

---

---

# THE RELEVANCE OF FAMILY FARMS TODAY

Stephen Carpenter

---

---

## TABLE OF CONTENTS

I.	INTRODUCTION .....	1
II.	PUBLIC SUPPORT FOR FAMILY FARMING AND ITS MEANING.....	1
III.	DEFINING FAMILY FARMING—STILL HERE, AND STILL KICKING.....	2
IV.	A FAMILY FARMING SNAPSHOT, AND A BIT OF HISTORY .....	6
V.	REASONS TO SUPPORT FAMILY FARMS .....	8
	A. Individual Justice for Farmers .....	8
	B. Social Equality, Viable Rural Communities.....	11
	C. Environmental and Other Externalities.....	13
	1. Environmental Problems.....	13
	2. The Possible Connection Between Family Farming and the Environment.....	16
	D. Aesthetic Reasons to Support Family Farms .....	18
VI.	THE ISSUE OF EFFICIENCY .....	19
VII.	FOUR TYPES OF FAMILY FARM STRATEGY .....	20
	A. Sustainable Agriculture.....	20
	B. Direct Marketing.....	21
	C. Value Added Processing.....	21
	D. Organic Production .....	21
VIII.	FOUR POLICIES TO PROMOTE FAMILY FARMING .....	22
	A. Target Farm Programs to Family Farmers.....	22
	B. Redirect Agricultural Research.....	24
	C. The Environmental Lynchpin .....	25
	D. Civil Rights Programs.....	27
IX.	CONCLUSION.....	28



## I. INTRODUCTION

The American public has a soft spot for family farming. We know this from survey results, can infer it from the way marketing experts continue to use the image of family farming in its advertising, and we know it from our casual conversations. Sophisticated survey results show Americans support family farms, think government policy should protect family farming, and are willing to pay more for food produced by family farmers.<sup>1</sup>

This essay takes public support for family farming as a starting point, and looks at two questions. First, is public support for family farming justified? Second, supposing we are sympathetic to it, what sort of steps should be taken to promote family farming?

## II. PUBLIC SUPPORT FOR FAMILY FARMING AND ITS MEANING

In a democratic society, overwhelming support for family farming should “count for something.”<sup>2</sup> The assumption that popular support for family farming is large and long-standing, however, begs several important questions.

We should ask, if we care about this issue, why the public cares. If the preference is based on confused or illegitimate moral values, or on erroneous assumptions about actual circumstances in agriculture, we should acknowledge the public preference, but oppose the public in our politics and our work. Many influential people favoring what they

---

<sup>1</sup> For a quick summary, see the poll results described in Ronald K. Knutson, et al, *Agricultural and Food Policy* 11-12 (4th ed. 1998). For a detailed examination of two extensive surveys, see the essays collected in Ronald C. Wimberley, et al (ed.), *The Social Risk of Agriculture: Americans Speak Out on Food, Farming and the Environment* (2002). For a summary of survey data on farming and on environmental concerns concerning agriculture see, Meg Bistro, *Digesting Public Opinion: A Meta-Analysis of Attitudes Toward Food, Health and Farms*, in *Perceptions of the U.S. Food System: What and How Americans Think About Their Food*, W.K. Kellogg Foundation (2005).

<sup>2</sup> See the cartoon, published on March 1, 1985, on the last page of this essay. How could family farming fare so poorly in agricultural policy if the population cares about the issue? Two possible answers center on the politics of agricultural policy. First, farm policy is arguably a prime example of the extent to which small numbers of prosperous and well-organized interests can control government policy despite large majorities of public opinion holding contrasting views. For example, prosperous sugar interest groups tend to control sugar programs, and so forth. A discussion of this nature featuring agriculture can be found in Theodore J. Lowi's *The End of Liberalism: The Second Republic of the United States* (2nd ed. 1979). Second, farm policy may be especially susceptible to what could be called symbolic politics. Political leaders are adept at taking stances that rhetorically defend family farming, but that have little practical effect. For a discussion of this general phenomenon, see Murray J. Edelman, *The Symbolic Uses of Politics* (2nd ed. 1985). The relative lack of a public outcry in the 1980s despite broad support for federal aid to family farmers is discussed in Thomas A. Lyson, *Who Cares about the Farmer? Apathy and the Current Farm Crisis*, 51 *Rural Sociology* 490 (1986).

describe as a free market approach to agriculture and many agribusinesses' interests hold that the public's understanding of agriculture is deeply mistaken, and that policies sympathetic to family farming are foolish and inefficient.<sup>3</sup> In intellectual discourse on farm policy and in relatively sophisticated agricultural trade publications, the fate of family farming ranks very low as a priority.

### **III. DEFINING FAMILY FARMING—STILL HERE, AND STILL KICKING**

Defining family farming is important, but is actually not as hard as it sometimes seems. For the purpose of this discussion, a family farm is one where the bulk of the labor and management of the farm is contained within a family. The farm family must make management decisions for the farm, and must do a large percentage of the farm work.<sup>4</sup> This definition is arbitrary in the sense that one could easily develop a different definition, but it probably fits what most people think of when a family farm comes to mind.<sup>5</sup>

Almost every writer about agriculture notes the remarkable diversity in farming operations in the United States. Distinctions among family farmers are important—and some are discussed below—but in general, the definition used here allows for a very wide variety of operations. Generally, family farms include almost all cow-calf beef operations, almost any dairy with 200 or fewer cows, most hog operations, including most producing on contract, and most poultry farms producing meat. All but the very largest row crop farms are likely family farms. By contrast, according to this definition, the largest dairies and hog operations are not family farms.

Although many efforts to cloud the definition of a family farm are intellectually suspect, at least four fair questions can be raised about the definition of family farming set out above. In each case, the question is whether a certain group of actually existing farming operations are family farms.

---

<sup>3</sup> For a recent version of this argument, see E.C. Pasour, Jr., and Randal R. Rucker, *Plowshares and Pork Barrels: The Political Economy of Agriculture* (2005).

<sup>4</sup> Entity status, acreage under cultivation, total gross sales, numbers of animals, tenant status, and relative use of technology or machinery are all far less important in this analysis than labor and management. This definition resembles that used by USDA's Farm Service Agency when it makes loans to family farmers. See 7 C.F.R. 1941.4, "Family Farm" (2006) for the current definition in use for farm operating loans. For FSA, the operation must produce enough to be recognized in the community as a farm rather than a rural residence. The farm must be managed by the borrower, and a substantial amount of the labor on the farm must come from the borrower and his or her family members. The farm may use a reasonable amount of full-time hired labor and seasonal labor during peak load periods.

<sup>5</sup> For the farm typology used by USDA see, for example, Robert A. Hoppe and David E. Banker, *Structure and Finances of U.S. Farms: 2005 Family Farm Report*, USDA ERS Economic Information Bulletin No. 12 (May 2006).

First, why are not all farms owned and operated by a family, family farms?<sup>6</sup> In fact, many farms are owned by a single family, but the family does not do much, or any, of the physical labor on the farm. While these farms may be thought of as modestly sized businesses in comparison to large American corporations, they are not family farms, as the term is used here, because the family does not perform the labor on the farm. For example, in California, it seems customary to think of various farming operations as family businesses even though the physical labor on the farm is done overwhelmingly by paid laborers. Although these producers are not necessarily bad stewards of the land, or bad employers of farm labor, their operations are still, for the purposes of this essay, larger than a family farm.

Second, are not many family farms under this definition so small they do not deserve to be considered a real farm? Many observers seek to discount such operations.<sup>7</sup> It is true that operations earning only a few thousand dollars in a given year are defined as farms by USDA's Economic Research Service and by the USDA census.<sup>8</sup> Most of these households have significant off-farm incomes. Ronald B. Knutson and others, for example, argue that if a household earns more money from an off-farm job than its net farm income, it should not be classified as a farm household.<sup>9</sup> Still, these small operations cumulatively produce a very large volume of farm products, and control many millions of acres of productive farmland. Further, even on those farms labeled by USDA as "retirement" or "residential/lifestyle" farms, the average family spends 1,300 to 1,500

---

<sup>6</sup> Ronald Jager, for example, perceptively describes four farming operations in *The Fate of Farming Farming: Variations on an American Idea* (2004). Not all would be family farms by the definition used here.

<sup>7</sup> For Timothy A. Wise, one should not count two-thirds of all USDA farms as part of the farm sector. *Understanding the Farm Problem: Six Common Errors in Presenting Farm Statistics*, Global Development and Environment Institute Working Paper No. 05-02 (March 2005).

<sup>8</sup> The USDA cut-off to constitute a farm is a minimum of \$1,000 in sales in one year. Certainly if all of the farms in our discussion never sold more than one or two thousand dollars of farm products a year, the analysis would be quite different. This is not the case. One of the typically unacknowledged advantages of a cutoff in sales when defining a farm that is this low is that if a higher number, say \$10,000, was set, operators whose sales ended up largely in December of one year, and then in January thirteen months later, would suddenly not be a farm, even if the average farm revenue over the three years amounted to many tens of thousands of dollars.

<sup>9</sup> Ronald B. Knutson et al, *Agricultural and Food Policy* 222 (4th ed. 1998). Many smaller scale family farmers depend in large part on off-farm income, and this phenomenon is important for understanding family farming. A statistical sleight of hand based on this observation is sometimes used, however, to seemingly define these farms out of existence by implying that, if a farm loses money in a particular year, and the family was therefore dependent on off-farm income for family living expenses, then it is not a "real" farm. Applied generally, this analysis would mean that many thousands of larger farming operations would vanish from the definition of a farm because the farm lost money. In addition, a close look at household budgets of farm families 50 or more years ago would likely reveal significant off-farm income as well. The phenomenon of off-farm income has certainly increased, but it is not new.

hours per year working on the farm.<sup>10</sup> Or, to put it differently, if the definition of a farm suggested by Knutson above is used, farms on which nearly half of all of the total hours of farm work occurs do not qualify as a farm.<sup>11</sup> By the definition used here, these operations are still family farms.

