States a 30 percent increase.[33] But the long-run trend is hard to predict, since mechanization will continue to revolutionize the parts of farm work traditionally requiring large amounts of labor. The condition of agricultural laborers is not likely to improve markedly in the near future. Many seasonal and migrant workers will suffer as their jobs are eliminated. Furthermore, since the progress of industrialization in agriculture is slow and costly, few sectors of farming will pay good wages or maintain good working conditions. Finally, those family farmers who do hang on into the future will be hardpressed economically and therefore hungry for cheap labor and afraid of most progressive demands for unions and better working conditions. This situation should therefore provide fertile, though hard, ground for the growth of agricultural unions and labor militancy.[34]

Taking regional differences into consideration, we can begin to predict the broad outlines of a new rural class structure for the 1980s and 1990s.

1. A rapidly rising agrarian bourgeoisie in much of the South and Midwest will join an already established class of corporate farmers in California, the Southwest, and Florida. This small but powerful farm class will assume more and more control over farmer politics as the middle-sized family farmers are squeezed out.
2. An increasingly large but politically inactive semiproletarian farmer class in the South, Midwest, and Southern Plains; a slower rise of this class throughout the other regions. It may prove critical to the farm protest movement of the future that this class of farmers join its ranks. However, the combination of wage earner and independent producer status among these households seems to dampen activism in either sphere.
3. The stabilization of an agricultural wage earner class in the near future as more kinds of production are transformed to a factory-like system. It is difficult to predict the future size of this class because while mechanization increases the permanent labor force in some areas, such as livestock, the same process creates unemployment in other areas, such as vegetable crops.
4. The decline of the middle-sized family-owned and -operated farm, occurring more rapidly in the South and Midwest among cotton, corn, wheat, and livestock farmers. This group of farmers, unable or uninterested in becoming part-time farmers or corporate capitalists, will be the most active in protesting the current changes in agriculture.[35]

This takes us back to where we started: to the American Agricultural Movement—the most visible representation of agricultural change in the United States—and to the issue of the family farm crisis.

Parity Politics: A New Populism

Many observers have argued against the AAM that farmers have nothing to complain about. During the 1979 tractorcade farmers received a significant beating from the press, which portrayed their movement with such catch phrases as "welfare tractors," "bellyaching," and "tractorcade follies of 1979." Articles in leading magazines and newspapers claimed that farmers had no grievance since 1978 had been a good year due to higher prices and a good wheat crop. Farm prices were up 20 percent from the previous year as farm income reached $28 billion, second only to the 1973 level.[36]

What this ignores, however, is that prices are not the only measure of a healthy industry. Costs must be also taken into account. And both costs and prices must be looked at over a longer term than just one year. Farmers argue that they have been receiving too little money for the commodities they produce as compared to their investment in land, capital, and labor. They have been caught in a squeeze between rising costs and falling prices for several years now: from 1973 to 1978 farm prices were down by 20 percent while costs had risen by 33 percent.[37]

For two winters in a row, farmers have camped in Washington to demand what they consider the answer to their problem: 90–100 percent parity. The term "parity" refers to the relative prices of farm products versus farm inputs (also known as the sectoral terms of trade). Full parity means restoring the price ratio that existed during the base years 1910–1914, which was very favorable to farmers. That is, it would give farmers gains in purchasing power equal to the rest of the economy over the last several decades.

Since parity as a short-run goal is beneficial to all classes of

farmers, farm interests support the parity demands of the AAM (except the large livestock farmers who depend on cheap grain prices). But it is primarily the demand of the medium-sized family farmers who are representing their class interest as the interest of all classes in agriculture. As such, parity politics diverts attention from the growing division among farming classes. The agrarian bourgeoisie, with a more permanent workforce, greater access to credit and markets, and an increased ability to raise productivity levels, is in a radically different economic position from smaller farmers who exploit their family's own labor. Parity is also not a life-and-death matter for semiproletarian farmers whose debts are less and who can seek off-farm employment.

Moreover, in the long run, government-supported high prices do little to solve the structural problems of the family farmers. They simply encourage further efforts to expand output and recreate the dilemma of overproduction and overinvestment on a larger scale. Meanwhile, the initiative continues to pass to the capitalist farm operators, who stand to benefit as much or more than their smaller competitors from high prices and government payments.

Neither the AAM nor the plight of hardpressed family farmers from which it grows are unique in American history. Like previous farm movements, the AAM is rooted in the wider economic forces that shape U.S. agriculture. Many farmers have only a limited perception of those forces and the way in which they participate in their own undoing. As a result, the parity focus of the AAM touches only on the surface manifestations rather than the systemic roots of the economic woes of U.S. farmers.

While their cause is in one sense a progressive one insofar as many farmers are struggling against the encroaching power of the banks, the corporations, and the large-scale agribusiness firms, we should be under no illusions that this populist struggle can turn back the clock. The U.S. family farm cannot survive as the dominant form of agricultural production. Ultimately, the remaining family farmers, the farmworkers, and the other sectors of the U.S. working class will have to assume control of both agriculture and industry and forge a new agricultural system that takes into consideration the needs of the vast majority of the American people.

(Note: changes are corrections, omitted by publisher, which alter our meaning or grammar.)

