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LARGE-SCALE VERSUS FAMILY FARMS 1/By R. L. Adams 2/

June, 1943

Current debate over large-scale versus family farms appears to justify some analysis of the relative objections and advantages of both. 3/ "A farm for every discharged soldier," or "a farm for every unemployed factory worker" is being more frequently mentioned as one way out if and when unemployment again becomes a major problem.

The purpose of this paper, therefore, is to set forth qualitatively one man's "inventory" of family versus large-scale farms with particular reference to Pacific Coast conditions. An approach on the qualitative basis is a helpful first step. Eventually, however, certain quantitative measures must be applied before final conclusions are possible. A qualitative listing is relatively easy, whereas quantitative tests offer problems of technique and lack of data. Irrespective of whether one's decision rests solely upon the qualitative listing or is reserved pending quantitative test, conclusions are certain to differ with various concepts of what constitutes a desirable goal or goals in agriculture. This goal may be maximum agricultural income to the state; it may be financial independence for the greatest number of farm families; it may be maximum employment to all workers (owner operators, their families, and hired workers -- regular and seasonal); it may be maximum capital worth; or maximum gross income; or days of productive labor. It may be the producing of crops, animals, and animal products at least cost. It may be maximum supply of food irrespective of cost. It may be maximization of national products per man-hour, per dollar of outlay, or per capita. It may be in terms of better citizens. Thus the measure may be either (a) economic or (b) social. In this presentation I propose to delve into both aspects. The question to which I am directing my thinking then is briefly: Should large-scale farms give way to family-type farms? Or vice versa?

This question is resolved into two major aspects: (1) economic advantages or disadvantages, and (2) social advantages or disadvantages, as these affect both large-scale and family farming.

By "family farming" and "large-scale farming" I am thinking in terms of operating units -- not ownerships. 4/ To my mind a family-sized (or "family type") farm is a farm with sufficient earning power, year in and year out, to maintain a

1/ Paper read at the meeting of the Western Farm Economics Association. Berkeley, California. June 24, 25, 26, 1943.

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3/ The use of the term "farm" is to be construed as including "ranch" (range production of livestock).

4/ The relative advantages of or objections to large-scale versus family ownership of farms is a matter outside the scope of the present analysis. Multiple units under single ownerships are also excluded.

farm family, finance the farm business, and create modest savings. This implies a reasonable standard of living, economical farm operations, freedom from over-capitalization, and a debt load the terms of which are not burdensome. It implies a farm of adequate size or volume of business, properly planned as to kinds, extent, and dovetailing of enterprises; with proper facilities for marketing all commodities produced for sale. It includes whatever is needed in the form of managerial ability.

This is a widening of the frequently stated definition that a family-sized farm is one the operating labor of which is fully (or in great part) contributed by the farm operator and members of his family, for included in my concept are many specialty family farms that pay wages for the greater part of the necessary farm work.

Large-scale farming, on the other hand, definitely takes the direction of commercial farming. Large-scale farms are usually acquired, planned and managed in the hope of obtaining incomes sufficiently large to pay all expenses, maintain the capital structure intact, and provide desired interest returns upon money so invested. Large-scale operating units represent holdings materially larger in size than the family farm, produce substantially greater volume of farm commodities, require considerably greater outlay of gross operating funds, necessitate hiring much (frequently all) of the manual work and much of the managerial direction, involve much more capital and utilize more and larger units of equipment and machinery. The term large-scale is relative rather than absolute since comparisons must be made on the basis of similarity in the type of agriculture. A 40-acre 10,000 fowl poultry plant may be a large-scale farm while a 160-acre grain farm may be relatively small when each is compared with a family-sized poultry farm or grain farm. If the usual family farm in a community of diversified farming is 160 acres in size, then a farm of 1,280, 3,200, or more acres is obviously a large-scale farm. The use of size of farm as one criterion of large-scale farming is not new. Mumford, for example, defines a large-scale farming organization as one the size of which is "at least 5 to 8 times as large as the typical farm business in the same locality producing the same kinds of products." <sup>5/</sup> There is, however, in my mind, no single multiple that can be applied to all types of agriculture. A few examples will indicate my view as to what constitutes large-scale farming, using for this purpose the specialized types of farm so common in the Pacific Coast States.

