

CHAPTER 5 Getting Started

No one knows what he can do till he tries.
Publius Syrus



ONCE THE TYPE AND SIZE OF FARM is in mind, the family must decide whether to rent or buy, plan what will be needed in the way of power, machinery, and livestock, and obtain enough money to launch the farming enterprise.

The family's decision whether to rent or own a farm is largely a matter of how much money is at hand, current price levels, and the location selected for starting farming. In many Midwest areas, farms can be rented that are quite satisfactory. In other places, however, good rental farms are hard to find. If the competition for farms is keen, it may pay the family to look around, particularly if the rent rate or the price of land is too high for the size wanted. Also, it may be easier and just as satisfactory to find a farm of a less popular size. But rather than take a farm that is too large or too small for the capital and skill of the manager, it is better to pay a little higher rate for one that fits the family.

When he draws up the farm's power and machinery needs, the wise manager will consider all possibilities. He will be careful not to buy too much; he will look at good used equipment; he will decide whether he can save money by having some custom work done; he will consider sharing ownership with a neighbor.

On farms where livestock will be used right at the beginning, the family will need the kind and number of livestock suited to its situation—milk cows, brood sows, feeder steers, chickens, and so on. Livestock are “productive machines” just as plows or combines are, and on livestock farms they must be considered part of the productive equipment. Because the subject of livestock farming is so broad, no attempt is made to analyze it in this chapter. Instead, all of Chapter 7 is devoted to planning livestock needs.

Once the family has progressed this far with its plans, money will be needed to get the farming business under way. Besides the machinery and livestock, there will be feed, seed, fertilizer, and other things to buy. The farmer will need money for day-to-day operating expenses until the farm produces enough income to take care of them. And family living costs should not be overlooked either.

These are decisions the family must make to get started in farming—whether to rent or buy, machinery and livestock needs, and operating capital. None of the decisions should be made hastily. They are too important to the future success and well-being of the family.

Renting or Owning—Which?

Even if they have enough money to buy a farm, there are several reasons why it is wise for most young people to start out by renting. First, the young couple needs to learn from experience what size farm fits them best. Buying may commit them to the wrong size, which isn't always easy to change. Furthermore, not very many beginners have enough money for all their needs. If that's the case, it usually is easier to make money on a rented farm. The third reason for renting is the matter of location. Few people buy more than one farm in a lifetime, so the decision of where to live is a very important one. And it's a decision that's likely to be less hurried if the couple starts out by renting.

Whatever the final decision—to rent or buy—getting started is the main problem. A study of the several plans that enable beginners to obtain a farm will help the family decide which fits its situation best.

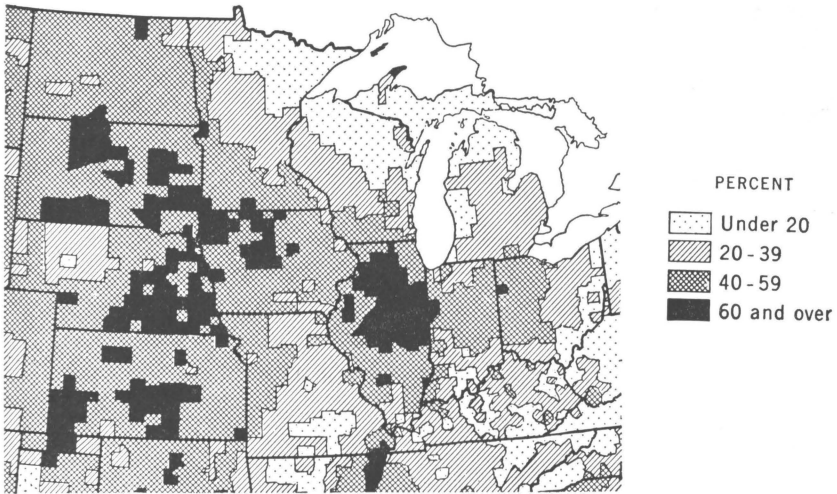


FIG. 25—Farm land rented 1945. The amount of rented land in the Midwest varies from less than 20 per cent in some counties to over 60 per cent in others. Young men find it easier to get started in farming where rented farms are available. *Bureau of Agricultural Economics and Census Bureau.*

Renting on a Labor-Share Plan

Although not very common in the Midwest, this plan is finding an increasing place as a starting point for qualified young farmers with little capital.

It fits the combination of a young man who wants to farm but has little capital, and a farm owner, usually an older man, who wants to be relieved of most of the labor but continue in the business of farming. The plan often is used by father and son or other near relatives, but this is not essential.

Typically the older man has a farm in operation and furnishes the farm, machinery, equipment, livestock, and part of the management. The young man gets a share in the business income, often one-third or one-fourth, which is agreed on in advance. This includes a minimum annual wage. If his share does not exceed the wages agreed on, the wages are all he gets; if his part of the income falls short of this, he still gets his wages; if his share is more than his wages, he gets the additional amount. The plan sometimes includes a provision so he can gradually own part of the operating capital. Some plans do not include a minimum wage, but this provision is desirable because the

young man without capital is not yet in a position to take on many business risks.

Although he probably will shift to a different plan before many years, the young man will find that the labor-share arrangement has one real advantage: he gains experience, especially in management, and perhaps can accumulate some capital. The plan is a test of his ability as a manager and willingness and skill as a worker. If he shows promise, he usually can find someone to finance him as a regular farm tenant. In a father-son arrangement, it may be a step in the transition to the place where the son is a full-fledged partner in the business.