When critics talk about very small farming operations, they are often referring to cow-calf operators. These farms are overwhelmingly small operations, are very numerous, and tend not to make much money.<sup>12</sup> The school of thought that holds these as not real farms is reflected in farm policy in the sense that farm program payments and disaster assistance generally does not go to cow-calf operators. In the Midwest, Northwest, South and East, cow-calf operators produce a commodity that corporations have been unable to undercut in price or quality, and they operate mainly on pasture and hay. Except for the fact that cattle often have access to creeks and streams, these operations are arguably the closest thing that exists in the United States to a purely sustainable farm. There is little erosion from most of these pastures, relatively little runoff of manure, little use of pesticides, and the animals are not confined. If industrial agriculture were somehow able to breed cows and raise calves under confinement at lower cost than these family farmers, their farmland, much of it hilly and erodible, would likely revert to crop production in order to feed the confined cattle. There is a certain irony that the sector of family farms that is perhaps most numerous, that involves the smallest operations, that at present prevents significant negative environmental externalities from its production receives almost no support from federal farm programs and is actually defined out of existence as a farming operation worthy of concern by many farm policy experts. For a supporter of family farming or of environmental protection, the puzzling feature of these operations in terms of policy is that there is no obvious trend whereby the operations would disappear, and thus financial support is arguably superfluous. To support cow-calf operations on a significant scale would be to reward people for what they are already doing. As a result, they are simply taken for granted.

Some advocates for family farms argue that the focus should be on farms that derive most of their family income from the farm. There is good evidence that this portion of the family farming population is under the great financial stress, and it would perhaps make

---

<sup>10</sup> USDA ERS notes that there is roughly a .65 to .73 “average person equivalent” working on these farms. Hoppe and Banker, *Structure and Finances of U.S. Farms*, at 31.

<sup>11</sup> Extrapolating very roughly from ERS data, about 5.9 billion hours of farm work are done per year in the U.S. Knutson’s definition would eliminate four ERS-created categories of farms, “limited resource,” “retirement,” “residential/lifestyle,” and “low-sales” family farm. These farms account for roughly 2.8 billion hours of farm labor. Hoppe and Banker, *Structure and Finances of U.S. Farms*.

<sup>12</sup> As of 1996 roughly 300,000 farmers raised cows and calves. In all but the largest operations, labor is mainly provided by families, even in the ranching areas of the West, and the average farm nationwide had well under 100 cows. The variation in moisture and growing conditions creates a wide disparity in acreage. The average ranch in the West had over 3,000 acres, and in the North Central region less than 400 acres. Sara D. Short, *Characteristics and Production Costs of U.S. Cow-Calf Operations*, USDA ERS Statistical Bulletin No. 974-3 (November 2001).

sense to target such farms in a family farm policy.<sup>13</sup> As a matter of definition, however, family farming includes more than those in what is sometimes called the “vanishing middle” of agriculture.

Third, it is sometimes assumed that a family farm must be a small farm or must be a technologically unsophisticated farm. By the definition advanced here, however, a ranch with, perhaps, 2,000 acres could constitute a family farm, as could a grain farm with immensely expensive and sophisticated machinery.<sup>14</sup> In both cases, family control and labor are the central defining elements of identifying a family farm.

Fourth, and perhaps most persuasively, it can be argued that some farmers retain so little actual control of the operation that they are not really family farmers, but are something else. This ambiguity has a historical precedent in the effort to characterize post-Reconstruction Southern tenant farmers. Was a plantation divided among sharecroppers, who had little control over their production decisions or labor, but who independently contracted with the landlord, one farm or forty?<sup>15</sup>

In the present context, the question of farmer autonomy is relevant for contracting, especially in poultry and hog production. In both instances, a single family tends to provide the labor, but the extent of that family’s autonomy can be quite limited.<sup>16</sup> For the purposes of this essay, these farms are generally considered family farms. Although a close reading of some of the production contracts used by farms might lead one to see

---

<sup>13</sup> This is the approach taken by Willard W. Cochrane in *The Curse of American Agricultural Abundance: A Sustainable Solution* (2003).

<sup>14</sup> Michael Pollan, for example, sees the grain farm in the Midwest as industrial agriculture, apparently based on the scale of the operation and the linking of the farm to an industrialized farm economy. *Omnivore’s Dilemma: A Natural History of Four Meals* (2006).

<sup>15</sup> For a description of plantation agriculture in the American South, see Pete Daniel, *Breaking the Land: The Transformation of Cotton, Tobacco, and Rice Cultures Since 1880* (1987).

<sup>16</sup> Conventional wisdom among economists tends to see various forms of contracting as normal response to market signals in agriculture. See Steve W. Martinez, *Vertical Coordination in the Pork and Broiler Industries: Implications for Pork and Chicken Products*, USDA ERS Agricultural Economic Report No. 777 (April 1999); and James MacDonald et al, *Contracts, Markets, and Prices*, USDA ERS Agricultural Economic Report No. 837 (November 2004). Critics are sometimes unable to stop themselves from comparing contracting to European feudalism. See Deborah Thompson Eisenberg, *The Feudal Lord in the Kingdom of Big Chicken: Contracting and Worker Exploitation by the Poultry Industry* (2001). A thoughtful summary of the implications of this transition is Council for Agricultural Science and Technology (CAST), *Vertical Coordination of Agriculture in Farm-Dependent Areas*, Report No. 137 (March 2001). A legal view can be found in Neil D. Hamilton, *Why Own the Farm When You Can Own the Farmers (and the Crop)?: Contract Production and Intellectual Property Protection of Grain Crops*, *Nebraska Law Review* 48 (1994). A FLAG contribution to this discussion is *Assessing the Impact of Integrator Practices on Contract Poultry Growers* (December 2001).

them as more like employees, in a close call, we should deem the overwhelming majority of these operations family farms.<sup>17</sup>

An alternative interpretation would be defensible in two ways. First, to the extent that the public supports the notion of family farms because farmers are “their own boss,” as many farmers put it, that support might be undermined by the straightjacket of a production contract. Second, in general, contract production, in both hogs and poultry, involves operations that are larger than independent producers. Some of the theoretical advantages of family farms in terms of the environment and the fate of local communities are arguably compromised in contract production.

#### **IV. A FAMILY FARMING SNAPSHOT, AND A BIT OF HISTORY**

At present, there are likely around two million family farms in the United States. Certainly 80-90 percent of all farms in the country are family farms.<sup>18</sup> The number of family farms has mainly been in decline for many decades—essentially since the 1930s. USDA data should probably be taken as a rough estimation, but based on its numbers the country was losing roughly 30,000 farms a year until very recently. The latest data shows a slight uptick in numbers.

Family farming is in decline, but it is still alive. Many observers argue that the end of family-based agriculture is inevitable.<sup>19</sup> Or, they argue that the only independent family farms remaining will be very small and insubstantial “hobby” operations. Often, though not always, those who see the end of family farming as inevitable believe that family farmers cannot compete in the current marketplace, and that modern economic efficiency requires farmers to leave—the phrasing often used is “to be released from”—agriculture.

---

<sup>17</sup> The issue of farmer autonomy is one that should be taken into account, however, if one is attempting to create policies that support family farmers. For accounts of contemporary agriculture that emphasize the lack of autonomy for virtually all family farmers, see Richard Lewontin, *The Maturing of Capitalist Agriculture: Farmer as Proletarian*, 50(3) *Monthly Review* 72 (1998), and for an early version of a similar argument, Ingolf Vogeler, *The Myth of the Family Farm: Agribusiness Dominance of United States Agriculture* (1981). The use of production contracts is discussed in more detail by Susan E. Stokes and Paul Strandberg later in this CLE program.

<sup>18</sup> No census counts farmers using this definition; it is therefore a rough estimate. A 1993 USDA ERS report found that 60 percent of all farmers hire no wage labor at all, and that less than 20 percent of all farms accounted for over half of all agricultural labor hired. *Characteristics of Large-Scale Farmers, 1987*, USDA ERS Agricultural Economics Report No. 668, at 11 (1993). A more recent calculation shows that among farms with sales of less than \$500,000 per year, most hours of labor came from the principal operator and his or her spouse. This would include well over 90 percent of all farms. See the data in Hoppe and Banker, *Structure and Finance of U.S. Farms*.

<sup>19</sup> A thoughtful presentation of a similar view is Thomas Urban, *Agricultural Industrialization: It's Inevitable, Choices* (4th Quarter 1991). Even some observers who are sympathetic to smaller farms think they are doomed. Victor Davis Hanson holds this view in *Fields Without Dreams* 268-270 (1997).



The demise of family farms, therefore, is a positive development. Following this logic, any efforts to retain family farming have the perverse effect of undermining efficient markets, and are at best antiquated and counterproductive policies that are doomed to failure.

The argument that family farming is inevitably doomed relies on an implicit view of the history of agriculture and of business enterprises in the country as a whole. There is certainly a surface appeal to the end of the family farm as inevitable argument based on the trends in numbers of farms and in the economic history of modern capitalism. After all, farm numbers have declined from six million in 1930 to less than two million now. Looked at from a broader historical perspective, however, the trends are not so clear as to take on an inevitability. It is not the case, as some might imagine, that an innocent family-based settlement period has been followed by the methodical displacement of smaller farms. Instead, in many places in North America, other forms of agriculture dominated for many decades.<sup>20</sup> In many areas, plantations out-competed family-sized farms in the production of several crucial commodities. Plantations proved to be a flexible and viciously efficient method of agriculture production for several hundred years. Similarly, a wage labor model of agriculture dominated in California and other places virtually from the very beginning of post-indigenous agriculture. The structure of agriculture and its labor arrangements, in other words, has ebbed and flowed over long periods. Viewed from the perspective of an indentured servant on a Virginia tobacco farm in the 1790s, a slave on a Mississippi cotton plantation in 1845, a wage-labor cowboy on a bonanza farm in Wyoming in 1880, or a wage laborer on a California fruit farm in 1940, the notion that American agriculture as based on family farming would have seemed inaccurate.