<u>Type of farm</u>	<u>Size of family farms</u>	<u>Size of large-scale farms</u>	<u>Multiples</u>
Dairying	20-30 cows	150-600 cows	5-30
Poultry (egg production)	1,000-2,000 fowls	8,000-12,000 fowls	4-12
Beef (range condition)	100-300 stock cows	11,200-3,000 cows	4-30
Sheep (range condition)	1,000-2,000 ewes	10,000-15,000 ewes	5-15
Deciduous tree fruits	20-40 acres	160-320 acres	4-16
Vineyards	20-40 acres	160-640 acres	4-32
Subtropical fruits (citrus and walnuts)	10-20 acres	80-320 acres	4-32
Truck	40-80 acres	240-400 acres	3-10
Cotton	40-80 acres	160-400 acres	4-10
Grain (dry farmed)	640-1,280 acres	2,560-12,800 acres	2-20
Alfalfa	40-60 acres	160-600 acres	4-10

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<sup>5/</sup> Mumford, Curtis D. Large-scale farming in the U. S. U. S. Bur. Agr. Econ., Washington, D. C. 1938.

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Because of the prevalence of specialized farming in the Pacific Coast States in contrast with the diversified or general farming elsewhere in the United States, this table reflects only the specialized type of farm business.

Economic Aspects.-- As I view the situation I'd select as the primary advantage of large-scale farming that which pertains to any business with a sufficiently large gross income to permit full utilization of competent management. For large-scale farming is business. It has to be or lose out in the competitive race. Freed from a maximum of manual duties -- which is the common lot of family-farm operators -- the managers of large-scale farms have far greater opportunity to devote themselves to the many managerial details involved in the successful operation of any farm -- proper keeping and subsequent analysis of farm books and records; proper selecting, directing, supervising, and caring for all hired workers; preparing and analyzing leases, marketing contracts, and other documents; financing operations; marketing products; keeping posted concerning new developments in agricultural techniques, economics, farm management.

A family-farm operator, busy with round-the-clock manual tasks, can muster neither the time nor energy, the interest nor inclination, to give more than passing attention to these managerial details. He usually confines himself to items of absolute necessity. Yet attention to these administrative details can and does pay dividends.

Considerable discussion occurs from time to time as to whether maximizing of food production results from large-scale farming or family farms. On a given area, assuming that both follow a similar pattern of agriculture, it is probable (though as yet far from proven) that the family farms would produce the larger gross supply. <sup>6/</sup> The above statement results after one analyzes the situation thus, assuming good farmers and good farms in each case:

(a) Proper timing of all operations.

There is a best time to prepare land, plant, irrigate, thin, and harvest crops; likewise there is a best time for calving, lambing, and farrowing.

The question arises: Can this timing be better met by large-scale farms or by family farms? My answer: By family farms.

(b) Utilizing proper crop and livestock techniques.

Three hundred years of experimentation and experience has evolved a mass of information concerning proper techniques in connection with both crops and animals. These techniques include data concerning best varieties (or breeds) for given situations, proper preparation of seedbeds; proper planting, including depth, amount of seed, and spacing; proper irrigating; proper controlling of pests; proper rotation of crops; use of green manure crops; proper use of animal and commercial fertilizer; details of breeding, feeding and care of livestock and poultry.

These various needs require, first, a knowledge of what to do; and second ability to translate this knowledge into action.

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<sup>6/</sup> "Gross" for consumption, including what may be consumed on the farm. The net (to off-the-farm consumers) would be less from family-farm production since more people would populate the given area. However, one should not lose sight of the fact that the real test is gross supply rather than where the supply is consumed.

Does experience indicate that the desired goal is more nearly reached by large-scale or family-farm operation?

My answer: I doubt if either has an advantage over the other.

(c) Ample and adequate farm equipment.

To produce crops (and, also, livestock, poultry, and their products) requires that if the work is to be done in approved fashion, ample and adequate farm equipment must be available when needed -- motive power, implements, machinery, and, as well, shelters for livestock and poultry.

Is the large-scale farm (or the family farm) likely to have an advantage in this respect?

My belief: The large-scale farm.

(d) Ample and adequate farm help.

Many farm tasks involve a lot of manual work of various kinds. Some of these tasks call for skilled workers, a few for unskilled workers, while the majority necessitate use of semi-skilled workers.

Is this needed supply more likely to be available to the large-scale or to the family farm?

My guess: The large-scale farm.

(e) Adequate financing.

Money to finance farming operations is frequently a necessary part of the farm operation. The question thus arises: Is access to such money -- as cash on hand or available credit -- likely to be an advantage held by the large-scale or the family farm?

