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FARM

SCIENCE

ECONOMICS AND
SOCIOLOGY READING ROOM

August 1960 — Volume 15, No. 2



The summer landscape on this month's cover was photographed by Hal Johnson, a part-time graduate assistant in Iowa State's agricultural information service and graduate student in technical journalism. His writing interests are mainly in conservation and outdoor journalism. From North Carolina, he likes Iowa's scenery; he's less certain about our weather.



chat with the editors

MORE ABOUT FARM CORPORATIONS

There was quite a bit of interest in the article about incorporating family farms when it was published in Iowa Farm Science about a year ago. Though based mainly on Iowa conditions, the article was republished in many other parts of the country. That article outlined the possibilities, advantages and disadvantages of incorporating a family farm.

The same three authors (Neil Harl and John O'Byrne of the Agricultural Law Center, State University of Iowa, and John Timmons of Iowa State) have another article in this issue. Beginning on page 13, its title is, "A Closer Look at Iowa Farm Corporations." The authors, in this article, report on part of their findings from a study of some of the farm corporations existing in the state. How are they owned, operated and managed? Why were they incorporated? What costs were involved? Are the owners satisfied with the results?

As they pointed out in their first article, the authors aren't suggesting that the corporate form of business is a "cure all" for each and every farm. There are both advantages and disadvantages -- depending on the particular situation and purpose to be achieved. The important question is whether or not the corporate form of business offers a better tool for that situation and purpose than the present form of business.

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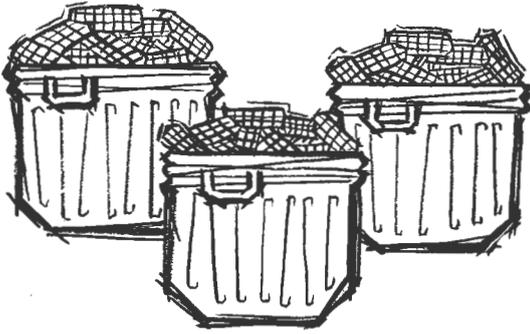
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August Iowa Farm Science Reprints

(available about mid-month)

- FS-875 Contract Farming "Take Over" Not Likely
- FS-876 Sell Cropping Rights on Your Farm?
- FS-877 Improve Your Forage Seeding Management
- FS-878 For Young Men Planning to Farm
- FS-879 A Closer Look at Iowa Farm Corporations



Contract Farming "Take Over" Not Likely

Most of the current concern about the possibilities of highly specialized, contract farming or so-called vertical integration can be summed up into three major questions. Here's how the situation looks so far.

by Earl O. Heady

CONTRACT FARMING or so-called vertical integration still is a fairly new wrinkle in agriculture. It's not entirely new. Various kinds of contracts and degrees of integration have been used in agriculture for decades.

Feeding cattle and sheep on contract once was quite popular here in Iowa. And contracts for producing sweetcorn, peas and other vegetables are commonly used in communities with canning factories.

It's just within the past several years, however, that there has been widespread expressed concern over contract farming—particularly with respect to hog production. Most of this concern involves specialized production arrangements and can be summarized into three major questions:

- Will specialized production—especially of hogs under contract or independently—fit into and be most profitable on *my* farm?

- Will specialized or specialized-contract hog production take over and become the general pat-

tern of agriculture here in Iowa and the Corn Belt?

- Will the growth of specialized hog production or specialized contract arrangements force hog production out of Iowa and the Corn Belt?

We discussed the first question in two earlier articles in *Iowa Farm Science*. See "What Hog System for You?" in the November 1959 issue (reprint FS-835) and "More About Choosing a Hog System" in the February 1960 issue (reprint FS-852).

Briefly, the research reported in those two articles showed that corn production holds top billing on most Iowa farms. Corn production offers the most profitable use of resources on good Iowa cropland. Taking capital and labor *out* of corn production and putting them to work in another enterprise, on the other hand, usually lowers income. The research indicated that the specialized multiple-farrowing systems would be used, if at all, (1) on specialized hog farms where cropland and the income from it is a minor element and (2) by farm operators using such systems as a means to acquire more know-how and capital from an integrator.

In this article, let's concentrate on the last two questions. Re-

search in progress is turning up some answers. Generally, the results indicate that the answer to both questions is, "No." But let's look at each question on its own merit.

Will specialized and contract hog production take over and become the general pattern of agriculture here in Iowa and the Corn Belt?

To find the answer to this question, let's look first to the individual farm and farm operator. For farms of typical size, we find that efficient hog production usually includes 2-3 farrowings per year—fitted into a farm operation that allows labor and capital to be used in a crop program plus some feeder cattle to use any extra forage. Most specialization and contract arrangements involve multiple-farrowing systems of 4-6 farrowings a year or purchasing feeder pigs.

Our studies suggest that these methods aren't likely—in terms of profits to the individual farm operator—to supersede the more general management systems now dominant in Iowa and the Corn Belt. There are some advantages in using the same equipment and stock for specialization and as many litters as are consistent with

EARL O. HEADY is professor of agricultural economics.

the most profitable combination of livestock and crops. Beyond this point, for the farm operator with the capital and management skills, it isn't profitable and draws labor and other resources away from corn and the cropping program that goes with it.

Thus, for the farm operator with the capital and management skills, it generally isn't profitable to adopt the specialized multiple-farrowing schemes. To do so, he'd have to take labor and other resources away from corn. And this is the crop that still gives the highest return to labor and capital resources. For the farm operator in this situation, contracts providing capital for feed, hogs and equipment have no profit advantage.

What about the farm operator who does *not* have the funds and management ability necessary to produce pork efficiently? In this case, there is some advantage in contracts and specialized multiple farrowings—providing hog production isn't pushed so far that it pulls resources away from the more profitable crops with which hog production must be fitted.

Very few Iowa farms make top profits by producing a single crop. It usually takes more than one enterprise for the greatest returns. If a certain number of hogs are a part of this combination—but the operator lacks the managerial or financial requirements—a contract or a vertical integration system can sometimes provide the lacking resources. If only capital is missing, however, and he has the management ability and can borrow funds at usual interest rates, a contract arrangement would have an advantage only to the extent that he can get a better selling price for his hogs.

About the only other farm situation that vertical integration can benefit is the farm that produces *only* hogs. For the farm operator in this situation, extreme specialization and continuous farrowings would be the most profitable method of using his resources.

But on a profit basis, most Iowa and Corn Belt farms won't enter into (or stay in) highly specialized hog farming based on contracts and vertical integration. Again, corn production gives the

highest return to capital and labor, and multiple farrowings would draw labor and capital away from corn. And it's a crop-livestock combination fitted with and "around" corn production that almost always results in the highest returns.

Will the growth of specialization and contract hog production in other areas take hog production out of Iowa and the Corn Belt?

To answer this question, let's look again to corn. For top profits in the major corn areas, it's necessary to combine a certain number of hogs or other livestock with crop operations. Even hogs can't compete with corn in returns to labor. But this applies only to labor that can be used to produce corn. During much of the year, labor can't be used to produce corn. So it's used largely in the production of hogs in the Corn Belt. And, unless a more profitable enterprise than hogs is found, labor will continue to be used in the Corn Belt for hog production during the off-season for corn.