One point in recalling such a distant past is that it takes us a step away from current trends and reminds us that the future is contingent on things that happen now, and the decisions made now, and is not preprogrammed in a way that can never be altered. It also reminds us that the set of rules used by society to govern economic activity has a lot to say about which economic enterprises succeed. It may well be that family farming disappears from the American countryside, but if that happens it will not be because the trends beginning three hundred years ago made it inevitable. Finally, the notion that an outcome is inevitable paralyzes anyone who might wish for a different result.

Turning the question upside down may be more interesting and more helpful. Why have family farms survived at all? Family farming has certainly changed over the last century and a half. It is now more commercialized, is mechanized, and family-run farms are larger, but family farming has survived. The majority of the economy went a different way. From roughly 1860 to 1925, the vast proportion of economic activity in the United States moved from small business to large industrial corporations. Agriculture simply did not follow the same path as virtually every other sector of the economy—transportation,

---

<sup>20</sup> Max J. Pfeffer, *Social Origins of Three Systems of Farm Production in the United States*, 48 *Rural Sociology* 540 (1983).

energy, communications, and the production of retail goods generally.<sup>21</sup> For anyone interested in the fate of family farming, an interesting question is why farming did not long ago come to be as dominated by large industrial corporations as, say, the automobile industry?

A short answer to the question of family farm survival is that family farmers have often been more efficient than their corporate competitors—that family farms have been, in the terms often used today, the “low cost” producer. For reasons that are important to understand, and that will be discussed briefly below, family farms seem increasingly to be losing this efficiency competition with larger farms. Next, however, this essay looks at some of the reasons why we might care about the fate of family farming.

## **V. REASONS TO SUPPORT FAMILY FARMS**

Among the many possible reasons for supporting family farming, four are discussed here. The first is individual justice for farmers themselves. If we think farmers are treated unfairly, it may make sense to support them in some way. A second reason to support family farming might be that we prefer the type of rural society that flows from a family farm-based economy—more equal, more viable—than a rural society depending on industrial agriculture. Third, we might believe that family farms tend to more effectively absorb the environmental costs of farm production than industrial farms. In other words, our primary concern might be the environmental harm done by agriculture, and we believe that family farms better limit the tangible harm done to the environment. Fourth, we might prefer family farming for essentially aesthetic reasons. For some hard to describe reason, we just like family farming. Each of these is discussed critically in turn.

### **A. Individual Justice for Farmers**

One possible reason to be sympathetic to family farmers is the sense that they work hard, work well, and receive little in return for their efforts. The point here is one of justice and fairness for family farmers.

In fact, family farmers work many, many demanding hours, the job is often dangerous, and the financial return is risky and relatively small. Regarding the demanding character of the work, anecdotal evidence seems to confirm one’s intuition. Helpful university extension materials, for example, remind those interested in entering dairy farming that this choice may not be consistent with outside community activities, and a recent description of some of the various configurations for milking dryly describes milking in a stanchion barn—still one of the most common ways of dairying—as hard on the body. Journalistic and memoir-oriented writing probably provides as good a guide as any to life on farms.<sup>22</sup>

---

<sup>21</sup> Alfred D. Chandler, Jr., *The Visible Hand: The Managerial Revolution in American Business* (1993). Chandler, in this and other books, describes the rise of the modern business enterprise from the 1850s to the 1920s.

<sup>22</sup> Two good examples are Richard Rhodes, *Farm: A Year in the Life of American Farmer* (1989), and Mark Kramer, *Three Farms: Making Milk, Meat and Money from the American Soil* (1987).

The low returns to family farming are evident in virtually any economic study that addresses the issue. Less noted is that a significant portion of farmers technically live in poverty. A 1993 study, for example, found almost 23 percent of farm operator households had incomes below the poverty line.<sup>23</sup> In the year in question, more than 20 percent of all agricultural production in the country was generated on farms run by households in poverty.

In addition, thousands of family farmers face dispossession. Not surprisingly, farmers often feel that dispossession means not only the loss of a job, but of a home, a place in the community, and a family heritage.<sup>24</sup> Further, while no one really tracks farm families once they have been removed from the land, limited information available suggests that low-income family farmers are not very competitive in the off-farm labor market.<sup>25</sup>

One reason that involuntary dispossession does not receive the attention it might is that most farmers choose not to make their financial distress a public matter—even to their neighbors. The Washington, D.C., tractorcades in the Carter administration are memorable—certainly to the taxi drivers working in Washington at the time—as are the “penny auctions” described in the news media and Hollywood films, but in recent decades these protests never represented the experience of politics of the vast bulk of family farmers. The brutal fact is that although most farmers support the kinds of proposals that are suggested later in this essay—such as targeting of subsidies to family farmers—distressed farmers are likely to be ashamed of themselves and ostracized by their neighbors. It may have taken an Ivy League academic to get the real point: in the last two decades many tens of thousands of farmers have absorbed their losses behind closed doors. As Kathryn Marie Dudley, a Yale anthropologist whose previous expertise had been the demise of industrial America, points out in her book on “farm loss” in the Midwest:

Economic failure is a stigma in virtually all walks of life, but it is especially discrediting in a rural township, where viable farms remain in the family for generations. A pioneering spirit runs deep in the hearts of those who till the land, and these settlers of the prairie have never looked kindly upon those who succumb to adversity, blame their troubles on others, or start crying for help when the going gets tough. When the names of neighboring families began to appear in the local paper—foreclosures, bankruptcies, auctions, tax delinquencies—there

---

<sup>23</sup> The data showed that these farmers worked an average of over 40 hours per week on the farm. Mary Ahearn et al, *The Economic Well-Being of Farm Operator Households 1988-90*, USDA ERS Agricultural Economics Report No. 666 (1993) .

<sup>24</sup> William D. Heffernan and Judith Bortner Heffernan, *Impact of the Farm Crisis on Rural Families and Communities*, 6 *Rural Sociologist* 160 (1987).

<sup>25</sup> Mary Ahearn et al, *Limited Opportunity Farm Households in 1988*, USDA, ERS, *Agricultural Economic Report No. 662* (1993); Frederick H. Buttel et al, *The Sociology of Agriculture* 153-54 (1990). Some evidence suggests that farmers who left farming in mid-career are better off out of agriculture.

was often little sympathy for the individuals involved and a general consensus that anyone who lost a farm had done something to deserve it.<sup>26</sup>

The point here is two-fold. First, the end of family farming would not be a minor moment of transition for farm families. It would instead mean that people who have worked for decades as farmers generally would suffer such losses silently, but they would suffer nonetheless. Second, Dudley's work reminds us that the most powerful political institutions in farming—the commodity groups in particular, but also the Farm Bureau and others—tell only one side of the story in agriculture, that of relative prosperity and power. We, however, need not accept the press release version of reality when it comes to family farmer poverty and dispossession.<sup>27</sup>

Critics of U.S. farm policy often make an argument relevant to the notion of individual justice for family farmers. They note that there is no longer a gap between the median income of farm families and the rest of society.<sup>28</sup> Presumably, no one would argue that if the median income in New York City is higher than the nation's median income that a nationwide effort designed to address poverty should simply skip New York City. The secret in agriculture is the very large inequality of income among farmers. While median income for farmers in general has improved, family farmers still struggle to make a living.

---

<sup>26</sup> Kathryn Marie Dudley, *Debt and Dispossession: Farm Loss in America's Heartland* 5 (2000). She later continues:

It is within [a] climate of suspicion that the drama of the farm crisis unfolds. As distressed farmers struggled to hold on to land, dignity, and dreams of a lifetime, they most often did so alone, veiled by a code of silence that could be both protective and suffocating. When the family farm could not be saved, the humiliation of offering up for sale what little was left exposed even the strongest of souls to a mortifying ordeal. For the sacrifice made on the auction block was never merely one of property or material goods. The loss of a farm, as testimony of dispossessed farmers makes clear, is the loss of a spiritual connection to society and life itself. Because this loss occurs at the hands of their neighbors and friends, collective resistance is difficult, if not impossible.

Dudley, *Debt and Dispossession*, at 19. Resistance occurred, although not nearly on the scale seen in the Great Depression. On 1980s farm protest, see Patrick H. Mooney and Theo J. Majka, *Farmers' and Farms Workers' Movements: Social Protest in American Agriculture* (1995).

<sup>27</sup> Your author has read *Farm Journal*, the largest circulation general farm magazine, and *Hoard's Dairyman*, the largest circulation general dairying magazine, more or less continuously since 1970. At times a sense of the desperation of family farmers inadvertently snuck into both magazines. I have no recollection, however, of any article in either magazine addressing directly the possible difficulties of farming and living in poverty in those thirty-five years. It is perhaps worth noting that for several years *Farm Journal* has included a frank question and answer column written by a practicing rural psychologist.

<sup>28</sup> For many decades farmers as a group made far less than the rest of society. For a detailed discussion of those disparities during the Great Depression, see Anna Rochester, *Why Farmers Are Poor* (1940).

A more relevant argument regarding farmer poverty is that farmers often have a reserve of assets that enable them to absorb a year or years in poverty. This is certainly true to a point.<sup>29</sup> Many family farmers, however, have both low incomes and little in the way of net assets. Even the USDA's Economic Resource Service has decided to acknowledge a category of farmers it labels as "limited resource" and farmers. These farmers, typically living in poverty, and with few net assets, account for about ten percent of all farmers.<sup>30</sup>

Finally, if individual justice is a central concern when thinking about family farming, additional attention should turn to farmers facing even steeper odds than most.<sup>31</sup> According to USDA statistics, roughly five to ten percent of U.S. farms are operated by people of color, and five to ten percent of all farms are operated by women. Both estimates likely undercount the actual numbers. Minority farmers are more likely than white male farmers to live in poverty, and they benefit less from government farm programs.<sup>32</sup> A separate session in the program discusses these issues more thoroughly. At a minimum, insofar as one's sympathy for family farms is based on the notion of individual justice, policies that support family farming need to take into account that many family farmers are not men, and many are not white.<sup>33</sup>

## **B. Social Equality, Viable Rural Communities**

A somewhat different reason to support family farms concerns social equality in rural society. Most often, this issue is described as one of farm structure, and it is in addition to any concern we might have for fairness for individual farmers.