My conclusion: Equal advantages to both.

(f) Seeking and applying ways for better use of land (new enterprises, new techniques, new machinery).

My vote: Large-scale farms.

When these several factors are added, one concludes that, in general, if both types are in the hands of good operators the family-type farms produce more per acre because a small farm has relatively larger income demands per acre or animal unit which causes stressing of intensification, diversity, multiple cropping, and attention to ways and means of maintaining (or increasing) the income-producing power of the land. Obviously a poorly-operated large-scale farm is at a marked disadvantage. Similarly, a large-scale farm in the hands of an efficient operator will produce more per acre than family farms operated by inefficient -- and especially marginal -- farmers.

However, usually the pattern of agriculture is not the same for both large-scale and family farming. Family farms usually tend to be more intensively farmed. In many instances they have to be. Less units per farm (acres or animal units) require that each unit must provide more in the way of prorata income to meet those financial demands which the farm is called upon to meet. Thus any

attempt to assume that a comparison can be made on the basis of a similar agricultural pattern under two conditions of large-scale and family farms isn't sound. An area now in large-scale farming would not necessarily have the same pattern when reduced to family-farm units.

Does the advantage of cheaper unit costs of production (per acre of crops, per animal unit, or per animal product) favor large-scale farming or family-farm operations? To determine an answer to this question requires evolving a number of factors. Supervision of large-scale farming (for managers, foremen, and superintendents) amounts to a fairly substantial sum. But notwithstanding that this charge is spread over a larger number of units, the cost per unit on the average is more than that chargeable to the family farm. This is shown by the following tabulation, using for testing three types of business, namely, dairying, deciduous fruits, field (cash) crops:

<u>Cost of management (annual)</u>				
Type of farming	Family farms		Total management	Cost per unit
	Size	Days of management.*		
Dairying	30 cows	30	\$300	\$10.00
Deciduous fruits	40 acres	25	250	6.25
Field crops	80 acres	15	150	1.88

\* At \$10 per day.

Type of farming	Large-scale farms		Cost of management	Cost per unit
	Size			
Dairying	300 cows		\$4,500 †	\$15.00
Deciduous fruits	320 acres		4,800 ‡	15.00
Field crops	1,280 acres		3,000 §	2.35

† Manager at \$3,000; foreman at \$1,500.

‡ Manager at \$3,300; foreman at \$1,500.

§ Manager only.

Because of this higher cost for management, offsetting economies are necessary in the case of large-scale farming. One common economy is in connection with the cost of manual labor, a principal operating item in the budget of any farm. It is true that large-scale farms face the possible disadvantage (to them) of making cash payment (in wages) for each and every task that must be performed and at current wage rates payable before returns are realized from sale of farm commodities. Managers of these farms must meet monthly pay rolls in advance of the time when receipts are received from the sale of farm products. Thus the large-scale operator faces a necessity in many cases of putting actual cash into a crop, animal, or animal product before the returns from his commodity can be known.

The family-farm operator, on the other hand, carries on during a season, accepts his returns, and seldom stops to figure out whether the sum allocatable to his labor (and other unpaid members of his family) is actually equal to, perhaps more than, but too frequently less than the prevailing wages paid to hired help. By contrast the family farm, on the other hand, frequently has an advantage of unpaid labor and, in addition, compensation to the operator consists of any residual

resulting from sales of farm commodities less payments made on account of operating expenses and maintenance of capital items. To put it another way, a large-scale farm may face a labor pay roll made up of a going wage averaging \$0.75 per hour (current wages). The rate of compensation for an operator of a family farm is determined from whatever is available at the end of the year as pay for his services. If this amount is \$1,800 and his labor totals 3,000 hours, then his rate of compensation is actually \$0.60 an hour, or \$0.15 less than the going wage. At \$1,200 his pay is but \$0.40 per hour. Hence the family-farm operator may receive a less-than-going wage, thus giving his operations a lower-cost advantage. If the sum available is sufficient to provide security for his family this farm operator isn't likely to worry very much because he receives less-than-going wages. On the other hand, the large-scale farm has advantages in that it can hire specialists for different tasks -- skilled tractor drivers, orchardists, livestock men, etc. Moreover, workers are hired only when needed, being discharged when a need no longer exists. This condition, however, may operate in subsidizing large-scale farms by placing upon the community (that is, the taxpayers) the responsibility for providing relief to the extent that such farm workers cannot find employment elsewhere when not needed by the larger-scale farms. However, proof is needed to show whether or not, in the long run, the public actually gains by receiving more and even cheaper food (after including relief or other taxes) than would otherwise be the case. Both these conditions operate to reduce large-scale farm outlays to actual requirements. But notwithstanding the ability of the large-scale ranch to effect economies by use of specialists and release of workers when no longer needed, there is a handicap -- that hired operators may not be as experienced as the family-farm operator. Hired help certainly does not ordinarily possess that personal interest in the proper care, maintenance, and operation of machinery or proper performance of the various techniques involved in producing crops, animals, and animal products which is one of the outstanding advantages of the farm operator working with his own crops, livestock, tractors, implements, machinery, and tools.