Hog production is closely tied to corn and other feed-grain production. Feed grains are by far the major input in hog production, with a much smaller input of prepared feeds as compared with, say, broiler production. So hog production "on location" has a relative cost advantage in the areas where corn and other feed grains are produced.

Certain regions, such as the Southeast, have a labor advantage in the form of wage rates. The Corn Belt has another kind of labor advantage: Field crop production is seasonal. Labor used for hog production doesn't have a great alternative opportunity on most Iowa and Corn Belt farms. This appears to be a greater force than low wage rates and will continue to be an important force in holding hog production in the Corn Belt.

This doesn't mean that there won't be long-run increases in pork and beef production in other areas—most likely in the Southeast and West. Increases are likely to occur in the Southeast because of long-run shifts from cotton coupled with other factors

—rising feed-grain production, lower-cost freight rates by water and a more rapid population growth than in the Midwest. Likewise, the factors encouraging increases in the West are a rapidly growing population and consumer market and a rising feed-grain production.

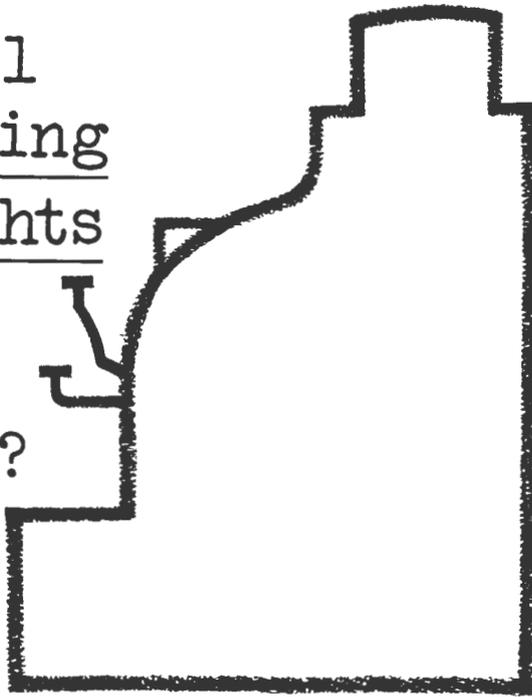
None of these factors, however, reflect a deterioration of the basic comparative advantage of Iowa and the Corn Belt in hog production. Part, but not all, of the forces encouraging increased feed-grain production in the Southeast and West may be the result of past and present government farm policy for cotton and wheat. A change in government farm policy might change this situation, too. A change, for example, taking the emphasis off of the shift from wheat and cotton land to surplus feed grains would re-emphasize the Corn Belt's basic advantage.

Another factor which could have a major effect on integration is whether or not the integrating firms pass on any savings to farmers. Can integrating firms process and distribute larger amounts of feeds at lower cost than other firms? Can they provide managerial services and skills at lower costs also? If so, cost economies would exist. If such gains were passed back to farmers in the form of lower costs for feed and services or in higher prices for their products, the result would likely be a long-run trend toward more integration.

This force won't exist, however, if any such economies aren't passed back to the farm operator. He'd gain nothing by integration, with the result that there'd be no lasting long-run developments in the areas of integration for hogs and cattle fattening.

Summing Up: The weight of the evidence favors a negative answer to the last two questions as well as the first. There's no absolute proof either way. But it appears that no widespread number of farmers will move into (or stay in) highly specialized arrangements unless there are very real and genuine advantages. And, so far, there's little evidence that many of these exist.

Sell Cropping Rights on Your Farm?



by Melvin G. Blase

WOULD YOU be willing to “sell” the right to raise certain crops on your farm? One of the *suggested* possible programs for reducing surplus production involves this question. The government would offer to “buy” a part of your farm—not acres of land, but your legal right to raise surplus crops. Essentially, you’d sell your right to produce these crops for some definite period of time by means of land-use easements.

This type of program has been suggested as a long-term measure to cut back production of surplus crops. It is a type of program which isn’t likely to be capitalized into land values. The purpose of this article is to present the idea of an easement program so that you can think about it and consider it along with the other ideas and suggested programs that are being discussed.

How Would It Work?

Easements are familiar to many

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farm people. Your power supplier may have used an easement to acquire the right-of-way for a power line across your or your neighbor’s land. A few farmers have had experience with another use of easements. To compensate owners for occasional brief floods, the government has bought the right to flood farmland around the edges of reservoirs. Instead of being forced off their land when the reservoir was built, farmers have planned and continued their operations—knowing of the possibility of being flooded. Easements have allowed the government to flood the outlying reservoir areas when necessary without buying whole farms.

Likewise, under a land-use easement program to reduce surpluses, the federal government would buy only your right to produce certain crops. The property itself and all other rights in the land would continue to be yours.

In our system of owning property, ownership of a farm or any other real property is the exclusive (but not absolute) possession of a “bundle of rights.” This bundle can be divided. And it’s frequently done. If you’re a tenant, for example, you hold some of the rights in the bundle. One of these is the right to operate the farm for a specified period of time. If

you’ve inherited a life estate in a farm, you have most of the bundle, though not the right to say who will get the farm when you die.

Ownership’s “bundle of rights” can be divided in many ways. The sale of cropping rights through land-use easements would be, in principle, just another way of dividing and selling these rights.

Purchase of rights to produce surplus crops may sound like a modified Soil Bank to you. But there are two important differences. (1) You could use your land in any way you chose except to produce specific surplus crops. (2) The sale of the easement, if you entered such program, would probably be for a longer period of time than the more familiar 3, 5 or 10 years of the Soil Bank or Conservation Reserve.

What Compensation?

What would be a fair price for land-use easements? Aside from general willingness or unwillingness to participate, this might well be the most critical factor. Since an easement would transfer some rights in land, its price might be closely related to land prices. Land may sell for about 20 times the annual net income it produces if mortgage interest is 5 percent.

That is, if you expect a net income of \$10 per acre annually, you could pay 5-percent interest on an investment of \$200 an acre for the land. If a land-use easement had been sold by the previous owner so that you expected the most profitable nonsurplus crops to yield \$5 net income per acre annually, you might offer as much as \$100 per acre for the land (with a 5-percent interest rate). But how much should the previous owner have received for his land-use easement? To be as well off, he should have received the capitalized value of the difference between the net income from his most profitable crop and the net income from his next best allowable alternative—in this instance \$100 per acre.

The exact price of an easement would depend upon, among other things, the productivity of the soil. Let’s take an example from southern Iowa and look at the

difference in incomes from the most productive rotation and from permanent pasture—both for an eroded Shelby soil and for a highly productive Grundy soil.

On the Shelby soil, a corn-oats-meadow-meadow rotation will return about \$2.50 per acre annually more than permanent pasture. A rotation of corn-corn-corn-oats-meadow on Grundy soil will yield about \$15 per acre annually more than permanent pasture. Capitalizing these returns at 5-percent interest, gives a rough estimate of the cost of a *permanent* easement of \$50 per acre for eroded Shelby and \$300 per acre for the more productive Grundy soil.