To the land owner, the plan offers a way of maintaining his farm operations rather than having to dispose of part or all of his livestock and equipment. He does not have to perform the labor or assume all the management.

Renting on a Grain-Share Plan

In the areas where it fits, the grain-share plan usually requires the second smallest capital investment. It is best adapted to the more level areas of the Corn Belt or Plains States where a share of the crop is paid as the rental and most of the land can be cropped. It is not so readily used in special cash crop areas where a great deal of seasonal labor must be hired.

With this plan the farm operator needs a good tractor and an adequate set of crop machines. The landlord usually will insist on this so he can be assured that the crop will be put in on time and cared for properly. Money or credit is necessary to pay operating expenses and living costs until a crop is harvested. Livestock are not absolutely essential and in many cases the operator gets along without horses. However some livestock, especially a few milk cows, chickens, and hogs, add considerably to the income and make for better use of labor.

This type of operation returns a decent profit to the tenant only on high yielding farms of considerable size. On Corn Belt farms, at least 80 acres of crops are needed for a one-man farm, and 100 or more are better. In the Plains Area, the acreage should be larger. Cash rent often is paid for land used for hay, pasture, and other uses.

In the Corn Belt, legumes should be used in the rotation to maintain yields, while summer fallow as well as legumes

may be used in the Plains Area. In many cases, as experience and capital are accumulated, the farmer works toward more of a livestock system of farming.

Renting on a Livestock Share Plan

This stock-share or partnership plan requires the next largest capital investment by the operator. It is a good system and is found mostly in areas where the land cannot safely carry a large acreage of the more intensive crops such as corn, wheat, or soybeans, and where a livestock system of farming fits the land. There are a number of variations in this system including the so-called fifty-fifty livestock share lease, a one-third, two-thirds share arrangement, and other combinations.

The common goal of both landlord and tenant is to arrange the lease so the tenant will make the best possible use of his own time and ability, the capital available, and the capacity of the farm to produce. This is a much more important question than details of how to divide income and expenses. If the lease does not encourage the tenant to do his best, it is not a good lease regardless of the so-called "fairness" of the division between the two.

Some essentials for success with the stock-share arrangement are:

1. The business must be large enough so the operator's share of the net income will support a family well.
2. The operator and landlord must generally see "eye to eye."
3. A reasonably good set of buildings and an adequate fence system and water supply are important since much of the income is from livestock.
4. A good set of financial records must be kept.
5. A detailed lease should be drawn up. However, if many decisions must be arbitrated by what is written in the lease, the plan is likely to fail.

In other words, all the qualities that make for a successful partnership apply here: similarity in interests; ability to work together; both parties being able to keep attention centered on the main problems and to adjust minor differences quickly; respect for the partner's abilities and limitations. One example

TABLE 16
DIVISIONS ON ONE FARM WITH LIVESTOCK SHARE LEASE WHERE INCOME IS
SHARED 50-50

<i>Capital Items</i>	Furnished by	
	Landlord	Operator
Land and buildings.....	All	None
Livestock and feed.....	$\frac{1}{2}$	$\frac{1}{2}$
Machinery and equipment..... (May be exception on such livestock equipment as milking machines, farrowing houses, etc.)	None	All
<i>Expenses*</i>	How Expenses Are Divided	
Regular operating expenses, feed, seed, fertilizer, fuel and oil, etc.....	$\frac{1}{2}$	$\frac{1}{2}$
Labor.....	None	All
Personal property taxes and insurance.....	$\frac{1}{2}$	$\frac{1}{2}$
Land taxes and building insurance.....	All	None
Building and fence upkeep..... (Operator to furnish unskilled labor in making ordi- nary building and fence repairs.)	All	None
<i>Income</i>	How Income Is Divided	
Sale of hogs, dairy products, crops, etc.....	$\frac{1}{2}$	$\frac{1}{2}$
Poultry and eggs (Often $\frac{1}{2}$ and $\frac{1}{2}$, but depends on size of flock. May have different arrangement due to special labor re- quirement for poultry. Sale of dairy products also may be different from hogs, cattle, and crops because more labor is needed.)		
Income from labor and custom work off the farm..... (But work on home farm must not be neglected by the operator for outside income.)	None	All

* Adjustments to give greater incentive to the tenant more often are made on the expense side. The landlord may furnish the lime and grass seed, for example, in return for the tenant's extra work in using erosion control practices, filling ditches, cleaning up weeds, and the like. But income and capital shares may vary, too.

of how both landlord and tenant share income and expenses in the stock-share plan will be found in Table 16. This shows the list of items that the landlord and tenant studied together to set up a good lease on a particular farm. Details must be varied to fit other cases.

The Cash Lease

This kind of lease is found more often where weather and similar hazards are comparatively low. The tenant must have

more capital for this plan than he needs for others. For example, he not only furnishes all of the livestock, feed, and equipment, but typically contracts in advance to pay a stipulated cash rent for the farm regardless of prices, weather, or other effects on the year's business. Many farmers like a cash lease because it gives them practically the same freedom of operation as farm ownership. But it involves more risk than the previous types of leases.

A variation of the cash lease has been developed, however, that tends to reduce the tenant's risk. It is called the flexible or sliding-scale cash lease, and at the time the lease is written a base rental rate is fixed. Then at the end of the year the actual cash rent rate is adjusted above or below the base rate by examining the average level of farm prices in the state during the year. If prices have been higher than were expected, the cash rent rate will be higher than the base rental rate. If prices were lower, the cash rent rate would be lower.

