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# Can the Family Farm Survive?

*Report of Seminar Sponsored by  
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## CAN THE FAMILY FARM SURVIVE?

When the survivability of the family farm was selected as the topic for the 1978 UMC-Perry Foundation seminar on agricultural marketing and policy, doubts were held as to whether it would bring forth either new ideas or many persons in attendance.

The fears proved groundless. As the papers presented here will show, various aspects of the subject were treated perceptively. Some differences of opinion also show through -- a stimulant to discussion.

Attendance at this sixth seminar was the largest ever. Apparently, a great many persons close to agriculture are concerned for the "structure" agriculture will take in the future.

UMC-Perry Foundation seminars are held under terms of an agreement between the Perry Foundation and the University of Missouri. The object of the seminars is "to promote the development of information relative to the socio-economic forces that bear on the welfare of family operated farms and ranches, and upon the income to those operators; to disseminate that information widely among agricultural leaders of the nation; and to provide a forum . . . for discussion . . . by leaders of organizations, institutions, and legislators."

The Perry Foundation was established in Robstown, Texas in 1946 as a memorial to members of the Perry family who did much for the agriculture of South Texas. It both sponsors and carries on research in agriculture. The Foundation is dedicated to working toward a prosperous agriculture and the welfare of the people on the land.

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CAN THE FAMILY FARM SURVIVE?

The family farm is a part of our history and our culture. It has been a special part of the American scene since the beginning of the country. As a result, it has been attached to the American mind as a symbol of the family farm. This attachment has been a part of our national consciousness. I have no doubt that you, too, have a special feeling for the family farm.

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November 9-10, 1978  
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We at the University of Missouri-Columbia are pleased to have hosted this seminar. The seminar was held on November 9-10, 1978, in Columbia, Missouri. The seminar was held on November 9-10, 1978, in Columbia, Missouri.

Workers in this industry have gained a great deal of respect. The U. S. Congress is one of the most important bodies in the world. The U. S. Congress is one of the most important bodies in the world. The U. S. Congress is one of the most important bodies in the world.

Harold F. Breimyer  
Perry Foundation Professor of Agricultural  
Economics and Extension Economist

Through two centuries of history the citizens of our nation have had a special appreciation for agriculture and the countryside. An almost idyllic image has attached to the yeoman farmer as a person and the family farm as an institution. This attitude has been called "agricultural fundamentalism." It has its critics, as does any creed, but it remains deeply held.

The attitude may prevail as widely in town and city as in the rural community. Some years ago the historian Whitney Griswold capsuled the national sentiment in words that still may be accurate. He suggested that an urban industrial people caught in a swirl of commerce and big business see in the family farm the epitome of their failed hopes. "The family farm . . . is the daydream of city-dwellers," he wrote. "For them it stands for democracy in its purest and most classic form. For millions of Americans it represents a better world, past but not quite lost . . . ."

It is not the object of this seminar, however, to examine the pros and cons of agricultural fundamentalism. Manifestly, the favorable light in which agriculture is viewed is a positive factor in the political process of making agricultural policy. I open in these terms for a different reason. It is to remind that the traditional structure of U. S. agriculture, known as the family farm, is rooted in a special appreciation that society does not attach to most of its economic institutions. Likewise, I suggest that in the final analysis the future structure of agriculture will be determined more by the philosophy of what kind of agriculture and rural community our citizens want, than on purely economic grounds.

In brief pre-summary, the family farm is in some jeopardy. Evidence shows a trend toward a dual agriculture of many small farms and a comparatively few large ones. The trend is explained, in my judgment, not so much by shortcomings in the performance of the family farm as by financial pressures. These are attributed, in turn, less to prices of farm products than to the scramble for ownership of farmland, aided by tax laws, that lifts land values out of the reach of younger operating farmers. Unless younger farmers can enter, family farming cannot be kept as our rural tradition.

The family farm is not yet in crisis. This fact makes it harder to attract attention to political issues relating to it. Politically, the usual practice is to mobilize on matters of crisis urgency, and postpone others.

On the other hand, it is likely that sometime in the future a crisis alarm will be sounded about what will have happened. The irony is that it will then be too late to do much about it. Moreover, the trend seems to be moving faster. The day of reckoning may not be too far distant. I have said that the 1980s will be the decade of decision.

We at the University of Missouri-Columbia have joined extension economists of North Central states in an educational program called "Who will control U. S. agriculture?" Throughout, we have said that the answer to the question will be determined by policy action. It is not a case where "natural market forces" will take over, if only because many of the forces at work are neither natural nor market.

Workers in this vineyard have gained allies recently. The U. S. Congress is one. The Food and Agriculture Act of 1977 contains more than the usual dedication to the family farm. To be sure, every farm law enacted since 1933 has had its liturgy. In the original 1933 law the words had dramatic realism and concrete meaning. Visible to everyone in that awful year was the banks' and insurance companies' foreclosure and takeover of farm property. The 1933 legislation was intended to put farmland in the

hands of farmers instead of insurance executives.

Laws after World War II lapsed into ritual. The 1977 law is notably stronger. It tells the Secretary of Agriculture to investigate trends in the structure of agriculture and to report back on how farm programs bear on structure. The latter is the subject Dr. Paarlberg will address at this conference.

Howard Hjort, chief economist for the U. S. Department of Agriculture, has testified in firm language about the nature and significance of emerging trends in structure. He suggests as "perhaps the single most important structural change" in agriculture today, "the increasing frequency of the separation of ownership from operation. . . ."<sup>1</sup> He notes how the trend bears on income of landowners and operators and on local communities -- topics that also will be discussed here at this seminar.

Mr. Hjort made his statement during testimony regarding foreign purchase of U. S. farmland. The surging speculative value of U. S. farmland, which has virtually put it out of reach of young farmers possessed of eagerness and ability but little money, has attracted various investment buyers. But only when foreigners "got into the act" was an alarm sounded.<sup>2</sup>

### How to Address the Subject

Because the subject of this seminar is so important I will take a moment to reflect on how we look at it.

Differences of opinion about farm policy turn so often on the way individuals see an issue. Thought habits vary, as do the criteria for a judgment. Everyone is affected by his personal economic situation. No matter how hard we try to be public spirited and perceive the public interest, our self-concerns interfere.

So much is wrapped around the innocent sounding subject of the structure of agriculture. What are the basic issues? Are they the dreams and aspirations of farm people? Their aggressions too, some of which can be pretty selfish? Is our first concern how we use and conserve our resources? Is it the food supply?

Do "basics" include the fabric of the rural community? Rural America has historically rested heavily on a family farm agriculture.

The class struggle is involved. The most dramatic feature of family farming is that it dampens the class struggle as the "farmer" is at once landowner, manager, financier, and worker. But this cannot be carried too far, for family farming tones down only the vertical clash among those four roles. What we have seen recently are widening class divisions horizontally, as tiny, small, moderate, big, and very big operations compete.

We can expect some of these questions to be addressed by the noontime panelists.

I insert these philosophical remarks because of the sharp impression a bulletin devoted to the world food problem made on me. The author, a businessman named Werner Erhard, says it is time to end starvation on this planet, but he almost disregards technical aspects. He insists that "the first step" is to consider one's system of analysis and after that "our own nature and the effect of that nature

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<sup>1</sup> Howard W. Hjort, "Statement . . . before the House Agriculture Committee, Subcommittee on Family Farms, Rural Development and Special Studies, June 20, 1978." U. S. Department of Agriculture 1755-78.

<sup>2</sup> We could muse about how much attention a situation can get when foreigners are detected in it. A little chauvenism may be involved.

on our perceptions and understanding . . . ."3

In a sense the first question about whether the family farm can survive is whether anyone cares. Maybe it's the final question too.

#### The Terms of Access to Land

Among the several possible approaches to the subject of this seminar, the one I have chosen is the terms of access to that unique resource, productive farmland.

Land is manifestly an essential social resource. It is also singularly a resource of agriculture.

No people can survive without productive land. This has always been so, and in all likelihood will remain so. We hear a lot about how industrial our economy has become, and even about how industrial an agriculture we now have. Yet not all the magic of biology and chemistry can let us escape our dependence on land.

Each generation of human beings, aware that it must subsist on the land resource it has inherited, has invariably been circumspect about setting terms for access to it.<sup>4</sup> "Terms of access" include who will own the land and farm it, under what arrangements, and for what distribution of reward (returns).

Public interest in our land system interweaves our national history. The story has been told often about how urgently our forefathers wanted to make a fresh start. They sought release from the rigid bonds of European feudalism. Except on Southern plantations and in some Spanish areas, the servile status of those who work on land was to be ended. In addition, and significantly for our time, hereditary landholding was weakened by abolishing primogeniture and entailment. Holding real property was to be in fee simple or freehold. This compromised the interest of the yeoman farmer with the residual interest of society. As Mulsow notes in a recent article, society retained "the four rights of escheat, eminent domain, taxation, and the police power."<sup>5</sup>

Our system may have reflected a resistance to feudalism but it was made easy by the seemingly limitless expanse of productive farmland lying in wait for development.<sup>6</sup> Indeed, not only was land abundant but pioneers found it better as they ventured westward. It kept getting better until they reached the Missouri, Missourians and Iowans tell us.

<sup>3</sup> Nothing is so Powerful as an Idea Whose Time has Come, The Hunger Project, San Francisco, 1977, p. 7.

<sup>4</sup> Historically, land has more often been subject to conquest than to orderly commercial transactions. In my Farm Policy: 13 Essays published last year I wrote,

Land has been searched for, by restless nomads and aggressive explorers.

Land has been fought over, a thousand thousand times.

Land has been appropriated by the strong to control and exploit the weak.

Land has been a promise of opportunity but also, far too often, a seat of bondage.

Land has made some people rich. Its unavailability has impoverished more.

<sup>5</sup> Thomas A. Mulsow, "Allodialism -- the Forgotten Concept," The Forum, Association of Social Economics, Spring 1978, p. 45.

<sup>6</sup> Citations on this theme are found in my Individual Freedom and the Economic Organization of Agriculture, University of Illinois Press, 1965, pp. 46-51.

Thomas Jefferson is cited most often as the philosophical spokesman for a family farm agriculture. His line of argument is well known. He put much store in the enhanced status of the farm operator, together with its meaning to the rural community and the political system. An interesting question is whether diffusion of political power was seen as a merit of a dispersed agriculture. Probably so, for the oppression imposed by feudal lords was fresh in new Americans' minds.

Over the long span of human history the record is clear that a small unit proprietary agriculture made its appearance a number of times yet seldom persisted. It often came into being with the emergence of nations. It was superseded later. This was true in ancient Greece and Rome. It may be logical or paradoxical but the fact is that yeoman farming lasts best where it is not very profitable. Only in instances where farming yields a surplus above minimum subsistence is land coveted. (During the years of my youth in Ohio no one worried about tenancy or foreclosures in the state's poor southeastern hills. Neither landlord nor lender wanted that land.)

To sum this historical note, our U. S. tradition of a dispersed proprietary agriculture, often called the family farm, came about through a combination of deliberate choice and favorable conditions. So it has been at various times in history. That kind of agriculture has seldom persisted; and it is most vulnerable not when it is unprofitable but when it is profitable enough to attract competitive systems.

### Roles, Returns, and Recipients

At this point I turn to the question of how to define the various kinds of organizational structure for agriculture. I consider as most important: (1) who does what in farming and for what return; (2) the connection between farming and its suppliers and outlets; (3) size. Notes will follow on the kinds of farming systems we have, and criteria for making judgments about them. Finally I will offer a few personal guesses about where we are headed.

The table below outlines my way of looking at the basic economics of who does what in agriculture and for what return.

Only three factors of production (roles) are listed, instead of the four that are found in college textbooks in economics. In general, management in farming usually includes bearing a considerable part of the production and price risk. Therefore management and risk bearing are combined. The other two factors are labor and land-holding.<sup>7</sup>

Outline of Roles in Farming Operations  
and the Returns Associated with Them

Role ("Factor of production")	Return	
	from production	from speculative investment
Labor	labor income	
Management, including supplying of capital funds and risk bearing <sup>1</sup>	Management income in- cluding economic profits	
Landowning	Rent	Capital gains (or losses)

<sup>1</sup> Combining of management with bearing at least a substantial part of production and price risks is fairly standard practice.

<sup>7</sup> The commercial inputs that are now so important in agriculture (machinery, fuel, fertilizer, etc.) are omitted from the table because they are resources of non-farm origin.



Each of the three roles or factors generates its own kind of income. Labor and management incomes are similar; they are a return from farming operations. Rent is different. "Pure" rent is a return to possession of land alone. To be sure, some landlords participate in management and risk bearing and therefore receive some management income in addition to rent itself. But the fact remains that pure or net rent is a return just for possessing land. It does not arise from productive effort on the part of the landowner.

Until recent years the third column in the table would probably not be shown. The value of land for farming purposes has sometimes increased fairly steadily. In other periods it has gone in the other direction. During my youth the bottom dropped out of the land market. As everyone knows, during the last 45 years land prices have moved persistently upward. The rate of increase has picked up so much speed during the 1970s that appreciation of capital assets in agriculture has become a major category of return. The fact that capital gains do not convert into cash flow currently does not keep them from being significant. Large capital gains in recent years underlie the tendency toward separation of ownership from farming operations about which Howard Hjort is quoted on page

Because the differences in roles, and the returns to each of them, bear so sensitively on the subject of this seminar I will elaborate a bit more. The language is value-loaded and makes some people bristle, but in a real sense the differences in roles and returns are what the whole subject is about.

As noted above, returns from labor and management (including risk-bearing) are much alike. They are returns from farming operations. Language sometimes applied to them is that they are earned income, meaning income earned directly from the farming operations. If markets work well the return to labor and management at any given time reflects productivity.

Yet in another and almost ironic sense, over a long period of time the level of income earned from labor and management in farming is not influenced so much by price-cost relationships in agriculture as by economic opportunity in the economy. In the long run, whether or not the farm operator gets a good return from the operating part of farming depends mainly on whether job opportunities are available outside farming. I have never subscribed to the once-popular notion that the solution to the farm problem was to shove a maximum number of farmers off farms and into cities. It nevertheless is true that the level of returns to the actual farming operation, including wages paid hired workers, depends critically on the state of the economy and availability of employment elsewhere.

Rent and capital gains are sometimes called unearned income because they do not arise as a return from current farming operations. Both are associated with possession of land. Every student of economics knows that David Ricardo explained the basic economics of rent two centuries ago. Rent arises from the pressure of growing demand upon the scarcity of land. It traces to the inherent monopoly position of land as a whole. Rental income becomes capitalized into the price paid for land when it is sold.

The recent surge in capital values came as something of a surprise. The explanation I have offered in some of my writings, in briefest summary, is that private and public efforts to stimulate our stagflating economy act mainly to up-value fixed assets. Capital gains in farmland in recent years have considerably exceeded the rate of commodity price inflation. Even when "indexed" they are sizable. It is often said that investing in farmland is a "hedge against inflation." More accurate is that farmland has been about the best participant in inflation to be found.

Once asset value inflation has begun it tends to feed on itself. Investors learn to anticipate inflationary overvaluation. Eventually all will get caught in a corrective devaluation; but farmland investors' Camelot can last a long time.

## The Market Connection

Until vertical integration became conspicuous perhaps no one gave much thought to the vital place of markets. No one asked how the connection between farming on the one hand, and the sources of commercial inputs and outlets for products on the other, might bear on the organizational structure of agriculture. The matter is no longer in question. Professor Rhodes will discuss the topic at this seminar. The usual language recognizes, at the least, three kinds of connection: (a) exchange markets, (b) vertical integration by contract, and (c) vertical integration by ownership. Contract in this sense means production contracts, not advance delivery contracts in marketing.

### Size

The market (or integrated) connection in farming, and the role and rewards to people in farming, may be regarded as vertical axes in the organizational structure of agriculture. Size, by contrast, is horizontal. It simply means, how big in a horizontal sense.

When I first enrolled in a college course in farm management the opening question was how to measure size. Acreage was quickly abandoned. Size of capital investment was offered; also, value of annual marketings. Value of marketings has been used recently as a size index. The principal problem is that a cattle feeder who finishes off heavy animals can show a huge value of sales without "producing" so much. The value added concept would be better. It is not found very often in statistics of agriculture.

My instructor suggested that man-years of labor might be the best common denominator. It continues to be relied on rather widely. It will be used here.

### A Classification of Organizational Systems

In recent years I have developed a six-category classification of systems by which agriculture may be organized. It is presented in the following table, with a key into the three considerations just introduced.

The classification obviously does not include all the combinations that are possible. Those selected are the most common, or those of highest potential for the future.

The first three categories involve a market system for buying and selling. However, the sixth, an industrial agriculture of very large corporations, also may employ open market trading.

The first category is almost self-defining.

Category 2a is the typical, traditional family farm. This is the one that dignifies the farmer for the work he does and grants him both managerial control and the status of ownership of land. Some hiring of labor is allowed but it is more or less incidental and does not displace the working role of the operator and his family. Likewise, some renting of land is permitted but it is secondary to the acreage the operator owns.

Significantly, North Central extension economists working on the who-will-control project insisted that a family farm be big enough to provide at least a minimum acceptable level of living for the farm family. This is the main distinction from small farms.

Tenancy and part ownership are familiar terms. The tenancy shown in 2b is that where the tenant is essentially the manager. Old style sharecropping would not qualify. In part ownership the farm operator owns some land and farms a sizable acreage of rented land as well. It is truly a mixed category.

The most difficult item in the classification is to divide a family sized farm from a larger-than-family one. This always presents a dilemma. For my part, I resist getting into a numbers game as to separating a family from a larger-than-family farm. On the other hand, I have yet to find in the entire United States a farmer, irrespective of size or proprietary status, who did not consider himself a family farmer.<sup>8</sup> A distinction must be made.

I have used here the time-honored criterion of number of workers employed. Cut-off numbers are shown in the table. What really counts, though, is the status of those who do the physical work. In the "true" family farm, class 2a, the principal bearers of the workload are the owner-operator himself, and his family. As farms move through the larger-than-family category, the labor function falls more and more to a separate wage worker class.

Of all the categories listed in the table, the family farm, number 2a, is the most socially integrated, the freest of class division or distinction.

Because the family farm has been eulogized so much other characteristics may be worth noting. One long taken for granted but breaking into prominence recently is that the family farm system offers opportunity for new persons to enter it. It has relatively free entry and exit. By every principle that distinguishes our yeoman farming from feudalism's bonds, farming is not to be a closed sector. There must be room for new entrants. Ideally, the newcomers should be qualified by their interest and ability, and not obstructed by impossible hurdles of capital fund requirements of any kind of hereditary rule.

Interweaving all these criteria there is, it seems to me, a philosophical aspect of deep meaning. The family farm tradition is pro-operator. It puts the operating farmer first. It is not pro-landlord and definitely not pro-investor. Permeating all our sentiments and logical reasoning is the notion that the status and welfare of the man (or woman) who tills the soil and tends the herds is to be preeminent.

Owner-operatorship is eulogized because of what it means to the operator. When we note that in family farming all incomes telescope into a single one, we regard the landholding income as supplement to the operator's return from work and risk-bearing, and not vice versa.

I touch quickly on the last three structural categories. A cooperative agriculture has been proposed as a way to bind independent farmers tightly together for marketing purposes. It is more an idea than a reality, although cooperatives that tie up their members in unbreakable delivery contracts are close to it. Category 5 is the familiar vertical integration under contract. It is most common in poultry and processing vegetables but is sprinkled through much of agriculture.

"Large corporate" means the industrial type corporation. All labor is hired, as is most management.

#### What is at Issue

If our traditional proprietary family farm agriculture is under fire, we perhaps should ask first what is at issue. Why does the question matter?

My personal views follow closely the analysis presented by North Central extension economists in the reports issued a few years ago under the general title, "Who Will Control U. S. Agriculture?"

<sup>8</sup> Not long ago the presidents of Allied Mills and Cargill told the U.S. Supreme Court they were farmers for purposes of the Capper-Volstead Act, because they produced some chickens under contract.

<sup>9</sup> Who Will Control U.S. Agriculture? North Central Regional Extension Publication 32, Univ. of Ill. at Urbana-Champaign Cooperative Extension Service Special Publication 27, 1972; and subsequent publications.

# A Classification of Organizational Structure in Agriculture<sup>1</sup>

Structural system	Role of individual	Market connection	Size
<b>Proprietary farm</b>			
1. Smaller than family size	Combined labor, management, landholding	Market exchange	Small by any test
2. Family size	Combined labor, management, landholding	} Market exchange	Large enough for acceptable living but not to exceed 2 man-years family and 2 man-years hired labor <sup>2</sup>
a. Primarily owner operated	Operator combines labor and management. Landholding separate		
b. Primarily tenant operated	Operator combines labor and management. Landholding is divided		
c. Part ownership	Operator combines labor and management. Landholding is divided		
3. Larger than family size <sup>3</sup>	Combined management and landholding. Labor can be divided between family and hired but much is hired	Market exchange	More than 2 man-years family and 2 man-years hired labor
<b>Non-proprietary farm</b>			
4. Cooperative	Operator combines labor with varying degrees of management and land holding. The cooperative holds the rest	Group (cooperative) action	Can be of various sizes. Usually proposed for family-farm size
5. Contractually integrated	Operator combines labor and landholding. Contractor provides management	Contractual integration	Can be of various sizes
6. Industrial	Labor is separate and hired. Industrial firm combines management and landholding	May be ownership integration or market exchange	Always very large

<sup>1</sup> Sketched from point of view of farm operations, not of landholding.

<sup>2</sup> Some definitions have put the limit at 1½ man-years of each.

<sup>3</sup> Often regarded as owner operated, but some tenancy and much part ownership also are found.

Productivity. It may seem inappropriate, concerned as we are just now with surpluses, to ask about agricultural productivity. From a long run viewpoint the question is valid. Insofar as agriculture is more productive when land and labor are used intensively, it's no contest: family farming wins hands down. Part time farming does not use land very well, and the very large operations are likely to be more extensive than intensive. The latter is especially likely to be true if property taxation is lax. Engraved in my memory are the fertile but untaxed lands in Argentina held by rich city families who use them as hunting preserve.

Technology as it bears on productivity is another matter. Some critics say the individual farmer cannot keep up with the newest technology and the large corporation does better. Dr. Drache will touch on this aspect. Manifestly, the situation varies by enterprise.

North Central economists conclude that productivity will not be enough different in various kinds of agriculture to be a major consideration in making policy.

Political and Economic Power. A dispersed proprietary agriculture finds it hard to exert much political or economic power. All larger-unit alternatives would show more.