Another item of cost worthy of consideration is that resulting from larger units of equipment possible in large-scale farming, plus certain equipment which operators of family farms cannot afford (unless offset by cooperative equipment pools) such as threshers, binders, headers, and balers. For instance, the part that larger units of equipment can play in reducing costs is illustrated by the two examples which follow:

- (a) 1 Man 60 Tractor 8-14" plows = 18 acres per 9-hour day; versus
- (b) 1 Man 10 Tractor 2-14" plows = 4.5 acres per 9-hour day.

Assuming wages of \$1.50 an hour for case (a) and \$0.75 for case (b) results in a labor cost per acre of \$0.75 for (a) versus \$1.50 for (b).

Larger units may also be used more efficiently. For example, if a large-scale operator has twelve times as much acreage to farm and can use three times as large a unit of farming as can family farms, the result is that the large-scale farm can utilize its equipment four times as much. This tends to lower the overhead charge per year and per acre. Expensive equipment does entail a higher total annual charge than does the less expensive family-farm equipment. However, this higher annual charge can amount to less cost per acre (or other unit of production) because of the more efficient use. A large tractor suitable for large-scale operations may have an overhead (interest, depreciation, taxes, and upkeep) of \$680 versus \$150 overhead for a family-farm tractor. But if the two machines are operated 120 and 40 days respectively and the large one does four times as much work per day the allocation of overhead per unit of work is respectively \$1.42 and \$3.75. Moreover on large farms, farm shops can be provided with accompanying advantages of



quicker and cheaper repairs than is possible to family-farm operators who must rely upon neighborhood blacksmiths and machinists.

Taken all in all it appears that large-scale operating units have advantages of assigning various tasks to those best fitted to perform them, use of larger units of farm implements and machines, release of workers when not needed, all of which may more than offset any advantage in lower wages possible for family farms, greater interest in the work and its accomplishment on the part of workers employed on family farms.

Another advantage of large-scale operations is the opportunity provided managers to purchase needed supplies -- seed, fertilizer, spray materials, crates, boxes, hampers, sacks, etc. -- in large quantities, thus benefitting from savings incident to purchasing in wholesale quantities.

An outstanding advantage open to large-scale operators is the opportunity to sell farm commodities to better advantage. It is easier to find buyers for wholesale quantities, frequently at better prices; the manager has time and opportunity to better acquaint himself with all available market outlets and facilities and to utilize that which is to his best advantage. The unit cost of marketing in large quantities is also usually reduced. The family-farm operator is largely at the mercy of buyers who can (and frequently do) take advantage of the seller's ignorance or his inability to market other than locally or within a much restricted area. An operator with 200 or 300 fat cattle, or 1,000 fat lambs, or with several cars of fruit or vegetables, can market to far better advantage to himself than can a producer with 10 or a dozen cattle, 50 or 60 lambs, and less than carlots of fruits or vegetables. The large-scale operator, moreover, from his knowledge and because of his resources, can (and usually does) make the most of better quality, attractive packs, neat labeling, and other devices designed to enhance his selling price. One offsetting influence, of course, is the fact that farmers' cooperative marketing associations do provide similar and perhaps equal advantages to family-farm operators when such cooperatives are available to them.

Generally large-scale farming represents less capital in a given area than is the case when that area is in family farms. Frequently the market price of the land itself is less, since purchasers of large tracts are usually procurable at a lesser cost per acre. Less investment is needed for dwellings: One dwelling for the manager, together with additional dwellings for superintendents, foremen, possibly some of the married workers, in toto may not exceed half a dozen dwellings on a 10,000-acre tract. This same 10,000 acres if subdivided into 80-acre family farms would necessitate providing 125 dwellings. The same situation applies to erection of barns and other outbuildings. Even housing for occasional help needed by operators of family farms could exceed the investment in bunkhouses, kitchen, and dining quarters and other facilities needed for the large-scale farm. Fencing would be a substantial addition. Thus if a less amount of capital is an advantage certainly an area devoted to large-scale farming has the "edge."