Table 17 shows the capital needed by a beginner on a Corn Belt farm under four rental arrangements and as an owner having a 25 per cent down payment. To make a uniform comparison, the same farm plan was used in all cases.

TABLE 17
CAPITAL NEEDED BY A FARM OPERATOR UNDER VARIOUS TENURE PLANS
(Same Farm and Home Plan)

	Total Farm Capital *	Farm Rented Using:				Owner- 25% Down Payment
		Labor Share Lease	Stock Share Lease	Crop Share Lease	Cash Lease	
Land, 160 acres \$150 per acre.....	\$24,000					\$ 6,000
Livestock.....	1,650		\$ 825	\$1,650	\$1,650	1,650
Feed.....	500		250	500	500	500
Machinery.....	2,160		2,160	2,160	2,160	2,160
Cash for operating expenses.....	600		350	400	600	600
Cash for household equipment and operation.....	1,000	\$1,000	1,000	1,000	1,000	1,000
	\$29,910	\$1,000	\$4,585	\$5,710	\$5,910	\$11,910

* 1942 prices: corn, 75c bu., milk cows, \$95 head, two-plow tractor, \$1,000.

Buying a Farm

This has been left until last because it should, in the early years of farming, be dismissed from the minds of young farm families with limited capital. This is not because it is undesirable to own a farm. Farm ownership is a worthy goal for any farm family. But it is a question of what is logical and reasonably safe from the business standpoint as well as what is desirable for the family. One of the high ranking goals of almost every farm family is to be successful financially. Buying a farm before enough money is accumulated is not the way to success, but all too frequently leads to failure.

There are two main reasons why this is so. First, capital put into land normally earns a much lower rate of return than money used for farm operations. Over a period of years, farm land normally earns only a little more than the usual mortgage interest rate. And it may earn less. This is a fundamental reason why, under normal conditions, it takes even a good manager the better part of a lifetime to pay for a farm. If the farm is bought at too high a price or with too small a down payment, future low income years may squeeze out the farmer who lacks the money or credit to tide him over. In many such cases, all the previous savings are lost and the family finds itself forced to start over again.

The second reason is that a farm that fits the family should be large enough to use the labor of the family, pay operating costs, carry costs of the mortgage, taxes, upkeep, and also provide a good family living. The minimum size of farm that will do this successfully varies greatly in different areas. But usually the purchase price for a farm of a desirable size requires more money for a safe down payment than the young farm family will have and still leave them enough to carry on profitable farm operations.

It's not quite so risky to buy in areas where additional land can be rented easily. In such areas, many farmers buy a small or medium-sized farm and rent additional land to make a good operating unit.

Don't Mortgage the Future Too Much

In periods when land prices change greatly within a single generation, the wise family is extremely careful in choosing the *right time* to buy a farm as well as the *right farm* to buy.

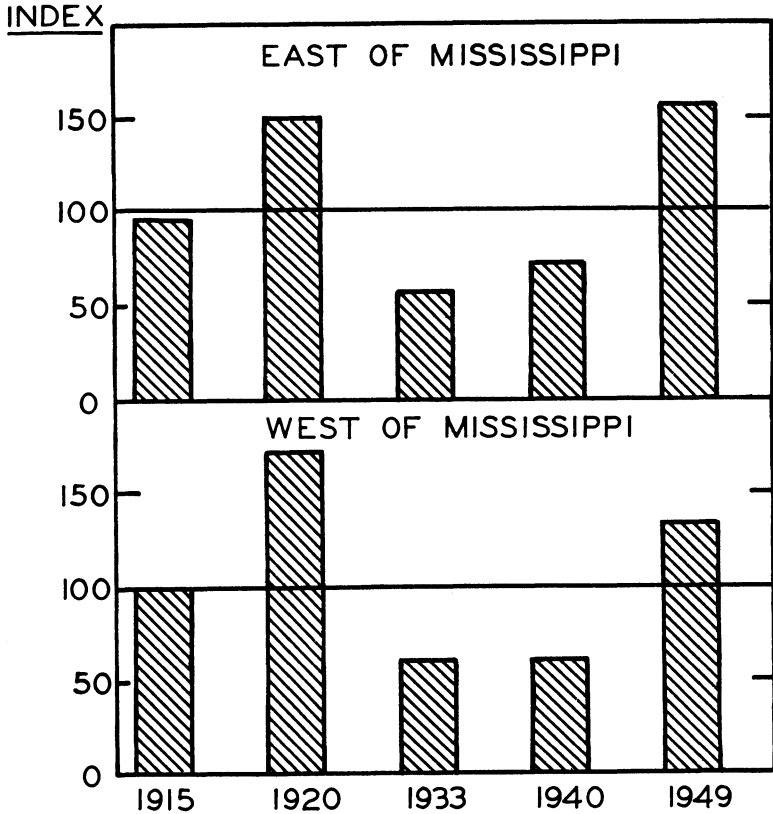


FIG. 26—The ups and downs in Midwest land values per acre. (1915–49 average = 100). The price of farm land goes up and down a great deal from time to time. If a large share of the cost of a farm is to be paid for out of future earnings, the farm family needs to be especially careful before buying.

The decision to buy a farm involves much more money than any other single one made by the average farm family. Furthermore, because most farm families make such a decision only once in their lifetime, much of the family's future welfare depends upon the conclusion they reach.

If borrowed money is used to buy a farm, the annual and total cost of using it needs careful study. Such a cost should be considered in relation to the present and prospective future earning power of the farm and the probable future level of farm product prices. The annual and total cost of a \$10,000 mortgage loan is shown in Table 18.