From a conservation viewpoint, it might be most desirable to obtain easements on the Shelby rather than the Grundy soil in the example. But an easement for 1 acre of Shelby will reduce production by an average corn equivalent of only 13 bushels per year compared with 34 bushels for 1 acre of Grundy.

It might cost the government less to secure a permanent reduction in surplus crops by easements than by renting the land indefinitely. But would *your* income be lower than under a Soil Bank type rental? Probably not, because your easement payment would be supplemented by annual income from the permanent pasture. This isn't possible under the Soil Bank or Conservation Reserve.

Why Do Anything?

A large part of the current farm problem is due to surplus production. We're producing so much of certain commodities that prices are being forced too low to give labor and capital under average management in agriculture a return equal to their earnings if employed elsewhere. This has been the case for a number of years, and it appears that the situation will continue unless a solution is found. If some of our farm resources aren't shifted to less intensive uses, farm prices are likely to remain low for a number of years in the future. Attracting land to a less intensive use seems to offer one of the most painless ways of adjusting agricultural production downward.

The farm problem is a "big" and long-run problem. We have on hand more than twice our normal annual carryover of feed grains. This is equal to about half of all feed grains fed to livestock in the 1958-59 feeding year. Our wheat stocks exceed all wheat produced in the nation last year.

In the 1950's the rate of increase in farm output pushed ahead of population growth by 0.6-0.7 percent a year. With no further increase in farm production, it would take population about 5 years to catch up with current production levels. But our surplus crop production isn't standing still while population catches up. Output is increasing more rapidly each year, and our surpluses, thus, grow at an increasing rate also. In this respect, American agriculture is snowballing further *out* of adjustment with population needs.

If and when the demand for our crops takes annual production, we will still have the problem of reducing the huge surpluses in storage. They're already so large that it will take years to eliminate them. It seems that our farm problem won't be solved soon unless we develop more effective programs than we've had.

This Program Help?

Unless we use some of our land less intensively, our surpluses will continue to grow. How can we make a shift in this direction most effectively? Two guideposts might be used: (1) Land should be removed from intensive use where the cost to society of keeping it in its present use is relatively high and the resources used with land can be transferred to a more productive use elsewhere; this would contribute to national economic efficiency. (2) Land should be aided out of intensive cropping where the erosion hazard is greatest; it makes little sense to produce crops we don't need at the expense of topsoil that future generations may need.

If such a program were adopted, land in the program would shift from producing surplus crops to increased forage and timber production. And since a pound of meat requires more acres if

produced on grass rather than feed grains, this shift would help to shrink farm output in the longer run. Because of the time needed for timber to mature, a shift toward this crop wouldn't affect timber marketings for many years to come.

If the main object is to reduce production, an easement program probably would be most effective if cropping rights to whole farms were bought. This would shift land to less production and also decrease production from other resources now used with the land. If the easements were for only parts of farms, it's likely that production from the remaining acres would increase. But the partial-farm approach has a soil conservation value since the most highly eroded land on farms would be likely to go into the program first.

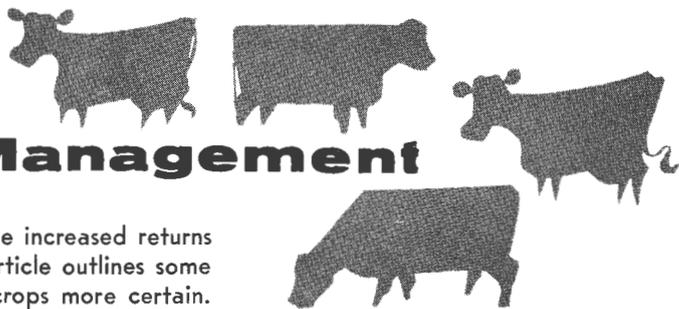
Thus, a land-use easement program could offer a relatively permanent remedy for our farm problem. If you sold your cropping rights, they'd become property of the federal government. Eventually they'd expire or, if permanent, could be sold back to the landowner in case of an emergency or increased demand for crops now in surplus.

Such a relatively permanent remedy might be cheapest for taxpayers when we consider how large the surplus problem really is. The history of past government farm programs shows that it would have been cheaper for the government to have bought some land earlier than to have paid the costs of so many programs since the early 1930's.

A land-use easement program wouldn't be a complete answer to the farm problem. It may be desirable in addition to use more land for recreation, to expand the conservation program, to make more information about nonfarm job opportunities available to farm youth and to alter the education that our farm boys and girls receive.

There may be other methods of reducing farm output that would be more desirable than land-use easements. But there appear to be many reasons why a land-use easement program would be a step in the right direction for the government to help agriculture.

Improve Your Forage Seeding Management



Research results again and again have pointed to the increased returns possible through better forage management. This article outlines some of the practices to make your success with forage crops more certain.

by J. M. Scholl and J. G. Wheat

TO OFFSET rising production costs and lower returns, there's plenty of emphasis today on efficient management in most phases of farming. But there's been less on-farm progress in improving forage seeding methods and management.

Many of the poor, low-yielding forage stands around the state are simply the result of not using the practices known to produce better results. Part of this may be due to the greater emphasis on most of the cash crops in the rotation—with the forage crop treated as a “fill-in” between the crops producing a direct cash income. Research at many of the state experiment stations, however, again and again has pointed to the increased returns possible through improved forage management.

The starting point, always, is high-quality seed of adapted varieties—planted at recommended seeding rates and mixtures in a fertile, well-prepared seedbed. In this article, let's look at other seeding and management practices that can make your success with forage crops much more certain.

What Companion Crops?

You've probably been seeding your forages with an oat companion crop. This still is the method preferred by many farm operators even though the profitability of the oats for grain has been questioned by both farmers and farm economists.

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Oats grow rapidly. They provide quick cover and are of some benefit in weed and erosion control. Actually, oats act in direct competition with the legume seedlings rather than playing the role of a “nurse” crop. But if you need the oats as feed (grain or silage) and for the straw, the companion crop method of forage seeding establishment may be the best for getting some return in the seeding year.

There's a long-standing belief that there's a difference among oat varieties for companion crops—that early, short, stiff and less leafy varieties are the best. The reason is this: By heading time, oats are in direct competition with your legume and grass seedlings. Because of this, it's advisable to use early to midseason oat varieties with short, stiff straw. Use the tall, late varieties—which have a greater tendency to lodge—only when they're to be removed for silage or hay.

Other small grains are used as companion crops in some areas. Barley and flax are possible alternatives in northwestern Iowa.

Barley has broader leaves and tends to cut off light from the legume and grass seedlings more quickly and more completely than oats. Early varieties of barley with short, stiff straw seem best for a companion crop, while the tall, weak-strawed varieties seem less desirable. Barley, in general, has a slight advantage over oats since it matures slightly earlier and can be removed sooner when allowed to mature for grain.

Flax in some respects is an ideal companion crop for forage seedlings. It lets more light reach the forage seedlings, and, because

of its habit of growth, it doesn't form a smothering mat when lodged as do the cereal grains. But flax is a poor competitor with weeds. Flax doesn't shade the ground, and this tends to restrict its use to relatively weed-free fields.

Seeding Methods, Rates . . .

Your method and rate of seeding can have a bearing on the success of establishing the forage stand. Give preference to practices that reduce competition between the companion crop and the forage seedlings.