Based on a fictional ideal type, one could compare two economies: in one there are roughly 5,000 family-sized farms, with 15,000 full time equivalents of work going on on these farms. The majority of the hours come from the families themselves. In the alternative one could imagine the same region with only 50 very large farms, with labor provided almost exclusively from 5,000 to 10,000 wage labor employees. The pay for

---

<sup>29</sup> This argument seems to assume that farmers should liquidate their assets in order to increase their income, or to put it differently, should simply leave farming.

<sup>30</sup> Hoppe and Banker, *Structure and Finances of U.S. Farms*, at 31.

<sup>31</sup> This essay leaves for another day a discussion of issues of justice within the family, and questions of how to define family. On the latter point, Karen Struening shows that the well-being of family units generally does not require a narrow definition of a family. *New Family Values: Liberty, Equality, Diversity* (2002). For the argument that populist notions of family farming neglect issues of gender inequality see Patricia Allen and Carolyn Sachs, *Sustainable Agriculture in the United States: Engagements, Silences and Possibilities for Transformation*, in Patricia Allen (ed.), *Food for the Future: Conditions and Contradictions of Sustainability* 139 (2003).

<sup>32</sup> Women farmers are described in Judith Z. Kalbacher, *A Profile of Female Farmers in America*, USDA ERS Rural Development Research Report No. 45 (January 1985) and Carolyn Sachs, *Invisible Farmers: Women in Agricultural Production* (1983).

<sup>33</sup> Further, to the extent that notions of individual justice affect our thinking about family farming, we are likely to be drawn into consideration of other moral issues and how they are connected to agriculture. See, for example, the essays in Patricia Allen (ed.), *Food for the Future: Conditions and Contradictions of Sustainability* (1993).

wage laborers is very low, and the economic and social equality in the latter society is much less than in the former. It may be that this inequality and other community effects provide a reason to support family farming.

The farm crisis in the 1980s prompted the development of a solid sociological literature showing that the decline of family farming is associated with a long list of social maladies.<sup>34</sup> Family farming tends to support healthier, more egalitarian rural communities than larger scaled farming.<sup>35</sup>

A different and perhaps more readily observable comparison is between the family farming as we typically think of it in the Midwest, the South, and the Northeast on one hand, and agriculture in California on the other.<sup>36</sup> Using the definition of family farming used here, there never was a significant family farm presence in California, and there certainly is not now. Instead, work on farms in California has always principally been through hired labor.

It is perhaps easy to forget the extent to which California produces agricultural goods in this country. Perhaps a third of the food eaten by Americans comes from California. It is by far the largest agricultural producing state, has been the top producing state since 1960, and has been among the top three states since the Hoover Administration. Fresno County, California, all by itself, would rank fourth among states in agricultural production—behind Texas and Iowa, and the rest of California—but ahead of everyone

---

<sup>34</sup> It may be important to separate two trends that undermine rural farm communities. On one hand, as family farms grow increasingly large a community could suffer decline from pure depopulation. The decline would occur even though a family farming structure remained. The process by which larger farms have an advantage over smaller farms due to technological advantages can be true among family farmers. Willard W. Cochrane makes this general point in *The Development of American Agriculture: A Historical Analysis* 389 (1979). On the other hand, the creation of larger than family farms likely involves a zero-sum competition with family farms. Here, the question is about both a decrease in the number of people working on the farm, and on the status and economic and social conditions of those who actually do the labor on the farms.

<sup>35</sup> For a quick summary of community effects see Marty Strange, *Family Farming: A New Economic Vision* (1988). The most influential discussion of this kind is Walter Goldschmidt, *As You Sow: Three Studies in the Coal Consequences of Agribusiness* (2nd ed. 1978). There are critics of Goldschmidt's study. More recent additional efforts include Linda M. Lobao, *Locality and Inequality, Farm and Industry Structure and Socioeconomic Conditions* (1990); David J. Peters, *Revisiting the Goldschmidt Hypothesis: The Effect of Economic Structure on Socioeconomic Conditions in the Rural Midwest* (July 2002); and Thomas A. Lyson and Rick Welsh, *Agricultural Industrialization, Anticorporate Farming Laws and Rural Community Welfare*, 37 *Environment and Planning* 1479 (2005).

<sup>36</sup> This summary of California agriculture relies largely on Richard A. Walker, *The Conquest of Bread: 150 Years of Agribusiness in California* (2004). It is not the case that production there is so mechanized that labor is little needed, or that labor is needed only for the quick harvest and little else. In 1997, for California producers, hired labor was fully a fifth of the cost of production—more than feed and fertilizer—and their largest single expense. Put differently, compared to the value of the total farm product, California has long spent more than twice as much on wage labor as farmers in the country as a whole.

else. Further, this dominance is not based solely on California grapes and other profitable but obscure nursery crops. By 1996, California's top farm commodity was dairy.<sup>37</sup> Beef cattle were fourth, cotton fifth, and hay and alfalfa seventh. California produces more eggs than any other state in the country, although egg production is only a very small part of the state's total product.

In other words, although California is a special case in many ways, it is a candidate to show the kind of rural society that might exist if family farming collapsed in the rest of the country. The picture is a grim one, as the fate of agricultural labor in California is well documented.<sup>38</sup> Labor conditions, especially the circumstances of the armies of harvest workers, have shocked observers since the days of John Steinbeck. It certainly seems fair to say that in California farm workers have labored under dire conditions and remained in a permanently degraded state. It is an especially notable paradox that California's cheap labor system continues despite an immense growth of agricultural revenue and productivity.

### **C. Environmental and Other Externalities**

Agriculture by definition upsets the environment and can cause a broad range of ecological problems. For many years, farmers and those speaking politically on behalf of farmers seemed to think that these problems were best ignored and not discussed, or that they should be dismissed with the argument that farmers are the best environmentalists of all because they live on the land, and so forth. Whatever the merit of that thinking was at the time, it is now too late to avoid the environment. Politically, the discussion of agriculture and the environment and the policies that govern them are irrevocably linked. The question is how to proceed from here.

#### **1. Environmental Problems**

Intellectually, the notion that agriculture has a large, often-measurable, and negative effect on the environment cannot be disputed.<sup>39</sup> Environmental concerns—including damage to the environment as well as human health—might conveniently be grouped into five categories.<sup>40</sup>

---

<sup>37</sup> For a description of the on-the-ground differences in dairy farming, see Jess Gilbert and Raymond Akor, *Increasing Structural Divergence in U.S. Dairying: California and Wisconsin since 1950*, 53 *Rural Sociology* 56 (1988).

<sup>38</sup> For a matter-of-fact discussion, see U.S. General Accounting Office, *Hired Farmworkers: Health and Well-Being at Risk*, Report No. 92-46 (February 1992), and for a more pointed anthropological view see Miriam J. Wells, *Strawberry Fields: Politics, Class and Work in California Agriculture* (1996).

<sup>39</sup> For summaries produced by scholars not inclined to overly dramatize environmental problems, see Council for Agricultural Science and Technology, *Water Quality: Agriculture's Role* (1992).

<sup>40</sup> This discussion omits several possible topics, including biodiversity. For contrasting perspectives on this issue, see Council for Agricultural Science and Technology (CAST), *Benefits of Biodiversity*, Report No. 133 (February 1999); and Kristen Blann, *Habitat in Agricultural Landscapes: How Much is Enough* (2006).

In the first category is the reasonably well-documented and actually quite conservative estimation of the dollars and cents economic impact of the environmental effect of agriculture.<sup>41</sup> For example, runoff of soil and nutrients causes undisputed economic costs to the rest of society, such as expense of cleaning water, or costs from a decline in recreational uses of waterways. Pesticides cause economic damage by killing crop pollinators. These costs run into the billions and are not speculative in any sense.

A second group of environmental harms are likely significant, but are less studied, or are not so easily studied. For example, there is little doubt that agriculture contributes to the creation of what is now being called a Dead Zone in the Gulf of Mexico, and contributes to the resistance of some bacteria to antibiotics, but the dollar cost to the economy for these problems has not been studied extensively.<sup>42</sup> Similarly, manure and odor problems at animal confinement operations are significant, but not yet the basis of much empirical measurement.<sup>43</sup>

Third, there are some perceived environmental problems for which the science is either lacking or in dispute. The health effects of pesticides, for example, are thought by the mainstream scientific community to be minimal for consumers.<sup>44</sup> Many others are not so sure. We know that pesticide effects are more severe on children than they are on adults. The agricultural science community's focus on consumers also neglects the evidence that pesticides have an effect on the rural communities in which they are used and on the farmers and farm workers who use them. Similarly, a debate concerns the use of

---

<sup>41</sup> Surveys of these costs may be found in Erin M. Tegtmeier and Michael D. Duffy, External Costs of Agricultural Production in the United States, 2(1) *International Journal of Agricultural Sustainability* 1 (2004); Jules Pretty et al, Policy Challenges and Priorities for Internalizing the Externalities of Modern Agriculture, 44 *Journal of Environmental Planning and Management* 263 (2001); European Environmental Agency, *The Externalities of Agriculture: What Do We Know* (May 1998); David Pearce et al, The True Price of Pesticide, in William Vorley and Dennis Keeney (eds.), *Bugs in the System: Redesigning the Pesticide Industry for Sustainable Agriculture* (1998); Pierre Crosson, Soil Erosion Estimates and Costs, 269 *Science* 461 (1995); David Pimentel et al, Environmental and Economic Costs of Soil Erosion and Conservation Benefits, 267 *Science* 1117 (1995); David Pimentel et al, Environmental and Economic Costs of Pesticide Use, 42 *BioScience* 750 (1992); R.A. Steiner et al, Incorporating Externality Costs in Productivity Measures: A Case Study Using U.S. Agriculture, in Vick Barnett et al (eds.), *Agricultural Sustainability: Environmental and Statistical Considerations* 209 (1995). Older sources are summarized in James Stephen Carpenter, Farm Chemicals, Soil Erosion, and Sustainable Agriculture, 13 *Stanford Environmental Law Journal* (1993).