TABLE 18
YEARLY INTEREST AND TOTAL COSTS ON A \$10,000 MORTGAGE LOAN*
(Five Repayment Plans—4 Per Cent Interest)

Annual Payment	Standard Amortization Plans						Uniform Principal Payment Plan		Modified Amortization Plan †	
	20-Year Yearly Cost		34-Year Yearly Cost		40-Year Yearly Cost		20-Year Yearly Cost		40-Year Yearly Cost	
	Int.	Total	Int.	Total	Int.	Total	Int.	Total	Int.	Total
1st.....	\$ 400	\$ 736	\$ 400	\$ 543	\$ 400	\$ 505	\$ 400	\$ 900	\$ 400	\$ 504
5th.....	343	736	376	543	382	505	320	820	382	505
10th.....	258	736	339	543	355	505	220	720	355	505
15th.....	154	736	295	543	323	505	120	620	323	505
20th.....	28	736	241	543	283	505	20	520	283	505
30th.....	.....	.....	97	543	177	505	.....	.....	177	505
34th.....	.....	.....	21	543	121	505	.....	.....	160	160
40th.....	.....	.....	.....	.....	19	505	.....	.....	160	160
Total Cost.....	\$4,716	\$14,716	\$8,465	\$18,465	\$10,208	\$20,208	\$4,200	\$14,200	\$10,858	\$16,858
									(\$4,000 unpaid principal)	

* Nearest whole dollar.

† This plan is the standard 40-year amortization plan except that payments are discontinued on the principal after it is reduced to \$4,000. From then on, it is shifted to a long term loan with no principal payment required. It may run more or less than 40 years, presumably until ownership is shifted by sale or inheritance.

Those who plan to buy also should become familiar with the common method of land appraisal. The buyer can make a rough appraisal of a particular farm's value, but after the choice has been narrowed down to two or three possible farms it's a good idea to have an expert appraisal made also.

A rule-of-thumb method of appraising a farm is shown in Table 19. In making the appraisal, the farm is considered rented on a crop share-cash plan. Table 19 capitalizes the net rent a landlord would get in an average year and can be used as an appraisal method even if the farm is not actually rented.

In many cases the home farm of the parents is considered for purchase. Naturally there is merit in keeping a farm in the same family generation after generation. But care should be taken that the price is based primarily on the farm's earning power rather than merely on personal attachment.

Actually, a father-son partnership is a good way for a boy to get started. This must be said with some reservation, of course, because many problems will arise, some not easily settled. Is the farm large enough for two families? Do father and son enjoy working together? Are there satisfactory living quarters for both families? Is the father willing to let the son learn through trial and error or does he protect him too much from making mistakes?

These partnerships nearly always are an agreement among four people instead of two. At least they ought to be. The interests and contributions of the son's wife, frequently overlooked, are important to the success of the agreement. "Of course we'll be more than fair," the parents are likely to say. But self-respecting young people want to stand on their own feet and they want an agreement that gives them an opportunity to do so.

A family arrangement that works out pleasantly and profitably during current operations can lead easily to a satisfactory agreement when property is to be passed on. But this will not happen if the son never is allowed to "grow up" in his responsibility for handling the business.

Power, Machinery, and Equipment

A certain minimum of power, machinery, and equipment is necessary for successful farm operation. What that minimum

TABLE 19:
A RULE-OF-THUMB LAND VALUE APPRAISAL METHOD*

1	2	3	4	5	6	7
Usual Land Use Crop Acres	Normal Yield	Total Production	Landlord's Share	Amount To Landlord	Expected Price	Landlord's Income
Corn 50 A.	50 bu.	2,500 bu.	$\frac{1}{2}$	1,250 bu.	\$1.00	\$1,250.00
Oats 30 A.	40 bu.	1,200 bu.	$\frac{2}{5}$	480 bu.	.60	288.00
Soybeans 10 A.	20 bu.	200 bu.	$\frac{2}{5}$	80 bu.	2.00	160.00
Hay 30 A.	1-2/3 T.	50 T.	$\frac{1}{2}$	25 T.	15.00	375.00
Pasture 30 A.			Cash Rent		6.00	180.00
Buildings 10 A.						
Total 160 A.						Total \$2,253.00

Usual Expenses

Taxes.....	\$200.00
Seeds (corn and grass).....	100.00
Lime and fertilizer.....	60.00
Insurance and repairs.....	90.00
Depreciation on buildings.....	160.00
Depreciation on fences, tile.....	60.00

Total..... \$670.00

Summary

Total income.....	\$2,253
Less expenses.....	670

Net income..... \$1,583

He figured a 5% return as follows:

$\$1,583 \div 5 = \$316.6 \times 100 = \$31,660.$

$\$31,660 \div 160 \text{ A.} = \197.87 per acre.

* Many farms will have less cropland and more pasture under normal conditions. Some will have more cropland.

† The prices used are only examples. Each person must make his own estimate of probable future prices and farm expenses.



FIG. 27—Father-son farming works best where there is cooperation both in work and planning as well as enough land and capital to make their labor and skill effective. Here a father and his sons discuss the new building that will enlarge the farm business. Photo USDA Extension Service.

should be depends upon the labor supply, type of crops grown, soil conditions, the weather, and other factors.

If, for example, labor is scarce or expensive, more machinery will be needed than if labor is plentiful and wages are lower. Before he buys machinery, the manager analyzes both the present and probable future labor situation.

The probability of unfavorable weather also will guide the farmer in planning his machinery needs. He knows, too, that some crops must be planted within a short period of time to yield the most, and machinery will be needed for that. A farmer is unwise, however, to keep such a large power and machinery supply that it will see him through even the most unfavorable conditions. He can better afford to run some risk of bad seasons and perhaps hire custom work to help out in peak periods.