With broadcast plantings, a moderate decrease in your oat seeding rate often won't reduce this competition. Small grains generally have an ability to compensate for thinner stands by increased stooling. So your stand of oats may be just as great, even though you cut your seeding rate. About 2-3 bushels per acre will produce full stands of oats on most soils. Heavier rates are preferred on soils apt to crust.

A more effective way to reduce competition is by drilling your oats. Because of the more uniform depth of seed placement with drilling, at least $\frac{1}{2}$ bushel less oat seed per acre is needed. Some studies at Iowa State have shown better legume stands with 7-inch oat drill rows, with the legume broadcast, than with both oats and legume broadcast. In these tests there was a tendency for oats drilled in 14-inch rows to resist lodging better than oats drilled in 7-inch rows. Under critical conditions, this could be important for both the oat crop and the forage seeding, though there's the possibility of increased weed



A typical field of lodged oats.

growth with the wider drill row spacings.

If you place the most emphasis on your forage seeding, the small differences in grain yield among the various seeding methods aren't important. Drilling (in 7-inch rows) has given about a 3-bushel-per-acre advantage over broadcasting. Drilling in 14-inch rows at the rate of 2 bushels per acre has produced about 4-5 bushels less per acre than 7-inch row spacing at a seeding rate of 3 bushels per acre. This is a small price if it means the difference between a good alfalfa stand and a mediocre or poor one.

Though drilling small grains has advantages over broadcasting, most small grains in Iowa are seeded broadcast. But, even with broadcasting, there's room for considerable improvement in seeding by this method.

For best results after broadcasting oats on the surface, the seed should be covered to a depth of 1-2 inches, usually by disking. The forage grass and legume seeds, on the other hand, are small, and many will be placed too deeply if covered by disking. Research results show that the best depth for the small forage seeds is $\frac{1}{4}$ - $\frac{1}{2}$ inch on heavy soils and $\frac{1}{2}$ -1 inch on light soils. Use a corrugated roller or a spiketooth harrow to cover the forage seeds. The roller is first choice.

Many poor stands result from broadcasting and disking both oats and forages; many seeds are buried too deeply, and others remain uncovered. *It's well worth the time and effort to disk in the oats first and then seed and cover the forages in a separate operation.*

Fertilizer, Lodging . . .

Iowa soils generally are deficient in nitrogen and phosphorus. Corn in a rotation usually is fertilized, and the carryover or residual fertilizer usually is depended upon to meet the fertilizer requirements of the oats and forage crops. This often has been a successful program when the fertilizer has been applied at recommended rates. But it will frequently be necessary to top-dress established stands of legumes that are to remain for 2 years or longer. A reliable soil test is the best guide to fertilizer use.

The ability of oats to respond to nitrogen at the expense of the forage seedings has been shown many times. Lodging often follows nitrogen fertilization of oats, with consequent damage to the forage seeding unless the lodged growth is removed at once.

There's some evidence that small amounts (10-20 pounds per acre) of actual nitrogen will benefit forage seedings on sites where nitrogen levels are very low. Such sites aren't common, however, where recommended rates of fertilizer are used in the rotation.

Lodging is potentially one of the most serious problems with small grains. An anticipated high grain yield can easily be lost overnight in a wind-driven rain. Recent Iowa studies showed a loss of 25-35 percent in oat yields from lodging. Perhaps even more serious was a following loss in alfalfa stands—three seedlings per square foot compared with 16 on plots where there had been no lodging.

The results of one such study are summarized in table 1. At-

tributed to lodging is a loss of 10 bushels per acre in oats and a thinning of the alfalfa stand. Differences in the alfalfa stands weren't great; the number of alfalfa plants was low on all plots. Thicker stands would likely be needed for maximum forage yields on good soils with adequate moisture. Also shown in this study was a tendency for alfalfa plant numbers to be reduced where the oats had responded to higher levels of nitrogen.

After Grain Harvest . . .

There's considerable evidence that new seedlings benefit from having grain stubble and weeds mowed. Remove straw soon after combining. Mow and remove weeds and stubble soon after grain harvest if they're heavy and provide enough shade to harm the seedlings underneath.

In terms of the number of alfalfa plants the following spring, there's generally some benefit in clipping new seedlings in the fall (see table 1). Weeds are common in most fields after the oat harvest. Controlling them helps the forage seedlings compete successfully for light and moisture in the dry part of the summer.

Though results varied from year to year, studies in Wisconsin on stands and yields of red clover in the late 40's and early 50's showed that clipping in late August was sometimes very beneficial and never harmful. Cutting at September 15 or later, on the other hand, was injurious in 3 of 4 years and never increased yields. In some years, removal of the

TABLE 1. Effect of artificial lodging and fertilizer on an oat-alfalfa seeding, Ames.^a

Treatments	Oat yield (bu./A.)	Alfalfa stand (plants/sq. ft.)		Hay yield (lbs./A.) ^b
		Fall clipped	Not clipped	
Not lodged				
0 lbs. nitrogen.....	61	5.1	4.0	3,940
36 lbs. nitrogen.....	69	4.8	3.6	3,710
72 lbs. nitrogen.....	70	4.6	3.9	3,890
108 lbs. nitrogen.....	75	4.6	4.0	3,270
AVERAGE.....	69	4.7	3.9	3,700
Lodged (June 18, 1958)				
0 lbs. nitrogen.....	54	3.3	2.6	3,570
36 lbs. nitrogen.....	59	2.9	2.5	3,410
72 lbs. nitrogen.....	61	1.9	1.9	3,400
108 lbs. nitrogen.....	62	1.9	1.8	3,340
AVERAGE.....	59	2.5	2.2	3,430

^aSeedings made in 1958; plant counts and hay yields for 1959.

^bTotal of two cuttings, 1959.

clippings immediately after cutting reduced the amount of weeds and straw in the hay.

The results of Iowa studies with alfalfa have been similar. The harmful effects of leaving straw and clipped residue on the fields can often be observed. Shading in some years results in the killing of the alfalfa plants. Field mice populations are cyclic. But, in years of high numbers, severe damage occurs in fields where the mice can find enough food and shelter for overwintering. Plant diseases also can be more serious in damp areas under plant residues. Typical results from stubble management studies are shown in table 2.

TABLE 2. Yields of alfalfa hay as affected by management of the oat stubble.^a

Management of stubble	Yield of hay ^b (lbs. per acre)
Mowed directly after combining	
Clippings removed	2,537
Clippings not removed.....	2,298
Not mowed after combining	
Stubble left standing	2,032

^aSoil Conservation Experimental Farm, Shenandoah. Seedings made in 1958 and harvested once, June 27, 1959. Straw removed on all plots directly after combining.