Perhaps vertical integration with conglomerate firms is the extreme case in power combines. The principal reason city dwellers almost shout their preference for family farming is their fear of the economic power that big land-and-processing corporations could exercise over food prices.

Class Status. I link together the importance of the status of the farmer, and the distribution of income from farming -- who gets what. With regard to status, I accept the idea that the proprietary operating farmer holds a status and self-respect that are hard to duplicate in tenants or wage workers. I believe further that such farmers and their families contribute more to rural communities than does a class-stratified agriculture. These are personal value judgments. They are also rather conventional. Having admitted holding them, I add quickly that I do not myself place these highest among the criteria for making a choice among kinds of farming.

Combined Income Sources and Risk Bearing. The combining of several roles in the family farmer and thereby combining all returns has a feature not mentioned thus far: it also combines risk.

The owner-operator who receives return from labor, management, and land scarcely is aware of the multiple sources. He may not even bother to guess how the total divides. He is likely to regard the combined total as scarcely more than what ought to be earned from operatorship alone. Professor Paarlberg has said many times that the traditional farmer will sell his labor and management for a sub-standard return. In effect, he counts on the added return from the land factor to yield an acceptable total income.

Combining of roles and returns amounts also to a combining (pooling) of risks. Risks in agriculture can be roughly divided into those associated with farming operations and with landholding. The proprietary farmer who fills all roles thereby assumes all risks, and the pooling principle clearly applies. As one quick illustration, during the 1976-77 drop in grain prices the most vulnerable farmers were the young entrants with big debts, plus tenants; and at the other end of the spectrum, bigger farmers who had levered themselves in search of speculative gains. Family farmers with an equity in land who had not overextended themselves were able to survive rather well.

Wherever the roles in farming are separated, risks are also. Pressure then builds to underpin each income category separately, and to include in each a separate risk bearing component. It is in this context that the testimony of Howard Hjort, quoted on page 6, stabs like a stiletto. If, he said, labor, management, and land-

holding "are separated, rather than taking the combination of all three jointly producing a decent living" then, he warns, "each will require its own competitive return."<sup>10</sup>

#### Where We Are Now

Unfortunately, statistics on the existing structure of agriculture are such a morass that it is possible to find a figure corroborating whatever prejudice a person may have. An example is two articles in the same issue of the American Journal of Agricultural Economics, telling two different stories.<sup>11</sup>

Smaller-than-family farms number more than a million but contribute little to gross marketings -- perhaps only one to three percent. They are not an important factor commercially.

To swing to the other extreme among categories of farms, my estimate is that big corporations market some 10 percent of all farm products. The figure could readily be larger. It is this large because both the Census and USDA statistics continue to consider commercial cattle feedlots, egg cities, and such industrial operations a part of agriculture.

With regard to contractual integration, evidence is pretty clear that around 15 percent of all farm marketings come from it.

Cooperative farming is tiny. Let's call it one percent.

We are left with slightly over 70 percent of all farm marketings originating with family size or larger-than-family farms. It is virtually impossible to strike a division between the two. Even if it were easy to define a family farm sharply, exact data would not be available. Furthermore, data are sparse separating owner-operator farms from varying degrees of tenancy.

One statistic bearing on size is the volume of marketings coming from farms selling \$100,000 worth of products per year. Percentages are high for states such as California, Arizona, Texas, and Florida.

A better approach is to rank farms by volume of marketings (cash receipts from marketings) and compare them by size blocks. Census and USDA data allow us to make approximations. My estimates of the proportion of all marketings of farm products coming from the smallest one-fourth of all farms, the second one-fourth, and so on, are presented in the table below.

Proportion of U. S. Farm Marketings, Gross and Net,  
Contributed by each Quartile  
of Farms, 1960, 1970, 1977<sup>1</sup>

Quartile of farms	Gross Marketings			Net Marketings (Value Added)		
	1960	1970	1977 percent	1960	1970	1977
First	3	2	1	5	4	5
Second	5	3	2	11	7	6
Third	15	13	12	23	19	16
Fourth	77	82	85	61	70	73

<sup>1</sup> Approximations based on cash receipts from marketings plus governmental payments and "other" farm income; and on net farm receipts. Interpolations from data published in Farm Income Statistics, USDA, ESCS, Statistical Bulletin 609, July 1978.

<sup>10</sup> "Statement . . . .", pages 5-6 (footnote 1). Footnote 11 next page

The top one-fourth of U. S. farms accounted in 1977 for 85 percent of all marketings. If we narrow the data more we find that the largest one-tenth had 65 percent of marketings. The two percent of very largest farms had about 35 percent of all marketings.

Concentration has been increasing.

The largest operations, such as commercial feedlots, have a fast turnover and therefore add much to gross marketings. If net production (marketings) be the measure, the concentration is not so great. In 1977 the top one-fourth of farms had 73 percent of net marketings. But the trend is even faster when viewed on a net rather than gross basis.

The data apply to all farms, not just family size and larger-than-family. The inference of a high and increasing concentration among all U. S. farms is clearly drawn. U. S. agriculture seems to be drifting into a bimodal pattern of many small farms and a relatively few large ones. Many of the small farms are part-time or retirement farms, but some are not. Some of the largest farms are industrial farms, but many are larger-than-family size.

As family size and larger-than-family farms combine to make up more than 70 percent of all farms, we can believe that the trend toward concentration indicates a growth of larger-than-family relative to family size. But another question is how many of these farms are owner-operated. Many are not. Data are not exact but the picture is that full tenancy has been declining while part ownership has become much more common. When measured by resources controlled and products sold, part owners outrank both full owners and full tenants. Part ownership is especially prevalent on very large farms. In 1974, on farms of 2,000 acres or more 65 percent of all land was in part ownership.

In Missouri, roughly 40 percent of all farmland is in part ownership.

To repeat and sum up, the evidence seems convincing that true family farming, category 2a, is on a decline. The major replacement just now is larger-than-family farms. I will offer my judgment below that this kind of farm may not prove stable and may be only an intermediate step to industrial farms.

#### Pressures of the 1970s

If family farming is now fading slowly, can we say anything more about the forces at work?

It is tempting to veer into a digression about why family farming is so vulnerable -- why it cannot or does not defend itself. If it is regarded so highly, why is it in jeopardy? The explanation begins, I believe, not with economic or technological forces but with the inherent political weakness of a small unit, dispersed, family farm agriculture. I have offered my ideas elsewhere under the title, "Farming's Non-instinct for Self-preservation." The independence of each unit, a quality lauded so much, keeps farmers from being aware of their group vulnerability. It leads them to misidentify what endangers them. It thwarts their concerted protective action. The independent farmer finds it hard to understand that policies which benefit him individually may doom him collectively.<sup>12</sup>

<sup>11</sup> B. Delworth Gardner and Rulon D. Pope, "How is Scale and Structure Determined in Agriculture?" and Jerry A. Moles, "Discussion," Amer. Jour. of Agr. Econ., May 1978, pp. 295-302 and 316-21.

<sup>12</sup> See, for example, chapter 9 in Farm Policy: 13 Essays, Iowa State University Press, 1977.

But this is not new. Family farming has always lacked an internal cohesiveness to aid in collective defense. What is newly influential in the 1970s?

Without being too confident about them I suggest four principles, four commentaries on our times. In brief summary they are:

One, as stated above, pressures of our time are to large extent financial in nature. They involve the financing of both production costs and land ownership.

Two, the growing role for landholding relative to the operating part of farming is destructive of traditional agriculture.

Three, it follows that the terms of financing agriculture, including (1) leveraging of past capital gains and (2) income tax laws and regulations, have more to do with the structure of agriculture than does the level of operating returns. By no means can the problems of family farming in the late 1970s be met just by increasing loan and target prices for commodities. Paradoxically, the effect might be the opposite of that sought.

Fourth, a number of other institutional factors also have a bearing. Among these are the specifications of price and income support laws, the terms of pollution control and other environmental regulations, access to irrigation water in irrigated areas; also availability of good markets.

Farming has become highly commercialized, as indeed everyone knows. Costs and risks have been converted from non-cash to cash. My father farmed with horses. He raised his own hay and oats. His fertilizer was manure -- from stables, and "green." Today these are replaced by purchased inputs.

As a rule, the larger the farm of today and the more it confines itself to cash crops (also, the more advanced its technology), the greater is its financial operating risk. University professors, tenured with salary contracts, could easily fail to appreciate how scary are the operating risks in farming now.

On the other hand, my colleague Rudie Slaughter, Jr., points out piercingly that family farmers are not as perceptive as they could be about how various routes toward reducing risk affect the stability of the family farm. They may not take full advantage of what can be done to reduce risk on a family farm and instead either seek risk-reducing farm policies that undercut the family farm or move toward very large operations. Each farmer hopes himself to come out on top. Each action toward enlargement means little but when repeated thousands of times the outcome is to convert agriculture to a large-scale, stratified form.

With regard to the second and third principles, in the 1970s not operating costs and risks but the financing of landholding has become more crucial. Probably no one has pointed out more often than I that in this decade farm ownership as such has been more profitable than farming. The data are that in the 1970s capital gains have out-run income from farm operations by more than two to one.

The attraction of ownership as such leads to a land price boom that effectively disqualifies the younger farmer of limited funds from becoming a land-owning family farmer.

To repeat, I regard financial considerations as having more to do with emerging trends in the structure of agriculture than technology does. Much has been said in the past about big machinery and how it underlies a growing size of farm operation.



Dr. Drache may touch on this in his paper. I tend to place most emphasis, in the 1970s, on the attractiveness of landholding to nonfarmers but equally on the ability of older established farmers to lever the inflated value of their original holdings into expansion of acreage.

Professor Raup has joined me in showing that income tax laws contribute to current trends.<sup>13</sup> It is not an overstatement that income tax laws may actually force small farmers and tenants to subsidize high-tax-bracket farmers and nonfarmers in competition for buying land. One could wonder if the system is rigged against family farmers.

All this is true even before estate taxes enter the picture. With regard to the estate tax issue, every economist who has studied estate taxes concludes that each step to "liberalize" (i.e., reduce) those taxes acts to lock in present owners and lock out unfunded new ones. Contrariwise, a sharply graduated estate tax is seen as essential if family farming is to be retained.<sup>14</sup>

I will not take time to develop the fourth principle listed above. Three speakers, Woods, Fischer, and Rhodes, will tell us more about tax rules, pollution, and markets.

#### Predictions ✓

Finally, I offer a few guesses as to what may lie ahead, in the absence of policy action.

Small farms. For 30 years I have been championing the durability of the small part-time farm. My reasoning is simply that those farms do not depend critically on their farm income and have great staying power. In 1977 the smallest farms had an off-farm income ten times that from farming.

And yet, strangely, the smallest farms may be vulnerable from another direction. It is the availability of markets. Those farms do not have enough volume to generate markets themselves. They have ridden piggyback on the markets set up to serve family farms. If family farms and their markets disappear it would be hard to be sanguine about the chances for the factory worker or retired Army Colonel to graze a few beef cows or put out a field of soybeans. He could not sell the product.

Family farms. I have already expressed my skepticism about survival powers of the traditional family farm. I suppose my principal concern is the farm's ability to self-finance and accept risk. Moreover, the increasing difficulty of entry by new young farmers, accentuated by tax laws, is a strongly negative factor.

Some other developments also cloud the outlook. One is the trend toward specialization of enterprise. The more specialized a farming operation, the easier it moves into large scale. Particularly significant is the separation of feed production from the raising and feeding of livestock. Corn-hog farms seem to be on the way out. If corn-hog farmers willingly acquiesce in letting large units raise the hogs, they will have no grounds for complaint once the hog industry has converted totally.

<sup>13</sup> Philip M. Raup, "Some Questions of Value and Scale in American Agriculture," Amer. Jour. of Agr. Econ., May 1978, pp. 303-08. Harold F. Breimyer, "Upsetting Combination: Farmland Inflation and Farm Product Deflation," Econ. & Mktg. Info. for Missouri Agriculture, March 1978.

<sup>14</sup> Death and Taxes: Policy Issues Affecting Farm Property Transfers, North Central Regional Extension Publication 40, Univ. of Ill. at Urbana-Champaign Cooperative Extension Service Special Publication 38, 1975.

Larger-than-family farms. These are the farms that have been gobbling up family ones and doing so primarily by leveraging land value inflation. Under present circumstances, the process will continue. Yet three reasons suggest that this kind of farming is only an intermediate stage. First, it is the most financially vulnerable. It has more at risk than the family farm. The latter, particularly if it combines feed crop and livestock production, is in better position to hold cash costs down. On the larger-than-family farm, everything is cash.

Secondly, land value inflation is a shaky base on which to build enterprise units. Eventually large farms will have to pay out on their market value (unless inflation continues to the point it wrecks the U. S. economy). Some may have trouble.

Thirdly, the larger-than-family farm is the kind big corporations want. In other words, if and when larger-than-family farms find themselves overextended, they are more likely to sell out to investment combines than to revert to family farms.

I wish there were time to recount the sequence of Bud Antel and his lettuce enterprise. That operation, once smaller farms, then Bud Antle, Inc., is now a part of multinational Castle & Cooke.

And yet, larger-than-family farms are not without defense. The American Agriculture Movement of last winter, which was spearheaded by larger-than-family farmers in financial trouble, proposed joint action to regulate marketings and thereby protect prices and incomes. This is a natural expedient for farms that attain really substantial size. And if there are still 100,000 big farms, we should remember that for each commodity the number is fewer. Perhaps larger-than-family farms will find a route to unified group action that family farms never could achieve.

Contractually integrated and big-corporation farms. If the industrial corporation gradually widens its sphere in farming, an open question is whether contractual integration or direct operations will predominate. My guess favors the latter. The whole economy seems to be going the conglomerate corporation route, and agriculture seems likely to follow suit unless protective action be taken.

#### Final Remarks

I conclude by echoing my opening theme. Productive farmland is a common resource of the population of each generation. It is made available for cultivation in the interest of common survival, on terms that society sets. Those terms bear directly or indirectly on the organizational structure of agriculture. In plain, direct, simple words, the United States of America can have whatever kind of agriculture it chooses to have. The only footnote is that any choice will affect various interest groups in agriculture differently. The political influence of the various groups may be the most significant datum bearing on the whole question. Fortunately, Dr. Barr will tell us something about this aspect in his concluding talk to this seminar.

## FARMING TO FIT TODAY'S TECHNOLOGY

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Technological knowledge and ability of American farmers far exceeds the total application. This is the traditional sociological lag. I open with this comment because I am a bit depressed by Dr. Breimyer's pessimistic view of the future of the family farm. I do not want to share that pessimism. And, contrary to my title, I believe there are very potent factors beyond sheer technological progress that give the family oriented commercial farm staying power.

Because I am an historian I think we should first look at history as the best way to attack the basic question, "Can the family farm survive?" In my The Day of the Bonanza<sup>1</sup> I concluded that the bonanza farm of almost a century ago was simply a multiple of 250 acre farms with centralized management relying on hired labor. Each of the permanent or full season men equipped with five horses, a riding gang plow, four-section harrow, eight-foot seeder, and an eight-foot binder could basically handle about 250 acres. Peak season hands were hired for haying, shocking, and threshing. Wheat monoculture and animal-power farming were blended to a systematic factory-type agriculture that was as efficient as farming could be when relying on hired labor and the technology of the 1880s and 1890s.

If the large bonanza farm had any advantage it came from the fact that its management was more advanced in agricultural practices and because it was better capitalized than most homesteads. The bonanza also had an edge in selling and buying. Those farms sold at a premium direct to the terminals or millers in train-load volume and they purchased direct from the machinery manufacturers at 33-1/3 percent discount. In spite of those advantages, in a few years the investors were anxious to sell their stock in the bonanzas because they were not able to generate enough cash flow -- that is, operating profits. The farms could show returns only as the price of land, beginning at a purchase price of 16¢ to \$4.00 an acre, appreciated to a value of \$10 to \$25 by the 1890s and \$150 during World War I.

Who bought the land of the bonanzas? New homesteaders who were often the ex-hired help and were now family oriented farm operators with the same or less equipment per acre, but with several children as a labor supply.

In The Challenge of the Prairie,<sup>2</sup> which dealt with homesteaders, I uncovered some evidence on finances of family farm operations indicating that the average family farm had too small a volume to survive unless in order to maintain the farm, the family denied itself a satisfactory standard of living.

Research had proven that the bonanzas, which used cost accounting, could produce wheat at less per bushel than the smaller family farm. But when the drought and low prices of the late 1880s and early 1890s hit, the bonanzas started to fail while the homesteaders somehow managed to endure. Personal suffering, great self denial, and subsidizing the farm with non-farm income made the difference. Children who worked off the farm were expected to contribute part of their income to the farm. By the time I had finished Challenge of the Prairie I concluded that if the family were to be properly paid for its labor the homesteader needed at least 480 acres instead of the typical 160 acre plot. This was true on the fertile, productive soils of the Red River Valley. One farmer from north central North Dakota commented at the time of his retirement

<sup>1</sup> Bonanzaland Enterprises, Baker, MN, 1964.

<sup>2</sup> Bonanzaland Enterprises, Baker, MN, 1970.

in 1966 that the entire profits of two generations of farming (since 1900) equalled the unpaid labor of the 14 children raised on the farm. Land appreciation was exclusive of operating profits.

That many homesteaders also failed is no secret. As Gilbert Fite wrote in The Farmer's Frontier, "The surprising thing is not that many pioneers failed to establish going commercial farms in the 1870s and 1880s, or fell heavily into debt, but the remarkable thing is that so many of them succeeded."<sup>3</sup> To me that has still been a miracle of 20th century farming. A retiring farm economist from the University of Illinois recently told me, "Farmers have a unique ability to tighten up and live with very little cash flow when the times demand."

In 1976 in an article entitled "Midwest Agriculture: Changing with Technology," I made some flat predictions where agriculture would be in the year 2000.<sup>4</sup> Family oriented farms would still dominate the rural scene, but they would be far larger than what the average farmer of 1975 dared to conceive. I based that conclusion on several findings. First, if all farms used the technology that was being applied on the farms I researched, 67,000 farmers could operate the total cropland of the United States. Like earlier large farm studies, these farms were about 25 times larger than the average sized farm in the nation. My figure came from the simple process of dividing all the acres of cropland in this nation by the average number of acres operated by farmers I had interviewed since 1968. Vernon Ruttan of the University of Minnesota had reached the same conclusion several years earlier based on the technology applied on census Class I farms.

Second, a United States Department of Agriculture study of 1973 concluded that the technically optimum farms having the lowest production costs per unit of output were the fully mechanized, one-man farms. These farms were capable of 800 acres of corn and soybeans or 1,950 acres of small grain. This was in contrast to the average existing farm of 263 acres of row crops or 694 acres of small grain. In other words, the average sized farm was one-third the optimum size using 1973 technology.

Third, the farmers whom I interviewed exceeded the USDA standard of production per man in row crops, small grains, dairy, beef, pork, and poultry. One corn farmer in Iowa with excellent production and good conservation practices was exceeding 1,000 acres of row crop per man, and had a goal of 1,700 acres for each worker. A young farm couple who started in 1970 with absolutely no family funds now has a fully automated mechanized dairy farm and in 1977 did the equivalent of 3.7 man-years of labor when judged by Minnesota Farm Accounting Records. I am sure a corporate farm would need five people to do the work of this couple.

Fourth, technology will not stop giving us progress in production. Many farms still fail to use all available technology, but the time lag between innovation and majority adoption is shortening rapidly.

I do have a concern that social legislation, backed by church groups, environmentalists, some farm organizations, and politicians might seriously hamper the continued progress toward larger family oriented farms. However, after observing what has happened in Europe and interviewing farmers in eight countries there, I am less concerned that we might pass such legislation unless our social planners think contrary to their European counterparts. The popular myth of the virtuous small farmer still abounds and could influence legislation, but I do not know of many sociologists who could prove that any segment of our society has a monopoly on virtue.

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<sup>3</sup> Gilbert C. Fite, The Farmer's Frontier 1865-1900, Holt Rinehart and Winston, New York, 1966, p. 45.

<sup>4</sup> Agricultural History, Jan. 1976, pp. 290-302.

Dr. Breimyer in his opening paper expresses a different concern about the family farm -- namely, its inability to sustain the capital growth needed to remain competitive with other types of farm ownership structures. At this point I will admit to a bias. I have never feared a corporate takeover of American agriculture. I have defended the right of corporations, either Wall Street or family controlled, to farm, and feel that all activity to the contrary is like spinning wheels.

A good many successful farmers I have interviewed have said, "Let the corporations come in. We can use their money and when times get tough they will go back to Wall Street." It is my conclusion that that is exactly what happened to the bonanzas, and what has happened to many corporate operations in relatively recent times. Unfortunately for corporation agriculture, investors insist on dividends.

The successful farmer today can generate capital and can borrow what he needs, but I do share a concern of Dr. Breimyer. Are the agricultural finance institutions facing up to the long run potential needs of the large commercial family oriented farm? We have banks in our nation capable of making \$200 million short term operating or inventory loans to industrial corporations, but shudder at making a \$2 million operating loan to a farm business that is sound financially. In a recent article in Agri-Finance I challenged the bankers to face the future. The Farm Credit Administration has acknowledged that by the 1980s the cooperative finance capital (loan volume) for agriculture will be as great as the annual budget for the federal government during the 1950s. Farmers have proven that they can be money managers, and also that they willingly borrow any amount required by modern day technology. But I am not sure that our financial institutions have developed their concepts to cope with current demands. If they do not, then Dr. Breimyer's thesis will be correct.

What do I foresee? In 1968 I set out on a project to determine the impact of technology on agriculture by interviewing some of the most successful farmers in the Midwest and Manitoba, and by a stroke of good luck was able to include some of the best in Europe. The result, as expressed in my two most recent books,<sup>5</sup> is far different from my original intent. Basically I believe that economics ultimately determines the direction that any industry will take in the long run, but on-the-farm research cautioned me to look at other factors. Sociologists and psychologists gave me insights on some of these factors. The writings and conversations of Dr. Joe Bohlen of Iowa State have been some of the best in this respect.

In tracing the history of innovative farmers from 1900 to the 1970s in their transition from horse-power agriculture to four-wheel-drive tractors, it seems clear that the farmers who are innovators in any given period are the profit takers; and they basically succeed. They become part of the story of history and eventually the great majority will adopt their methods. The rest fail.

Agricultural banking and the four-wheel-drive tractor were included in that study because I consider them to be two keys to the future. Technologically, the four-wheel-drive tractor is the family farmer's way of overcoming his reluctance to employ hired labor, and it also gives him power equality with industry. It is my opinion that the development of the four-wheel-drive tractor has to be included among the most important technological advances in agriculture.