Wisdom is needed in deciding how much to invest in machinery, especially when money is scarce. A farmer can be "machinery poor" by having too much or too expensive machinery just as well as by not having enough. If capital is short, used machinery may be the answer. The work done per hour by good used and new machinery is about the same, so the lower cost may favor the used machine even though it requires more skill to keep it in running order.

How Much Farm Power?

Midwest farmers depend on tractor power for most of their farm work. For odd jobs and certain kinds of field work, though, many farmers use a team of horses, especially in the more rolling areas and on smaller farms.

Because more than a third of a farmer's investment in power, machinery, and equipment may be tied up in the tractor, the size and type of power unit to be used needs careful study before a purchase is made. The proper size should be considered in relation to the rest of the business and the size and kind of farm being operated.

The farmer who has soil that works easily and has plenty of time to get his land ready and the crop put in can get along with a small power unit. In other areas, where the soil works hard, the farmer will need a large power unit to do a good job. If the number of days when the ground is fit to work are limited, it will pay the farmer to buy a larger power unit than the acreage of cropland normally would require.

The man who operates a two-man farm, or larger, must decide whether he wants two tractors of the same size or a large one and a small one. Many managers of large farms like power units of two different sizes because more economical use can be made of them. And economy in power use is important in keeping costs down. It comes from picking the right size and type of power and keeping it in shape so operating costs will be low. This principle can be applied to any kind of power unit, whether it's a tractor, motor, or horses.

Once a tractor is bought, the cost of using it will be pretty well fixed until it is ready to trade in. If it is too large, operating costs and depreciation per unit of work done are sure to be

high. If it is too small, farm work takes more time and the tractor may not be large enough to operate some machines that are needed. It's possible to make mistakes both ways, but buying a tractor that is too big or has more power than is necessary is the most common mistake. Another is failure to adjust the tractor to keep fuel consumption down.

For many small power jobs like pumping water or grinding feed, an electric motor is the most satisfactory. A motor of the right size and type for the job has a long life when properly cared for. Large motors seldom pay since most farmers don't have enough use for them and already have a tractor on hand that can do the heavy belt work.

Tractor Costs

Tractor costs may be estimated by dividing them into two parts. First is the routine cost of having the tractor on the place—depreciation, housing, repairs, taxes, interest on the investment, and so on. These costs are much the same per year regardless of the number of hours the tractor is used. Second are the costs that depend directly on the hours of use, mostly the expense for fuel and oil. Table 20 gives approximate estimates for these items.

Cost of Using Machinery and Equipment

Like the costs of tractor power, the cost of using machinery and equipment varies from farm to farm and from area to area. The largest difference is in the amount of work done by the

TABLE 20
TRACTOR COSTS *

	1-Plow Tractor	2-Plow Tractor	3-4-Plow Tractor
Routine cost per year. (Repairs, depreciation, housing, etc.)	\$100	\$165	\$225
Cost per hour for fuel and oil†	30c	39c	45c
Typical use, hours per year	400-600	400-800	400-800

* Adapted from research under farm conditions in Minnesota, Iowa, and Illinois, by the respective experiment stations.

† Gasoline at 20c per gal., oil at 30c per qt.

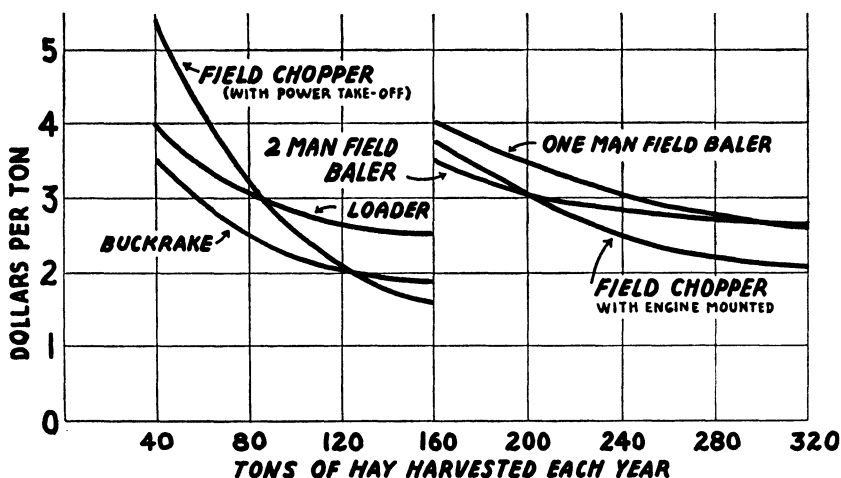


FIG. 28—Be careful to select machinery adapted to the size of the farming operation. Note how haying costs vary with the amount of hay put up and the kind of machine used.

machine in a year. For example, one farmer may use his corn picker for only 40 acres of corn a year while his neighbor may use the same size picker for 200 acres. The man with the larger acreage would find the picker a big saving in cost, while the man on the smaller farm would find the picker an expensive machine to own. Figure 28 shows the costs per ton of putting up hay with various kinds of equipment. The principle illustrated here—how costs per unit change depending on the kind of machine used and amount of work performed—applies to all kinds of farm machinery and equipment.

Many farm managers find that hiring certain work done by others is cheaper than owning the equipment. Others who are handy with machinery find that doing custom work for their neighbors is a profitable sideline. But it seldom pays a farmer to work away from home if his own crop or livestock program must be neglected. This is especially true where the farm business is large enough to justify the operator's full time.