<sup>42</sup> For an introduction to the issue of hypoxia in the Gulf, see Suzie Greenhalgh and Amanda Sauer, *Awakening the Dead Zone: An Investment of Agriculture, Water Quality, and Climate Change* (2003); and for a mainstream view on antibiotics in animal agriculture, see National Research Council, *The Use of Drugs in Food Animals: Benefits and Risks* (1999).

<sup>43</sup> National Research Council, *Air Emissions: From Animal Feeding Operations: Current Knowledge, Future Needs* (2001).

<sup>44</sup> See, for example the National Research Council, *The Future Role of Pesticides in U.S. Agriculture* (2000).



genetically modified organisms. The mainstream scientific community sees them as relatively safe, but others, including a minority of scientists, see risk in their use.<sup>45</sup>

Agricultural sustainability provides a fourth category of concern. Some scientists believe that soil erosion, the use of fossil fuels, and other aspects of conventional agriculture make it unsustainable for the long term.<sup>46</sup> Economists argue that the market recognizes such problems and adapts to solve them. For example, economists hold that land owners have plenty of incentive to keep the soil fertile, and that the market will limit fossil fuel use as it grows more scarce.<sup>47</sup> It is hard to imagine a way to measure such environmental costs in a way that will be agreed upon by all since many influential thinkers believe there is really no problem at all.

A fifth problem concerns animal welfare.<sup>48</sup> There is a tendency within the world of agriculture to complain that the public just does not understand that there are no Old McDonald's Farms out there any more, and that this failure to understand the "real" world of agriculture makes peoples susceptible to the radical arguments of the animal rights movement. The reverse may actually be true. In particular, the more the public knows about contemporary animal agriculture—confinement conditions for hogs, poultry, and dairy—the less sympathetic to agriculture it may be. Few people are vegetarians on ideological grounds, or have an adamant view regarding animal rights as such, but the vast majority of the population thinks unnecessary cruelty to animals is to be avoided. There is a reason Hoard's Dairyman magazine covers feature photos of luxuriant Ayrshire dairy cows grazing on a warm day, and not photos of manure-splattered Holsteins with cropped tails and lame feet standing on concrete as a nearby veterinarian prepares to inject the cows with BST and a farm worker prepares to flush waste into a large lagoon.

Mainstream agricultural science now acknowledges that farm animals consciously perceive physical and psychological stress, feel emotions of pleasure and displeasure, and

---

<sup>45</sup> Jane Rissler and Margaret Mellon are careful skeptics in *The Ecological Risks of Engineered Crops* (1996).

<sup>46</sup> The approach is discussed in Judith D. Soul and Jon K. Piper, *Farming in Nature's Image: An Ecological Approach to Agriculture* (1991) and Wes Jackson, *New Roots for Agriculture* (1985).

<sup>47</sup> Further, if one assumes that agricultural productivity will continue to increase indefinitely, farmers can withstand a shrinking resource base. Most studies do conclude that agricultural productivity increases between 1 and 2 percent each year. Michael A. Trueblood and Vernon W. Ruttan, *A Comparison of Multifactor Productivity Calculations of the U.S. Agricultural Sector*, 6 *Journal of Productivity Analysis* 321 (1995). From 1948 to 1994, productivity increases were apparently something less than two percent per year. Mary Ahearn et al, *Agricultural Productivity in the United States*, USDA ERS Agriculture Information Bulletin No. 74 (January 1998). Whether that would continue indefinitely could only be a matter of speculation.

<sup>48</sup> A very brief summary of this issue can be found in Geoffrey Becker, *Humane Treatment of Farm Animals: Overview and Issues*, Congressional Research Service (2005).

comfort and discomfort.<sup>49</sup> Further, farm animals probably have internally motivated behavior patterns that ought to be considered behavioral needs.

It seems likely that innovations in the animal confinement industry have significantly reduced animal welfare. Livestock farming operations have every incentive, it is often argued, to treat animals well because if the animal is under stress, it will not produce as well as it should. This made sense when the question was whether a mule or horse or cow was literally mistreated by a farmer. Mules were valuable, and poor treatment of the animal likely reduced the value and productiveness of the mule. More generally, in traditional agriculture, animals had to be kept in environments for which they had evolved. It is now possible to keep animals in environments that are contrary to their natures, but that allows the farm operator to be a low-cost producer in an economic sense.<sup>50</sup> If briefed of the scientific evidence, and able to witness confined animals personally, many people would conclude that farm animal suffering is common. The larger point is that many people now express considerable sympathy for animals in agriculture, and scientific research supports the notion that many animals on farms suffer needlessly.<sup>51</sup>

## **2. The Possible Connection Between Family Farming and the Environment**

Is a concern with the environment a good reason to support family farming? This question can be divided many ways. In several respects, we simply do not know the answer. In others, family farmers clearly protect the environment more effectively, and in some there is likely not much difference between very large operations and family farms. It is worth dividing the question into two parts.

First, to what extent do family farms at present provide environmental advantages? To the extent they do so, there is logic to support family farms. In some cases, this will seem obvious. For example, almost everyone would agree that dispersed livestock operations provide fewer odor problems than massive livestock operations. In this sense, family farms have an advantage. In other cases, the question is far more complex. For example, do smaller family-sized dairies provide more humane living conditions for dairy cattle

---

<sup>49</sup> Council for Agricultural Science and Technology (CAST), *The Well-Being of Agricultural Animals*, Task Force Report No. 130 (September 1997).

<sup>50</sup> Bernard E. Rollin, *Farm Animal Welfare: Social, Ethical and Research Issues* 9 (1995), makes this particular point and provides a survey of current animal welfare topics. A matter-of-fact discussion of the scientific approaches to animal welfare is presented in Gary P. Moberg (ed.) *Animal Stress* (1985). Other useful writing with a scientific focus includes A.F. Fraser and D.M. Broom, *Farm Animal Behaviour and Welfare* (3rd ed. 1997), and the articles collected in Bill Baumgardt and H. Glenn Gray (eds.), *Food Animal Well-Being, Conference Proceedings and Deliberations* (1993).

<sup>51</sup> Some of the more cautious support for animal well-being comes from unusual places. See Richard A. Posner, *Animal Rights: Legal, Philosophical, and Pragmatic Perspectives*, in Cass R. Sunstein and Martha C. Nussbaum (eds.), *Animal Rights: Current Debates and New Directions* (2004).

than very large dairies? Part of the difficulty here is the incredible variation of what goes on on farms. As will be discussed below, it may be useful to divide family farms into more than one type to answer this question.

One might suppose that it would be relatively easy to know whether family farms are more likely than larger farms to operate using effective conservation practices. In fact, even this relatively simple question is hard to answer. According to one recent lengthy and detailed study, larger operations are more likely to adopt conservation measures than much smaller farms—apparently an important finding.<sup>52</sup> Problems in the study are indicative, however, of the difficulty of measurement in this area. For example, farmers who planted insect- and herbicide-resistant crops were considered adopters of one of only nine conservation practices closely analyzed.<sup>53</sup> Organic production, alternatively, seems not to have been an approved conservation practice. The study is certainly interesting, and convincingly makes the point that larger operations are more likely than smaller operations to seek technical assistance and to apply newer complicated technological strategies that could benefit the environment. If I understand the study correctly, however, a farmer who dairies on pasture might rank below a nearby grain farmer who bought a global positioning system on the new combine and raises herbicide-resistant corn.<sup>54</sup> The larger point is that as an empirical matter we do not know how good a job family farmers do in protecting the environment.<sup>55</sup> Further, even if we knew and could analyze the practices of every farm in America, it would be essentially impossible to come up with an objective standard on which to evaluate the farms.

---

<sup>52</sup> Dayton Lambert, et al, Conservation-Compatible Practices and Programs: Who Participates, USDA, ERS Economic Research Report No. 14 (February 2006).

<sup>53</sup> The basis of this estimation is that such practices are thought to reduce the use of herbicides and pesticides. Some scientists remain skeptical about the environmental merits of genetically engineered crops. See Jane Rissler and Margaret Mellon, *The Ecological Risks of Engineered Crops* (1996).

<sup>54</sup> For Wendell Berry-style sustainable agriculture, the answer is to farm few acres, farm them over a long period, build up a close understanding of the farm, and farm carefully in response. For precision farming advocates, extremely precise measurements can be garnered electronically, and applied with extensive machinery. For a summary of precision farming, see National Research Council, *Precision Agriculture in the 21st Century: Geospatial and Information Technologies in Crop Management* (1997). For a critique that sees precision agriculture as largely a defensive step aimed at preserving the legitimacy of conventional technology, see Stephen Wolf and Fred Buttel, *The Political Economy of Precision Farming*, 78 *American Journal of Agricultural Economics* 1269 (1996).

<sup>55</sup> A sense of the imposing nature of making such a determination can be gained by browsing the seemingly endless inventory of practices in use in American agriculture in Merritt Padgett et al, *Production Practices for Major Crops in U.S. Agriculture, 1990-97*, USDA ERS Statistical Bulletin No. 969 (August 2000); Margriet Caswell et al, *Adoption of Agricultural Production Practices: Lessons Learned from the U.S. Department of Agriculture Area Studies Project*, USDA ERS Agricultural Economic Report No. 792 (January 2001); and in the Ralph Heimlich's printer-defeating, *Agricultural Resources and Environmental Indicators, 2003*, USDA ERS Agricultural Handbook No. 722 (February 2003).