At this point my original thesis changed, and the theme of the six M's evolved. It became clear to me that there are certain non-economic and non-technological factors that in the future, as in the past, will continue to influence types of farm ownership structure. I am not evading the assignment given relative to the significance of

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<sup>5</sup> Beyond the Furrow: Some Keys to Successful Farming in the 20th Century, and Tomorrow's Harvest: Thoughts and Opinions of Successful Farmers, Bonanzaland Enterprises, Baker, MN, 1976 and 1978, respectively.

technology, but I want to establish some other relationships to the success of farm enterprises.

The six M's in order of importance to most family oriented commercial farms are: Mate, Motivation, Management, Money, Marketing, and Mechanization. The list should please most of the participants on this program because it seems to relate to the topics assigned. Note that mechanization, which includes all technology, is the sixth or least important of my M's because it is automatic if the conditions for the other five are met. Some economists may not agree, but mechanization (or technology) is equally available to all farmers. But it is not equally acceptable to all of them.

Placing the Mate in top priority has nothing to do with the ERA movement. However, sociologists have informed me that ERA will be making a yet unforeseen impact on the family structure. My reason for placing the Mate in priority position is two-fold. She is the attitude setter in most households, and in this era of capital intensive agriculture she must be risk-oriented. If not, the farm will go nowhere. So far I have not had a farmer disagree with me on this point.

In the past the woman's position was to produce the free labor force so the farm could survive, even though the family might live at a subnormal social level. There is so much literature on this phase of history that no elaboration is needed. One can be quite certain that if both the husband and the wife were equally determined, it took a great deal of adversity to drive them from the farm. However, our most noted sociologists are not in complete agreement as to the quality traits of those who failed and those who succeeded. The farmers I deliberately sought in my research were the successful people. Generally they were strong characters and their wives were equally strong. The wife participated in all but four of my interviews.

It is my contention that if the wife is risk oriented and understands the business and is a part of the management process, the second M -- Motivation -- becomes almost automatic. In fact, there appears to be an eagerness to face the challenges of the dynamic and fast changing business of farming. In the case of beginning farmers, the wife will have a full time job off the farm to help cash flow the business, or she will do the chores and some field work while the husband works off the farm. In many cases she will be the bookkeeper, radio and road operator, maybe the banker, and even the marketer. Yes, even in hedging and forward contracting. The biographies of the Outstanding Young Farmers provide excellent data on personal motivation.

Motivation makes long hours seem less tedious. It keeps the mind open for new ideas, and it helps to set the goals for the farm and the family. This is a key ingredient that I find missing from the personnel of the corporate farms that I am familiar with.

Motivation creates the desire for good Management, the third M, a key element in capital-intensive agriculture. Motivation constantly challenges better management. The rapidly increasing use of consultants and other professional aids to farmers is a reflection of the more alert and inquisitive type of manager among the new generation of farmers. This type of manager attends seminars, reads widely, is in regular contact with universities, extension people, financiers, and agri-business, and travels extensively to learn the best ideas and innovations in the industry. He is a book farmer who uses computers, business radios, airplanes, and laboratories in his search for knowledge.

A husband and wife team who are well motivated and manage properly are able to get Money, the next M in the chain of progressive farming. As an industry, agriculture carries a debt load of only 16 cents per dollar of assets, but, unfortunately, it is not evenly divided. I have not met a good well managed farm couple who have positively

said that they cannot get money. A regional manager of the Farm Credit Administration told me that if the farmer says he cannot get money it is probably his excuse for not really being adequately motivated to do the job required to make the farm perform.

Agriculture historically has been adequately supplied with capital. The obvious overexpansion of the industry is proof of that. At all times in our history some farmers have lacked capital and others have had a surplus of liquid assets. This is true of all industries. An Iowa banker who is past Commissioner of Banking for that state declares that agriculture is as sound as any other industry and no more risky. I agree with that statement with one qualification -- if management is equally capable. We are entering the era of better management partly by virtue of the fact that farming now is getting somewhat more difficult to enter and only those with the greatest challenge orientation will seek it as a vocation.

Contrary to Dr. Breimyer, I believe money will be available for our basic industry. Our country cannot have it otherwise. If our free enterprise financiers cannot do the job, federal legislation will make funds available. However, I personally do not care to see the continued drift in the governmental direction. Other countries are farther along that route than we are and I'm sure Dr. Raup will enlighten us on that. But the finance people I am familiar with have little difficulty in talking \$100,000 and up as operating loans and \$1 million and up real estate loans, so hopefully the transition is in process.

Dr. Rhodes will address himself to Marketing, the fifth M in my theme. Nearly every farmer involved in my research was a direct marketer. Each had the facilities to load trucks or rail cars as rapidly or faster than many country elevators. Half million bushel storage units were common, and many had over one million bushels of storage and were capable of loading a truck from weigh-in to weigh-out in eight minutes. Basically the farmers I have worked with have little faith in cooperatives, and I might add that I was surprised to find that many of the European farmers I spoke with also expressed dissatisfaction with cooperatives.

One U. S. farmer interviewed had resigned from his cooperative elevator board because he was personally able to buy cheaper and sell higher than the co-op could. Many other farmers could prove that same point. A career cooperative elevator manager told me, "We have to juggle something if we are expected to meet our competition and pay dividends." It is my impression that cooperatives have little to offer the farmer who is versed in hedging, contracting, and direct marketing. The progressive farmer spends much more time marketing than the average farmer and he considers it his most important work. He is aware that there are many good producers, but few good marketers.

With the other M's in order, the sixth M, Mechanization, is inevitable. Many farmers have been criticized for spending far too much for technology, probably because of their fascination for the big power units. The old saying that the only difference between men and boys is the price of their toys does not apply to the people I have worked with. To them large-scale machinery and automation are a matter of economy, for technology is far more reliable and less of a problem than hired labor. Besides, machinery depreciation is more economic than the ever increasing cost of pensions. Technology is cheap by comparison.

Technology or mechanization has the lowest priority of the six M's, yet it may have the greatest economic impact. In the context of the theme of the M's, technology includes chemicals, hybrids, fertilizer, computers, radios, teletypes, mechanical and electrical power, automation, machinery, and whatever else science has to offer. Mechanization is equally available to all types of farms, but the problem is chiefly to be able to justify ownership (economically).

There are farmers today who have six, eight, and ten times as much invested in technology as they have in land. They are cash flow minded individuals who do not rely on land appreciation for eventual profits. Some farmers prefer to have their money invested in technology. They rely on rented land or even purchased feeds rather than owning the land and producing their crops. Segregated beef, poultry, hog, sheep, and dairy operations are becoming increasingly common. The reason is obvious. Technology generates quicker cash flow and better profits than land. European society is placing its emphasis on technology to help farms develop into larger and sounder economic units in their quest for more abundant production at a lower cost to the consumer.

Technology is the key to the survival of the family oriented commercial farm, for it is the soundest way of developing an adequate scale of business. Technology enables a farm family to live with equality with the rest of society. As technology develops the family farm will expand out of sheer need to survive because profit margins will continue to decrease. Hasn't this been the case with each breakthrough in history? To anyone who replies "No" to that question I must ask, "Are you saying we have reached our technological peak?" The family farm has its best defense in ever improving technology, for the dedication found basically in the family unit will most effectively employ that technology and will continue to give the family farm the edge over its competition.

Two tables illustrate what technology has done for productivity in agriculture and how it has brought us to the point we are at. Winston Churchill said, "He who has knowledge of the past has some grasp on the future." Is there any reason to believe that the trend will change?

We could go on and on with examples of improvements in technology. One farm researched had figures to prove that in 1876 it took one man with six teams six days to haul a sixty bushel load to market. When the farm purchased a Model "T" Ford truck (1920s), one man could haul as much as three men and 12 horses. In 1972 that same family could deliver 800 bushels in five hours. The hauling time in 100 years was reduced from 66 minutes per bushel to 22 seconds, or a ratio of 180 to one.

Goals on well managed farms today are 3,000 hogs per man per year, or 72 cows and a million pounds of milk per man per year. In 1976 the United States average was 11,500 pounds of milk produced per cow, but I know a dairy with an 18,000 pound average and 166 cows per milker (one minute of man time per cow per milking, three milkings per day). On beef farms 3 or 4 men are needed to produce 1,600 beef animals (1,000,000 pounds) and 1,200 acres of crops to feed those animals. To many people the above figures seem like someone's dream of a distant future frontier. But to others the frontier is already here for it is being done by them.

The frontier belongs to those who see its future, not as it is, but as it will be. Our frontiers for the family oriented farm have never been greater, and the challenges have never been more numerous than they are today.



Table 1  
(Selected typical data)

Technology	Year	Daily wage	Labor cost per acre	Man minutes to plow an acre
Man/spade 10 hr. day	1600	\$ 0.16	\$1.54	5,760
\$100 ox team \$35 plow	1800	1.00	2.00	1,200
\$500 five horses \$170 two bottom gang plow	1890	2.00	.40	105
\$3500 steam engine \$700 fourteen bottom plow (two men)	1910	2.00	.33	120
\$750 Fordson tractor \$150 two bottom plow	1919	3.00	.43	86
\$30,000 four-wheel drive tractor \$8,000 nine bottom plow (Clarion Webster soil)	1972	35.00	.40	7
\$35,000 four-wheel drive tractor \$12,000 twenty-one bottom plow (sandy loam)	1972	25.00	.16	4-1/2
No-moldboard plow \$55,000 four-wheel drive tractor \$15,000 sixty foot cultivator	1976	35.00	.06	1-2/3
Alcohol steam Turbine eight wheel drive or electric powered small units	Future	48.00+		

Table 2  
Time Required for Producing Wheat

Year	Technology	Minutes of labor to produce 1 bushel	National average yield per acre  (bushels)
1830	Biblical (hand scythe)	255	8-10
1834	Reaper		
1837	Walking plow		
1850s	Thresher		
1878	Twine binder		
1880s	Riding gang plow		
1890s	Bonanza horse-power era 22-36 I.H.D. Holt combine Semi-trailer Scoop shovel	42	8-17
1928- 1940	Tom Campbell Auger elevator Self propelled combines Fertilizer Weed control Bigger trucks	14	5-24
1973	R.D. Offutt	1/2	30
The future	No till Greater yields Less field loss Cylinder-less combines Containerized units		

## AGRICULTURAL STRUCTURE AND THE COMMUNITY

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### Empirical Studies

In 1944 Walter Goldschmidt conducted what has become a classic study of the relationship between agricultural structure and the rural community. Because of controversy surrounding it the results of the study were not made public for two and one half years. The Department of Agriculture refused to release the report. Eventually Senator James Murray, Chairman of the Senate Small Business Committee, was able to pry the report loose and have it published as Senate testimony. Goldschmidt has since -- in 1978 -- discussed the obstacles he faced in doing his original community study in California.<sup>1,2</sup>

Perhaps it is not surprising that Professor Goldschmidt, after his early California experience, turned his research talents to examining the organizational structure of "less developed societies" of the world. Recently, though, he has once again returned to his original research. In his most recent work<sup>3</sup> Dr. Goldschmidt, who today is Chairman and Professor of Anthropology at UCLA and was president of the American Anthropological Society, concludes, "The high correlation between the relative importance of large scale farm operation and the proportion of the population in the 'lower class' offers evidence in support of the agrarian thesis that family farms are conducive to democratic rural communities." These findings support his early studies which found that the California town surrounded by family operated farming units was superior to the town surrounded by large scale enterprises. It was superior in all measures reflecting quality-of-life -- income, level of living, social and physical amenities, social and religious institutions, and the degree of local control of the political process.

The strong opposition Goldschmidt experienced in conducting and publishing his research is perhaps the strongest validation of his findings. Since the opposition came from those with large land holdings -- the larger than family farm interests -- one can infer that those persons were aware of issues of how a non-family farm structure would affect the quality of community life.

A second major study of relationships between agricultural structure and the rural community was done in Maine the following decade. In the late 1950s and again in the early 1960s Dr. Louis Plock compared table egg producers and broiler growers who were independent producers with those who had formal contracts with large vertically integrated firms.<sup>4</sup> He concluded the report of the 1963 study of the broiler growers by stating, "Despite certain obvious differences with the 'ideal' features of traditional systems of farming, contract broiler growing in Maine appears not to have introduced any major social or economic maladjustments."<sup>5</sup>

<sup>1</sup> Walter Goldschmidt, As You Sow, Allanheld, Osmun & Co., Montclair, N. J., 1978.

<sup>2</sup> \_\_\_\_\_, Newsline, Rural Sociological Society, Vol. 6, No. 5, Sept. 1978.

<sup>3</sup> \_\_\_\_\_, Rural Sociology, Vol. 43, No. 3, Fall 1978.

<sup>4</sup> Louis A. Plock, Social and Family Characteristics of Maine Contract Broiler Growers, Maine Agricultural Experiment Station Bulletin 569, Orono, Maine, August 1960.

<sup>5</sup> \_\_\_\_\_, Maine's Contract Broiler Growers -- A Restudy, Maine Agricultural Experiment Station, Publication 669, November 1965, p. 14.

The original study and the restudy of the broiler growers did not, however, place much emphasis on measuring the community life of the producers. Community involvement received more attention in Plock's 1964 comparison of contract and independent table egg producers. Here he found that compared with independent producers, contract producers were characterized by being younger, having completed fewer years of schooling, having lived in the community for a shorter period of time, participating less in community organizations, and reading fewer farm related publications. Obviously, these variables are interrelated. The causal links are impossible to ascertain from his study. For example, age would be related to years living in community and thus participation in community organizations. He concludes this study by saying, "There is only limited evidence in the study that these differences are significant in the sense that the two groups of poultrymen represent different community status levels."<sup>6</sup>

Contrary to the stir created by Goldschmidt, Plock's research sparked no concern. His work received so little attention that it was reported only in three Experiment Station Bulletins which have largely gone unnoticed.

In 1968, inspired by the work of Goldschmidt and Plock and a new book by Harold Breimyer,<sup>7</sup> I set out to compare the community life of family farmers and of farmers involved in contract broiler production with that of workers and managers of larger than family farms. In an effort to control for social cultural differences, I drew a sample of the three agricultural structures from a three parish area in North Central Louisiana. My study included a larger number of measures of community involvement than did Plock's. The family farmers interviewed did not include independent poultry producers because markets no longer existed in the area for them.<sup>8</sup> Thus, I compared contractual poultry producers with farmers producing other farm commodities.

At the same time I was conducting the Louisiana study Rodefeld and Wilkening were determining the community activity of persons working on family farms, larger than family farms, and large scale industrial farms in Wisconsin.<sup>9</sup> We worked together rather closely in developing our measures of community involvement. I will discuss a couple of the tables from the Louisiana study to indicate the measures of community involvement we used and to show the general findings. I might<sup>10</sup> add that many of the same measures were used in a recent study in Iowa by Hoiberg<sup>10</sup> and others. The analysis of that data set based on information from 933 farmers is not yet available.

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<sup>6</sup> Louis A. Plock, A Comparison of the Social Characteristics of Maine's Contract and Independent Table-Egg Producers, Maine Agricultural Experiment Station, University of Maine, Publication 670, November 1965, p. 28.

<sup>7</sup> Harold F. Breimyer, Individual Freedom and the Economic Organization of Agriculture, University of Illinois Press, Urbana, 1965.

<sup>8</sup> William D. Heffernan, "Sociological Dimensions of Agriculture Structures in the United States," Sociologia Ruralis, 12:481-99, 1972.

<sup>9</sup> Richard Rodefeld, "The changing organizational and occupational structure of farming and the implications for farm work force individuals, families and communities," University of Wisconsin, unpublished Ph.D. thesis, 1974.

<sup>10</sup> Eric O. Hoiberg, "Iowa Family Farm Study," paper presented at Sociology of Agriculture Conference, Chicago, 1978.

The parish (county) selected as the focus of the Louisiana study had the largest number of contract poultry producers in the state. Forty-nine units which were of a size that most of the labor could be provided by the farm family were included as corporate integratee units. A list of family farms was provided by local extension personnel using the general guideline that less than one-half man-year of hired labor could be employed. A sample of 50 family farmers was drawn.

Twenty-eight corporate farmhand structures were identified in the area. Corporate farmhand structures were defined as having two or more year-round workers. The largest unit had 40 workers. A sample of three workers (or two if there were only two workers) was drawn from each unit. Because black farmers did not appear in the family farm and corporate integratee structures, they were eliminated from the corporate farmhand structures for purposes of this analysis. Of the original list of 85 workers, only 16 remained in the sample. A disproportionate number of those workers utilized in this analysis were of the rank of foreman.

The following tables reporting the findings from the study indicate some of the measures used to determine community involvement and the general trends in the responses. Many of the measures are starred, indicating statistically significant results, but for many measures the differences are not great. Still there is a tendency for the owner-managers to be concentrated at one extreme while the workers are concentrated in the other direction. The family farmers and those in corporate-integratee structures tend to represent the middle range.

Table 1: Relationship Between Agricultural Structure and Community Integration.

Community Integration Measure	Agricultural Structure				a F	2 Eta
	Corporate-farmhand		Corporate-integratee	Family farm		
	owner-manager	worker				
	. . . . . mean score . . . . .					
Know people living in area quite well	2.61 <sup>b</sup> (28)	2.31 (16)	2.86 (49)	2.68 (44)	4.52*	.09
Feel free to visit with almost everyone	2.86 (28)	2.25 (16)	2.90 (49)	2.90 (43)	15.88*	.26
Feel at home anywhere in the community	2.86 (28)	2.50 (16)	2.86 (49)	2.82 (44)	2.91*	.06
Do not mind asking for help	3.36 (28)	2.83 (16)	3.16 (49)	3.02 (44)	.83	.01
Feel should attend most Funerals	1.79 (28)	1.88 (16)	2.47 (49)	2.22 (45)	4.12*	.08
Perceived source of advice	1.71 (28)	.94 (16)	1.06 (49)	1.16 (45)	8.62*	.16
Perceived importance of opinion	1.57 (28)	1.00 (13)	1.70 (43)	1.22 (45)	10.10*	.20
Make a difference if move from area	2.45 (27)	1.81 (16)	2.47 (49)	2.54 (44)	3.12*	.06
Hard to find better place to live	2.36 (28)	2.00 (16)	2.59 (49)	2.64 (44)	3.11*	.67

<sup>a</sup>F tests for analysis of variance

<sup>b</sup>Number of cases from which mean was calculated

\*P is less than .05

Table 2: Relationship Between Agricultural Structure and Involvement in Formal Voluntary Organizations.

Involvement in Formal Voluntary Organizations	Agricultural Structure				a F	2 Eta
	Corporate-farmhand		Corporate-integratee	Family farm		
	owner-manager	worker				
	. . . . . mean score . . . . .					
Membership in farm organization	1.82 (28) <sup>b</sup>	.12 (16)	.33 (49)	.76 (45)	24.24*	.35
Participation in farm organization	10.4 (28)	.38 (16)	1.20 (49)	3.29 (45)	18.68*	.30
Membership in school organization	.18 (28)	.06 (16)	.10 (49)	.22 (45)	1.03	.02
Participation in school organization	.75 (28)	.19 (16)	.80 (49)	.76 (45)	.30	.01
Membership in church organization	.54 (28)	.19 (16)	.22 (49)	.44 (45)	2.15	.05
Participation in church organization	3.18 (28)	.31 (16)	1.84 (49)	2.56 (45)	1.09	.02
Membership in fraternal organization	.39 (28)	.00 (16)	.14 (49)	.16 (45)	3.72*	.08
Participation in fraternal organization	1.25 (28)	.00 (16)	.51 (49)	.42 (45)	1.39	.03
Membership in social or civic organization	.68 (28)	.00 (16)	.14 (49)	.11 (45)	5.91*	.12
Participation in social or civic organizations	3.14 (28)	.00 (16)	1.26 (49)	.40 (45)	2.68*	.05
Elected or appointed position in last five years	1.21 (28)	.00 (16)	.06 (49)	.51 (45)	20.62*	.19
Church membership	1.00 (28)	1.06 (16)	1.04 (49)	1.04 (45)	.49	.01
Church attendance	3.65 (28)	3.43 (16)	3.22 (49)	3.61 (45)	2.80*	.05

<sup>a</sup>F tests for analysis of variance

<sup>b</sup>Number of cases from which mean was calculated

\* P is less than .05

From the data four interrelated conclusions emerge. First, workers in corporate-farmhand structures are less involved in the formal and political activities of the community than are workers in family farm structures. Secondly, owner-managers in the corporate farmhand structures are more involved in those aspects of the community than are family farmers. Thirdly, the first two conclusions suggest rather clearly that the corporate farmhand structure, relative to the family farm structure, begins to emphasize the two extremes with regard to community and political involvement. This type of agricultural structure suggests the development of two rather distinct social classes for rural America which undermines the traditional American ideal of equality. The fourth conclusion is that little difference exists between workers in the corporate-integrated structure and workers in the family farm structure with regard to community involvement.

This study and that of Rodefild and Wilkening too provide additional support to Goldschmidt's conclusion that the family farmers are associated with higher levels of community involvement than are corporate farmhands.

On the other hand, this study like the Maine broiler study indicates that the corporate-integratee structure is not clearly associated with reduced community involvement.

The corporate-integratee structure requires additional comment, however. I suggest that the integrated poultry industry in the parish provided a better source of income for many farmers than any other enterprise in this parish characterized by hilly topography and 80 percent of the land area covered by trees. The parish had been losing population for several years because of low family incomes. Undoubtedly this migration out of the parish was selective. Those persons who had fewer personal, religious, and community ties were more likely to leave the parish while those with strong community ties remained and searched for other employment opportunities.<sup>11</sup> Almost half of the growers said they entered into contract production because they could not provide the capital in any other way. One fourth of the growers entered into a contract because it reduced their risk, while the remaining one fourth entered into a contract because no market existed for independent producers. When asked why they continued to produce broilers, 61 percent said the enterprise provided a better income than any other work they could secure in the area. One fourth of the growers said they had so much invested in buildings and equipment they could not quit. Because of the selective nature of who originally became contract producers, final evaluation of this structure will require a longer time period for study.

Following are the summary statements lifted from the Arvin-Dinuba restudy conducted by the Community Services Task Force of the Small Farm Viability Project.<sup>12</sup> A brief examination of these findings (1) suggests the methodological procedure emphasized by both Goldschmidt and the Peterson restudy, (2) provides an indication of Goldschmidt's original findings, and (3) indicates the changes that occurred during the intervening 30 years.

1. As in 1945, the small-farm community continues to support more businesses than the large-farm community by a ratio of 2:1.
2. The volume of retail trade in 1976 was greater by nearly 70% in the small farm community, an improvement over the 61% advantage in 1945, as measured

<sup>11</sup> Judith B. Heffernan and Douglas G. Marshall, "A Comparative Study of Selected Characteristics of Nonmigrants and Migrants in a Rural Wisconsin County," paper presented at the annual meetings of the Rural Sociological Society, San Francisco, 1967.