Upkeep Reduces Costs

Farms are different and soils are different in their effect on field machines. And so are operators. The man who keeps

TABLE 21
COST OF USING FARM MACHINERY*

Machine—Kind and Size	Iowa Conditions		Nebraska Conditions	
	Cost per A.	Usual acres†	Cost per A.	Usual acres†
Tillage machinery				
Plow, 18" tractor.....	\$.27	60		
Plow, 2-bottom.....	.26	70		
Plow, 3-bottom.....	.27	100		
Plow, 2-way, 2-bottom.....			\$.69	110
Disc, 7', horse.....	.09	80		
Disc, 9' or more, tractor.....	.07	180		
Disc, tandem.....			.17	130
Disc, one-way.....			.11	350
Harrow, spike tooth.....	.04	120		
Harrow, spring tooth.....	.07	80		
Roller.....	.08	110		
Corn planter, 2-row.....	.22	50		
Corn planter, 4-row.....	.16	200		
Corn, lister, 2-row.....			.20	140
Drill, 6', horse.....	.47	35		
Drill, 9', tractor.....	.59	60	.15	120
Potato planter, 2-row.....			1.50	50
Cultivator, 2-row.....	.09	190		
Cultivator, duckfoot.....			.14	260
Cultivator, lister.....			.12	110
Potato sprayer.....			.94	200
Harvesting machinery				
Small combine, power take-off....	.85	160		
Medium combine, with motor‡....			1.06	300
Corn binder, horse.....			.50	60
Corn binder, 1-row, tractor.....			.63	190
Corn picker, 1-row.....	1.03	70		
Corn picker, 2-row.....	.86	160		
Field ensilage cutter.....			1.35	160
Mower, horse.....	.41	40		
Mower, tractor.....	.25	80		
Side delivery.....	.32	40		
Hay loader.....	.47	40		
Stacker, tractor mounted.....			.48	70
Buck rake, tractor.....			.28	120
Hay rack.....			6.00 yr.	
Potato digger, 1-row.....			2.50	40
Ensilage cutter, stationary.....	51.00 yr.			
Other machinery				
Manure spreader.....	27.00 yr.			
Wagon and box.....	15.00 yr.			
Grain elevator, portable.....	36.00 yr.			
Feed grinder				
Medium size hammer mill.....	36.00 yr.			
Large size hammer mill.....	57.00 yr.			
Medium size plate mill.....	9.00 yr.			
Large size plate mill.....	18.00 yr.			
Milking machine.....	20.00 yr.	15 cows		
Cream separator and motor.....			38.00 yr.	

* Costs are at 1948 price levels. They include repairs, depreciation, housing, taxes, insurance, and the like. They do not include the cost of the power to operate the machines or costs of labor in using them. Derived from base data of Iowa and Nebraska Experiment Stations.

† Acreage once over.

‡ Includes fuel for motor.

TABLE 22
MACHINERY CHECK SHEET

1. What will be the first cost and the cost per year?	
a. Original cost of machine.....	\$ _____
b. Cost of one year's use.	
Interest on investment.....	\$ _____
Annual depreciation.....	\$ _____
Repairs and Upkeep.....	\$ _____
Shed room, insurance, taxes.....	\$ _____
Total cost for year.....	\$ _____
2. What will it cost per unit (per acre, per head, etc.) per year?.....	\$ _____
3. Will the farm produce more due to its use?	
How much more? (Be conservative.).....	\$ _____
4. Will it save time? How many hours per year?.....	_____
5. Can the time saved be used to produce other income or will it (and should it) be used for leisure?.....	_____
6. Do I have the skill necessary for successful operation?.....	_____
7. Is the machine one I will need for many years?.....	_____
8. Is it a well established make, backed by a sound company and with dependable local service?.....	_____
9. Is it likely to go out of "style" or be replaced by a more efficient machine soon?.....	_____
10. Would it be cheaper to hire custom work than to own it?.....	_____
11. Could I use the money elsewhere and get a higher return?.....	_____

his machines in good repair—bolts tightened, bearings greased—and runs them carefully will have much lower costs than the man who is careless. On some farms, machinery falls apart or rusts out faster than it wears out. Other men may take good care of their machines but have such a big investment in a machine shed and repair shop that the overhead adds too much to machine costs. The man short of capital will find that paint, grease, and good care is a satisfactory low-cost substitute for expensive machine sheds. More complicated machines, however, such as combines, corn pickers, and tractors, ought to have some kind of shelter.

Approximate average costs of using various machines and equipment are given in Table 21.

Local farmers who are good managers can be relied upon for advice about what machines fit in their community and which ones the young man should buy. Through trial and error, they have learned the types and sizes that fit their conditions.

Table 22 is a check sheet that will help the beginning farmer make wise investments in machinery and equipment.

Plan Money Needs Wisely

To buy machinery, livestock, seed, and the other things needed to begin farming, the operator must have money. He should make a careful estimate of the capital needed, and a reasonable amount of whatever is required ought to be his own, say from a third to a half. If he has some money of his own and a reputation for being dependable, it won't be hard for him to borrow the rest.

The farmer should take the banker or other lender into full confidence in his plans. No doubt the lender will be rather conservative. But this may be a useful check on the enthusiasm of the beginner. It is easy to paint too optimistic a picture of the first year's income and forget about the hazards of weather and of prices. But optimism tempered with the judgment of older heads will be a great asset.