Second, to what extent are family farmers able to adapt to policies that either require or support environmental concerns? In other words, if farms were forced to internalize their environmental costs, would family farmers be better able to adapt than larger operations? The answer to this question is even more speculative, but is important if one is interested in creating policies that support the environment and support family farms. For example, what if extremely demanding Clean Water Act rules were applied to agriculture regarding runoff from livestock facilities, or restrictions on gases and odor leaving the premises of hog operations were enforced? Family farm advocates often argue that a central cost advantage for industrial agriculture is that it pushes more environmental costs onto the rest of society. Once such costs are internalized, family farmers would be more efficient than industrial farms.

It is important to emphasize, however, that we do not really know how various entities could respond if they were forced to be more environmentally conscious. There is a long-standing tendency for industry to over-estimate the cost of environmental compliance when the regulations or legislation is being contemplated—but then manage to meet the requirements of the rule more cheaply than had been expected. For a long time, for example, the poultry industry insisted that it could not survive with using antibiotics with feed. By the fall of 2002, as the problem of drug resistance to human pathogens began to receive more attention, poultry publications were preparing for an end to their use, and concluding that it was possible.<sup>56</sup>

#### **D. Aesthetic Reasons to Support Family Farms**

Some people just like to see cows grazing in the pasture, and, based on nostalgia or aesthetics, embrace the idea that our agriculture should be based on family farms. It is sometimes argued that these amorphous reasons to support family farming are behind the public's support and that for this reason they should be abandoned. It seems likely that at least the first half of this argument is correct; public support for family farming is in part based on the vague pleasure of knowing that they continue to exist.

In Europe an aesthetic role for agriculture seems to be taken more seriously. One of the commonly discussed problems with modern agriculture in the eyes of many in Britain, for example, is the dwindling number of hedgerows in the countryside. Perhaps similarly, in much of Europe small farms are seen as a part of a national cultural heritage—not unlike the Roman ruins in Italy or any number of other cultural artifacts that are valued in more than economic terms.

In America, the best analysis of this hard-to-chronicle sympathy may come from literary and cultural writing. Leo Marx's 1964 book, *The Machine in the Garden: Technology and the Pastoral Ideal in America*, includes much that is mainly of historical interest. Marx notes, however, that in early American culture the pastoral was a repository of order, beauty, and humane society. The machine was an intruder, a dominator, and a transformer. It is not hard to imagine a pastoral ideal subtly preserved in people's minds

---

<sup>56</sup> S.E. Watkins and F.R. Jones, *Feed Antibiotics—Can We Get along Without Them*, 4(3) *Avian Advice* (2002).

by family farmers, and undermined by an industrial agriculture that barely notices if it was a long day in June or a short day in December, if it rained today, or has been dry lately.

## **VI. THE ISSUE OF EFFICIENCY**

A center of any discussion of family farms is economic efficiency. In some unavoidable sense it is true that family farming is in trouble because it is not efficient enough. At least four important questions can be raised when discussing family farm efficiency.

First, what is the character of the efficiency disadvantage for family farms? How large is the difference, and how much of the difference might be amenable to changes in family farm practices? If the disadvantage is relatively small, there would seem to be more promise for supporting family farming. Similarly, if the disadvantage is due not so much to efficiencies in production but rather the inability to buy inputs or sell goods for as favorable a price as industrial firms, and thus may tell us something about effective family farm policies.

True economies of size are likely significant in the problems for family farmers, but they may be less than is sometimes imagined. A sophisticated analysis of New York dairy farms, for example, showed that 500-cow dairies had about 60 cents per hundred weight advantage over 50-cow farms.<sup>57</sup> This accounted for only a small percentage of the overall economic advantage of the larger farms because the large farms were able to buy inputs more cheaply.

The larger point to the first question is that although pure economic efficiency will always be important, it is not the only factor people consider when making decisions; nor, sometimes, is it the main factor. As English historian E.P. Thompson put it in the 1970s, there may also be a “moral economy” that holds sway, and that ought to hold sway.<sup>58</sup>

Second, are the rules of the market in which family farmers compete unfair? Is there a sense in which economic concentration in agribusiness disadvantages family farms? One important aspect of this question concerns antitrust issues. This topic is discussed in more detail by Lynn A. Hayes and Doug O’Brien in this CLE program.

Third, how much of the efficiency difficulties faced by family farmers are due to social externalities that are absorbed by family farms but not other farms?

Fourth, supposing we wanted to pursue policies that support family farms, is it possible for a government policy to pursue an intervention in the marketplace that does not cause severe disruption to the economy and cause economic inefficiencies? One school of

---

<sup>57</sup> The difference was between 13.61 and 13.03 per hundredweight. See, for a summary of this data, Eddy LaDue et al, *Future Structure of the Dairy Industry: Historical Trends, Projections and Issues* (June 2003).

<sup>58</sup> E.P. Thompson, *The Moral Economy of the English Crowd in the Eighteenth Century*, 50 *Past & Present* 76 (1971).

thought holds that the government is so inefficient and so subject to capture by political interests that virtually no intervention is justified.<sup>59</sup>

## **VII. FOUR TYPES OF FAMILY FARM STRATEGY**

If, after thinking about family farming generally, we think there may be reason to care about family farming, it may be important to think critically about at least four types of strategies that have been advocated to save family farms. Each strategy in some way addresses the economic problems of family farming. They are reviewed here because they suggest different approaches to supporting family farms that may more easily align with some of these alternative strategies.

### **A. Sustainable Agriculture**

A significant literature now describes some of the possibilities for a more sustainable agriculture.<sup>60</sup> This writing is quite convincing that sustainable family farms would reduce most of the environmental harms described above. Further these farms would likely be smaller than the largest family farms and might therefore promote an even stronger rural society than family farming generally. Pesticides are minimized, extensive crop rotations are used, cows and hogs graze in the pastures, and chickens scratch around for worms.

A good example of a sustainable alternative is the intensive rotational grazing for dairy farms. Like much of sustainable agriculture, this approach was largely the product of farmers who ignored the advice of the agricultural establishment about how to make a living from dairy cows. Grazing dairies tend to be smaller than confinement operations, and the environmental performance of these farms is admirable.<sup>61</sup> The trick for sustainable farms is to make money. Several research reports show that some sustainable strategies, while absorbing lower yields or revenue, more than make up for the deficit by incurring fewer costs. Several studies suggest, for example, that intensively grazed dairies can be profitable. Their milk production is lower than confinement operations, but so are their expenses. In general, however, it is hard to imagine that without some added revenue due to marketing the sustainable character of the farm that these efforts will prove to be as profitable as is sometimes hoped.

---

<sup>59</sup> For a version of this thinking applied to agriculture, see Pasour and Rucker, *Plowshares and Pork Barrels*.

<sup>60</sup> A good starting point is National Research Council, *Alternative Agriculture* (1993). A series of publications summarizes well the conventional and more sustainable methods for raising livestock. See Beth Nelson (ed.), *Poultry Your Way: A Guide to Alternatives for the Upper Midwest* (2005); Debra Elias Morse and Beth Nelson (eds.), *Hogs Your Way: Choosing a Hog Production System in the Upper Midwest* (2005). A more economic view is presented by John E. Ikerd, *Sustainable Agriculture: An Alternative Model for Future Pork Producers*, in Jeffrey S. Royer and Richard T. Rogers (eds.), *The Industrialization of Agriculture: Vertical Coordination in the U.S. Food System* (1998).

<sup>61</sup> A summary of the research on rotational grazing can be found at Mathew J. Mariola et al, *The Societal Implications of Management Intensive Grazing: An Annotated Bibliography* (January 2005).

## **B. Direct Marketing**

Direct marketing through roadside stands and farmers' markets have existed for a long time. Their use has expanded greatly the last two decades, however. In addition, other forms of direct marketing, such as community supported farms, are now popular. The premise for direct marketing is not so much that a middleman is somehow eliminated—everything the middleman did is done by the farmer and it is time-consuming and costly. Consumers are willing to pay a premium for locally grown food raised by the person standing in front of them. The trick for direct marketing is that a farmer, or someone in the farmer's family, needs to be a salesperson, and salesmanship is harder than it looks. Further, direct marketing is most possible for farmers who live near large population areas. Direct marketing therefore promotes family farming by making it more profitable.<sup>62</sup>

New agricultural markets are discussed in more detail by Jill Krueger and Neil Hamilton in this CLE program.

## **C. Value Added Processing**

Value added processing seeks to make family farms economically viable by taking on more of the processing of farm products that are typically performed by agribusinesses. In some cases this processing can promote the product as special because the producers are family farmers, or use sustainable methods, and so forth. Some of these efforts are accomplished through cooperatives. There are some notable successes in these efforts, although running a processing plant of any kind requires considerable expertise and capital.<sup>63</sup>

These efforts raise other concerns depending on the reasons one originally had for supporting family farms. Some of the value added processing efforts require substantial capital and may involve larger than family farms. It is not clear that smaller efforts can be as successful. A second issue, now often discussed, is that if one of the reasons we care about family farms is justice for the farmer or the character of rural society, the processing efforts themselves need to be scrutinized closely. If the new farmer-owned pork processing plant adopts the same methods and labor practices as every other plant, the effort may not be as appealing for some family farm supporters.

## **D. Organic Production**

Organic farmers often have smaller operations than do non-organic farms. The economic appeal of organics is that farmers receive a significant premium for meeting organic

---

<sup>62</sup> Thomas A. Lyson discusses some of these alternatives in the context of remaking society more generally in *Civic Agriculture: Reconnecting Farm, Food, and Community* (2004).