<sup>12</sup> Community Service Task Force, The Family Farm in California: Report of the Small Farm Viability Project, November 1977.

by median family income.

3. Expenditures for household supplies and building equipment were not available.
4. It was also impossible to determine the number of persons supported per dollar volume of agricultural production.
5. The small farm community has improved its material advantage since 1945, as measured by median family income.
6. In 1976 Dinuba had  $2\frac{1}{2}$  times the number of independent business outlets found in Arvin, a ratio equal to that found in 1945.
7. Farm laborers constituted 37.6% of the large-farm community's labor force in 1970 and only 13.7% of the small-farm community's. These data compare with 66% and 33% respectively in 1945.
8. The number of physical facilities and public services is still far greater in the small-farm town.
9. As in 1945, there are more schools in Dinuba than Arvin: four elementary schools to two, one junior high school to none. Each town has one high school.
10. The small-farm town still provides its citizens with many more park facilities: five parks to two, and eight playgrounds to none.
11. The small-farm town has more than four times the number of social and civic organizations.
12. Public recreation centers were not touched upon.
13. Today as in 1945, Dinuba supports two newspapers, while Arvin has one.
14. Consistent with 1945, churches bear a ratio of 2:1 in favor of the small-farm community.
15. Local decision-making is more accountable and unified in the small-farm community, whereas in the large-farm town, decisions are made in a confusing and fragmented fashion because of the proliferation of special districts. This reaffirms the 1945 findings.

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A second study following in the Goldschmidt tradition is one comparing 130 towns in the counties of the San Joachin Valley. Although the final analysis of this study has not been made, data currently available suggest that large scale farming systems offer the local community no substantial advantage. Only two of the seventeen services examined appear to be positively related to large scale farming operations. The authors conclude, "The smaller scale farming areas clearly tend to offer more to the local communities than their larger counterparts."<sup>13</sup>

I have singled out six studies by different researchers, at different points in time, in different areas of the country and based on different methodologies. There are methodological differences among them, as in the operational definition of the various agricultural structures. However, the characteristic the studies share is the conclusion that agricultural structure is related to the quality of community life. The researchers I have mentioned have been involved in additional research efforts in this and in other countries. Also, studies made by other social scientists in this country, Canada, Europe, and developing nations have shown that agricultural structure

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<sup>13</sup> Ibid , p. 242.



is related to the community life. Missouri citizens of rural communities who have observed the relationship between changes occurring in agriculture and activities in their communities will undoubtedly say the studies simply prove the obvious. Perhaps this is a fair accusation. If so, my only defense is that persons in decision-making positions such as Senator Gaylord Nelson have asked for scientific evidence to corroborate observations. Until recently, it has been relatively scarce. Perhaps the real question becomes this: how important is the quality of rural community life, and what must be given up to obtain it? I have fewer hard data with which to discuss this issue, but I feel it is a question we must address.

#### Importance of Community Life

A psychologist by the name of Maslow has suggested that man has five different levels of needs which he seeks to fulfill.<sup>14</sup> Maslow arranged the needs in a hierarchy of importance; the individual must satisfy each need to some extent before moving to the next higher level. The most basic need is the physical need for food, clothing, and shelter. According to Maslow, once the minimal physical need has been filled the individual seeks to fulfill his need for security, followed by his social or love need, his need for recognition, and his need for self-actualization. As one measure of quality of community life we might determine whether the members of the community are able to fulfill their needs.

Many societies of the world are not able to provide for the basic physical needs of their populations. This is not true of the United States. Increasingly we see a concern focussed on some of the higher level needs -- better health care, conservation of the natural environment, and opportunities for self-expression. The increased attention focussed on the social or love need highlighted by the hippie movement of the 1960s has become so widespread as no longer to be identified with one segment of the society.

People once left rural areas seeking enhanced economic opportunities in the cities. As a result of increased mechanization and reduced labor required in agriculture, persons like those out-migrants from the North Central Louisiana parish had little choice other than to leave their native community if they were to satisfy their families' basic physical needs. The 1970 census, however, confirmed that this trend had reversed. A distinct urban-to-rural migration was documented, a phenomenon that is obvious in southern Missouri. Most of the persons leaving urban areas are quite aware that financially they may not fare as well in rural areas, but they seek other benefits. In a recent study of five counties in Missouri, we asked the residents what they perceived to be the major advantages of living in rural areas. Those receiving the highest ranking in a list of 14 were: 1) healthier place to live, 2) more privacy, 3) being outdoors, 4) friendly community, and 5) safe to be out alone at night. Lower cost of living and other more economically oriented aspects were named as less important. On the basis of the respondents' choices, it is obvious that rural communities provide a setting in which citizens feel they can fulfill some of their higher level needs.

One of the major goals in agriculture, to which much research has been devoted, has been to increase efficiency of food production, thus assisting in providing for the most basic physical need. When discussing the social costs related to a change to a corporate structure of agriculture, I frequently am told that those social costs must be incurred as a trade-off for more efficiency and cheaper food. My response is four-fold.

First, an increasing number of studies suggest that the so called economies of scale may not be as great as often assumed. A recent study in California notes that ". . . relatively modest sized farms can achieve a major portion of the possible cost

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<sup>14</sup> A. H. Maslow, "A theory of human motivation," Psychological Review, 50:370, 1943.

savings associated with size."<sup>15</sup> Attribution of increased efficiency to larger than family farms is questionable.

My second response is that our usual measures of efficiency include measures of what should appropriately be called economic power. Paul Lasley and I have been studying the changes occurring in the Missouri grape industry as the vineyards move from small family operations to larger than family operations.<sup>16,17</sup> We have been able to observe few benefits to society as a result of the shift. It is true that some of the larger units have less input costs per ton of grapes produced because they can purchase some of their inputs at a lower cost. But if one attempts to measure the total input resources used to produce a ton of grapes, little difference is observed. (It is difficult to compare one resource to another without assigning a dollar value to all resources, but in the case of grape production the practices used are similar on all units.) From the standpoint of the profitability of the vineyard, the input costs are important, but from the standpoint of society the real issue is the quantity of resources required to produce a ton of grapes. Too often we are guilty of making societal decisions using dollar values which are important to the production units, but which do not adequately reflect the distribution of societal resources. This error is a result of our accounting procedure and our mislabeling of efficiency. Much of what currently passes as efficiency is economic power. In our system power usually favors the larger economic units.

In addition, all too often the concept of efficiency is used in agricultural circles to stress output relative to the inputs of capital and labor. If other resources such as non-renewable ones were stressed, the efficiency ratio might change radically.

My third response returns to the point that as a society we already have the capability for providing basic physical needs. (The fact that some segments are left with unfulfilled physical needs is a result of our social organization and distribution, not production shortfall.) We might raise the question of how much longer we should allow the relatively fulfilled physical need to be a major goal of agricultural production. For some reason (I can think of a few), we in the agricultural segment appear to be the ones in society most hung up on the efficiency of agriculture. Many consumers are raising questions about the quality or safety of our food and general environment. This is a reflection of a concern for higher level needs. For example, the DES issue and that concerning the banning of certain antibiotics as livestock feed additives reflect a concern for the security of good health. Basically many consumers are saying that they are willing to trade a higher price for meat for less risk to future good health. The agricultural groups counter that the loss of these products will mean a loss of efficiency and thus higher prices. If the consumers are willing to pay the increased price as they suggest, let's take away the antibiotic feed additives. Let's take away the growth hormones and let each steer eat ten percent more grain (or whatever the increased amount will be). I doubt that many grain farmers here would object! Family farm interests and consumer interests have points of convergence.

I realize I am taking a relatively narrow view when not considering the role of factors outside of the United States which today have a major impact on U. S.

<sup>15</sup> Bruce F. Hall and E. Phillip LeVeon, "Farm Size and Economic Efficiency: The Case of California," Amer. Jour. of Agr. Econ., Vol. 60, No. 4, November 1978.

<sup>16</sup> William D. Heffernan and Paul Lasley, Missouri Grape Industry: Past, Present, and Future, University of Missouri Agricultural Experiment Station, MP 500, 1977.

<sup>17</sup> Paul Lasley and William D. Heffernan, "Structural Changes in Central Missouri's Grape Industry," paper prepared for the Rural Sociological Society meeting, New York City, 1976.

agriculture. Perhaps Dr. Raup's comments will temper mine.

My fourth response to the charge that arguing for social benefits stemming from a family farm structure is arguing against increased efficiency takes me back again to Maslow and perhaps once again to proving the obvious. My economist friends tell me that while industry expects a 13 to 15 percent return on invested capital, farmers are willing to accept much less. In the past few years members of the Missouri Record Association have received about a six percent return on their capital when no cost is attributed to management. Why do farmers accept such a low return? The answer is that for those farmers who have paid for their land and equipment, this return allows them to continue the farm operation and provide for the family's needs. (Eighty-two percent of the capital in U. S. agriculture is free of debt.) They accept this low level of return because they perceive they can fulfill some of their higher level needs better in this occupation than in some alternative.

A year ago we interviewed every person who bought or sold a bull at the Missouri All-Breed Performance Tested Bull Sale here in Columbia. We presented them with the following situation:

"People have suggested several benefits they receive from farming (reasons why they farm). Please distribute a total of 100 points among the following five possible benefits to be obtained from farming. You are to give the most points to the benefits which you consider most important and distribute the rest of the points among the other four benefits in order of their importance."

The five benefits were designed to follow the needs suggested by Maslow. The responses were as follows:

#### Bull Sale Data

	Buyers N=95	Sellers N=56
Be own boss and make decisions	26	38
Receive recognition as being successful	9	14
Develop friendships	10	15
Increase security	21	14
Increase income	39	20

In a recent study in cooperation with economists Kliebenstein, Kirtley, and Barrett which focussed on farmers' response to risk in agriculture, we asked 30 cash grain farmers in Missouri the same question. We predicted that cash grain farmers would be more economically oriented than purebred beef cattle producers. Here are the results.

#### Crop Farmer Data

Be own boss and make decisions	37
Receive recognition as being successful	10
Develop friendships	11
Increase security	21
Increase family income	21

Being on a program dominated by economists, I want to stress that the income or economic benefit of the farming operations is not only important because in Maslow's term it is the most basic individual need, but also because the survival of the farm firm is essential to the farmer's fulfilling his higher level needs. Nevertheless, the benefits the farmer perceives are not just economic in nature.

Because of the increased amount of capital required to start farming, the young farmer just setting out cannot survive on a six percent return. Thus, even the family farm structure cannot survive into the future on a six percent return without some other form of assistance. But the fact remains that labor and management in a family farm structure can be secured at lower economic cost than in corporate structures because additional non-economic benefits, which cost the consumer nothing, are available. Thus even if large non-family farms do have increased efficiencies in some areas, they would be offset by the higher cost of labor and management.

I find it ironic that today agricultural structures are moving toward urban industrial work organizations which include an increase in task specialization, separation of management from labor, and separation of home and community from the worksite. This is occurring at the very time that one of the major themes running through books and journals in the area of management focuses on job enrichment, job enlargement, participative management, democratic management, and other such concepts. Why is industry moving back from task specialization and separation of labor from all decision making? Because the workers have become alienated.<sup>18</sup> They have lost their motivation. They have lost interest in the product they produce. Their productivity has dropped and their absenteeism and job turnover have increased.

I find it ironic that when educators, researchers, and government personnel from this country begin working closely with persons from other countries for the purpose of increasing their agricultural productivity, one of the first items on the agenda is land reform. Break up the large farms and haciendas and give the workers ownership of the land they work so that they will be motivated to produce and agriculture will be more efficient: such is the plea. Our family farm system has become a model for the world. Yet in this country, in the name of efficiency, we watch the demise of the family farm, the development of a landed aristocracy, and the separation of labor from ownership and management.

I find it ironic that at a time in history when the benefits of living in rural areas have become so obvious as to induce a major reverse migration pattern, the structure of the agricultural segment of rural society is moving increasingly toward the urban industrial model of work organization. Research has shown that the impact of work spills over into the worker's family and community life. Rather than ask what it is that makes rural areas more attractive to migrants from urban areas, we seem bent on urbanizing our rural areas. Demographers are quick to tell us that size is the important variable in explaining social interaction. Size may be one variable, but drawing from C. Wright Mills, Paul Lasley and I have argued that the importance of the occupational role in determining social interaction is also an important explanatory variable and may well be the most important variable in explaining social relations in rural areas.<sup>19</sup>

At this point, I may appear to be a modern-day agrarian fundamentalist. That label is often applied to persons who discuss the non-economic needs of rural areas. If I am that, I have a lot of support from persons who have spent their entire life in urban settings! Pick up any current college text in social problems and you will observe a rather standard set of chapter titles focusing on topics such as the strains

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<sup>18</sup> Work in America: Report of a Special Task Force to the Secretary of Health, Education and Welfare, MIT Press, Cambridge, 1973, pp. 36-39.

<sup>19</sup> Paul Lasley and William D. Heffernan, op. cit.

of the city, alienation and work, loosening bonds of the family, mental illness, poverty, drug-abuse and crime.<sup>20,21,22</sup> Certainly rural areas are not immune to such problems, but research by urban sociologists has found differences which in many cases point favorably to living in rural communities. The research has also shown that the causes of many of these problems are related to work settings and community life.

As we search for ways to improve the quality of life in this country, I predict more weight will be attached to the social and psychological needs of the members of the society -- be they in cities, suburbia, or rural areas.

Let's take a hard look at the social and psychological costs and benefits of the family farm structure now!

Values are real. Scientists, planners, and concerned citizens must be willing to examine our societal values. We have been making value choices in our society. We have chosen not to alter the social structure as it relates to agricultural production -- this social structure which continues today to squeeze out the small farmers. The defense offered is that the small farmer keeps getting bigger, but how big? To larger-than-family or corporate size? Is this what we really desire?

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<sup>20</sup> Elbert W. Stewart, The Troubled Land, McGraw-Hill, New York, 1972.

<sup>21</sup> Jonathan H. Turner, Social Problems in America, Harper & Row, New York, 1977.

<sup>22</sup> Michael McKee and Ian Robertson, Social Problems, Random House, New York, 1975.

DOES IT MAKE A DIFFERENCE?

V. E. Rossiter, Sr.  
President, Bank of Hartington  
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I must admit that I have accepted the invitation of the Perry Foundation and Dr. Breimyer a little reluctantly and with mixed emotions.

At first blush, the subject of the family farm struck me as being purely academic, certainly as old ground frequently traveled, with no very satisfying answers for a rural populist -- which I am.

Then I mellowed and decided to accept the invitation.

In order to dispel, at the outset, any anxiety that you might have about my position on this subject, let me state most emphatically that "I can not visualize the United States remaining a viable nation of relatively small and independent -- individually owned -- business entities, unless we devise a method of preserving the family operated farm."

Having said that, I must add the further observation that "if we could succeed in satisfactorily disposing of the family farm, which seems inevitable to many in the light of recent history, then I am almost certain that a vast majority of the some 9 million small stores, small banks, professional people, and small communities that these people serve will disappear from the rural scene along with the family farm."

This would seem to be an unnecessarily harsh solution to something that really hasn't been clearly identified as a problem.

I keep asking myself, "Is the perpetuation of the family farm a real problem that must be dealt with by society, or is it more accurately a problem that has been created out of whole cloth as a by-product of a public policy of 'cheap food' for a well paid and over-fed United States Consuming Public?"

Is it a result of planned underpayment for agricultural raw materials?

It is gross underpayment when compared with the income levels of other equally important segments of the economy, and when measured from a base of, say, 1947-49. It is an underpayment to agriculture that has resulted in an unfair economic pressure on the family farm, and has been counterproductive by creating inflated price levels for the people it is supposed to help, U. S. consumers.

If it is true that the agricultural economy has been unjustly discriminated against on prices and income levels, these things can be corrected. And if in fact they can be corrected without adversely impacting the remainder of the economy, but on the contrary will enhance it, the obvious choice is to improve farm prices and income and to save the family farm -- and with it the basic business structure of Rural America.

If correction occurs, the future of the family farm is secure. It will make it possible for a young man with his young wife and prospective family to earn a respectable living on a relatively small 320 acre diversified family farm.

This is the point of entry, the essential beginning, the seed, the nucleus of the larger and more highly leveraged family farm operation of the future.

As a working country banker, I have observed young men entering agriculture from "scratch" and with varying degrees of assistance from friends, relatives and a variety of lenders such as banks, the Farmers Home Administration, the Production Credit Associations and others.

During the late 1930s it was possible to enter agriculture from scratch with as little as \$2,000 of borrowed capital. Following World War II, the cost was \$4,000 and a great many returning veterans started farming with this modest beginning. Most succeeded. Today it would require a minimum of \$25,000 to make a start comparable with the minimal amounts required in the 1930s and 1940s. These figures are for a rented farm. For a young farmer buying land on which to farm much larger sums are required, and some money is available through the Farmers Home Administration.

The fact is that the availability of credit has never been a major problem in engaging in agriculture. It is also true that there is more credit available at this time than at any time in my recollection, for a young farmer entering agriculture.

However, in a period of economic imbalance which is unfavorable to agriculture credit is a mixed blessing. The repayment of the principal and interest on a large loan can become a very serious problem, and it is a very serious problem to many farmers today.

The fact remains, however, that the traditional family farmer, and the vast majority of farmers so classified, are not expected to survive much more than another decade.

It is unrealistic to begin farming from scratch today, and it has been since so 1973. It will continue to be unrealistic until:

1. farm prices are brought into relative balance with the rise in the cost of other goods and services based on the average prices for the period of 1947-49; and
2. realized net farm income is restored to the same relative level, as a share of National Income, as prevailed on the average in 1947-49; and other income levels in other important sectors of the economy are likewise restored.

Failing to achieve these corrections, it is necessary to draw a simplistic but overpowering conclusion that if a young man and his family can not enter agriculture from scratch with his own limited resources and the help he can get from conventional creditors, AND BE SUCCESSFUL, there is no way to perpetuate the family farm.

Without an equal number of new family entries into agriculture to counterbalance the loss of aging family farm operators, there will be no one to fill the ranks of the family farmer.

A vacuum will be created.

The connotations of such a vacuum are many and generally not in the interest of the consumer of the United States.

The conclusion then must inevitably be that without substantial farm price increases within the parameters of previous norms, and an optimum increase in realized net farm income, the family farm can not survive. It is virtually dead.

Fred V. Heinkel,  
President, Missouri Farmers Association

There is but one answer to the question raised in the topic assigned to our panel: an unqualified "Yes!"

As I study the problems of present-day agriculture, I conclude the future food and fiber needs of this country and of foreign customers can only be met if we maintain a strong and broad system of family-size farms.

In view of recent trends, some are saying we do not need family farms. Over the past 40 years, farm numbers have been reduced by half, and farm size has more than doubled. A past Secretary of Agriculture predicted that we will have a million fewer farmers by 1980.

Some note with pride that a declining number of farmers continue to set new records of production, and this is an achievement unmatched anywhere else in the world. This trend of fewer, but larger, farms achieving record production has been made possible by greater use of new technologies within agriculture.

But we may well be reaching the point of diminishing returns from our new technology. We are beginning to learn that what is considered efficient in the short run is not necessarily efficient over a longer period of time.

In the name of efficiency, we have bulldozed out windbreaks to create fields large enough to accommodate today's large equipment. This results in increased wind erosion, and could lead to another dust bowl like that of the 1930s. Use of wide multi-row equipment has destroyed many of the terraces created to reduce water erosion. The severe corn blight epidemic of 1970, which destroyed half of the corn crop in some states, reminds us of the dangers of relying on only a few strains of hybrid seeds for producing the nation's crops. Elimination of the practice of crop rotation has intensified depletion of the soil, and caused a greater reliance upon pesticides, some of which have since been removed from the market because of their alleged detriment to human health.

The trend toward larger, more mechanized, and higher capitalized farms accelerates the problems associated with wind and water erosion, the susceptibility of crops to disease, and the degradation to our environment. Unless new technologies are developed to overcome problems associated with present-day technology, the only assurance of ample food and fiber in the future is survival of the family farm.

It was the family-size farm that was conducive to having windbreaks divide the land into small, yet economically-sized fields.

It was the family-size farm that provided the population base to support the economic base of rural communities which, in turn, served as shopping and educational centers for farmers, and provided social, medical, and cultural services for farmers.

Just as the family farm made the difference in the past, it can make the difference in the future.

Farm organizations, from their inception, have vigorously supported the concept of the family farm. Through their patron-owned cooperatives, family farmers have been able to supply their farm inputs as cheaply as have the largest conglomerate-owned farms. Through their cooperatives, they have been able to compete with the largest producers at the marketplace.



Farm organizations have also sought to overcome the advantage that large corporate-owned farms have over family farms in the areas of taxation and credit. Studies indicate that when these artificial advantages are eliminated, the family farm is more efficient than is the large corporate farm. The answer to the question raised in the title of a recent publication, "Who will sit up with the corporate sow?" also answers why the family farm is more efficient than other systems.

Farm organizations have successfully supported legislation designed to prevent the takeover of farm land by foreign aliens at the state level, and we are supporting such legislation at the national level. Certainly we must continue to take those actions necessary to prevent the demise of family farms and prevent the birth of a landed gentry. The alternatives would be a few super-size farms, owned by conglomerates, or the development of a feudal system. Either of these alternatives would not only have disastrous economic impact on the nation, but would also result in undesirable social consequences as owner-operators were relegated to tenant farmers.

This country was founded and developed in large part by farmers who left homelands dominated by feudal systems in order to create a new way of life for themselves. If a farming system were to be developed which gives greater returns to absentee landlords than to those who both own and operate their land, it could well liquidate the family farmers.

It is my firm belief that a nation which established a homestead program in the past ought to care enough to maintain and protect our proven system of family agriculture in the future. The nation which passed the Hatch Act, establishing experiment stations; and which passed the Smith-Lever Act, making education and research results directly available to farmers, should now continue to take necessary actions to help keep the family farm alive and healthy in the future. Such is the case because the family farm does make a difference:

- a difference in the dignity of those who produce the food,
- a difference in the base upon which social, cultural and economic systems are built in rural areas, and
- a difference in whether ample food and fiber can be produced without degrading our environment.

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DOES IT MAKE A DIFFERENCE?

Frances Hill  
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I would like to bring the perspectives of a political scientist to bear on the analysis in Dr. Breimyer's strikingly insightful paper. I would like to examine the assumption that issues can be resolved in the public policy process once they have been defined, and analyzed. Dr. Breimyer has certainly defined and analyzed the problems of family farms. Yet I am pessimistic that his proposed next stage, a full policy discussion resulting in more adequate public policies, can be realized.