There are many uses to which money can be put by the beginning farm family, but five are of major importance. They are, in the order they should be considered:

1. Money for household goods and personal items.
2. Money to buy at least the minimum needs of power, machinery, and equipment.
3. A fund for getting operations under way. This should include money for farming and living costs until income from the farm is available.
4. Money to buy livestock and the feed they need until a crop is raised.
5. Money to buy a farm.

None of these requires a fixed amount of money; all can be adjusted. Suppose that a deal already has been made to rent a farm and \$5,000 in cash and credit are available. With this money the couple must buy most of the items needed in the home and on the farm. The problem is to divide the money among the various uses to get the maximum return from it.

The First Management Test

The first test of the young farm family's management ability comes when household goods are bought. Too much money spent on furnishings and finer things for the home may limit seriously

TABLE 23
POINTS TO CONSIDER IN USING BORROWED MONEY

Use of Borrowed Money	Time Needed for the Loan to Repay Itself	Kind of Risk Involved for Money Lender
1. To pay farm operating expenses	Until a crop is raised; where the crop is fed, until livestock or livestock products are ready to sell.	Crop yields may be low. Prices may go down. Living costs or other expenses may not leave enough to repay the loan.
2. To buy feed for livestock	Varies: a short time in the case of cows in milk; a few months for hogs, chickens or feeder cattle; 2 or more years for some breeding stock.	Livestock may die or not produce well. Prices may fall. Operator may do a poor job in care and management.
3. To buy feeder cattle	Usually less than a year	Considerable risk of future prices. Farmer may be a poor feeder or run short of feed.
4. To buy milk cows	Usually 15 months to 2 years since feed and other costs take a large share of the income.	Cows may die, be non-breeders or poor producers. Prices may fall.
5. To buy a tractor or machinery	Normally 5 to 10 years depending on kind of machine and amount of use.	Usually no direct income unless custom work is done. Is paid for by crops or livestock produced on the farm.
6. For family expenses or household use	Usually no direct income.	Repayment depends on the ability of the family to earn enough to pay this in addition to regular expenses.

the amount of capital available for the farm business, and therefore the future income of the family. Household investments do not bring in direct money income, but farm business investments do. It takes good management on the part of the family to decide how much money will furnish the home comfortably and still leave enough to set up a going farm business. The young couple will face this problem again and again during their farming experience because there are dozens of times when family living needs and farm operation needs are in competition for whatever money is available.

One point is vital: both husband and wife should join in the decision-making about the use of capital for the house and for the farm business. Parents or friends may furnish counsel and guidance. But the final decision always should be made by the family. Not only do such joint decisions make for more harmonious living, but they also develop the confidence and judgment of the couple in making decisions that are vital to their mutual welfare.

Using Borrowed Money

Most farmers must borrow money, at least part of the time, to add to their own capital, especially if they use the farm plan that pays best. The problem is to reach wise decisions about borrowing money for use in the farm business or for the family. In Table 23 are examples of using borrowed money which indicate the time required for the investment to repay itself and the lender's usual point of view.

The Farmer and the Lender

A good manager will take the following steps before going to his banker or other source of credit to borrow money:

1. Make a careful estimate of whether it will add to the income if it is a production loan. This calls for study of how its use affects the whole farm business if the loan is a good-sized one.
2. See how much reserve is available in case plans do not work out as expected.
3. Estimate when the loan can be repaid. Is it reasonable to expect it to be paid off in three to six months or will it take a year or two?

If these points are carefully considered before asking for the loan, the lender will be much more inclined to extend the needed credit. If, on the other hand, the farmer takes the attitude that "this is my own business and not the lenders," a smooth working relationship between the two is not likely to develop.

The lender needs to understand the credit needs of the farmers and know a good deal about the man who wants to

TABLE 24
POINTS ABOUT SHORT AND LONG TERM CREDIT

Source of Credit	Kind of Credit Offered	Usual Interest Rate	Security Required	Comments
(Operating Credit) Local Bank	Short term loans for most purposes.	(Percentage) 5 to 7%	Varies. Usually chattel mortgage for larger amounts.	Up-to-date bankers fit the terms of the loan to the credit needs of the borrower.
Production Credit Association	Livestock and production loans.	5%	Usually full chattel mortgage on non-real estate assets.	Offices are scattered. Farm inspection is required. Borrower must hold small amount of stock in proportion to loan.
Farmers' Home Administration	Production loans where borrower cannot get credit elsewhere.	5%	Usually full chattel mortgage.	Government money, so a good deal of "red tape." Can make loans up to 5 years.
Implement dealers, stores, mail order houses, etc.	For purchased goods.	Varies. May be direct or indirect.	Varies. May require chattel.	Interest rate often indirect and usually higher than regular credit agencies.
Personal Lending Agencies	Personal loans, usually \$300 limit.	Up to 40%—sometimes more.	Usually signature only. May take household chattel.	Interest rate is usually very high. Unsuitable for farmers.
<i>Mortgage Credit</i>				
Federal Land Bank (Local Farm Loan Association)	Primarily for purchase of a farm or to make farm improvements.	4%	First mortgage on farm with clear title.	Use amortized repayment plan. That is, interest and principal are paid in annual installments so that mortgage is repaid in about 33 years.
Insurance Companies	Usually for land purchase	4 to 5%	First mortgage on farm with clear title.	Wide range of plans, mostly longer term. Some are amortized.