<sup>63</sup> Conventional wisdom among economists is that concentration in meat packing is due to cost efficiencies, and that packing is generally competitive and without extra profit. See Azzeddine M. Azzam and John R. Schroeter, *The Tradeoff Between Oligopsony Power and Cost Efficiency in Horizontal Consolidation: An Example of Beef Packing*, 77 *American Journal of Agricultural Economics* 825 (1995). If that conclusion is true, value added processing by farmers, at least for meat, faces tough competition.

production standards. The market for organics is growing rapidly, and the price premiums have largely remained strong. The extent to which organic farming avoids external environmental costs is generally thought to be significant, although there are some doubters with some fair criticisms.<sup>64</sup> Nothing in organic production requires family-based production, but as a strategy for promoting family farming organics has thus far proved helpful.

## **VIII. FOUR POLICIES TO PROMOTE FAMILY FARMING**

Dozens of policies have been promoted on the basis that they will help family farms. The President of the United States, for example, picked a repeal of the Estate Tax as a family farm protection strategy. There are many, many others. The ones discussed here share two common characteristics. First, they do not require spending more money on farm programs. They assume instead that farm program spending remains close to what it has been or is reduced.<sup>65</sup> Second, these strategies do not take the view that the best way to support family farming is to promote the interests of agriculture generally. Often such strategies directly harm family farmers, but even when they do not, these policies all assume that it is important to be precise in our targeting of policies for family farming.

### **A. Target Farm Programs to Family Farmers**

USDA spends billions of dollars each year in farm programs. They generally take the form of commodity programs, conservation programs, and disaster programs. Each should be more targeted to family farmers. It is commonly observed farm programs historically provide money to more prosperous farms. As a 2006 USDA ERS study shows, this continues to be the case.<sup>66</sup>

---

<sup>64</sup> Leslie A. Durum explains the scientific and social background of organic production in *Good Growing: Why Organic Farming Works* (2005). Julie Guthman questions some of the premises on which organics is based in *Agrarian Dreams: The Paradox of Organic Farming in California* (2004).

<sup>65</sup> Some critics argue that farm programs should be abolished entirely. Luther Tweeten makes this point in various publications. See, for example, *Farm Commodity Programs: Essential Safety Net or Corporate Welfare?* (2001). Defenders of farm programs generally avoid the specifics of this analysis and instead go straight to the political realm where farm programs have been successful. There are, in fact, some reasons for farm programs that credibly withstand economist scrutiny. For example, for reasons that are still poorly understood, the farm economy as a whole continues to operate at a loss compared with the rest of the economy. Farm programs arguably help to balance those scales. In addition, for an economist food is just a commodity, not really different in its essential aspects from tennis shoes. For the public, however, there may be a sense that a prospering farm economy helps to insure that the country can, in times of a dire crisis, feed itself, and that thus makes food and farmers different from the rest of the economy. Finally, for the public as a whole, it may be that the notion of family farming itself justifies a farm policy. In other words, for the public, farm policy may be family farming policy.

<sup>66</sup> James C. Donald, Robert Hoppe, and David Banker, *Growing Farm Size and the Distribution of Farm Payments*, USDA, ERS, Economic Brief, No. 6 (March 2006). The allocation of these funds continues to be a basis of criticism of the programs generally. For a strong form of this



There are few technical questions of how to go about this.<sup>67</sup> Payment limitation rules already apply in many programs. They simply need to be tightened and applied to all programs. The result would be a significant increase in benefits for smaller producers.<sup>68</sup>

There are at least two concerns regarding targeting federal programs that should be taken seriously. By placing strict payment limitations on federal conservation programs, that spending may accomplish less in terms of environmental benefit per dollar spent. In other words, to the extent that a conservation program is designed to target conservation problems that are most serious, a purely conservation-based method of allocating the funds might result in spending large amounts on a few farms. Assuming that USDA conservation efforts are skilled at identifying the neediest conservation problems, shifting that money to another farm might reduce the environmental gains from the spending.<sup>69</sup>

Second, at present commodity programs require certain conservation actions on the part of farmers. They involve mainly efforts to limit soil erosion and protect wetlands. It is possible that if payment limitations drop too low, some farmers may drop out of the federal programs and quit meeting the conservation compliance now required.<sup>70</sup> This is a difficult problem, and none of the possible answers is very appealing. One could simply wait to see if farmers started to drop out in significant numbers, and see if they also abandoned their conservation measures. If this does not actually happen, there would be no significant harm. A second alternative would be to simply require conservation compliance for all farmers. This would be very unpopular. A third alternative would be to accept this result as a cost of tightening the program. Here the question would be the

---

criticism see Clark Williams-Derry and Ken Cook, *Green Acre\$: How Taxpayers are Subsidizing the Demise of the Family Farm* (2000); and more recently other Environmental Working Group discussions, including “\$1.5 Billion Bonus Subsidy in Emergency Spending Bill is Unfair, Wasteful Response to Agriculture’s Increased Energy Costs” (April 26, 2006). It has drawn attention from legal scholars as well. Christopher R. Kelley, *Rethinking the Equities of Federal Farm Programs*, 14 *Northern Illinois University Law Review* 659 (1994).

<sup>67</sup> Actually, maybe more than a few, but they do seem manageable. See Christopher R. Kelley, *Introduction to Federal Farm Program Payment Limitation and Payment Eligibility Law*, National Agricultural Law Center (June 2002).

<sup>68</sup> See the table of recipient data in General Accounting Office, John W. Harman, *Farm Programs: Distribution of USDA Support Payments*, GAO/T-RCED-95-133 (1995). To pick just one year as an example, in 1993 a fully enforced payment limitation of \$50,000 per farm would have freed up roughly ten percent more money for the rest of the recipients of farm programs. It should be noted that some of the producers receiving fewer funds under this program would be family farmers by the definition used here.

<sup>69</sup> According to some, the most efficient use of a conservation program might be to spend billions to allow large CAFOS to meet Clean Water Act requirements. The family farm viewpoint would be that the CAFO should either pay for its own compliance or shut down.

<sup>70</sup> Most farmers have met the conservation compliance requirements with relatively inexpensive practice changes. It appears that conservation compliance reduces both wind and water erosion. Roger Claassen et al, *Environmental Compliance in U.S. Agricultural Policy: Past Performance and Future Potential*, USDA ERS Agricultural Economics Report No. 832 (June 2004).

extent to which conservation compliance has actually helped the environment. There are conflicting opinions.

Targeting can mean more than payment limitations. In addition, conservation programs can more effectively promote practices that are not significantly capital intensive.

## **B. Redirect Agricultural Research**

Agricultural research is almost universally thought to be an effective public investment in the sense that a dollar spent on research increases farm productivity by much more than a dollar.<sup>71</sup> One does not need to accept some of the more radical critiques of the apparent malleability of science as an intellectual discipline to believe that scientists tend to find answers to the problems that are the targets of their research. There is no reason why publicly funded agriculture could not dramatically increase its focus on the sort of problems that make family farmers inefficient. Regarding only animal agriculture, one might ask, for example, what poultry genetics are best for raising birds largely on grass? What is the most efficient way to finish beef cattle on something other than a large feedlot? Both of these questions carry with them a set of assumptions about the type of technological and scientific advances that would be best for society. This does not, however, make them unique. Current research addressing the best technological techniques for containing odor within very large lagoons, and how to alter feed and hog metabolism to limit the odor that is produced within those lagoons are no less based on ideological assumptions.<sup>72</sup> The difference in the two sets of questions is the target itself. One assumes that livestock should be and will be raised on large confinement operations, and one does not. To the extent that research is publicly funded, and we care about family farming, it makes sense to target research to solve problems faced disproportionately by family farmers, and leave research that allows industrial agriculture to operate more efficiently to the ever-increasing private market. There are many areas where the private market has little incentive to conduct research.

---

<sup>71</sup> Publicly funded agricultural research aimed at increasing productivity appears to produce an annual rate of return of between 20 percent and 60 percent. A common assumption is that the return is at least 35 percent. For a summary of research on the returns to agricultural science research, see Keith Fuglie et al, *Agricultural Research and Development: Public and Private Investments Under Alternative Markets and Institutions*, USDA ERS Agricultural Economics Report No. 735, at 24-33, 58-63 (May 1996). Other standard work on agricultural research and public policy includes Vernon Ruttan and C.E. Pray (eds.), *Policy for Agricultural Research* (1987); Lawrence Busch and William Lacy, *Science, Agriculture, and the Politics of Research* (1983); and Julin Alston and Philip Pardey, *Making Science Pay: The Economics of Agricultural R & D Policy* (1996). An accessible summary of agricultural productivity and the role of research and extension is Mary Ahearn et al, *Agricultural Productivity in the United States*, USDA ERS Agriculture Information Bulletin No. 740 (January 1998).

<sup>72</sup> On diet and feed additives to reduce odor, see Council for Agricultural Science and Technology (CAST), *Animal Diet Modification to Decrease the Potential for Nitrogen and Phosphorous Pollution*, Issue Paper 21 (July 22). On research on tanks and lagoon covers and other highly technological fixes to manage manure, see L.D. Jacobson et al, *Generic Environmental Impact Statement on Animal Agriculture: A Summary of the Literature Related to Air Quality and Odor* (1999).

Remarkably, some analysis of agricultural scientific research concludes that the effects of research continue on for thirty years. Research done years ago that tends to benefit larger farms continues to create the basis for economic efficiency that is sometimes assumed to be natural or inevitable. Part of the reason sustainable agriculture practices sometimes seem so antiquated is that they do, in part, involve the rejection of practices developed by scientists in the last few decades that neglect environmental and family farm concerns. It has literally been decades since USDA-sponsored research discussed the best way to house free-range poultry. Further, a nationwide agricultural extension system that could make the research results available to farmers already exists.<sup>73</sup> Agricultural research may be the most underrated reason family farmers are in their present predicament, and may be the best long-term answer for their survival.<sup>74</sup>

### C. The Environmental Lynchpin

As noted above, there is no decisive proof that there is something innate about family farms that helps to promote the environment. There is enough evidence, however, to commit family farming policy to an agricultural policy that vigorously protects the environment and that takes a thoughtful but comprehensive view of environmental problems.