Notes

Chapter 1. Crisis and Change in U.S. Agriculture: An Overview

1. *Dollars & Sense*, February 1978.
2. Calculated using figures from *Dollars & Sense*, February 1978 and *The Economist*, February 10, 1979.
3. Harriett Friedmann, "Simple Commodity Production and Wage Labor in the American Plains," *Journal of Peasant Studies* 6, no. 1 (1978): 71–100.
4. Kevin Kelly, "The Independent Mode of Production," *Review of Radical Political Economy* 11, no. 1 (1979): 38–46. Kelly has introduced the concept of the "independent mode of production" as a more general term for a system of independent household producers than Marx's "simple commodity production." In a thoroughly commercialized economy such as the U.S. has been since colonial times, the two terms can be used interchangeably. See also Karl Marx, *Capital* (New York: International Publishers, 1967), Vol. I, Chap. 32, and Friedmann, "Simple Commodity Production," p. 71.
5. From early in U.S. agriculture this has been the case. Contrary to popular myth, few homesteaders were able to start out "from scratch." Land almost always had to be purchased, whether from the federal government, royal grantees, or most important land speculators with roots in the East Coast or Europe. See Roy Robbins, *Our Landed Heritage: The Public Domain, 1776–1970* (Lincoln: University of Nebraska, 1976), and A. M. Sakolski, *The Great American Land Bubble* (New York: Harper & Bros., 1932).
6. Marx, *Capital*, Vol. I, p. 376.
7. *The Economist*, January 5, 1980.
8. Marx, *Capital*, Vol. I, pp. 380–86.
9. Robin Murray, "Value and the Theory of Rent, Part II," *Capital and Class* 4 (Spring 1975): 11–34.
10. Michael Perelman, *Farming for Profit in a Hungry World* (Montclair, N.J.: Allenheld, Osmun, 1977), p. 4.
11. Ibid., p. 75.
12. Ibid., passim. While Perelman is astute in pointing out the importance of the social division of labor for U.S. agriculture, he fails to treat the family farm system as a mode of production embedded in a capitalist system rather than as a branch of capitalist production. He uses terms such as "the new feudalism" to describe the relations between capital and farmers which are quite misleading.
13. Kelly, "The Independent Mode of Production," p. 46, and Richard Walker, "The Transformation of Urban Structure in the Mid-Nineteenth Century

and the Beginnings of Suburbanization," in Kevin Cox, ed., *Urbanization and Conflict in Market Societies* (Chicago: Maaroufa Press, 1978), pp. 165–212. This development has contributed to the confusion about the nature of the U.S. agricultural system and the failure to realize that the family farm system cannot be understood simply as a branch of capitalist production.

14. *The Economist,* January 5, 1978.
15. Roy Barner, "Science and Technology in Western Agriculture," *Agricultural History* 49, no. 1 (January 1975): 56–72. Barner also tries to use climate as an explanation for the advanced state of California's mechanization. The question as to why large holdings have prevailed in California more than elsewhere is one that has never been satisfactorily answered. The usual explanations, cheap labor and reliance on specialty crops in a mild climate, do not work, since big growers never relied extensively on either. (This has been pointed out to us by Ellen Liebman, Department of Geography, University of California, Berkeley, and is based on her doctoral research.)
16. Tenneco Corporation, *Agricultural Report* (Houston), November 1975. The growth of contract farming in recent years has been substantial and has fueled critics of monopoly power who hold that the plight of small farmers can be traced to this source alone.
17. Murray, "Value and the Theory of Rent."
18. *Time,* November 6, 1978.
19. Luther Tweeten and W. Huffman, "Structural Change: an Overview," paper presented at the National Rural Center Conference on Small Farms, Lincoln, Nebraska, February 1–3, 1979, p. 26.
20. *Miami Herald,* October 10, 1976.
21. Tweeten and Huffman, "Structural Change," p. 5. This level of concentration still puts agriculture well below any other industry in degree of concentration—which serves as another reminder of the lack of transformation to fully capitalist and corporate production relations.
22. *The Nation,* June 2, 1979.
23. As a result, the smallest farms have less debt and fewer bankruptcies than their larger brethren. Perelman, *Farming for Profit,* pp. 85, 88.
24. George Sternlieb and James Hughes, *Post-Industrial America: Metropolitan Decline and Interregional Job Shifts* (New Brunswick: Rutgers University Center for Urban Policy Research, 1976).
25. *The Progressive,* June 28, 1978, p. 23.
26. R. Rodefeld, "Farm Structure and Structural Type Characteristics: Recent Trends, Causes, Implication and Research Needs," revision of paper presented at National Rural Center, Small Farms Workshop (Phase II), Lincoln, Nebraska, February 1, 1979, p. 43.
27. *Forbes,* March 5, 1979.
28. Rodefeld, "Farm Structure," p. 63.
29. *The Economist,* January 5, 1980.
30. *The Nation,* June 2, 1979.
31. *The Economist,* January 5, 1980.

32. For a fuller analysis of labor and the family farm see Friedmann, "Simple Commodity Production."
33. Rodefeld, "Farm Structure," p. 64.
34. L. P. Schertz, et al., *Another Revolution in U.S. Farming* (Washington, D.C.: U.S. Department of Agriculture, 1979), pp. 303–34.
35. Ibid.
36. *The Economist,* February 10, 1979.
37. *Dollars & Sense,* February 1978.

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