TABLE 24 — (cont.)
POINTS ABOUT SHORT AND LONG TERM CREDIT

Source of Credit	Kind of Credit Offered	Usual Interest Rate	Security Required	Comments
Local Bank	Real estate loans where owner equity is large.	4 to 5%	Mortgage on real estate.	Real estate loans are for longer term than production loans. Many variations in individual bank policies.
Farmers' Home Administration	Farm Ownership loans.	3½%	Mortgage on farm purchased.	40-year loans to limited number qualified tenants.
Private Individuals	Various purposes.	Varies.	Varies.	These are often subject to call on short notice which is not desirable for a farmer.

borrow. If he does, he can use policies that fit the different kinds of loans requested. The lender should not merely ask how much security the prospective borrower can put up, but also should look into the earning ability of the farmer to see whether the loan will be wise and useful credit. Many farmers who are good "money makers" do not have a large inventory as loan security.

Common sources of farm credit and a description of each are given in Table 24.

Private banks are the largest source of operating capital for farmers. Production Credit Associations are active in many areas, while the Farmers Home Administration makes operating loans to many young farmers.

Private capital furnishes the largest share of mortgage capital needs except in the high risk areas. Since good credit terms are offered by nearly all agencies, the farmer has several good choices from which to get his capital.

How Much Money To Use

The complex problem of how much money is needed involves many decisions. Among them are:

1. Is this the right time to invest? Will you make more money during the next year or two if you make the investment or not? Are prices likely to go up, stay about where they are, or go down—and how much?
2. Will this investment make it easier or more difficult for you to manage your business? Will it save labor such as a piece of machinery might do and if so, what will you do with the labor saved? If it requires more labor, (such as adding more livestock) must you hire it? If so, can you keep the extra help fully employed at profitable work?
3. Which is the best choice among the investments you can make?
4. Would it be wiser to invest in better living conditions, more education, travel, or other things for the family?

Suppose a man plans to use \$1,000 additional cash or credit. Table 25 shows how he studies the choices listed and others that may be added or substituted.

The best decision, of course, is to choose the one use or the

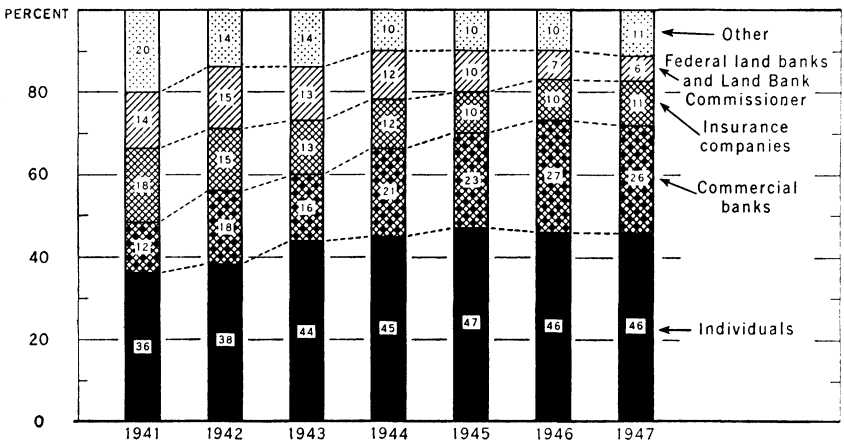


FIG. 29—Sources of credit to finance farm purchases, 1941–47 (data for approximately 130 selected counties). The careful borrower looks over several sources of long term credit before choosing the one that best fits his needs. *Bureau of Agricultural Economics*.

TABLE 25

EXAMPLE OF POINTS USED IN MAKING AN INVESTMENT DECISION BY ONE FARM FAMILY

Money Available	Possible Uses for Money	Comments
\$1,000 To spend or invest	Feeder Steers— \$1,000	Takes considerable feed and some extra labor. Risk is fairly high. Return in 3 to 12 months.
	New Tractor Outfit— \$1,000	May have more speed and be more comfortable than old one. (And look better.) Return on money may be large or small depending on how badly it is needed.
	Limestone— \$100 to \$1,000	\$100 will lime new field for alfalfa, \$1,000 will lime 80 acres. Money returned in 2 to 10 years.
	More milk cows \$200 to \$1,000	Requires extra labor, feed, pasture, and barn room. Risk is moderate. Money returned in 2 to 3 years.
	Fence— \$100 to \$600	\$100 will put hogs on clean ground; \$600 may make rest of farm hog tight. Returns will vary; may be high on first \$100, lower on larger amounts.
	Addition to Barn— \$500 to \$1,000	Can handle more feed and livestock. Will have to consider labor needed for extra numbers. Return likely to be slow.
	Brood Sows— \$100 to \$1,000	Can get returns in 8 to 10 months. Requires more labor and feed, a little more equipment. Risk is moderate.
	Purebred Bull— \$200 to \$1,000	Return takes 3 years or more. Risk is that production from heifers may not be improved; also the death risk.
	Water System and Bathroom— \$400 to \$800	Return is in better level of living. Conveniences and satisfaction for the whole family should be considered. May be more important than additional income.
	More Education for Children \$400 to \$1,000	Returns are in better opportunity for the child. Consideration must be given to benefits to be gained from more education vs. other choices.

combination of uses that gives the greatest returns for the additional investments. Those investments that are a part of the farm business must be judged on the basis of greatest profit and least risk. When the investment can be varied easily (liming or fencing are examples) the return on a smaller additional investment usually is much higher than on larger amounts. Investments that might be made in the family or in better living conditions should have equal consideration since money income is not the only goal of the family.

The wisdom with which decisions like these are made is a real test of the family's management ability. In making choices, the family should be sure that all possible facts are at hand. Then balance up all of the factors without bias. Wise decisions cannot be made by looking only for reasons that will support an early and preconceived choice.