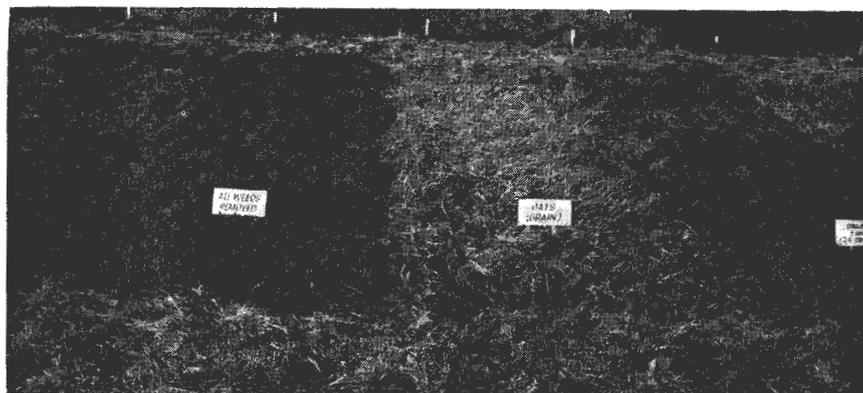
^bAt 12-percent moisture.

Volunteer Oats . . .

Volunteer oats sometimes add another hazard to the new legume-grass seeding. Usually some oats are shattered at harvest—particularly where there's lodging and where grain has been trampled near field edges. With favorable conditions, the shattered grain volunteers and may produce a dense cover in late summer. Small-grain volunteer growth often goes unnoticed in the field. But this rapid volunteer growth can "smother" forage seedlings unless removed by mowing or grazing.

Pasturing volunteer growth has some advantages over mowing. For one thing, you get some use of the surplus growth. But grazing should be controlled so that the new seeding isn't damaged by overgrazing or by packing the soil in wet weather.

New forage seedings should have 4-6 weeks of uninterrupted growth before the end of the growing season. This allows grazing in August and early September. After this, let the plants store



A spring seeding of birdsfoot trefoil as photographed in October. Plot at left was seeded alone, and the weeds were removed by hand. Plot next to it at right was seeded with oats harvested for grain.

food reserves in their roots for winter survival and for starting a vigorous spring growth.

Weed Killers . . .

Interest in using chemicals to control weeds in new seedings has come with the development of a wide range of selective chemical weed killers. The most useful of these kill weedy grasses but are also toxic to small grains. So the benefits to the forage seeding must be expected to offset the value of the small grain which can't be used when these chemicals are applied.

We've done considerable work at Iowa State in using herbicides in establishing birdsfoot trefoil. It develops slowly as a seedling and requires more attention than other common legumes. Trefoil seedlings are poor competitors with weeds and companion crops. But

they're tolerant of certain chemicals that control some of the more competitive weeds. For example, the kinds of results which have been obtained in using herbicides, as compared with a companion crop, in trefoil establishment are shown in table 3.

Notice that trefoil produced very little growth in the seeding year when competing with weeds or a companion crop. Hand-weeded plots produced six times as much growth in the seeding year and almost twice as much in the following year as did the plots that weren't hand-weeded. Yields of the treatments didn't differ greatly in the third year of this study.

Harvesting oats by a "pasture" management system has proven to be the best of the companion crop treatments for getting good stands and highest yields of trefoil. Companion crop yields are sacrificed

TABLE 3. Yields of birdsfoot trefoil in 1957 and 1958 as influenced by management of stands in the seeding year, 1957.^a

Management of new seeding	Yield of dry matter (lbs. per acre)		
	1957		1958
	Trefoil	Oats	Trefoil
No companion crop:			
Not weeded	390	.....	3,840
Hand weeded	2,340	.....	6,530
With companion crop:			
Cut for grain	10	4,950	3,100
Cut for hay	70	4,670	3,940
Cut at 12-inch "pasture" stage, 2 cuts.....	190	1,130	4,470
Cut at 6-inch "pasture" stage, 3 cuts.....	380	810	4,500
Herbicide treatments:			
Dalapon, 2 lbs./A.	370	.....	4,790
" , 3 lbs./A.	480	.....	5,140
" , 4 lbs./A.	610	.....	5,330
" , 4 lbs. + 1/2 lb. 4(2,4-DB)/A.	1,280	.....	5,460
" , 4 lbs. + 1 lb. 4(2,4-DB)/A.	1,250	.....	5,500
" , 4 lbs. + 2 lbs. 4(2,4-DB)/A.	1,240	.....	5,510

^aSeedings made April 13, 1957. Chemicals all applied May 22, 1957. All plots were harvested in July for yields and weed control in 1957 and for three hay harvests in 1958.

if you substitute grazing for hay or grain management. Usually, however, there are significant gains in forage stands in the seeding year and in forage production in the years to follow. It's often a case of getting satisfactory stands by grazing as compared with a poor stand or one that must be re-established by the other methods of management.

Dalapon, an effective grass killer, combines well with 4(2,4-DB), a broadleaf weed killer. Seedlings treated with this mixture produced satisfactory stands, but the plants weren't as large as in the plots which had been weeded by hand. Several other chemicals were included in the tests, but the two mentioned gave the best results.

Weed control is very important for a plant so sensitive to competition as is trefoil. The harmful effects of weed and companion crop competition can continue indefinitely where trefoil plant numbers have been greatly reduced.

It's usually desirable to grow trefoil and other legumes in combination with grass. Grasses can be seeded in late August or early September into fields where grass-killing chemicals have been used. The chemicals used in these studies became inactive in moist soil a few weeks after application. This combination of chemicals has been used successfully with alfalfa but has caused injury to red clover and ladino clover. Alfalfa establishment, however, is much more certain by conventional

means than is the establishment of birdsfoot trefoil.

The results of chemical control of weed competition in new seedings have been very favorable. At present prices, the cost of chemicals at effective rates shouldn't exceed \$5-\$6 per acre. Costs would probably decline if the chemicals were widely used. Despite the promise shown, however, their use *cannot* be recommended at the present time for seedings that will be grazed during the year of planting. For this purpose, the federal Food and Drug Administration requires further proof that the residues from these materials won't be harmful to the grazing animals or to humans consuming the animal products.

Ten Pointers . . .

In general, your success with forage crops will be much more certain with the following seeding and management practices:

- Plant high-quality seed of adapted varieties at recommended seeding rates and mixtures in a well-prepared, fertile seedbed.
- If harvested for grain, early to midseason, stiff-strawed small-grain varieties are best for companion crops. Tall, late varieties will yield more than early varieties but should be harvested for hay or silage at the late-milk or soft-dough stage when used as companion crops for forage seedings.

● Small grains are valuable forage crops — producing high-quality hay and silage—when cut early and properly stored.

● Remove lodged growth soon after it goes down to prevent damage to the forage seeding.

● Control nitrogen fertilizer levels carefully to reduce the hazards of lodging.

● Remove straw after combining.

● You can usually expect benefits from mowing and removing stubble and weeds after the grain harvest.