The basic problem is that we have no public policy process in this country that can grapple with large questions. We have instead a public policy process which is designed to solve fragments of problems. We have an administrative policy process rather than a legislative policy process. This system of administrative fragmentation is ideologically based. I would even use Dr. Breimyer's language and say that this policy process is class based. This system is the result of a policy decision made during and just after World War II that agricultural policy would be a series of commodity specific price policies. Questions of the quality of rural life, the potential access of young farmers to land, the potential access of different types of farmers to land would no longer be raised in policy circles. Some policy makers argued that price policies would automatically solve the other problems. Others argued that farmers who could not compete in the market and in the policy arena should move to cities. Questions of the quality and price of food were not raised. There was a similar silence surrounding questions of who benefitted from these price policies.

As a result, the agricultural policy process cannot address the question of land which Dr. Breimyer has identified as the central issue in analyzing the future of family farms. We have no land use policy and little likelihood of developing one. The Department of Agriculture is organized to deal with fragments of issues. Even if USDA could manage to sum up all its fragmented policies -- in itself highly unlikely -- this would not amount to a national agricultural policy. It would not even add up to a farmland policy. Such other fundamental issues as credit, taxation, energy policies for agriculture, and the widow's tax also fall outside the present policy process with its fragmented sub-agencies, each jealously guarding its own policy domain and each seeking to avoid either scrutiny or cooperation.

In such a governmental structure operating through a process of purposeful fragmentation it is virtually impossible to discuss policies that would answer the question: is land a commodity or a resource? Raising this question is crucial to the future of family farms. It calls for a broad philosophical discussion of why and in what ways farmland should be considered a resource and what this will mean for those who currently own land, those who hope to buy land, those who anticipate selling land, and several sectors of the population affected by these decisions, including those who eat. How do American values, American assumptions about the operation of the economy, affect our perceptions of these issues and the possible policies that could result from treating land as either a resource or a commodity? This kind of fundamental policy discussion is unlikely to occur because neither policy makers nor citizens are organized for such a discussion. This is not a problem of having policy makers who are unreceptive to consideration of such issues on an ideological basis. The problem is more profound. The policy apparatus simply does not provide access points to those people who want to discuss fundamental issues.

This fragmentation of the policy process also affects the pattern of farmers' own participation in the policy process. Farmers are now organized in some 120 commodity organizations, each of which is linked closely with the relevant commodity section of USDA. None of these groups gives serious attention to the fundamental questions of land policy and taxation. Instead, each is quite legitimately concerned only with its own commodity. Farmers tend to be represented not as farmers or as family farmers but as producers of a specific commodity.

The general farm organizations logically look to Congress as a forum. Yet Congress is a less important policy arena for agricultural policy than are the administrative agencies. Thus, the general farm organizations are at a relative disadvantage in finding access points in the policy process. Those organizations that seek to represent all types of farmers would be the logical groups to raise the fundamental issues of land, energy, and taxation. To do so, they will have to risk a broad discussion focussed on the legislative process rather than choosing the safer haven of administrative agencies.

Farmers fear the legislative process. Their fears are by no means groundless. Farmers control very few votes in Congress and the farm population continues to decline. Farmers are a permanent minority.

The choice is between continuing to avoid large issues and entrusting other issues to a fragmented regulatory process or to try coalition politics in an attempt to find the votes for legislation on land issues. Coalitions are risky but unavoidable. Farmers might well consider coalitions with labor, consumers, environmentalists, and with the rural non-farm groups. None of these groups has the same interests as farmers, but neither is any intrinsically opposed to the kinds of policies necessary to preserve family farms.

Coalitions with non-farm interests would require coalitions among farm groups. The commodity organizations are too narrowly focussed to raise the fundamental questions and the general farm organizations are too broad to fit easily into the fragmented structures of the current policy process. It is noteworthy that farm women have seen the need for such coalitions and have, in the past four years, formed two new general farm organizations. American Agri-Women and Women Involved in Farm Economics have been organized at least in part in an attempt to counterbalance the fragmentation seen in commodity organizations. Their formation also illustrates the futility of farm organizations' continuing to exclude women from meaningful policy roles. It is inexplicable that organizations with steadily declining potential memberships should fail to

use the skills and energies of half their potential members -- the female half. Women have already proven themselves effective citizen lobbyists. The farm organizations might think about using this neglected resource in the struggle to save family farms.

Farmers and farm organizations might also take a new look at what could be achieved at state and local levels. Agricultural policy has been focussed on the federal government because the federal government administers commodity programs. State and local governments have important powers in land use and taxation issues. Yet even in their states and counties farmers will need the support of other groups.

I would like to raise one aspect of the crisis of family farms that matters directly to farmers and labor and which might provide one basis for a political coalition. There is an increasing tendency for farmers and their wives to become an immobile labor force in the new rural industries. These industries often do not permit unionization, pay low wages, and hire and fire the same people on a regular seasonal basis. We are now being told that this is rural development and that this type of rural development is sufficiently beneficial to justify the use of public money for investment credits to industries that locate in rural areas. This issue needs to be discussed. This may or may not be rural development -- or it may be rural development only for some people.

Farmers seem to have a choice between seeing their wives work seasonally as turkey pluckers in an attempt to save the family farm or of accompanying their wives to Washington, their state capitals, and their county seats to raise fundamental issues. Coalition politics would seem no more risky and potentially far more rewarding than underpaid seasonal employment.

Saving family farms will require not simply analyzing the problems but also reshaping the policy process so that these problems can at least be discussed.

## ACCESS TO CAPITAL IN AGRICULTURE: THE FEDERAL TAX ISSUES

W. Fred Woods

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Let me say from the outset that I don't think the family farm has survived! I believe the "family farm" I hear talked about is similar to the "good old days" many of us talk about. We can't go back to them and I'm not sure we would if we could. I don't believe we can afford to fall into the trap of blindly defending the "old" image of the family farm. Quite possibly the demise of this "family farm" is, or was, as inevitable as the passing of the frontier. And it really began many years ago with the passing of that frontier and has only accelerated in recent years. I begin in this manner, not to start an argument, but to suggest that too much emphasis on the term "family farm" clouds the real issue. As I see it, this issue is this: can or should the trend towards larger, fewer and more specialized farms and the growing economic dependency of the farm upon the nonfarm sector be stopped or slowed -- or even accelerated?

This trend, this change in structure, is primarily a result of five highly related factors: technology, resource mobility, financing, risk and uncertainty, and public policy. Although all five are important, financing, or the access to capital, is perhaps the key to the other four.

Indeed, I am in full agreement with Professor Breimyer that the pressures of our time are largely financial in nature. Financing was thrust into its key role by the need to adopt the new technologies needed to reduce production costs and to expand output. This proceeded in a more or less orderly manner through the 1950s and 1960s but set the stage for the unprecedented boom in capital expenditures and farmland prices of the 1970s.

Sophisticated, management-oriented "family farmers" were able to use their income flows and substantial equity in relatively debt-free land to obtain the financing needed to acquire more land, expand output, and reduce per unit costs. Less sophisticated farmers, many who were simply guilty of bad judgment, and new entrants who thought 1973 farm prices were the new "norm" (and were sometimes aided by overly cooperative lending institutions) tried to rely on income flows alone and promptly got into financial difficulty.

To be sure, there were, and still are, some outside investors, both foreign and domestic. Some farmland is purchased for nonfarm uses. But to a large extent the growth in size of farm unit has been a form of "economic cannibalism" from within the agricultural sector. Thus the greatest single threat to the "family farm" is other family farms. In recent years approximately 60 percent of farmland changing ownership has been added to existing, predominantly "family" farms.

### Public Policy in General

Although Gardner and Pope attempted to argue that agricultural economists have failed to establish convincingly a connection "one way or the other" between public policy and the structure of agricultural production,<sup>1</sup> I believe it is fairly evident that public policy has, in fact, affected the structure of farming in many ways. More

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<sup>1</sup> B. Delworth Gardner and Rulon D. Pope, "How is Scale and Structure Determined in Agriculture?" Amer. Jour. of Agr. Econ., May 1978, pp. 295-302.

frequently than not the direction of the effect has been in the opposite direction from the stated intent of the policy. For example, although most public programs for agriculture are allegedly designed to help family farms, a major conclusion must inevitably be that Federal policy on the whole has discouraged small farm operations and, since benefits are usually distributed in direct proportion to volume of output, has led to greater concentration in farming.

Small farms have undoubtedly been helped by certain public programs, but most programs have advanced the trend toward larger units. Within the farm sector, the greatest benefits have consistently gone to those farmers with the motivation and resources to use commodity programs, income and estate tax laws, and low-cost credit to expand their acreage and size of business.

### Tax Policy and Financing Agriculture ✓

Federal income tax laws have historically granted preferred treatment, not only to taxpayers directly engaged in agricultural production, but to all having agricultural incomes. A major benefit, the privilege of using the so-called "cash accounting" method, allows accelerating or delaying certain income and expense items. This departure from basic accounting procedures was first justified and is still defended on the ground of providing a simplified method of accounting to farmers unable to cope with the more sophisticated accrual accounting. Further, they were presumed to lack access to competent accounting assistance. Cash accounting combined with laws and regulations permitting current deduction of developmental expenses, allows deduction of expenditures before the income derived from them is realized.

These tax preferences, plus the availability of capital gains treatment for sales of livestock held for draft, breeding, dairy, or sporting purposes, create a strong incentive for the entry of capital from outside agriculture. The attraction to individuals with large nonfarm incomes who seek farm investments to reduce their effective tax rates and delay payment of taxes has been widely publicized. And, to be sure, these tax shelters have contributed to the rising demand for agricultural land and create a decided advantage in access to capital for tax shelter investors over individuals who depend on farm income for most of their livelihood.

What is not generally considered, however, is how tax rules create inequities in access to capital among farmers themselves. Among individual farmers, tax considerations are only one of several factors affecting decisions to increase size of a farm operation; yet they have an important bearing on access to capital. Moreover, although special tax provisions are available to virtually all farmers, the ability to benefit is directly related to the farmer's marginal income tax bracket. The higher the bracket, the proportionately greater the benefit.

Other tax provisions such as investment tax credit and accelerated depreciation encourage the shift to mechanization in farming and to increasingly larger sizes of machines. They do so by effectively shifting a portion of the machinery cost to the public. What better access to capital is there, than to have the public at large share a portion of the investment cost? This amounts to a subsidy on capital inputs relative to labor inputs and the subsidy is most readily available to larger farmers who can afford the expensive equipment.

When farm income becomes high enough, the farmer may also realize a substantial additional tax saving by incorporating and gaining access to subsidized capital through retained earnings. Through this process, current income is transferred into additional real property and land ownership tends to become more and more concentrated. The most recent Federal tax legislation may be expected to accelerate the trend toward incorporation. The Revenue Act of 1978 provides, for the first time, a graduated corporate income tax rate. The first \$25,000 of corporate income will now be subject to a tax rate of 17 percent. The next \$25,000 of income will be taxed at a 20 percent rate;

the third \$25,000 increment will be subject to a 30 percent rate; and the fourth increment to a 40 percent tax rate. Taxable income over \$100,000 will be subject to the 46 percent rate. This change may be expected to provide a considerable incentive for smaller and medium size farms to incorporate. It will also increase the access to capital, a publicly subsidized access to capital, under the corporate income tax provisions.

Not only does the new law give a corporation a positive incentive to retain capital; it contains in fact a disincentive to use farm income for consumption purposes since under the regular corporate income tax provisions, income paid out as dividends is, of course, subject to the so-called double tax.

Other provisions of the Revenue Act of 1978 also affect access to capital within the farm sector. The 10 percent investment tax credit is made permanent and also extended to structures or enclosures used for single purpose food or plant production. This includes structures used for poultry, eggs, hogs, other livestock, or plants.

This provision effectively reduces the price that farmers pay for machinery and other eligible equipment. When combined with the accelerated depreciation deductions and additional first-year depreciation, tax savings of up to 50 percent of the purchase price can sometimes be realized in the first year of purchase.

The preferred capital gains treatment was further liberalized. Under the old law, the individual taxpayer could deduct from gross income 50 percent of any net capital gain for the year, with the remainder included in income and taxed at ordinary tax rates. Under the new law, individual taxpayers may exclude 60 percent of net capital gains from gross income and include the remaining 40 percent in income to be taxed at the otherwise applicable ordinary tax rate. The announced intent of this liberalization is to speed up the rate of economic growth by making more funds available for investment. But what is the effect of this provision on U. S. agriculture? Certainly there is no general shortage of investment capital in American agriculture and since the major capital asset in agriculture -- farmland -- exists in limited supply and is already under considerable inflationary pressure, the inevitable result of increasing its attractiveness as an investment will be further substantial upward pressures on farmland prices.

Nationwide, USDA economists had forecast, under the old tax law, that farmland values would increase 6-10 percent during the next 12 months. Under the provisions of the Revenue Act of 1978, the gains may well be on the order of 8-12 percent.

#### Federal Estate Tax Impacts

Three provisions included in the Tax Reform Act of 1976 could have considerable impact on access to capital and changing farm structure. These are the special use valuation for farmland, the carryover basis provision, and the liberalized extended payment of Federal estate tax liability.

Use value assessment, even though it cannot reduce a gross estate by more than \$500,000, provides benefits to all farm estates that qualify. The real size of this apparent half million dollar benefit is directly proportional to the marginal tax bracket of the estate. Benefits from use value assessment may reduce farmland valuation for estate tax purposes 35-50 percent on the average. While on the one hand this is an apparent advantage in financing, the benefit will quickly be capitalized into increased land values, thus adding further pressures to the already inflationary farmland market.

The primary beneficiaries of this tax shelter will in the main be existing farmers who have family heirs desirous of continuing the farming operation. One effect may be to encourage older farmers to shift capital investment into land and away from non-land assets.

It is difficult to predict how many wealthy non-farmers will enter agriculture to take advantage of the sizeable tax shelters now found there, but there is a definite incentive for movement in this direction. To the extent it takes place, the young, beginning farmer will find it all the more difficult to become established unless he is fortunate enough to be born into a landowning family.

The real financial boon comes under the liberalized deferred payment of estate tax liability provision. A new provision allows 15 year installment payment at 4 percent interest on as much as \$345,800 of Federal estate tax lien (less the allowable credit) attributable to a closely held business. The economic benefit could be great if an attractive return can be earned on the deferred tax.

If the money from deferred tax earns a 5 percent net return, compounded earnings reach 14.4 percent of the tax bill over the payment period. If a 10 percent net return is received, the compounded earnings pay all of the tax and more than 80 percent of the interest. With such benefits flowing from the deferred payment provision, substantial incentives are generated to qualify property for the election.

Since disposition of more than one-third of an estate's assets will trigger termination of the tax deferral, there is a sizeable disincentive for disposition of the property prior to the time the installment payment period expires. Continuation of farms in the same family is thus encouraged.

Finally, the carryover basis revision. The former "stepped up" basis at death tended to "lock in" appreciated assets into estates of elderly persons, since their heirs would receive a tax-free stepped-up basis. The carryover basis provision ends this lock-in and, in the short run, may be expected to reduce substantially the incentive to hold the appreciated assets in estates. In the longer run, particularly if farmland continues to appreciate as it has over the last decade, a different kind of lock-in may well be created: a permanent disincentive to sell appreciated assets, particularly land. However, we may never know what the impact of this revision would in reality be, for the Revenue Act of 1978 postpones the effective date of carryover basis until January 1, 1980. Thus, the old rules will continue to apply until that date. We may expect a strong effort to rescind carryover basis permanently sometime between now and 1980. It may, at this moment, be effectively dead.

#### Summary

So now to return to my original question: Can, and should, the trend towards larger, fewer, and more specialized farms and the growing economic dependence of the farm upon the nonfarm sector be reversed? Slowed? Halted?

Clearly access to capital, large amounts of capital, is necessary to support this trend. Just as clearly the Federal income tax promotes access to this capital, and promotes it in ways which, to say the least, are not generally considered supportive of stated national goals.

If the manner in which this operates is not generally understood, agricultural economists must shoulder much of the blame. With a few notable exceptions we have ignored the effects of tax policy on agriculture. We continue to cling to the comfort of marginal analysis and deal in before-tax results.

If we want to continue to subsidize the access to capital in a manner which gives the greatest benefit to the larger, wealthier farmer and to those who are already established in farming, then fine. But let's make it a conscious, straight-forward decision. Let's not continue to bury our heads in the sand and pretend we don't understand what is happening.

Loyd K. Fischer  
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University of Nebraska, Lincoln

The term "environment" refers to the aggregate of surrounding conditions and influences. People differ widely in what they consider to be ideal in environment; yet by consensus some things are regarded as undesirable. A problem arises, however, when pursuit of one objective threatens the achievement of another.

Presumably, everyone prefers surroundings which are clean and wholesome to those which are littered and polluted. On the other hand, individually and collectively we also zealously pursue another competing objective, that of producing and consuming prodigious quantities of goods. The response of U. S. agriculture to this second objective has been spectacular, to say the least. The quantity and variety of agricultural commodities produced in the U. S. exceeds the wildest dreams of our forefathers. Furthermore, this output has been achieved with a progressive reduction in the labor input. Yet this production has a price, some think too high a price, in environmental degradation. The increasing number and stringency of regulations reflecting environmental concerns are, to considerable extent, old bills coming due.

Farmers are influenced profoundly by not only the regulated or unregulated physical environment, but also by the political, economic, and social environment. However, these latter concerns are outside the scope of this paper.

Substantial social values are often attached to the preservation of the family farm. In addition, a popular view is that agricultural land and other resources are cherished and preserved when ownership resides with those who till the soil. Yet in the East and South lies much farmed-out land, now idle, that was in family farms prior to its abandonment. Insofar as such land has been reclaimed for agricultural purposes in the last decade, it has been brought back into production by non-family farms. In other words, in terms of protection of the environment family farms have not been an unqualified success story, nor have the large scale farms been an unmitigated disaster.

#### Environmental Degradation

Although the environment is not improperly defined in terms of the aesthetics of the place in which we reside, it is more than that. The environment is also the source of all of the natural resources, both stock and flow, which nurture and sustain us. The environment is degraded not only by pollution but also by diminution in quantity or quality of the resources on which we depend. When the technology of production is heavily dependent upon consuming stock resources, environmental degradation is inevitable. The economic system of the United States, including agriculture, has a ravenous appetite for finite stocks of metals, minerals, and fossil fuels. The gross national product of the U. S. is not correlated so closely with quality of life but instead with the rate at which resources are converted into waste. Waste may actually detract more from the quality of life than the added goods contribute to it. Moreover, some of the "goods" are of dubious value at best and some of the "bads" are bad indeed.

To repeat, the environment is degraded not only by pollution but also by diminution of the stock resources upon which productive activities are based. Furthermore, these two threats to the environment are closely related. The "consumption" of stock resources by an economic system obeys the first law of physics: that the materials which go into the system as inputs come out undiminished in mass or energy. However, the second law of physics (i.e. the law of entropy<sup>1</sup>) dictates that the

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<sup>1</sup> Namely, that every closed system tends toward a condition of uniform inertness.



residues of production and consumption are of lower utility than was the virgin input. What goes in is a valuable resource and ultimately what comes out is valueless waste. In economic terms the entropy law can be stated, "There is no free lunch."

On the other hand, an important lesson to be learned from the foregoing is that the price of lunch goes up in direct proportion to the quantity of stock resources consumed in its production. Furthermore, this price is paid not only in terms of denying the use of the resource to another purpose or to posterity but also in terms of the problems associated with accommodating the resultant wastes. The most effective means for reducing the quantity of pollutants entering the environment is to reduce the quantity of resources consumed. This reduction can be accomplished in either or both of two ways: (1) by reducing the quantity of goods produced and consumed, or (2) by shifting to techniques of production which utilize flow (i.e., renewable) rather than stock resources.

#### Technological Advancement

Technology is properly defined in terms of the sum of the means by which a social group acquires material goods for sustenance and pleasure. Surely Americans apply the adjective "advanced" to their technology of the present; but what form will "advanced" technology take under the changed resource conditions expected in the future? And where does agriculture fit in? The proponents of gasohol would have us believe that agriculture is the basic industry of the U. S. In reality the present day U. S. farmer is a middleman processing purchased inputs, such as machines, minerals, fertilizers, and fossil fuels, into food and fiber. Interrupt the supply of purchased inputs to U. S. farmers and overnight the industry will grind to a virtual standstill.

Knowledgeable people may differ as to when a transition must be made, but only the hopelessly naive can believe that U. S. agriculture can continue indefinitely its current dependence on the finite stock resources of the world. The question to be raised is, "Will the family or the non-family farm be best able to adopt techniques of production that are based upon flow resources?"

If we give weight to the interests of posterity, is present technology really "advanced"? Is our agriculture really all that productive? In the biblical parable, the father welcomed back the prodigal son; but he did not commend him for his behavior. Is it possible that we have confused prodigality with prolificacy and that we are not productive at all but are simply living up our inheritance? Are we engaging in riotous living, compliments of posterity and of our brother who stayed home?

To carry the point further, is it possible that truly advanced technology in agricultural production is to be found not in the U. S. but in Red China? Surely one must be impressed by the fact that in China 900 million people (more than 20 percent of the people of the world and over four times the U. S. population) are being adequately nourished from an arable land base equal to 60 percent that of the United States. Furthermore, the soils of China have been tilled not for 100 to 300 years but for 3,000 to 5,000 years. Also, this feat is being accomplished with only a modest input of stock resources. Unlike the technology of U. S. agriculture, that of China seems to be compatible with nature and thus capable of being sustained indefinitely. From press stories we learn that the Chinese are newly attempting to increase agricultural output by use of machines, chemical fertilizers, and minerals derived from stock resources. For their sake and for the sake of mankind one can devoutly hope that the transition stops at a level of dependence on stock resources far short of ours.

U. S. agriculture tends to have a strong bias toward mechanical and chemical solutions to problems. In the minds of many people advanced technology is synonymous

with complex machinery and synthetic chemicals. These almost invariably are capital and energy intensive. Finite stock resources found in the earth's crust are drawn on heavily. Persons and organizations having strong economic interest in perpetuating this type of technology are politically and economically powerful. Furthermore, the high investment and operating costs of such technology tend to impose severe stress on the traditional family farm. Entities having access to large amounts of risk capital have distinct advantages in an agricultural industry so designed.

Yet the above conception of "advanced" technology has little to commend it either intellectually or practically. Advancement in technology of production is more properly conceived of in terms of improved output/input relationships. Furthermore, to be legitimate each innovation should be appraised in terms of all costs, including adverse environmental consequences, and the potential impact on future generations.