So, to sum up, when the economic advantages and disadvantages of both large-scale and family farming are balanced, it is probable that in a well-managed organization the net advantage rests with the large-scale operations.

Social Aspects.-- This aspect deserves consideration fully equal to the economic aspects of large-scale versus family farms. Thus, one may ask: which of large-scale and family farms are in the best position to produce better citizens? Which makes for stability in the farm population? Which contributes most to the welfare of the community (and "community" can include a nation-wide concept)? Which provides greatest employment opportunities?

For purposes of my discussion, I have centered upon the following:

- (1) Maximum employment.
- (2) Stimulating interest of citizens in local, state, and national affairs.
- (3) Largest number of farm homes.
- (4) Widest base for assessing taxes.
- (5) Least amount of tenancy.
- (6) Enhancement of community life.
- (7) Wider support of state institutions, including colleges and various agricultural departments; local schools; farmer organizations; cooperative marketing associations; civic clubs.
- (8) More appreciation of the land -- for the land's sake -- instead of viewing farming merely as a way to make money.
- (9) Reduction in unrest on part of hired workers, sometimes resulting in strikes, lockouts, disputes, and strifes.
- (10) Reduction in exploiting of defenseless workers.

Most of these items are outstandingly provided by the family-farm type of agriculture. This is certainly true of items 2, 3, 4, 6, 7, and 9.

Item 1, which uses as its measure maximization of employment opportunities, favors the family-farms, if one takes into account work performed by operators and members of their families. If, however, the test is on the basis of hired workers, then large-scale farming presents more opportunities provided the prevailing agricultural pattern is the same for both groups of farms. Usually, however, family farms do tend to more intensive types of farming and under these conditions might provide more employment. For instance, an area of 10,000 acres devoted, under large-scale operations, to grain, alfalfa, flax, beans, etc. would provide far less employment to paid workers than would the same 10,000 acres in family farms given over to orchard fruits, vineyards, cotton, sugar beets and other crops of high labor requirements. The reverse situation is not likely to be met -- that is a change from intensive large-scale farming to extensive family-type farming.

I think one cannot deny that large-scale farming tends to force attempts to unionize workers. There appears to be more cause for discontent and unrest. Hired workers on family farms are apparently better satisfied and hence operators of these farms are relatively free from this influence, except in so far as unrest on neighboring large-scale farms spreads to similar workers on family farms. I shall not attempt to fully explore this situation, but I do point out that workers on family farms apparently have better advancement opportunities (from worker to tenant to owner), are more closely associated with the operator so that there is not only a better appreciation of the operator's problems but a more democratic association. There is greater variety of work. It is less a case of wages clashing with profits, of men being known by number instead of by name, of paid managers, of single task assignments.

Data are not available as to the extent that leasing enters into large-scale versus family farms. It is probable that more renting and leasing occurs in connection with the former than with the latter. Leasing is not necessarily anti-social but certainly does not appear to provide a particularly fertile field for fullest development of the social aspects.

It is highly probable that the advantages of our remaining items (numbers 8 and 10) likewise rest in family-farm operations.

So, overwhelming social advantages are to be found in the family farms when contrasted with large-scale operations.

In Conclusion.-- To sum up, my belief is that the economic aspects of large-scale overshadow those of the family farms. Conversely, the social aspects are far and away best accomplished with the family-farm type of operation.

I size up the situation about as follows: Family farms are a living; large-scale farms a business. If we need or desire to continue to have a business form of agriculture -- and to gain the inherent economic advantages -- we will retain large-scale farming. If we are satisfied with farms to provide a living -- and to result in outstanding social gains -- stress will be placed on family-farm operations.

In the foregoing discussion I have been dealing with extremes. There is a third size of farms especially worthy of inclusion. This is an intermediate group, too large to qualify strictly as family farms and yet too small to be classified as large-scale. This group provides greater income opportunities than the family farms (as defined above) and yet falls short of the profit goal of large-scale farming. It is a compromise between the mere economic security envisioned for family farms and the profit-at-any-price of large-scale farming. Then intermediate-sized farms do provide an opportunity for the more capable beyond the obvious limitations of the family-sized farms without going to the extreme of large-scale farming. This intermediate situation appeals to me as having a definite place in the future -- with respect to both the economic and the social aspects of agriculture.