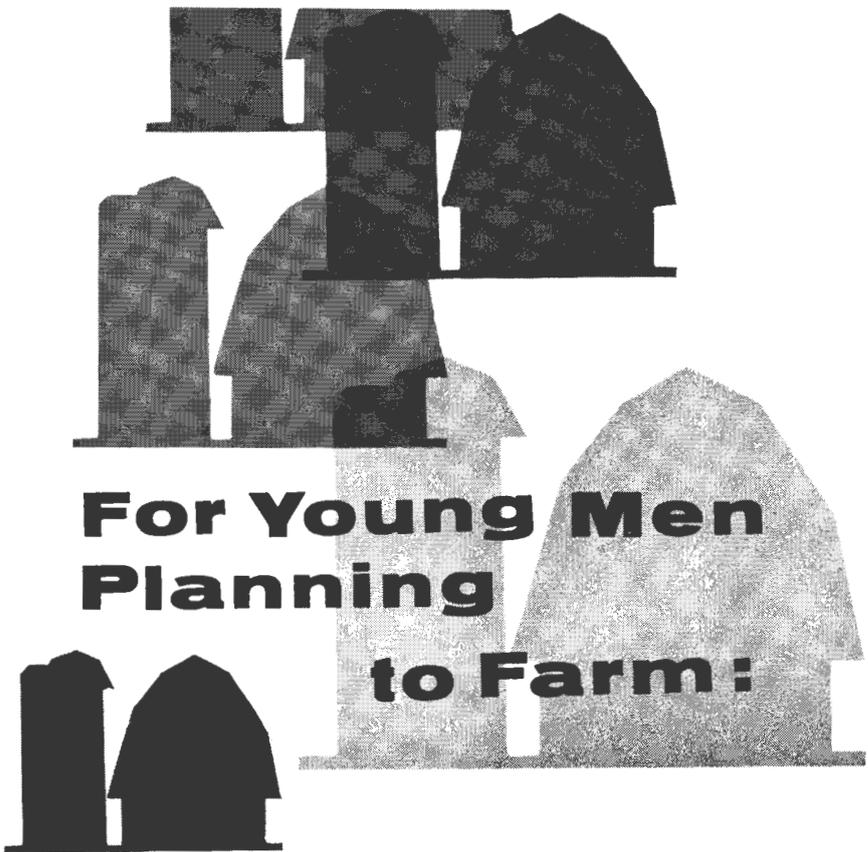
● If volunteer small grains appear, graze or mow them in late August or early September when weeds and volunteer grains pose the greatest threat to the forage stands.

● Allow the forage a "rest period" of about 6 weeks before the end of the growing season.

● Keep your eye on the chemical herbicide situation. Certain selective weed killers are very promising as aids in establishing forage seedings without companion crops. (At present, these chemicals cannot be generally recommended for forage seedings that may be grazed or harvested for hay during the year of establishment, and any widespread use of these chemicals is subject to approval by the federal Food and Drug Administration.)



LEFT: Birdsfoot trefoil seeded alone, with weeds controlled by a pre-emergence spray of Dalapon and 4(2,4-DB). RIGHT: Birdsfoot trefoil seeded alone, with no attempt to control weed growth.



For Young Men Planning to Farm:

If you plan to farm, the fact that the number of farms is decreasing tells only part of the story. In many ways, the larger units resulting offer increased challenge, responsibility and opportunity for those who will farm.

by Duane C. Acker

ARE YOU one of the some 2,800 Iowa farm boys graduating from high school this year who want to farm? Or are you a freshman, sophomore or junior interested in farming—or perhaps a parent interested in your son's choosing an enjoyable, satisfying and profitable occupation?

About 7,000 farm boys are reaching the age of 18 in Iowa each year. But surveys show that only about 40 percent intend to farm.

As farms are consolidated and expand in average size, the number of commercial farms in the state is decreasing. This implies a decrease in the number of op-

portunities in farming. But let's look a little closer—some of the changes taking place mean *increasing* opportunities for young men with the resources and skills to compete in modern farming.

The Facts . . .

The "average" Iowa farm operator farms for an estimated 33 years, and there are about 170,000 farms in the state. With no decrease in the number of farms in Iowa, this would mean that about 5,000 farms become available for new operators each year. But the number of farm units has been decreasing by about 1,500 each year. So there are only about 3,500 units "available" each year. This figure is an estimate. Various surveys and projections made here at Iowa State indicate that

between 3,200 and 3,800 new farm operators can find a place annually as replacements for farm operators who quit farming.

Who'll farm these newly "available" farms? Remember there are only about 2,800 farm boys graduating from high school each year who intend to farm. A few of these may not be able to farm for various reasons—change of mind, finances, health, etc. Some who don't plan to farm as high school seniors may change their minds, too. While there are a large number of farms available each year, this doesn't mean that there won't be competition for these farms.

Present farm operators may "go after" some of the land that becomes available to expand their present units, but we've taken most of this into account as the decreasing number of farms. Some farms may find their way into the conservation reserve. And some of the farm operators who may have been squeezed out in the farm-consolidation trend that's still going on will be looking for a chance to get back into farming on some of these available farms. But in spite of this stiff competition for land, we know there will be opportunities for substantial numbers of new operators each year.

The Opportunity . . .

If you plan to farm, the mere fact that there are fewer farms tells only part of the story. What about the farming units that exist that you may be eligible and qualified to handle? What kind of opportunity do they provide?

Farms now are of larger average size than they used to be. There's more gross production per farm, and the capital investment per farm has gone up. Each farm, on the average, has become more highly capitalized and more complex. Each farming operation has become a larger business.

These characteristics mean increased opportunity for young men who can gain control of

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enough capital to start on an adequate basis and who have the capacity and "know-how" to use their resources well. Certainly the pattern of agriculture that's emerging points to greater challenge and increased responsibility.

Each farm operator must be prepared to meet the challenge of a large complex business. He must be experienced in the problems that daily confront a farmer. He must be able to anticipate these problems, to recognize them when they occur and to provide a solution.

He must have the ability to allocate his labor, capital and decision-making abilities among his farming enterprises. That is, he must be able to decide quickly and wisely where his time, money and intelligence should be used. And he must know the principles of soils, crops, livestock nutrition and breeding, economics and other practical sciences to make wise decisions.

Should You Farm?

Farming is a business with many "fringe benefits." These benefits usually aren't in the form of group insurance rates, stock options, retirement programs or company medical programs that are common to some industries. They appear in the forms that you know—but which can't be precisely described—as "personal enjoyment, independence, farm living," etc.

You'll find many factors to consider in choosing an occupation. But, if you're planning to farm, I'll offer only the following four guides:

—Don't choose to farm if you aren't ambitious.

—Don't choose to farm if you aren't willing to learn and to take advantage of the experience of others.

—Don't choose to farm if you fear responsibility.

—Don't choose to farm if you can't learn to adjust constantly to change.

How To Prepare . . .

If you're one of the 2,800 Iowa farm boys graduating from high school who want to farm, how can you make yourself equal to the opportunity you may find? The first step is to gain experience. By being brought up on a farm, you've gained some of it already. Continue. Take advantage of every opportunity to master the many aspects of farming.

Take advantage and gain from the knowledge of others—especially from your father and neighbors. They've learned much over many years, and they can pass on some of this knowledge to you quicker than you can learn it through experience on your own. Experience is a forceful teacher, so don't discount what you can learn from others who've gained knowledge through experience.

Take advantage of your opportunities in vocational agriculture courses, in 4-H work and in other educational possibilities. Keep your eyes, ears and mind open. Be observing. Recognize that everything you learn today may help you tomorrow. When you come upon some knowledge that's new and different, make every effort to *apply* this knowledge wherever you can.