Laudatory comments about Chinese agriculture should not be construed to suggest that U. S. agriculture should be so patterned now or in the future. I only say that the technology of U. S. agriculture is totally inappropriate for the Chinese. Unfortunately, in the face of declining stocks of mineral and energy resources, much of the technology in use on U. S. farms may well be inappropriate here in the not too distant future.

Also to avoid misinterpretation, I add that the production methods on U. S. farms of 50 years ago are inapplicable. In retrospect, they were inefficient and environmentally destructive. The millions of acres of abandoned farmland in the United States attest to that fact. The point to be made is different: it is that a farming system based heavily upon renewable resources can be as "advanced" in technology as is today's "modern" farm.

A strong trend toward specialization has characterized the "modernization" of every industry, including agriculture. Among the consequences in agriculture are plant and animal monocultures which nature abhors. Monocultures facilitate mechanization and automation; but they also require a vast array of chemical and mechanical measures to cope with disease and insect problems.

#### Technology and Farm Size

The issue of the technology of production as related to farm size is exceedingly complex. Farm size is almost as elusive a concept as the family farm. Certainly in terms of either output or inputs, many farms classified as family farms by Professor Breimyer's definition are mammoth in size as compared to farms of an earlier era.

In conventional analysis of economies of size, the prime variable is cost per unit of output relative to the size of an operation. Yet the output/input ratio for the farm firm is not where the major battle over size of farm is being fought. In fact, in most farm enterprises the larger family farm likely achieves a level of physical efficiency equal, or perhaps superior, to that of the larger non-family farm. On the other hand, muscle in the market place, in the political arena, and in the courts tends to belong to those farms in which ownership, management, and place of residence are separated.

The physical environment in farming communities is being stressed not only by the corporation farm but by the family farm as well. Present-day agriculture is environmentally destructive. In tonnage our nation's farms are far and away the largest source of non-point pollutants. Nor are they just dust or silt. In many instances, the materials carried off our fields are laden with organic matter and plant nutrients. Oftentimes, they also contain pesticides in concentrations harmful to living things.

But the relationship between size of farm and protection vs. exploitation of land and water is a mixed bag. True enough, large tillage and harvesting equipment tends to be incompatible with terraces and other mechanical erosion control practices. Furthermore, the larger than family farm gravitates toward the specialized cash crop. Yet some of the largest farms in Nebraska are integrating center pivot irrigation and cattle production. Some are irrigating pastures and alfalfa hay, are making use of crop residues for feed and soil amendment, and are practicing minimum tillage to control erosion and reduce energy consumption.

Capital and energy intensity on large scale farms is often alluded to. Yet investment in machinery and equipment per animal, acre, or unit of output is often lower on the very large farm than on the family farm. The same may be true of energy. Furthermore, most of today's "family farms" purchase a large proportion of their productive inputs. The largely self-sufficient farmer of the earlier day is virtually non-existent in modern commercial agriculture. On the other hand, a small number of family farms in the U. S. are being operated without commercial fertilizers or pesticides. These farmers generally minimize tillage operations and carefully manage their crop residues, livestock wastes, and other organic matter.

An overall observation for U. S. farms of all sizes is that they are heavily based on using stock resources. Loss of soil by wind and water erosion is several times the level for maintaining soil productivity. Soil and water are no more likely to be abused on a large than a small farm.

Large scale farms may produce no more waste, relatively, than small farms. However, large concentrations of confined livestock pose special problems. Even though the quantity of waste produced per animal would not likely vary with size of operation, the cumulative impact of the wastes from several thousand animals confined within a small area can be exceedingly offensive and even threatening to health. Among the potential products of confined livestock are dust, odor, noxious runoff, and vermin. Furthermore, the full range of consequences of the chemicals used to improve feed conversion and combat disease among confined livestock is not known. Many people are alarmed.

On some large farms crop residues, such as corn stover, are being harvested for use as feed for confined livestock. This practice has little to commend it. For centuries highly complex mechanisms for harvesting and converting crop residues directly have been available. They are called cattle. Mechanical harvesting of crop residue uses machines and fossil fuels to remove from the fields organic matter and plant nutrients that are beneficial to succeeding crops. Additional energy is then employed to produce chemical fertilizers and spread them back on the field to replace the plant nutrients removed. Soil is bared in the process, increasing the hazard of erosion. Finally, energy is used to dispose of the animal wastes which are concentrated in the pens. The sequence is not efficient!

#### Disposal of Wastes from Confined Livestock

The natural recycling of wastes when cattle graze is absent in confinement feeding. In feedlots the standard practice has been to clean the lots periodically and haul the manure to fields. Unfortunately, feedlots and small farms alike have done so inefficiently. The manure is seldom collected as it is produced; it is leached out by rain or decomposes, breaking down the nutrients into ammonia, carbon dioxide, hydrogen sulfide, and other gases which pollute the atmosphere. What remains in the manure is about 1 percent nitrogen together with other minerals and organic material. At some point in time, the decomposed manure is scraped from the lots and it with an equal amount of dirt is hauled to the fields. On the fields the manure is further leached and decomposed. The process is also costly, in terms of money, time, and energy.

Alternative methods for converting livestock wastes from a nuisance to an asset have been proposed. Some are being practiced. The organic farmer favors prompt removal of manure for composting. When properly managed, this eliminates odor, vermin, and dust and converts the manure into a stable organic fertilizer. There is of course a cost in time and energy. Composting into organic fertilizer appears to be practical for feeding operations of any size.

Another process is to utilize manure to produce methane. This seems particularly well suited for large poultry producers but any manure will operate a methane digester. Not only is an excellent fuel gas produced, but the residue is an organic fertilizer containing nearly all of the nitrogen found in the raw material.

A third method of disposing of livestock wastes is liquid manure. It is particularly applicable for poultry, dairy cattle, and swine. The materials are flushed from pens with water and held in an underground tank until later removal. They are pumped from the tank and distributed directly on the fields. With proper management, which includes immediate incorporation into the soil, this system returns most of the plant nutrients to the soil. Sufficient storage capacity is required, to permit distribution at appropriate times.

Each of the above methods of handling livestock waste appears to offer some advantages to the integrated crop and livestock system of the small or intermediate size family farm. On the other hand, many large operations have also adopted these techniques. Yet recent research indicates that none of these methods is necessarily the most environmentally sound or economically efficient way of handling the waste from confined livestock. Considerable attention is now being paid to the recycling of animal wastes by processing them into animal feeds. Technology has been developed to process and convert animal wastes into sanitary, palatable, and nutritious cattle feed. A leading proponent is the Ceres Ecology Corporation of Sterling, Colorado, which has been working with scientists at Colorado State University in the development of the Cereco Process. A full-scale operational plant processes the waste from 8,000 beef cattle per day. Another is being constructed in Toulouse, France. Food and Drug rules governing the use of animal waste products in livestock feed will be forthcoming, but managers of the Ceres Ecology Corporation are confident their process will be found satisfactory.

At the Ceres feedlot, wastes are collected about once a week. Three immediate benefits in this first step are claimed, as follows:

- (1) Obnoxious odors are virtually eliminated.
- (2) Runoff of wastes into waterways during periods of heavy rainfall is greatly reduced.
- (3) The cattle live in a clean, sanitary environment which increases the efficiency of feed utilization.

The manure is processed to yield three products, as follows:

- (1) A fermented roughage feed similar to corn silage which may be blended with other feed ingredients and processed into dry pellets. This product is nutritionally equivalent to corn silage.
- (2) A dry pelleted protein feed containing approximately 27 percent crude protein.
- (3) A final residual product marketed as a soil conditioner.

The Cereco Process is claimed to be equally applicable to wastes from other livestock. Livestock in confinement in the United States are estimated to produce 485 million tons of waste per year. The process of converting this massive quantity of manure into livestock feed theoretically can transform this pollution problem into a valuable resource. A methane digester might be added. A fraction of the manure could be utilized to provide energy needs of the plant. As indicated above, the residue from a digester is an excellent organic fertilizer.

Large feedlots might offer economies of size in converting livestock wastes into animal feed. Conversely, processing the wastes from a number of small livestock operations might not prove economic. Cost would be too high to haul manure more than a few miles. In other words, if this technology proves to be as effective as its proponents believe, the large scale confined livestock system may prove to be more compatible with environmental concerns than is a smaller operation.

### Summary

The family farm of modest size has some inherent advantages relative to the environment. As a social institution in the rural community it has much to commend it. Furthermore, the inherent dispersion of productive activities is advantageous. Also, the opportunities for integrating crop and livestock enterprises on a family farm is self-evident. Further, the longer planning horizon of those who consider farming a way of life as well as a way to make a living provides incentives for improved husbandry.

If the attention of researchers is turned to the development of technology applicable to the family farm, energy efficiency can most assuredly be achieved. Perhaps then the major policy concern relative to environment should be to provide the appropriate incentives to encourage economy in use of stock resources. This applies to farms of all sizes. The survival or demise of the family farm will almost surely be determined on other issues.

Little has been said in this paper about specific rules and regulations governing agricultural enterprises. Instead, an attempt has been made to show how farm production may affect the environment adversely, and to offer suggestions as to how to make farm production less environmentally threatening. A general conclusion is that the technology of production in U. S. agriculture is not "advanced" with respect to environmental concerns. This is equally valid whether applied to the family or larger than family farm. Even though the family farm has some inherent advantage in protecting both the social and physical environment, the picture is by no means clear as to whether the family farm or another system will prevail. Perhaps the most likely pattern for the foreseeable future, as in the past, is a mix of farms of many different sized with the family farm surviving even as its character (and definition) continues to change.

## SMALL FARMERS AND BIG MARKETS

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McDonalds must have both a bun and a meat patty to make a hamburger. Likewise, a farmer must have both production and markets if he is to survive. Unfortunately this elementary fact is frequently forgotten in discussions such as that at this seminar. A new 70-page publication of the Congressional Budget Office entitled "Public Policy and the Changing Structure of American Agriculture" recently came to my attention. What does it have to say about marketing? Virtually nothing -- I found only two sentences. Such neglect is not rare.

During the 1960s we were much concerned about vertical integration and its impacts -- current and potential -- upon the organization of agriculture. We saw in the poultry industry that processors had ceased to become the marketing servants of farmers and instead had reversed the process. Many farmers in poultry have become the production servants of the integrators. Some of the same domination of farmers by "their markets" has occurred in processing vegetables and sugar beets. The tide of vertical integration seems to have crested, however, and rather quickly that lesson of farmers' dependence upon their markets is forgotten.

I discuss here a more subtle two-way interdependence of farmers and their marketing agencies. As agriculture is rapidly becoming more specialized by farm and by region, it hits home again that there is a vital linkage between production and marketing. Here in the lower Midwest the lessons are in livestock. I presume that examples of specialized crops can be cited in other areas. On the other hand, for smaller producers of grains and soybeans market access does not seem to be a major problem, nor is it likely to be in the near future.

The marketing economics are simple. A certain minimum amount of milk per mile is required to justify a milk route. A certain minimum number of lambs or cattle or hogs is required to justify a potential buyer's trip to the farmplot. Beyond that, packing plants are getting bigger and a rather large volume of livestock must be available within a given radius to justify a plant's operation.

Lamb producers in many areas of the country including Missouri claim that an absence of competitive outlets for their lambs is a primary problem. Cattle feeders in Missouri are beginning to voice the same fears. Two-thirds of the beef cattle are fed in one percent of the nation's feedlots. Most packers are not very interested in the smaller feeders among that other 99 percent.

Concerns of market access are more worrisome for the smaller farmers. A Midwestern cattle feeder with 1000 head ready for market will probably always be able to attract buyer interest, but the guy with only a truck load for sale has a problem -- a problem that seems likely to get worse.

This cattle feeder's problem of being too small to find markets is not exceptional. The small Grade B dairyman about 15 years ago found that he had to buy a bulk tank to sell milk. Many quit milking, instead. The small producer of farm chickens and eggs saw his markets dry up in the 1950s.

When most farmers were small we had a livestock marketing system to serve their needs. The large public markets were the assembly points as well as the price discovery points. For familiar reasons those markets have shriveled. In 1976, here in the West North Central region packers bought only about one out of five head of their slaughter livestock through auctions or terminals -- the percentage ranged from 24 for sheep and lambs to 18 for hogs. Nationwide, the percentages were almost that low.

The public markets -- terminals and auctions -- have difficulty in competing because of the operational costs involved. Nevertheless, they may increasingly become the only practicable market outlet for many small farmers. Whether smaller farmers will continue to have the volume to keep these markets open is a very real question.

Hog producers in Missouri will eventually face the problems now faced by cattle feeders. A new study in our department indicates that about 12½ million slaughter hogs were marketed last year by operations marketing 2,500 head or more. This figure includes about 8½ million marketed by those operations selling 5,000 head or more per year. Our studies over the past five years of these big specialized producers demonstrate fairly conclusively that there is a strong trend toward factory production of hogs. With few exceptions the hog factories market directly to packers. The largest hog producer in our survey is reportedly considering vertical integration into packing. If this trend continues, the number of hog buying stations and alternative market outlets will decline swiftly. The smaller hog producers -- those marketing 500 head or less -- will complain, "What has happened to our markets?"

If smaller livestock farmers choose not to watch passively as their markets erode, they have three possible policy options. The first is to attempt to preserve an open market system by active development of such market mechanisms. Developing an electronic commodity market (ECM) is the most obvious possibility. The second alternative is cooperative action to build their own marketing agencies. The third alternative is to drop livestock production, depend on crops, and politick for high price supports for the crops.

I am not optimistic that smaller farmers will undertake any of these alternatives vigorously. The third one may win out by default. Moreover, farmers have become skillful at wringing higher price supports out of Washington. Despite all their rhetoric to the contrary, many farmers still put their trust in price support solutions to their problems.

Farmers have long taken their markets for granted -- almost as though they were a gift of nature. They are not. They are man-made institutions. They can be remade.

There is another reason hindering group action. When any group faces a group task, the rational desire of each member is to let George do it. "Sure, as a group we can reap some benefits, but the costs to me will be too great if I spend much effort and money on this group task." The very logical desire for a free ride is the reason many worthwhile group tasks never get done.

The total benefits of an ECM can be sizable in terms of market access, although they need to be kept in perspective. The big operator selling direct will probably net a little more on his livestock than the smaller farmer selling through the ECM.

The hows of obtaining an ECM have been discussed in various extension publications and this is probably not the place to repeat them. Such systems can be operated quite economically if adequate volume is obtained. A telephone or teletype auction is likely to prove the economy-size model for beginning a regional ECM in livestock. After volume grows to several million head a year, a computerized exchange is probably the more satisfactory. The major unknown that can possibly be a major obstacle is the attitude of packers. As a major objective of the ECM is greater competition among packers one can hardly expect their enthusiastic support of the idea. However, there may be compensating gains to packers in terms of operational efficiencies. Suggestions have been made that government give a boost to ECM marketing by requiring that a certain minimal fraction of livestock be purchased via the ECM. Other persons are probably a better judge than I of the political feasibility of such a proposal.

The second alternative of building cooperatives to market livestock and/or meat will generally require more capital. Moreover, to be successful in handling the needs of smaller farmers, those farmers will have to make a long term commitment of their

livestock to the cooperative. A cooperative packing plant with committed livestock in its planning horizon could be an excellent market outlet for smaller producers. However, as the American Farm Bureau's Gene Hamilton remarked at a recent Perry Seminar, farmers are very reluctant to make such commitments. The recent failure of Land O' Lakes to find 2,400 cattle feeders in Iowa and three adjoining states who would subscribe \$2,500 each of stock to form a cooperative to buy Spencer Packing Co. is a case in point.

It may seem surprising that I suggest group efforts by smaller farmers rather than by all farmers. I find the idea a little surprising, and I readily admit that it may be incorrect. My first thought is that the really large operators, because of their direct market relationships to processors, will feel that group action would not improve their markets. However, that attitude is not likely to be universal. As I understand the development of the feedlot-owned packing plant at Sterling, Colorado, the managers have had a policy of being open to any size cattle feeder, even though the initial group included only a few large feeders. On the other side of the coin, much of the controversy surrounding the recent IBP joint venture with a few large feedlots in Idaho is the fear that market access is being foreclosed for the smaller feeders left outside the arrangement.

Considering these contradictory experiences, I arrive at the judgment that larger producers are not to be excluded but smaller farmers must be prepared to go it alone; the latter simply cannot depend on big producers' providing a market for them. I am not prepared to assess the probabilities of success of such joint efforts. As in the past, I assume there will be both successes and failures. As in the case of Land O' Lakes and Spencer Pack, farmers may get some assistance from their existing coops in expanding into new areas.

In summary, the decline of viable livestock market alternatives in the Midwest has discouraged sheep and lamb production, is discouraging the smaller cattle feeder, and within a decade or so will be discouraging the smaller hog producer. The policy solutions to such problems lie in group action by the farmers involved. Government can be of some help in facilitating solutions but the major solutions will not be made in Washington. If smaller producers fail to maintain their market alternatives, they diminish the probabilities of their own survival.



FARM PRICE AND INCOME SUPPORT PROGRAMS  
AND THE FUTURE OF THE FAMILY FARM

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I begin, like a professor, by defining my terms. For the purpose of this discussion I define the family farm as a farm on which the majority of the labor is provided by the farmer and his family. Thus defined, family farms constitute 95 percent of all farms and produce about two-thirds of all farm products for sale. These percentages have not changed appreciably for decades.

The definition I am using is similar to Harold Breimyer's, but it differs in several ways. He excludes small farms -- I include them. He includes as family farms those units hiring up to two man-years of hired labor; I cut off at 1.5, so that family farms by my definition average smaller than his. He prefers that the family farm be owner-operated but does not insist upon use of this criterion. I accept as family farms all those with less than 1.5 man-years of hired labor without reference to whether they are owned, part-owned, or operated by tenants.

My job is to consider whether and how the farm price and income support programs might affect the future of the family farm.

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A major rationale for the big commodity programs has long been that they are needed to protect the family farmer or the small farmer; the rhetoric varies with the speaker. However, virtually all the competent research shows that the commodity programs are regressive; that is, they give more help to those who are already well-to-do than they do to those who are poor. They widen the distribution of income within agriculture. In support of this finding I name such prominent persons as Cochrane, Findley, Nelson, Tweeten, Carter, Hardin, and Fuller. The works I am quoting are referenced at the end of my paper.

The commodity programs provide income support on a per bushel basis, thereby putting thousands of dollars into the pockets of those already well-off, and giving very limited help to those with little to sell. Risk reduction resulting from the commodity programs has worked in favor of the larger farms, which have greater exposure. Reductions in acreage often associated with the commodity programs are tolerable for a large farm, which has many acres and won't be critically injured by giving up some of them. But acreage reduction may be crippling for a farm already too small. The cotton program, which helped cut acreage from 36 million in 1932 to about 12 million in recent years, certainly reduced the number of family farms. The commodity programs have helped the big operators take over the small ones. Some ceilings have been placed on the amount of subsidy any one farmer can receive. But the ceilings are high and they affect few farmers.

The effect of the commodity program on farm enlargement has been marginal, not major. Farms increased in size both for enterprises that were in the programs and for those that were not. The primary cause for growth in size was technology. Nevertheless, the directional tendency of the commodity programs has been to put additional pressure on the small farms.

I would argue that in the long run the big commodity programs have hurt both the corporate-type farms and the family farms. While in the short-run these programs have increased farm income, in the long run they have priced us out of markets and given aid and comfort to our competitors. Consider the case of cotton. During 1928-30 before the acreage reduction programs began, we produced 14.4 million bales of cotton. Fifty years later we produce about the same amount. Meanwhile, production of cotton in the rest of the world quadrupled from 12.2 to 49.2 million bales.

Reducing the gyrations of farm prices and farm income could be good if the objective were to stabilize them. The problem comes when the programs are used to boost price and income substantially and persistently above where, on the average, they would otherwise be. This is what concedes market growth to our rivals.

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The trends in the structure of agriculture are reasonably well documented. They have continued for some years and will continue into the future unless altered by public policy decisions. These are the trends:

- fewer and larger farms
- more specialization
- more incorporation of family farms
- more vertical integration and contracting
- further decline of the central markets
- more part-time farming
- more services hired by farmers
- more outside capital coming into agriculture

If continuation of these trends is acceptable there is no need to change public policy. If it is not, if the trends need to be slowed down or reversed, then various alternative actions should be considered.

Proposals for slowing down the trends may be grouped into two categories: those likely to be effective, and those unlikely to be so.

Programs Likely to be Effective (if Adopted)

Certain policy actions would probably be effective in slowing down or reversing the observed trends. The attribute common to these proposals is that all are resisted by the power elite and so are unlikely to be adopted.

Progressive tax on farm real estate. This simple device could quickly remove the attractiveness of super large farms. It would relate to accumulated wealth in land much as does the progressive income tax to the annual flow of wealth. Very likely it would be validated legally in the same fashion as was the income tax.

Virtually every established farm lobby group would resist this proposal.

Tough inheritance laws. Instead of making it easier to pass large farms intact from one generation to another, as was the purpose and the effect of recent legislation, the objective could be to force the breakup of such farms by tough inheritance tax laws. This would require sale of part of the land to pay the federal tax, and would give young men a chance to buy land and start farming.

Proposals of this kind run 180 degrees counter to the prevailing mood. There is little chance that they could be enacted. This and other tough alternatives are listed simply to show that if the concern about larger and fewer farms is authentic there are ways of checking the trend.

Limitations on government payments. If we had a low limit on government payments to farmers, large farms would be less able to take over small ones. But in the Food and Agriculture Act of 1977, payment limits were raised instead of lowered, evidence that this policy tool is not likely to suffer from overuse.

Rural development. Rural development means more non-farm jobs in rural areas. It means that the rural labor supply will have attractive off-farm job opportunities and so will be less readily available for farm work. It means acknowledged status for part-time farming, and means that a part of the resources now devoted to research and extension for production agriculture would be diverted to this new clientele. With

rural development to increase flow of non-farm income, small part-time farms would become more viable.

But these developments are looked on with disfavor by the full-time large-scale farmers. The big operators want an abundant supply of labor and the full services of the research and extension people. They look on part-time farmers as a form of unfair competition. "A part-time farmer can operate his farm for nothing if he is earning \$10,000 a year in an off-farm job." So rural development wins little support from the farm lobby.

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Implicit in all these proposals is the undeniable fact that if the number of farms is increased above what it would otherwise be, average income per farm will be lower.

Programs Likely to be Ineffective

Following are half a dozen proposals which have been put forward as ways of slowing the trend toward fewer and larger farms. Their common characteristic is that they deal with the form of the problem rather than with its substance.