## LARGE-SCALE VS. FAMILY FARMS

Discussion

by

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A review of Dr. Adams' paper and of other available reports bearing on this general subject leaves one impressed with the lack of related objective data. A strong need exists for more information and fundamental research on the relative advantages or disadvantages of large-scale and family-size farms, both from the economic as well as the social viewpoints discussed. This need is particularly great in California, where, according to the study of Jennings referred to by Dr. Adams, there are almost 40 percent of the large-scale farms in the entire United States.

No studies, to my knowledge, have been specifically devoted to such an inquiry. Most farm management studies compare farms of various sizes, but all or most of the farms included fall within the range of so-called family-size operations. Furthermore, the inquiry has seldom been carried beyond the economics of individual farms or groups of farms, at least not to the point of evaluating financial results of farming operations on a community or area basis.

Dr. Adams points to the possibility that the operation of large-scale farms may contain an element of subsidy, namely, the failure to assume responsibility for employment of hired labor except during peak-demand periods. The community or society at large has been obligated to support such laborers during the balance of the year when no employment is offered. This is one of the major criticisms of large-scale farms as they have operated in the past. This criticism can be made of other industries and even of other types of farming operations, though in differing degrees. Admittedly, family-size farms also hire seasonal labor, but unless they are in an area of small, highly specialized farms these laborers are often neighbors or neighbors' sons. Whether large-scale, or for that matter any, employers of casual, seasonal labor should assume partial or total responsibility for support of the laborer and his family during all of the year is partly an ethical question and beyond the scope of this discussion, but on the assumption that they should, it might easily develop that much or all of the so-called economic advantage of large-scale farming of certain specialized types would disappear.

Adequate appraisal of this problem of advantages of scale should in my opinion go beyond simple comparison of family-size vs. large-scale farming. There are many kinds or types of both large and small farms. From the standpoint of continuous employment of hired laborers the diversity of enterprises may be as important as size of operations. An area composed of family-type farms under Dr. Adams' expanded definition, but largely specialized fruit farms of one kind, might have as serious objections from the standpoint of offering continuous employment to hired laborers as would a smaller number of large-scale specialized farms. A diversity of enterprises on a few large-scale farms in the same area might well result in both lowered economic costs and improved social conditions.

The factor of management undoubtedly is one of the critical items in the success of any farm. Dr. Adams rightly points out the need for a higher grade of management in large-scale farming operations. One important reason there are fewer large-scale operations, even though the advantages of scale in certain situations are obvious, is that good managerial ability is limited. Poor management on a large-scale operation can be much more disastrous than on a small farm.

How much management is worth and how efficient it is in terms of lowered unit costs of production is something that has not as yet been determined with any precision. If Dr. Adams' data indicating a higher cost per unit of output for management and supervision charges on large-scale enterprises are correct, then large-scale farms fall short in the one field where they usually have been assumed to excell. Such a comparison is exceedingly difficult to make, however, because of the practical impossibility of separating the management function from the role of laborer in the family-size farm operator.

A question may be raised regarding the lowering of unit costs by use of large units of farm machinery. Admittedly, the large-scale farm has had an advantage in being able to utilize fully and effectively units of machinery that are not adaptable to a smaller operation. Much progress has been made during the last few years, however, in developing smaller sized units of equipment. These developments most certainly have enabled the smaller farms in many instances to compete on more favorable terms than was heretofore possible. Perhaps much more progress can be made in the future in this direction. It is possible that the unit costs for machinery on family farms may be lowered to that possible on large-scale operations. A Leviathan does not always prove to be the most economical in operation, even though at one time it might have been so.

The major point of my remarks is that we need to know much more than we do at present regarding relative efficiencies of operations before we can draw final or perhaps even tentative conclusions. I am of the opinion that it is not an "either - or" proposition. I doubt that we should concentrate upon having all family farms or all large-scale farms, or even intermediate-size farms, even though one or the other policy of obtaining maximum social or maximum economic advantages is adopted. A combination of the several types may still be desirable, taking advantage of superior management where it exists and giving opportunity for its development, yet on the other hand, adopting such controls or curbs as will prevent exploitation of laborers or the undesirable social aspects of large-scale operations. Many of these devices need to be explored much further than they have before anyone goes "all-out" for a drastic rearrangement in the size-of-operations pattern now prevailing in our agriculture.