If possible, take advantage of the opportunities to study at your agricultural college here at Iowa State. You can learn the most recent principles and practices in soils, crops and livestock production, and you can acquire a background in the basic subjects that will enable you to better interpret and adapt to the changing economic, social and technological situation in agriculture.

Farm communities need young men to provide leadership in improved production practices, marketing methods and business management. They also need leaders in guiding school activities, farm organizations, churches and government processes. An important part of college work is in the area of social sciences and communica-

tions arts to better prepare you for these leadership responsibilities.

Help From Here . . .

Your College of Agriculture at Iowa State offers study opportunities in many fields. With the challenge that exists for young men who intend to begin farming in the last half of the twentieth century, the college offers several types of opportunities designed especially for young men who plan to farm. They're designed to round out and supplement your previous experience and training for farming. Specifically, these are the college programs in "Farm Operation."

There's a 3-month winter quarter special series of courses designed particularly for young men who can spend only the winter season—December, January and February—away from the farm. Many young men return in successive winters for additional courses. Some continue to complete the 2-year program or the full 4-year program leading to the Bachelor of Science degree. A student may enter any quarter and stay as many quarters as he feels are of benefit to him.

Most young men begin the 2- or 4-year program in September, though they may begin also in December, March or June. Because each farming operation is unique, an individual program of courses can be worked out by each young man, with his faculty adviser, to help him become better able to handle the particular farming opportunity that exists for him.

If you're interested in coming to Iowa State, we'll be glad to provide additional information. Contact your local county extension director, too. You'll find him helpful and interested in your plans. Whether you plan to come to Iowa State or not, he'll also be able to help you take advantage of the continuing off-campus services available from the College of Agriculture's Extension Service and Experiment Station.

Iowa Farm a closer look at Corporations

A year ago, we outlined the possibilities and the advantages and disadvantages of incorporating family farms in Iowa. This article reports some additional findings of a study of existing farm corporations in the state.

by Neil E. Harl, John C. O'Byrne and John F. Timmons

INCREASING numbers of Iowa farms have turned to the corporate form of business. State records show a substantial recent increase in farm incorporations.

We reported on the general principles, possibilities and the advantages and disadvantages of incorporating family farms in the July 1959 issue of *IOWA FARM SCIENCE*. (See "Incorporate the Family Farm?" in that issue or reprint FS-820.) We pointed out that the main question in deciding whether or not to incorporate is whether or not the corporate form of business offers a better tool than the present form for a particular farm business.

Because of the increased interest in farm incorporation, we began a long-term study of farm incorporations in 1958. The study is a cooperative one between the Agricultural Law Center of the State University of Iowa, the USDA and the Agricultural and Home Economics Experiment Sta-

tion here at Iowa State. A part of this study involves a detailed look at some of the existing farm corporations in Iowa. This article reports some of the preliminary findings of this part of the study.

We believe that certain of the findings will be of general interest. These include: the sizes and types of farm operations that have been incorporated; how they're owned and managed; the costs of incorporation; difficulties encountered; and some of the reasons for incorporating. We asked questions about these and other aspects of the shareholders of 20 Iowa farm corporations selected at random throughout the state.

All "Closely Held" . . .

All of the corporations in our study were found to be "closely held." Stock in each case was owned by a small group and not available for public purchase. Provisions in the articles of incorporation, by-laws or separate shareholders' agreements of many of the corporations restricted the transfer of stock among "outsiders." Shareholders in 19 of the 20 corporations were related by blood or marriage. Shareholders

in the other corporation were business associates in a separate non-farm business.

Operating Arrangements

Seven of the 20 were "operating" farm corporations. The corporations owned all assets used in the business—except, in some cases, the land. In one of these cases, all land was rented to the corporation by the majority shareholder. In the others, part of the land used in the business was owned by the corporation, and part was rented to the corporation.

Nine of the corporations were "landlords"—renting land to tenants, usually on a crop or livestock share lease. Most of the shareholders were off-farm residents who followed off-farm vocations. Some of the shareholders had obtained their interests by purchase. But most had inherited the land from parents who had formerly operated the farm. The shareholders had income from their off-farm jobs and weren't particularly interested in obtaining regular income from the farm business. So most of the landlord corporations had accu-

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mulated earnings over the years. Generally, only a small part of the corporation earnings had been paid out to the shareholders in the form of salaries or dividends.

The remaining four corporations were combinations of various operating arrangements. One was a landlord and also a partner in a farm business. The other three operated part of the land and rented the rest to tenants.

Size of Business . . .

Land holdings of the 20 farm corporations ranged from 160 to almost 3,000 acres. Six involved 1,000 acres or more, and six had 500 acres or less. These acreages represent the total in the farm business, whether owned by the corporation or rented to the corporation by others.

Average size of the operating corporations was somewhat larger than the landlord corporations. The operating corporations managed an average of 846 acres; the incorporated landlord operations averaged 523 acres. The larger size of the farm operating corporations probably is due to many factors. Four of the seven operating corporations were managed by second-generation members of the same families, and the businesses have gradually increased in size. Landlord corporations, with a large proportion of off-farm shareholders, tended to leave most of the earnings in the corporations but generally hadn't used the earnings to increase land holdings.

How Owned?

The number of shareholders per corporation ranged from two to 13. The average was roughly four per corporation for both the operating and landlord corporations.

One farm corporation was owned entirely by a family partnership with many partners, including a trust for minor children. In another, part of the

stock was held by trusts set up for grandchildren under the grandparents' wills. But in 18 of the corporations, all shareholders were individuals.

In four of the seven operating corporations, all shareholders were corporation employees and devoted all of their time to the business. In one, all shareholders lived off the farm and devoted most of their time to off-farm jobs; the farm business was carried on by hired labor. In another case, four of the five shareholders were engaged in off-farm occupations; the fifth, a brother, managed the farm business. In still another, one of two shareholders in the corporation was also farming for himself.

In six of the nine landlord corporations, all shareholders worked full time in off-farm jobs. In the other three, part of the shareholders worked off the farm, but one or more of the shareholders was closely connected with the farm business. In one of these cases, a retired farm operator who lived in town and owned stock in the corporation devoted considerable time to managing the landlord corporation. In another, the tenant's wife was a shareholder in the corporation. In the third case, the operator who rented land from the corporation was a shareholder.

Businessmen made up the largest group of off-farm shareholders. They and their wives comprised more than 27 percent of all off-farm shareholders. Ranking next were children under 21 (17 percent of all off-farm shareholders) whose parents were employed off the farm. Farm people who farmed independently for themselves made up almost 11 percent of the "off-farm" shareholders.

Retired farm operators and wives of retired farm operators made up slightly less than 10 percent of the off-farm shareholders. Physicians and wives of physicians also accounted for about 10 percent. Industrial workers, lawyers, bankers, engineers, chemists, students over 21, teachers, etc.

made up the remaining 25 percent of off-farm shareholders.

Off-farm shareholders (those devoting the main part of their time to some other job than working for the corporation) owned an average of 33 percent of the stock of the operating corporations. The comparable figure for landlord corporations was about 82 percent.

How Managed?