Increase farm price supports. This is often proposed as a means of saving the small farmer. Enough has been said to indicate that action of this kind, if it remains in general form of the past 45 years, is more likely to hasten the demise of the small farm than lengthen its life.

There are proposals to have a two-tier system of commodity programs, with larger benefits for the small farmers. This is based on the supposition that small farmers are poor. Some of them are. But many have substantial off-farm income and are in reasonably good circumstances. Farmers who sell less than \$2,500 worth of farm products a year receive, on the average, \$11 of non-farm income for every dollar they get from agriculture. When you put together their farm and non-farm earnings, their incomes average only 13 percent below the all-farm level. Off-farm income would have to be taken into account in any two-tier commodity program.

Prohibit farming corporations. This is popular in many areas. North Dakota, Kansas, Minnesota, Oklahoma and South Dakota all have anti-corporate farm laws of one kind or another. But, on the evidence, corporate farms are not a major threat to the family farm.

True, the number of corporate farms has risen. There were 8,200 corporate farms in 1957 and 28,090 in 1974.

The 28,000 incorporated farms constituted one percent of all farms. Most of the increase since 1957 came from the incorporation of family farms. Ninety percent of the 21,500 farm corporations operating in 1969 were family corporations, formed primarily for tax purposes, for managerial advantages, for better access to credit, and for facilitating transfer of the farm between generations. These corporations are closely held; that is, they have ten or fewer shareholders. In most respects other than legal form, these farmers are indistinguishable from ordinary large family farms.

The public concept of corporate farms is that they are large "factories in the field," owned and run by people outside the farming tradition. The nearest quantification available regarding the numbers of such units is given by statistics on farming corporations with more than ten stockholders. In 1969 there were 1,797 such corporations. They totaled about five one-hundredths of one percent of total number of farms and produced 2.9 percent of total farm sales. Most of these corporate farms were in California, Texas, Hawaii, and Florida.

There is no indication that these corporations are going to take over agriculture. In recent years a number of large-scale farming corporations have failed: Black Watch, Gates Rubber, CBK Agronomics, Multiphonics, and Great Western Land Company. Ralston Purina withdrew from its broiler operation.

There are good reasons for this poor record. For one thing, farmers have traditionally bid against one another to push the price of land up so high that it will provide, in current returns, over the years and on the average, considerably less than the mortgage rate of interest. A farmer bids up the price of land because he looks on a farm not just as an income-earning enterprise but also as a place to live and as an assured way of continuing to do the work he prefers. Pride of ownership enters into it, and anticipation of inflation. He would like to get a larger income from his investment but finds it hard to do so on land prices into which he has bid intangible wealth. Reluctantly he reconciles himself to a low return.

A farming corporation, however, has investors who look at the rate of return; they get few of the fringe benefits that accrue to the owner-operator of the family farm. If the farming corporation had to buy into farm ownership at the going price of land and were equally as efficient as a family farmer, it could, over time, and on the average, return to its shareholders less than they could get from non-farm enterprises. Stated in another fashion, if the corporation went to the bankers to borrow, or to the market to sell bonds, it would have to pay more for its money than it could earn thereon. The family farmer, with his demonstrated (but grudging) willingness to accept a low return on his capital, is a very tough competitor.

For another thing, the family farmer has incentive above and beyond that of a hired manager. He is self-employed and self-supervised. He accepts, despite grumbling, a relatively low rate of return not only on his capital, but on his labor. He works long hours at planting time and during harvest as the need arises. He naturally directs his efforts to wherever the payoff is greatest. He is always on the alert to the health of his herd or the condition of his crop; he will stay up all night, if need be, at lambing time. Contrast this with "the hireling, whose own the sheep are not." If times are hard the family farmer takes in his belt, pays himself a lower wage, and is there, ready to go when things improve. Contrast this with the handicaps of corporate farming: unionized wages, harvest-time strikes, limited working hours, prescribed working conditions, unmotivated labor, and the need for detailed supervision.

Add to all this the fact that the larger farming corporation has to pay nearly half of its net income in corporate taxes, a burden that the family farm escapes, and you get a measure of the problems the corporate farm faces in competing with the family farm.

Furthermore, flat prohibition of farming corporations would mean that family farms could not incorporate. This would deprive them of a useful means of dealing with the business problems of modern agriculture.

Prohibit contract farming. There are proposals to pass laws against contract farming, that is, sale by advance contract rather than through the various types of spot markets. To outlaw contract farming would deprive farmers of an assured home for the product, with known terms of sale. Contracts reduce risk. Allegedly, contracts are a way of exploiting farmers but this is a difficult allegation to evaluate. Farmers have more bargaining power in advance of the production period than they do at the time of sale. A tomato grower can deal more effectively on price and delivery terms before he plants his crop than he can if he comes to the unloading dock with his perishable crop and asks, "What will you give me?"

Prohibit purchase of land by non-farmers. Purchases of farm land by foreigners, doctors, lawyers and by the banks are a cause of concern. Proposals are offered to ban such transactions.

The fact is that with farms becoming fewer and larger, the amount of money needed for farm ownership becomes so great that farmers themselves can no longer supply all of it. A 1966 study showed net worth per family in agriculture to be four times as much as net worth per non-farm family. If farmers were to retain ownership of all farm land and farms were to become larger and fewer, this ratio would grow to intolerable levels. There is some acceptable level which this ratio cannot exceed. Ownership of farm land by non-farmers and the intelligent leasing thereof to farm operators is a means of preserving the family farm, not endangering it. This is why I am quite ready to accept tenancy as a legitimate form of family farming, despite Harold Breimyer's misgivings regarding it.

Closing the economic border between farm and non-farm sectors ill becomes farm people, who have crossed the border freely in the other direction, to take jobs and make investments.

But prohibiting the purchase of farm land by non-farmers holds considerable surface popularity. No doubt there will be numerous such proposals during the 1980s.

Cheap credit. Subsidized credit to help young farmers get started is widely advocated as a way of saving the family farm. And, indeed, the Farmers' Home Administration has thus helped establish a limited number of farmers.

But this is very expensive. Furthermore, subsidized credit results in inflating land values, making purchase more difficult for those who are not covered by the subsidy. Subsidized credit can be helpful to the recipients (hopefully the "right" ones, who have a good chance of success but cannot meet commercial credit standards). But it can do no more than contribute a small measure to preserving the family farm.

Government guarantee of farm mortgage loans taken out by young farmers is another proposal. This too would be helpful in individual cases but would further inflate land values and injure those who were not included in the program.

Government purchase and lease of farm land. Government could purchase farm land and lease it to young farmers. This has been advocated. It would permit government control of farm size, but not without complications. Through ownership, government would be able to prescribe not only the institutional character of agriculture but also land use and participation in various government programs. Government would be able to select those to whom farming opportunities were granted and determine those from whom such opportunities were withheld.

To adopt this approach in the United States would be to reverse the land policies of most of our history as a nation, when the drive was to get land out of the public domain and into private hands. It is doubtful whether we are ready for so major a change in land policy. The government sold the land for \$1.25 per acre in order to help young men get started in farming; should government now buy it back, at \$2,000 an acre, for the same purpose? This would be weird even for government. The Congress is unlikely to vote such a program.

Summary

No doubt the 1980s will see much debate on the future of the family farm. There will be a general deploring of the trends toward larger and fewer farms, farming corporations, vertical integration, and contract farming. Increased off-farm earnings will be cited as evidence that farmers are in financial difficulty. Public policy will continue to put pressure on the family farm and politicians will continue to deplore the results.

Faced with alternative policies which on the one hand would check the trends they lament, and on the other hand add to what they allege is the problem, the Congress will choose the latter. It may appear inconsistent for the politician to take actions helpful to the large farmers and at the same time to speak out in favor of the small farmers. But from the politician's standpoint these two actions are consistent; they consistently contribute to his re-election. The important thing is that the observer not take the rhetoric at face value.

. . . . .

Perhaps this debate is unnecessarily overheated. Agriculture need not be, nor is it likely to become, monolithic. We are a pluralistic nation, socially, politically, and economically. The fact that the trend has been in the direction of the large-scale units does not mean that the trend will automatically extend itself until it embraces all of agriculture. Nor does it mean that large-scale farming units should be abolished.

New England has the tradition of the smallholder. In the Midwest we have the heritage of the Homestead Act. In the South there is the legacy of the plantation system. The Southwest reflects the history of the Spanish hacienda. In the Northwest there is family farming, brought by the covered wagon over the Oregon Trail. Why try to obliterate all these differences and homogenize this heritage? Perhaps our present mix of large farms, small farms, and part-time farms has considerable justification. Those who believe in market competition should also believe in the appropriateness of competing institutional forms.

There is little need to worry about trends in the pattern of farm organization so long as we have a reasonably open and effective representative government and policy alternatives are available to change these trends. If the alternatives are there and go unused, it must be that the existing situation is not all that bad.

The thing that could kill the family farm is an attempt to hold it in the mold of the past, a past that is invalidated by the technological changes of the twentieth century.

The family farm can continue as a major organizational form:

- If it is permitted the flexibility that will allow efficient use of modern technology and management.
- If it is provided with good research, education, and credit.
- If it makes wise use of the principles of cooperation.
- If it has ready access to the market.
- If there is opportunity to supplement farm income with income from off the farm.
- If it continues to enjoy the good will of the public.

A summary prognosis on this issue is that there will be much discussion regarding the future of the family farm, numerous proposals offered, and relatively little policy change. Because, in the last analysis, the decisive consideration will be that old and wise political maxim, "if it ain't broke, don't fix it." The family farm, understood in its context, is far from broken. It has survived war, depression, natural disaster and a technological revolution, and with a little luck it can survive a political debate as well.

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RECENT TRENDS IN  
STRUCTURAL POLICIES FOR AGRICULTURE IN  
SELECTED DEVELOPED COUNTRIES

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Introduction

In interpreting my topic I confine attention to several major trends in the evaluation of agricultural systems in developed countries whose experience seems most relevant to the United States. I will not attempt a worldwide survey, but will seek the more modest goal of illuminating our own problems by a look at solutions tried elsewhere.

The broad setting for this selective survey is provided by two dominant trends that are reshaping the agriculture of developed countries: urbanization, and inflation.

The first thesis to be explored is that the city in developed countries is now the locus for setting farm policy. This is true in countries with popularly elected legislative bodies because that is where the overwhelming majority of the voters live. In a less visible sense, it is also true because that is where the capital accumulating capacity resides from which agriculture must attract development capital. If agriculture could control output and markets, and be a price giver instead of a price taker, it could secure this capital from consumers through the price system. In that case, financing of expansion, renewal, and modernization could be achieved with internally generated capital, as is now increasingly the norm in non-farm industries.

If however, agriculture cannot control its output and markets, owing to private sector competition or concentration or public-sector regulation, two choices are open: to get needed capital from a suppressed level of living of farm owner-operators, or to force farmers to surrender equity in their farms (principally in their land) in exchange for operating capital.

This trade-off of equity in order to retain some measure of control can take many forms. Capital can be provided by landlords, through a system of tenancy. It can come from creditors, through a wide spectrum of devices with the extreme form representing terms of debt so long that they exceed a lifetime and become a form of debt-tenancy.

Alternatively, a part of all of the land capital can be provided by the state, again through a spectrum of devices that range from subsidized credit to outright state ownership of the land.

But why should it be necessary for farmers to surrender equity in their land in order to get operating capital? In a competitive market economy, if farm profits do not cover capital needs, farms would be expected to diminish in number, total output to decline, and an equilibrating process to be set in motion so as to reduce food and fiber supply, raise prices, and restore agriculture's capital-creating capacity.

That the system does not function in this manner is common knowledge. The reasons are too well known to merit repetition here. The major thrust of our farm policies since the 1930s has been to force this equilibrating system into operation by restricting supply. But supply control alone cannot restore the capital-creating capacity of owner-operated farms. The reason why it cannot work lies in our cities.

An urban-industrial society relieves the vast majority of its people from the necessity to provide their own food. It does not destroy their desire to use and own rural land. Disenchantment with dense urban settlements is emerging as a major



characteristic of advanced industrial societies. Transport technology, shorter work weeks, and rising real incomes have given the majority of urban populations in developed countries the time, money, and motivation to increase their "consumption" of rural land.

In the United States, personal consumption expenditures in constant dollars doubled from 1939 to 1959, and doubled again from 1959 to 1977. Even when adjusted for population growth, personal expenditures per capita in 1977 were 136 percent above 1939.<sup>1</sup> In 1977 approximately half of total personal consumption expenditures went for housing, household maintenance, transportation, and recreation -- expenditures in which land plays a prominent role. In 1939 the same items accounted for only about one-third of total expenditures.<sup>2</sup>

Affluence contributes to sharply increased urban demand for rural land. As a result, the farmer must bid for his land not only against other farmers, but increasingly against non-farmers as well.<sup>3</sup> In economic jargon, the demand curve for rural land has shifted sharply to the right. Reasons therefor have little to do with the demand for food and fiber. The shift has not been uniform throughout the United States, but it has been pronounced in the dairy belt of the Northeast and Lake States, in the Eastern Corn Belt, and in the Atlantic, Gulf, and West Coast regions containing some of our most productive lands.

All developed countries show variations of this trend and some exhibit it more acutely than the United States. Examples include southern England and Sweden, northern France and Italy, western Germany, eastern Canada, and the whole of Japan.

The second principal thesis of this paper is that inflation has lifted this long-term trend of increased urban interest in rural land to levels that threaten to destroy the existing agricultural structure. Inflation is not new to developed countries. In most of the relatively short lived but acute inflations of the twentieth century farmers actually prospered. One thinks of Germany after World War I and of Germany, Japan, France, and Italy after World War II. Why is the inflation of the past decade different in its consequences for agriculture?

It is different, first, because of its lengthened life expectancy. Past inflations have been disastrous but, in most cases, short-lived. The developed world has not had to live with endemic inflation. Long term investment plans for agriculture have not called for balancing earnings from farm operation with inflationary increases in asset values -- increases that promise to dwarf any increases in profitability brought about by wise investments or prudent operation. Even in the most acute inflations of the past, the prospect of long-term capital gains in land did not enter prominently into farm income accounting. Today it does, and it does so almost uniformly throughout developed market economies.

Secondly, inflation affects agriculture differently now because the rural-urban balance has shifted so drastically. The great inflations since 1900 occurred in countries in which from 15 to 40 percent of the population was still engaged in agriculture. We have no history of coping with inflation in countries in which the population in control of agricultural land is 7, 5, or 3 percent of total population.

<sup>1</sup> Economic Report of the President, Washington, Government of the United States, January 1978, pp. 258, 287.

<sup>2</sup> Statistical Abstract of the United States, Washington, U. S. Department of Commerce, Bureau of the Census, 1948.

<sup>3</sup> Philip M. Raup, "Urban Threats to Rural Lands: Background and Beginnings," Journal of the American Institute of Planners, Vol. 41, No. 6, January 1975, pp. 371-378.

We have no institutions to protect agriculture from scared or restless non-farm capital of immense magnitudes seeking shelter through land purchases.

A third reason inflation bears differently now arises because the balance between operating and fixed capital in agriculture has undergone so radical a transformation. In the past, the ratio of the cost of purchased inputs to the gross value of output stood in the range of one to ten, or one to five. Today in intensive crop agricultural systems this ratio is in the range of one to two, or one to three. In livestock and poultry feeding it is in the range of 1 to 1.2 or 1.4. This shifts the incidence of inflation within agriculture, by putting a penalty on slow-maturing enterprises and a premium on fast turnover.

#### Some Early Impacts of Inflation on Agricultural Policy

Among developed countries, Sweden had the sharpest experience with the force of urban-industrial capital seeking shelter from anticipated inflation. This took place during World War I. In 1916 an act of the Riksdag required that acquisition of land by foreign citizens first have the approval of the King in Council. This initial restraint, directed at the intrusion of foreign capital seeking a safe haven in war-time, was later expanded in 1925 to include joint stock companies, associations, and foundations, for whom farmland acquisition was also made contingent upon approval by the King in Council. A Land Acquisition Act of 1945 extended this control to cover virtually all land sales to private, unrelated nonfarm buyers, with approval authority vested in local county agricultural boards.<sup>4</sup>

The restrictions contained in the Swedish act of 1945 were given additional strength in 1947 by including a right of preemptive purchase, in a law that established income parity as a farm policy goal. Under this, the county agricultural board had the right to take over a property that had been sold, after the sale had been completed and at the price agreed upon between the buyer and seller. The right of preemption is not exercised if the buyer and seller are close relatives, or if the sale is to a buyer who already holds a part interest in the property.

Between 1947 and 1955, the preemption act gave the county agricultural boards the right to interfere in a sale of farmland after the title had already been registered by the buyer. This provision was changed in the Land Acquisition Act of 1955, which consolidated the preemption provisions of the 1947 act with the control of land transfer provisions of acts of 1945 and 1948. The approval or denial of permission to complete the transaction was the key to the exercise of subsequent rights of preemption. If a transaction had been disapproved, the seller had the right to demand that the county agricultural board buy his property at the price agreed upon with the prospective purchaser.

In early years under this program some opposition came from landowners, particularly when a county agricultural board injected itself into a transaction after it had been completed and recorded. These sources of friction were largely removed by the 1955 Land Acquisition Act, with the result that in a number of counties the agricultural boards were offered more land than available finances would enable them to buy. The use of the act in pursuit of a policy of active acquisition was confined as a matter of policy to agricultural areas in which the parcelization of farms created severe problems of adjustment, or in which migration of rural people out of agriculture had led to immediate need for remaining farm units to regroup and expand in size.

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<sup>4</sup> This discussion of the post-1916 Swedish legislation is based on Philip M. Raup, "Some Recent Developments in European Land Policy," in Land Use Policy and Problems in the United States, H. Ottoson, ed., University of Nebraska Press, 1963.

It is important to note that Swedish legislation authorized disapproval of a transaction if the buyer were a nonfarmer. It also authorized disapproval if the buyer were a farmer, in case the land was needed to expand a nearby farm that was too small, or to complete a regrouping or consolidation project in the community. It was the addition of this latter provision (paragraph 5 of the 1955 Land Acquisition Act) that marked the transition from a negative policy of preventing parcelization or sale of land to nonfarmers, toward a more positive policy of improving farm configuration and increasing the size of farms.

Swedish law also authorized the expropriation of land under certain conditions, if the land were needed to improve the agrarian structure or increase the size of farms considered too small for economic existence. Under this legislation, land can be taken from a large farm, or an entire farm can be taken from certain classes of owners not primarily included in the farming population, or forestland can be acquired. While the legislation has undoubtedly strengthened preemption and the laws regulating land transfers, actual expropriation has been used in very few cases. One principal reason is that full compensation is guaranteed the owner of any expropriated land, and the awards made in the few cases that have been attempted have been so high that resale of the land to an operating farmer involved the expropriating authorities in a substantial loss. The combination of transfer control and preemption authority, used together with a policy of active purchase of land in the open market, has proved to be the most successful avenue open to county agricultural boards in acquiring needed land for farm consolidation and expansion.

Based on this body of legislation, the county agricultural boards in Sweden practice what might loosely be called a form of "rural renewal," not unlike that practiced under the heading of "urban renewal" in the urban core of American cities. The county boards have authority to acquire land, raze buildings, construct new buildings, and realign field boundaries, drainage patterns, and local road systems; and they can combine properties to the end that a pattern of economically viable farm units be created in the rural community. They can acquire land through preemption -- in extreme cases through expropriation -- but most importantly through active purchase in the open market. The land thus acquired can be held in order to create a reserve for rural community redevelopment. In the interim, the land is rented to local farmers.

Although the rights of preemption and expropriation have been important to county boards, their major tool has been the authority to buy land in the open market.

This body of Swedish legislation attracted attention in agricultural policy debates in other European countries during the 1950s. It was reported in meetings of the European Commission on Agriculture, an FAO-sponsored regional body, at a time when France was undergoing a major redirection of agricultural policy triggered by the Loi d'Orientation Agricole of 5 August 1960 (No. 60-808). Major features of the Swedish legislation were incorporated in this law and in the subsequent French Loi Complementary d'Orientation Agricole of 8 August 1962 (No. 62-933). The latter spelled out procedures for reorienting the structure of French agriculture along the lines laid out in the basic 1960 legislation.<sup>5</sup>

These major features included authorizing regional nonprofit companies called Sociétés d'Aménagement Foncier et d'Etablissement Rural (Land Improvement and Rural Settlement Companies), abbreviated SAFER. With initial financing from public funds, these SAFERs were empowered to buy land in the open market in order to regroup scattered parcels, restructure units of viable size, renovate abandoned lands, and resell the land to operating farmers. A major tool in the exercise of land acquisition powers was a preemption right. SAFER could intervene in open market land sales if in its judgment the land was needed to expand existing farms or to carry out its rural redevelopment mission.

<sup>5</sup> "Loi Complementary d'Orientation Agricole," Journal Officiel de la Republic Francaise, No. 62-143, Paris, August 1962.

This preemption right was restricted to rural land, and could not be exercised in sales among co-owners or relatives, or in case it violated the rights of sitting tenants. The exercise of these rights of open-market purchase or preemption was facilitated by a provision in the 1960 law requiring that all proposed sales of land in a region for which a SAFER has been organized including the proposed price, were to be reported to SAFER. SAFER has two months in which to decide whether or not it wishes to buy the land at the stated price, either by negotiation with the seller, or ultimately by formal exercise of its right of preemption.<sup>6</sup>

The law requires the SAFERs to dispose of the land within 5 years and authorizes short-term leasing in the interim. Failure to report a proposed sale to the SAFER can invalidate the transaction, as can falsification of the agreed price.

With these tools the French have sought to combat land speculation and insure that land sales will improve the viability of farms. The law provides a means whereby exiting farmers can have an assured market for their land and beginning farmers can be given financial aid in acquiring farms of appropriate size. Implementation of the goals has been facilitated by provisions of credit on favorable terms by the Credit Agricole (agricultural credit bank) and coordination with such public works as drainage, irrigation, and road construction.

There are currently 29 SAFERs in France, typically covering two to four Departments and coinciding in most cases with the regional planning units into which France has recently been divided. SAFER has the legal form of a limited liability company, with the providers of capital comprising public agencies, agricultural credit units, cooperatives, and associations of farmers for professional and social purposes. SAFER is governed by a board of directors, which includes two commissioners, one from the Ministry of Agriculture and one from the Ministry of Finance and Economic Affairs. These two commissioners must approve all purchases of land involving more than a nominal sum, and all exercises of the right of preemptive purchase. It is important to note that SAFER does not have powers of expropriation or condemnation, and cannot make use of eminent domain to acquire land.