At least three general directions are possible. First, USDA could expand conservation compliance for its farm program recipients.<sup>75</sup> A lengthy USDA Economic Research Service study on conservation compliance found that existing program payments have a potential to leverage a broader set of agricultural conservation and environmental gains.<sup>76</sup> The risk here is that recipients of the program funds will drop out if the conservation requirements become too strict.

Second, USDA could expand programs that reward conservation. The newer Conservation Security Program is a viable model. As long as we assume that our programs will not spend more than is already allocated to agriculture, this proposal means that we would cut either disaster or commodity programs—or essentially combine the two.<sup>77</sup> There is also an array of complicated questions to deal with when considering such

---

<sup>73</sup> The rate of return for public extension efforts is thought by economists to be hard to measure, but they still think it significant, at perhaps 20 to 40 percent per year. Ahearn et al, *Agricultural Productivity*, at 12.

<sup>74</sup> A 2002 National Academy of Sciences report provides an outline of how to begin this transition. The report also explicitly addresses the failure of research and extension to support nonwhite farmers. National Research Council, *Publicly Funded Agricultural Research and the Changing Structure of U.S. Agriculture* (2002).

<sup>75</sup> This possibility is explored briefly in Carl Zulaug et al, *Conservation Compliance: The Once and Future Farm Environmental Policy Tool, Choices* (4th Quarter, 2003).

<sup>76</sup> Roger Claassen et al, *Environmental Compliance in U.S. Agricultural Policy: Past Performance and Future Potential*, USDA ERS Agricultural Economic Report No. 832, at 26-36 (June 2004).

<sup>77</sup> Roger Claassen and Mitch Morehart, *Greening Income Support and Supporting Green*, USDA ERS Economic Brief No. 1 (March 2006).

an expansion. Should the funds be designed to change behavior, or to reward farmers who already act in the way one would want without the financial incentive?<sup>78</sup> Further, various form of financial incentives are possible for protection of the environment.<sup>79</sup> With both types of effort it is important to enforce the rules properly.<sup>80</sup>

Third, the government could simply decide that certain types of pollution or practices are not permissible.<sup>81</sup> This could come about through any number of means: outcome-based rules that limit the level of odor that can leave the farm, or nutrients that wash away from it; required techniques or banned practices; or the use of traditional tort law to force farms to internalize their environmental costs—or some combination. It perhaps goes without saying that this approach would not be popular with farmers.

From a family farming perspective, the logic of such an effort can be captured by taking the hog industry as an example. Twenty years ago most hogs were raised from farrow to finish on a farm that had both crops and livestock. The feed for the hogs was grown largely on the farm. Since 1994 the number of hog operations in the country has dropped from 200,000 to 80,000, even though the total number of hogs remained roughly the same. The largest hog operations, those with 5,000 or more sows, had half of the hogs in the country by 2001. From an environmental point, this transition matters for several reasons, but one in particular concerns the application of manure to farmland.<sup>82</sup> Smaller hog farms average less than two hogs per acre on the farm. The larger farms have more than fifteen hogs per acre. The largest farms have tended to apply the manure to nearby farmland, and to do so at a level that cannot be absorbed by the land. Thus, there is runoff of manure and then water pollution. A regulatory answer to this problem might simply set limits on the application of manure to fields. This would force all hog farms to internalize at least part of the environmental cost of handling the manure produced on the farm. For a smaller operation, this rule would likely be manageable. The problem for the largest

---

<sup>78</sup> Marca Weinberg and Roger Claassen, *Rewarding Farm Practices Versus Environmental Performance*, USDA ERS Economic Brief No. 5 (March 2006).

<sup>79</sup> For a detailed description of some of the alternatives for water, see Claassen et al, *Environmental Compliance*, at 37-55. Further helpful discussion on designing programs can be found in Andrea Cattaneo et al, *Balancing The Multiple Objectives of Conservation Programs*, USDA ERS, Economic Research Report No. 19 (May 2006) and LeRoy Hansen and Daniel Hellerstein, *Better Targeting, Better Outcomes*, USDA ERS Economic Brief No. 2 (March 2006).

<sup>80</sup> A GAO report doubts USDA's claim that 98 percent of the nation's cropland subject to conservation compliance requirements was meeting the conservation compliance mandate. General Accounting Office, *Agricultural Conservation: USDA Needs to Better Ensure Protection of Highly Erodible Cropland and Wetlands*, GAO-03-418 (April 2003).

<sup>81</sup> For a detailed description of some of the required standards in the context of water, see Claassen et al, *Environmental Compliance*, at 59-68.

<sup>82</sup> This general problem is described in Marc Ribaldo, *Managing Manure: New Clean Water Act Regulations Create Imperative for Livestock Producers*, *Amber Waves* (February 2003). Manure application to land is discussed in detail in Marc Ribaldo et al, *Manure Management for Water Quality: Costs to Animal Feeding Operations of Applying Manure Nutrients to Land*, USDA ERS Agricultural Economic Report No. 824 (June 2003).

operations is that applying manure over a broader area is very expensive because manure is heavy, and because there is a large volume of it. By legally requiring all hog operations to internalize the environmental cost of putting hog manure on fields, a policy might have the indirect effect of making family-sized hog farms much more competitive with the larger operations.

Without moving into great detail, but sticking for a moment with livestock, experts who have reviewed livestock production technologies—well over two hundred by one count—indicate that methods exist that would allow control of water and odor problems at livestock facilities.<sup>83</sup> The problem is that this level of control is expensive. The question is, how expensive? If these operations were required to take such steps, and were successful, the pollution problems would be limited, and the cost of production difference between large- and family-sized operations would draw closer.<sup>84</sup>

A number of caveats need to be emphasized with such an approach. For one, it is important that such regulations be well thought through. In particular, the science of the rule needs to be persuasive. In the above case the crucial questions are the amount of phosphorous and nitrogen that can be applied to a field without unacceptable runoff.<sup>85</sup>

In general, there is a good argument to be made that agriculture has successfully evaded environmental regulation—especially in comparison to environmental harms caused by farming. At present, many agricultural businesses are able to pollute at a very large scale without any consequence. Animal feeding operations are probably the most notable example of this. Limits on this type of environmental problem are not unavailable.

#### **D. Civil Rights Programs**

A different section of this CLE program, presented by Jessica A. Shoemaker and Thomas W. Mitchell, discusses civil rights issues. To the extent that our sympathy for family farmers is derived from a concern for equality and justice, civil rights must play a central

---

<sup>83</sup> Council for Agricultural Science and Technology (CAST), Integrated Animal Waste Management, Task Force Report No. 128 (November 1996).

<sup>84</sup> Critics of such an approach often suggest that large operations will be better able to raise the capital to meet stricter environmental rules, and that smaller operations could have a difficult time adjusting. This seems especially likely for smaller operations that have sought to adopt a form of industrialized livestock production. For hog operations see William D. McBride and Nigel Key, Economic and Structural Relationships in U.S. Hog Production, USDA ERS Agricultural Economic Report No. 818 (February 2003). In general, industry tends to overestimate the compliance costs of environmental restrictions. Frank Ackerman, The Unbearable Lightness of Regulatory Costs, Global Development and Environment Institute Working Paper No. 06-02 (February 2006). Perhaps the costs to meet environmental concerns would be less for industrialized farms than anyone now imagines.

<sup>85</sup> The practical aspects of various alternatives for water are discussed in Marc O. Ribaud et al, Economics of Water Quality Protection from Nonpoint Sources: Theory and Practice, USDA ERS Agricultural Economic Report No. 782 (November 1999).

role in actions taken on behalf of family farmers. Certainly a case can be made for additional attention in this area.<sup>86</sup>

## IX. CONCLUSION

When Adam delved and Eve span  
Who was then a gentleman?<sup>87</sup>

Many aspects of family farming are appealing. Despite all that is written about agriculture and all that we know about farming, the continued survival of family-based agriculture is something of a puzzle. It may be that as long as farms are forced to rely on nature, its rhythms, and its uncertainty, family farmers will be able to compete with industrial alternatives.<sup>88</sup> Where farming literally can be turned into a factory, a family has little chance against a corporation. Along with the progress of scientific and technical innovation in agriculture, however, often come social and environmental costs. How to calculate these costs, or even what to include in their accounting, is inevitably controversial. To the extent that the replacement of agriculture's reliance on nature with a nature-less set of technologies and industrial methods is itself the key element that makes harmful externalities inevitable, it may well be that industrial agriculture can never be a more efficient way to raise food and fiber than family farming. In the meantime, to the extent we have federal farm programs and publicly supported agricultural research, there is certainly a case for targeting these efforts toward family farming. In the long term, the fate of family farming may well be entwined with how the society comes to think and act on environmental issues.

---

<sup>86</sup> Spencer D. Wood, and Jess Gilbert, *Returning African American Farmers to the Land: Recent Trends and a Policy Rationale*, *The Review of Black Political Economy* (Spring 2000).

<sup>87</sup> John Ball, quoted in Rodney Hill, *Bond Men Made Free: Medieval Peasant Movement and the English Rising of 1381*, at 211-15 (1973).

<sup>88</sup> A treatise on the economics of agriculture from the 1920s makes this point:

The most fundamental [reason] is the peculiar seasonal nature of agricultural production and the consequent lack of continuous operations. Almost every line of endeavor on the farm must depend either upon the swing of the seasons or upon the periodic nature of some biological process. There are seed time and harvest with their specific tasks which, in the main, are of short duration. There is also the case of livestock at the different stages of development. In no case can a man be put to a single specific task and be kept at it uninterruptedly for a month or a year as is true in the factory.

C.L. Holmes, *Economics of Farm Organization and Management* 40-41 (1928). For two efforts to understand the extent to which a reliance on nature shapes the agriculture, but that view these influences from quite different perspectives, see Douglas W. Allen and Dean Lueck, *The Nature of the Farm: Contracts, Risk and Organization in Agriculture* (2002); and Susan Mann and James Dickinson, *Obstacles to the Creation of a Capitalist Agriculture*, 5 *Journal of Peasant Studies* 466 (1978).