The characteristic corporate split—among shareholders, the board of directors and officers—in management rights and responsibilities had little practical significance in these Iowa corporations. The stock was closely held, and few people were involved in corporate management. The rights and responsibilities of the three groups merged, and each of the farm businesses was managed in much the same way as before incorporation.

In 15 of the 20 farm corporations, all shareholders were also members of the board of directors. In 11, all shareholders were also officers of the corporation. Here, the three management groups were identical in membership.

Very little attention was given to which management group should make certain decisions. Decision-making usually was informal, though major decisions such as land transactions, salaries, etc. were recorded in the minutes of the meetings.

Policy-making and day-to-day management rested largely with the owners. All of the directors were shareholders in 17 of the 20 corporations. In two, the attorney for the corporation served as a director but wasn't a shareholder. In the other, shareholders' wives, who owned no stock in their own names, were on the board of directors. All officers were also directors in all 20 corporations. In 19 of the 20, the officers were all shareholders.

Nearly all management decisions were made by only a few people in most of the farm corpo-

rations. In all but two cases, the decision-makers were officers, and one of them usually was the president. In one instance, however, the decision-maker was a general manager who owned no stock, but he was a member of the family that owned all of the stock. In another case, farm management decisions were made by the husband of one of the shareholders; he was also a tenant on one of the farms owned by the corporation.

The decision-makers, on the average, were older than the other shareholders. The average age of all "managers" was 52, while non-managing shareholders averaged 45 years of age (all shareholders under 21 omitted).

Why Incorporate?

Shareholders listed a number of reasons for their decisions to incorporate. Most of the reasons were based on or related to the relative advantages and disadvantages discussed in our first article (see July 1959 issue or reprint FS-820).

Ease of transferring property was the most frequently mentioned reason, though not always the most important one in each case. Easier continuation of the business after death of the original owners was the second most frequently listed reason. Income tax advantages ranked third, with limited liability, access to capital and retirement planning, following in that order. The relative importance of each of these factors varied according to each situation.

One corporation was organized partly to consolidate three separate units of the family farm business. Another incorporator wanted to divide legal ownership for death tax savings but retain the balance of control. One corporation mentioned the businesslike atmosphere created as the main reason for incorporating. In another case, a shareholder mentioned the ease of sharing income and expenses proportionately as

a reason for incorporating. A mutually agreeable sharing of expense and income is a major economic problem with many multiple-ownership operations.

Double taxation of corporate earnings often is mentioned as a drawback for small business corporations. Earnings paid out as dividends are taxed to the corporation when earned and again to the shareholder when received. But this wasn't a major problem for these 20 Iowa farm corporations. Only one declares dividends to shareholders. Shareholder-employee salaries, interest on money loaned to the corporation by shareholders and rental on land rented to the corporation by shareholders are expenses of doing business and are tax deductible to the corporation.

Shareholders in five of the corporations rented land to the corporation. Shareholders in eight of the corporations loaned money to the corporation. In 13, part or all of the owners received a salary.

Costs of Incorporating . . .

Total costs of incorporation were available for only 13 of the 20 corporations. For 12 the average cost of incorporation was \$471 per corporation. Of this, the average attorney fee was \$257. (The one corporation not included in the average had a much higher cost of incorporation because of its complex situation.)

Besides attorney fees, the main expenses were fees to appraisers for the Iowa Executive Council, fees paid to the Secretary of State, the cost of recording the articles of incorporation in the county recorder's office, the cost of publishing the notice of incorporation in a county newspaper, the federal stock stamp tax, minute books, stock certificates and a seal (not required by law).

These farms were incorporated before the new Iowa Business Corporation Act became effective July 4, 1959. Costs of incorpora-

tion now should be lower. Publication of the notice of incorporation has been reduced from four times to only one, and the Iowa Executive Council need no longer appraise assets transferred to the corporation. The organization fees payable to the Secretary of State have been lowered, but the annual fees payable have been increased under the 1959 law.

Satisfaction . . .

The shareholders interviewed of 19 of the 20 incorporated farms were pleased with the decision to incorporate. The dissatisfactions of the shareholders of the other corporation didn't stem from the corporation itself. The dissatisfaction stemmed from the inability of the shareholders—all of whom lived off the farm—to manage the farm business effectively. This also was the only farm corporation of the 20 in which the shareholders weren't related.

None of the corporations had experienced legal difficulty except from income tax audits and one instance in which corporate property had been stolen.

Many of the farms that have operated successfully as a corporation are typical family farm operations.

In General . . .

The findings of this study indicate that the corporate form of business has been used as a tool to achieve a number of different purposes with generally satisfactory results. This, in turn, indicates wider potential application of the corporate form to Iowa farm businesses—depending on individual need and situation.

The decision as to whether or not to incorporate calls for a balancing of advantages to be gained against disadvantages involved. And, as emphasized in our first article, the main question is whether or not the corporate form of business is a better tool than the present form for a particular farm business.



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Farm Outlook...

Looking ahead, present signs point to moderate hog profits in the fall of 1961 -- but still on the profit side of the ledger. The 16-percent reduction in the 1960 spring pig crop indicated by the government's June 1 pig report is the sharpest cutback from the peak of a hog cycle since 1944. This sharp drop isn't likely to be followed by a comparable drop in the spring of 1961. Hog numbers already have been pulled lower than for any other spring pig crop in 15 years, save one.

Thus, the 1961 pig crop may be as large or larger than the 1959 crop, but it's unlikely to be large enough to make hog prices unfavorable a year from this fall.

Hog production used to be affected by hog prices, corn prices and corn supplies. Our current large supply of corn practically has removed the corn supply as a factor in national hog production decision making, though still a factor in local areas. But with bulging supplies of CCC corn ready to come out if the price of corn moves up much past the loan level, the price of corn isn't the variable factor in changing hog production that it used to be. In effect, we now have a plentiful supply of corn at a relatively stable price of around \$1 a bushel.

This leaves hog prices as the main variable to affect farm decisions in hog production. And as producers become more market conscious, we can expect hog production cycles, in turn, to perhaps become shorter and more erratic.

Prospects for the 1960 fall pig crop continue good. The June 1 pig survey indicated a 4-percent smaller fall crop. This is the same pattern as in 1955 when the decline in fall farrowings was less than in spring farrowings.

As a result of the sharp cutback in the 1960 spring crop and the smaller cut in the expected fall crop, we'll have the largest share on record of a year's total hog production produced in the fall of the year. This shift tends to spread out marketings and give less of a seasonal bunching in marketings. But it also means relatively more hogs on the market in the winter than was the case a decade or more ago. Thus, it serves as a brake on how high hogs will go in the late winter and spring.

CATTLE . . .

Cattle slaughter has been running 10 to 12 percent above a year ago. Even if it continues at this rate, cattle numbers probably will increase again this year. If so, it will take an unusually strong demand to keep prices from trending downward the latter part of this year.

The main increase in the breeding herd in total cattle numbers during the past 2 years has come through a slow-up in culling cows. Heifer slaughter has been relatively heavy. Delayed culling of breeding cows can only go on so long. What happens to cattle numbers over the next 2 years will be decided in the next year or two by the number of heifers held back for replacement. So the level of heifer slaughter this fall and in 1961 will provide a strong cue as to whether we'll get through this cattle cycle without undue price troubles.