Since 1960 SAFERs have become a major force in the rural land market in France, and are credited with a remarkable improvement in the reporting of land price statistics. In the past, reports of land prices obtained in private treaty sales were generally considered to be underestimated by as much as 40 percent. The requirement that each prospective sale of rural land must be reported to the SAFER, including the proposed price, has led to a substantial up-grading in accuracy in reporting on the French farm land market. Even in cases in which the SAFER does not exercise a preemption right, the value of land purchased becomes the basis for subsequent grants of credit by the agricultural bank. Farmers have a direct motive to report more accurately the actual value of their land purchases, since this determines the amount of credit they can obtain.

This French legislation was a sharp deviation from the provisions of the Napoleonic Code, which since 1804 had vested private owners of French rural land with rights more rigid than those prevailing in any other developed country today. The invasion of this ancient code by a right of preemption in favor of a non-profit company was thus a dramatic break with French tradition.<sup>8</sup> It received wide coverage in the French language literature outside France, including the press in French Canada.

<sup>6</sup> SAFER, Organisation, Fonctionnement, Paris, F.N.S.A.F.E.R., 1970.

<sup>7</sup> Interviews with Directors of SAFERs in Dijon, 13 November 1970, Dijon, 28 Nov. 1972, and Montpellier, 4 Dec. 1972.

<sup>8</sup> J. Madec, "Farm Structure and the SAFER in France", FATIS Review, No. 4, 1965, Paris, Organization for Economic Cooperation and Development, pp. 97-104.

In contrast, there has been little discussion of the work of the SAFERs in the professional literature in the United States, due undoubtedly to the language barrier.<sup>9</sup> This barrier was less inhibiting in Canada, with the result that a number of Canadian agricultural associations and policy leaders were familiar with the French approach in the middle 1960s.

Although it is difficult to trace the genealogy of an idea, there is good reason to believe that this French legislation, and its Swedish predecessor, had a significant influence on legislative action in Saskatchewan in the 1972 creation of the Saskatchewan Land Bank Commission. This agency has authority to acquire land through treaty arrangements with private owners, hold the land, and resell under favorable credit terms to new owners or beginning farmers. The Saskatchewan version does not include a preemption right, but it does include authority to lease the land to prospective farmers under what amounts to a lease with option to purchase. It also includes provision for purchase and lease back of land to individuals who wish to continue farming but desire to consolidate their credit position or obtain working capital for more intensive farming operations.<sup>10</sup>

Under the Saskatchewan system, lessees of Land Bank land were given the option to purchase the land five years after creation of the initial leasing arrangement. The first five year period expired in June 1978, with the result that some 350 lessees were eligible to buy land that they had been farming for five years. Only about 50 of these lessees are reported to have been actively trying to buy their land, due primarily to the sharp increases in market value of grain land since the program was initiated in 1972.<sup>11</sup>

The broad outlines of a program of family farm support and rural development through the creation of a non-profit corporation authorized to buy, hold, and sell farm land is thus a major feature of approaches to structural policy in Sweden, France, and Saskatchewan.

A fourth chapter in this summary history of institutional migration is provided by the Minnesota Family Farm Security legislation of 1976.<sup>12</sup> This was developed after commissions of the Legislature had visited Saskatchewan, and had invited officials of the Saskatchewan Land Bank to testify in hearings held in Minnesota in developing the 1976 law. The result was legislative authorization for the creation of an advisory council of seven members to screen applicants for farm land purchases, and provide credit at below market rates to approved applicants for a period of at least ten years.

The law creates an advisory council authorized to review loan applications submitted by commercial lenders, public or cooperative credit institutions, or individuals and, if approved, to advance to the creditor up to 4 percent of the unpaid portion of the principal of the loan each year for a period of ten years. The typical loan envisaged under this program is a 20-year level-payment amortized first mortgage loan.

<sup>9</sup> One of the few articles in the U. S. literature is Christopher R. Bryant, "Metropolitan Development and Agriculture: The SAFER de L'île de France," Land Economics, Vol. LI, No. 2, May 1975, pp. 158-163. To underscore the paucity of U. S. attention to the SAFERs, it is ironic to note that the author is a Canadian. For a British view see Michael Butterwick and Edmund Neville Rolfe, "Structural Reform in French Agriculture -- The Work of the SAFERs," Journal of Agricultural Economics, Vol. XVI, No. 4, December 1965, pp. 548-554.

<sup>10</sup> The Saskatchewan Land Bank, What Is It? How Will It Operate? Who Benefits? Regina Ministry of Agriculture, 1972, plus Annual Reports of the Saskatchewan Land Bank Commission.

<sup>11</sup> Ag World, Vol. 4, No. 3, March 1978, p. 12.

<sup>12</sup> Laws of Minnesota, 1976, chapter 210.

The borrower can apply after 10 years for an extension of the deferral of interest for an additional 10 years. At the end of 10 years (or 20 if extended) the borrower must repay the Commissioner of Agriculture for the deferred interest. In case of default by the borrower, the State of Minnesota guarantees to reimburse the lender for 90 percent of the amount due. The program also permits seller-financed loans (using land contracts or contracts for deed) and authorizes the Commissioner of Agriculture to guarantee these to the seller for 90 percent of the unpaid portion in case of default by the land contract buyer.

In practice, in the first two years the program has made substantial use of seller-financing. In the typical case the seller first mortgages the land for up to 29 percent of the purchase price, then sells it to the approved buyer by means of a land contract or contract for deed. The buyer then assumes the mortgage as well.

These four approaches in Sweden, France, Saskatchewan, and Minnesota have common features and some intriguing differences. Sweden and France make use of a preemption right. Saskatchewan and Minnesota do not. Sweden, France, and Saskatchewan authorize land agencies to buy, hold, lease, and resell land. Land purchase and resale is not a part of the Minnesota program. All four governmental programs set up a screening procedure for selection of eligible beneficiaries. Primary stress is placed on farm experience and ability, and the creation or continuation of viable family type farming units. Need or relative poverty are secondary criteria. In Sweden and France the screening committees are decentralized at the county or local planning region. In Saskatchewan and Minnesota, screening of applicants takes place at the provincial or state level. All four programs make use of subsidized credit in one form or another as a major implementing tool. All four programs are focused on beginning farmers, on the problem of financing intergenerational transfers, and on the maintenance of a system of owner-operated family farms.

#### Conclusion

This brief survey of four variations on a common theme derives its unity from a common problem: the preservation of freedom of entry and flexibility in a system of owner-operated farms when confronted by the superior strength of non-farm capital propelled by fear of inflation. It has been fashionable in the agricultural economics literature for at least half a century to decry the fact that in a system of single-proprietor farms each generation must "buy the farm again." Much of the strength of economic arguments for the abandonment of a system of single-proprietor farms is derived from a desire to insure continuity of capital without necessitating its re-purchase every generation. As in all economic arguments, the merit of this position can only be appraised in terms of the probable alternatives. With this in mind, there is an additional common policy position discernable in the four programs outlined above. They all reject an approach based on inheritance as the major device for inter-generational transfer of farm capital, and they all maintain the principle that the beginning farmer should pay for his land.

There are strong arguments supporting this position. Ability to pay for land from earnings has been the major screening device by which market economies have selected the most able managers. If this is abandoned, some other screening or rationing device must take its place. Land Commissions or county boards may do a good job of screening new applicants, but they cannot exercise the constant supervision that is enforced by the self-imposed spur of a debt-repayment obligation. Rather than decry the burden involved in buying the farm every generation, we should recognize the strength of a motivational structure that can harness the desire to own land with the ability to pay for it.

Endemic inflation poses the most serious threat to this agricultural structure. If we desire to maintain the structure, the four programs surveyed in this paper provide the broad outlines of a possible approach, with the following features:

- 1) A non-profit public law corporation with authority to buy land, hold it for appropriate intervals, and lease or resell it.
- 2) A decentralized system of screening committees to insure that regional differences will be respected in selecting among farming applicants.
- 3) Continued reliance on conventional credit sources, with the role of government limited to risk sharing and not risk assumption.
- 4) An expanded alternative availability of installment-purchase or land-contract methods of land sale, running for a term of years that would enable annual payments to approach the level of long-term cash rents.
- 5) Economic resources sufficient to permit participation in the land market in rural but urbanizing areas, or in situations involving land purchases by investors of non-farm capital. This should be supported by a system of agricultural districts or exclusive agricultural zoning, to provide guidance in the provision of long-term financing at favorable rates to beginning farmers.
- 6) A commitment on the part of government to use these devices as a supplement to, and not a substitute for, the normal working of the land market.

It should be clear that this approach would succeed only if it were designed to perform a monitoring or measuring-stick function in the total agricultural system. It will fail if it adds rigidity; it will succeed only if it adds flexibility to the system by increasing the alternatives available to beginning farmers. If in some way this is not done, I am forced to conclude that the days of a non-hereditary family farm agriculture in highly urbanized industrial societies are numbered.

CAN THE FAMILY FARM SURVIVE? THE DECISION PROCESS TAKES OVER!

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Our American heritage in regard to agriculture has been dominated by the Jeffersonian principle that "small landholders are the most precious part of a state." American agriculture historically has been characterized by relatively small, family owned and operated farms.

But agriculture is going through a rapid and massive transformation. The fewer and larger farms are requiring more capital. Coupled with inflation, this is bringing estate tax concerns to the forefront. Farms are becoming more specialized and are highly dependent upon the nonfarm sector for inputs. The modern farm requires sophisticated managerial skills.

Marketing channels have changed toward more concentration in response to competitive pressure and meeting the needs of a more urban society. Land ownership and huge financing needs generally are of growing concern. And the decision making role of farmers is changing -- some would go so far as to say farmers have lost more of their decision making power than they like to admit.

These changes give rise to a continuing concern about "Who Will Control U. S. Agriculture?" The many symposia -- extension or research -- now being held such as this one titled "Can the Family Farm Survive?" are evidence of that concern.

Before exploring the decision making process and some policy options, I would like to highlight a few points Breimyer made in his opening remarks.

Farms and Farm Size. The long term trend is toward fewer and larger farms. Whether it continues and at what rate is a part of the family farm policy issue. Since 1945 farm numbers have shrunk from 6 million to 2.7 million, a drop of 55 percent.<sup>1</sup> Today the average farm is nearly 400 acres; in 1950 it was a little over 200 acres. Farms of less than 180 acres have decreased most. The number of farms with 500 acres or more has increased significantly.

But acreage is not the best term for classifying farm size. In 1977, the 510,000 larger commercial farms that sell over \$40,000 of farm products annually, 19 percent of all farms, accounted for 78 percent of the total farm sales and had family incomes that averaged \$32,000.<sup>2</sup> Farmers of those farms are in the higher income brackets of U. S. society. About \$5,000 of the total net family income of these families comes from non-farm sources such as income of wives working off the farm, off-farm investments, or off-farm work by the farm operator. Unless there are changes in policy these larger farms will increase in number in the next decade and the owners will receive a larger share of the total value of farm production as they continue to gain control of additional resources. They will benefit from either higher prices and incomes, or their neighbors' financial distress, or both. Yet, over the long run, as Breimyer indicates, they may be the most vulnerable to financial risks or conglomerate takeovers.

Over two-thirds of all farms have total farm product sales of under \$20,000. These are small scale farms. They produced only 11 percent of the value of all farm products sold in 1977. The composition of this group is diverse. Some operators are completely dependent on their income from farming for family living; some use

<sup>1</sup> Agricultural Statistics, USDA, 1977.

<sup>2</sup> Farm Income Statistics, USDA, Statistical Bulletin No. 609, 1978.



nonfarm earnings to supplement their farm incomes; still others work mainly off the farm. Some of these farms are retirement operations, others merely rural residences or hobby farms that sell sufficient quantities of farm products to qualify as a farm by Census definition. Their total family income averaged nearly \$16,000 in 1977. This compares favorably with the average income level of non-farm families. Their ownership equity is high and, thus, as a group they have a lot of "staying power." But, as Breimyer and Rhodes indicate, they are, or will be, vulnerable to a lack of markets.

The small scale farm is coming into heavy demand by people with city jobs wishing to supplement their income by farming or wanting to realize some non-economic objectives associated with part-time farming. Up to one-fifth or about 375,000 of these farms can be considered farm poverty cases.<sup>3</sup> They have too little land, too little capital, and too little management know-how to produce a sufficient quantity of goods at any price to provide an adequate farm income.

Farmers in 1977 selling \$20,000 to \$39,999 of farm products accounted for one eighth of all farm products sold. Some are part-time farmers. Many are older and will forego expansion but will need to modernize their operations and practices. The younger people within this size group who depend on farming will (1) expand and move into the commercial class, (2) quit farming, or (3) join the ranks of the part-time farmers and shift to more extensive farming operations.

Farm Structure. The organizational structure Breimyer presents includes (1) smaller than family size, (2) family size, (3) larger than family size, and (4) non-proprietary. The non-proprietary category includes cooperative farms and integrated and industrial type organizational patterns.

In the recent Congressional Budget Office paper to which I referred above (footnote 3) the farms are called (1) small scale farms, (2) family farms, (3) larger than family farms, and (4) industrialized farms.

Both definitions use hired labor as the basis for defining family farms. CBO follows the USDA definition that a family size farm uses less than 1.5 man years of hired labor. Breimyer puts the ceiling at two years of family labor and two years of hired labor. We could "fuss the definitions," to no useful purpose. The usefulness is in their similarity and some of the magnitudes.

Family farms in the CBO classification make up 90 percent or more of all farms, of which about 70 percent are small scale farms selling less than \$20,000 annually. Part-time farmers are not so distinguishable but fall into both categories of family size and small scale farms.

The larger than family size farms (meaning more than 1.5 man years of hired labor) make up an estimated 4 to 8 percent of the total farm units. The industrialized farms (compares to Breimyer's non-proprietary type) make up 2 percent or less of the total.

Farm product sales as a percent of the total for each type farm is quite different. The industrialized and larger than family farms combined sold an estimated 35 to 45 percent of all farm products marketed in 1977.

Somewhere between 60 and 70 percent of all farm products sold originated from the family and small scale farms including part-time farms.

This perspective on the size of farms, income distribution, and organizational structure is summarized here to help set the stage for a more meaningful discussion

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<sup>3</sup> Congressional Budget Office, a background paper titled Public Policy and the Changing Structure of American Agriculture, 1978.

of the policy options. It should assist in the decision-making process as to what kind of farm structure is preferred, and will help answer the question, "Can the family farm survive?"

## ✓ Policy Options

If we want to design a policy to influence the structure of agriculture, we must deal with two basic and interrelated questions. The first is, "What structure is desired?" Stated differently, "Does society prefer the small family farm, a few conglomerates, or some mix between the extremes?" The second is, "What policy tools might best achieve the structure desired?" We shall address these issues and provide some implications of each choice.<sup>4</sup>

A few limitations are in order. It is quite apparent that there is too little research on farm structure, as indeed on most public policy issues affecting agriculture. The great variation in farm size, type of farm, capital needs, crops produced, off-farm employment opportunities, and linkages with the non-farm sector compounds the problem.

Public policies can influence the structure of agriculture. But they must interact with determinants of farm structure from the private sector. The public and private forces are most often complementary. Sometimes, though, they conflict; and then the objectives of public policy are negated.

Policies to influence the structure of U. S. agriculture to be suggested below are just that -- suggested. No advocacy is intended.

Alternative Structures. Even with the strong trend toward fewer, larger, and more specialized farms, it seems certain that the farm structure will continue for years to reflect the heterogeneity that exists in U. S. agriculture today. The choice is not between the extremes of many small farms or of a few non-proprietary type farms. The more realistic choice is between the different rates at which the heterogeneous farm sector will change in the next two, three, or four decades.

The policy options fall into three broad categories. They are (1) to continue the present trend toward fewer and larger farms, (2) to decelerate the trend, or (3) to accelerate it.

Choices will be made according to the benefits or costs relative to certain objectives. These objectives which people will weigh heavily include production efficiency, farm family income, food prices, impacts on rural communities, and cost to taxpayers. Some of these objectives conflict with others. Thus an emotional element enters the policy process, as tradeoffs are made.

## Policy Tools

Policy tools that may be suggested for each of the option categories raised above are not exhaustive. Nor do they represent a major break with the past. They illustrate the type of action that might emerge if a particular structure is sought.

Continue the Present Trend. Public policies to insure continuation of the present trend are in place. Commodity programs would provide price supports on a cost of production basis and supplement low prices and incomes with deficiency payments. Price uncertainty would be reduced and benefits distributed in proportion to total output.

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<sup>4</sup> The policy options, tools and consequences utilize heavily the findings of the Congressional Budget Office background paper referenced in footnote 3.

Export market expansion would continue through negotiating reduced trade barriers and entering into long term trade agreements. The Farm Credit Administration would be expanded to meet the increasing credit needs of the larger farms. Preferential tax treatment on capital gains would be maintained. Anti-trust laws would be used to maintain reasonably competitive conditions, and they might involve prohibiting further acquisitions and mergers by the largest corporations or cooperatives.

Accelerate the Current Trend. Policies to accelerate the current trend and move toward larger farms would be designed to reduce the cost of production and encourage a more closely coordinated market system. Existing policies would be modified to accomplish the objective of fewer and larger farms.

Commodity programs could be used to reduce the risk of low farm prices and incomes. There would be no maximum government payment per farm. The level of price supports could be kept low enough to discourage small farm operators. Public research and information would be designed for large farms.

No special help would be provided small farmers through any agency including FmHA, Extension Service, etc. Higher minimum wages would encourage mechanization and farm growth. Favorable capital gains treatment would encourage farm consolidation. Coordination in the market system would be encouraged by government regulations and by more integration through contracting or direct ownership. Industrialization and employment opportunities would be directed toward "growth centers" and away from prime farming areas.

Decelerate the Current Trend. Policies that would decelerate the trend would require the greatest revisions from traditional policy. Changes would be designed to discourage the expansion of family-size farms into larger-than-family size and to encourage larger farms to be subdivided.

Commodity program benefits could be targeted to small farms by gearing payment rates inversely to lower volume, or to favor preferred ownership patterns and diversified farming operations. Another choice would be to eliminate commodity programs and provide direct income subsidies to lower income farm people.

Liberal government credit could be used to reduce the cost of debt capital to small farms. A different kind of possibility would be to purchase land for lease on favorable terms to small operators. Agribusiness firms could be prohibited from engaging in farming or using contracts. Farm inputs and products could be required to move through open markets.

Public research and information could be directed exclusively toward small farmers. Tax laws could be changed (1) to prohibit the use of farm losses to offset nonfarm income, (2) to increase the capital gains tax, and (3) to eliminate investment tax credit. To retard growth in farm size, a graduated property tax might be introduced. Government subsidies could be used to encourage the dispersion of industry to insure that farm people could have employment opportunities without leaving the farm.

#### Consequences of the Choices

Some probable results of each of the three policy options can be shown by comparing the consequences of slowing down or of accelerating the current trend with the consequences of continuing it. Using the option of continuing the current trend as a benchmark serves to highlight the nature and magnitude of the trade-offs among objectives.

Continuing the Current Trend. With continuation of the current trend the aggressive farmers are likely to earn incomes comparable to those in the higher income levels of the non-farm sector. Efficient and competitive conditions in farming would be expected. Consumer food costs relative to disposable income would remain near their current level. Budgetary cost of federal farm programs would vary from low to high depending upon supply and demand conditions each year.

Slowing Down the Trend. Slowing down the current trend would result in slightly higher production costs. Total cash farm receipts would rise, but net farm income per farm and per farm person would fall due to a larger number of farms and more people on farms. Retail food prices would be slightly higher. Yet dispersed ownership with small farms relying on their own labor might provide a more continuous food supply. Economic activity in rural communities would be favorable with more people on farms and with greater local industrialization -- increasing off-farm employment opportunities.

Policy tools to accomplish this goal would require the most government intervention and the largest taxpayer outlay, as income payments to help small farms and programs to encourage rural development would need funding. A USDA study shows that to preserve the maximum number of farms tax costs would increase -- perhaps double.<sup>5</sup> Choosing this option would provide more policy options in the future because it is easier to consolidate small units than to break up large units.

Speed Up the Trend. Accelerating the current trend would lower production costs per unit. This would result in relatively lower farm prices. Total cash farm receipts would fall compared to continuation of the current trend, but average net farm income could rise. An increase in the average net farm income per farm could occur because of fewer farms.

Retail food prices could be lowered slightly. But with greater concentration of production and farm worker unionization, consumers would be more likely to experience interruptions in their food supply. Lower farm product prices could enhance farm exports and be helpful in our balance of payments problem.

Economic activity in rural communities would be reduced, as farms would be fewer and less emphasis would be placed on rural development. The cost of implementing policies to accelerate the trend toward larger farms would not be great. On the other hand, a reduction in federal outlays for farm programs might be offset by substantial expenditures to assist displaced farm people and distressed communities.

General Consequences. Public policy can influence the rate of change in the structure of agriculture. The differing consequences reflect the varying distribution of benefits and costs to consumers, farmers, rural residents, and communities.

To accelerate present trends would benefit farmers owning the largest farms, and consumers too as they paid less for food. Major costs would be experienced by rural communities, as farm receipts and farm employment declined and local economic activity contracted.

To reducing the rate of change and thereby protect traditional agriculture would work to the advantage of rural communities but would reduce average farm income per farm and increase food costs. Budgetary costs to taxpayers would increase. This policy choice would conflict with attempts some farmers are making to increase their income by adding more acres. The benefits and/or costs to consumers would be minor; the major impacts would fall in the rural sector.

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<sup>5</sup> Alternative Futures for U. S. Agriculture: A Progress Report, USDA.

## Conclusions

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Can the family farm survive? Yes it can, because the structure of agriculture is changing slowly -- though more rapidly than some realize -- and there is sufficient time to act. But enough people must decide soon that they want the family farm to survive and must mount a campaign to secure the legislation necessary to ensure "survivability." To succeed, a coalition of farm interests and representatives from the consumer movement and organized labor might be necessary.

Will the family farm survive? Not likely, though the demise may take decades. And the time factor is a major reason for the demise. There is no crisis and therefore the case for the family farm is hard to transmit to the political arena.

If a political campaign is mounted to slow the trend away from the family farm, conflicts and oppositions will arise within the agricultural sector; passage will be difficult. Policy issues within agriculture are divisive: they pit farmer against farmer, neighbor against neighbor, region against region, and family size farmer against larger-than-family-size farmer. Politicians try to avoid issues matching farmer against farmer.

In the final analysis, some blending of the policies discussed earlier seem likely. The policies probably will achieve a diverse farm structure, providing some help to the family farm and its survivability without isolating farming from changes in the economy.

