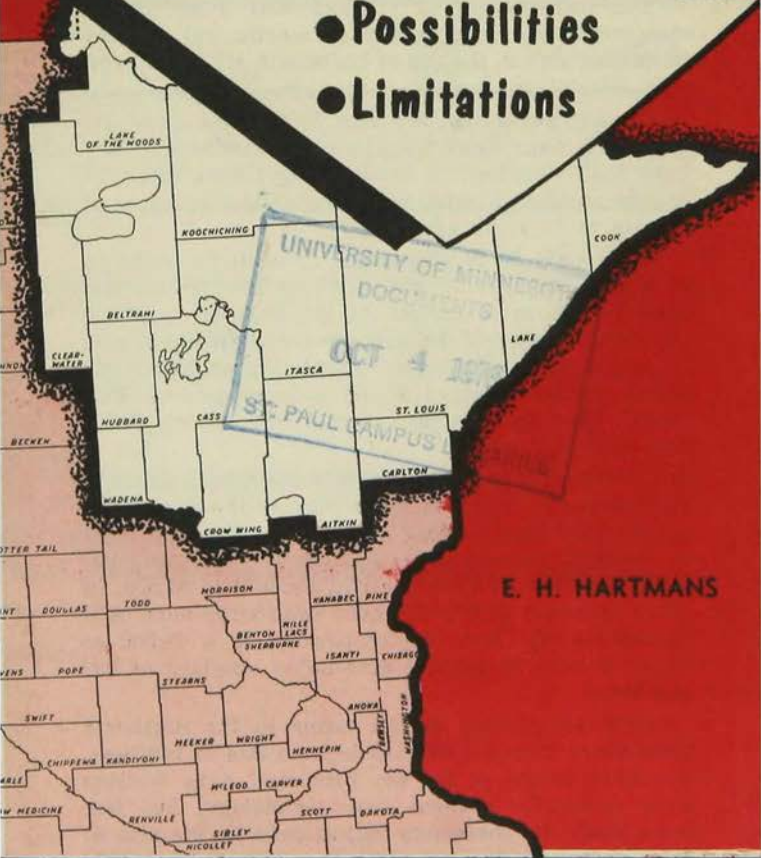


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AGRICULTURE IN

Northeastern MINNESOTA

- Possibilities
- Limitations



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WHAT ARE the possibilities and limitations of farming in northeastern Minnesota? This folder discusses the more important economic aspects of this question only. Admittedly there are important social questions to be considered also.

The 13 northeastern counties have 2,837,000 acres of land in farms. Of this, 947,540 acres is crops, 200,000 acres in open permanent native blue grass pasture, and 1,143,500 acres in woodland and forests.

Since 1940 the number of farms has dropped from 30,095 to 14,304 and 20 percent from 1950 to 1954.

Today 40 percent of the farms are operated as full-time farms and 60 percent as part-time farms. The average gross farm income per farm was \$1,854 in 1954. This figure is about the same today.

A Changing Agriculture

The introduction of tractors and other power equipment, the substitution of mechanical devices for manual labor, the use of chemicals, etc. has forced upon agriculture a much larger size business.

Twenty years ago less than half of the gross income on a dairy farm would pay all expenses. Today more than 70 percent is needed. This means you have to take in almost twice as much to get the same net income as 20 years ago.

Since only 20 to 30 percent of what you take in on a dairy farm is normally left for net income, you need \$10,000 gross income to get a \$2,000 to \$3,000 net labor income. If the operator owns all the capital he would charge 5 percent interest on about \$20,000 of his capital or about \$1,000 to his expenses. This would mean that the farm family could spend \$3,000 to \$4,000 per year.

Living on a farm does have certain economic advantages over living in town such as lower cost for housing and food, certain income tax privileges, such as charging certain expenses against the farm business, etc. This advantage might amount to \$1,500. In other words, a \$3,000 to \$4,000 return for labor and capital on the farm is comparable to a \$4,500 to \$5,500 income in town, a reasonable standard of living today.

Only 1.5 percent of the farms in the northeast gross more than \$10,000. Inadequate size of business, therefore, is one of the key problems. Area farmers have generally adapted new technology, but few have made the necessary adjustment in the size of their operation. In most cases, they have been unable or unwilling to adjust to meet these changed conditions. As a consequence, farms that once provided a good living are now unprofitable.

Full-Time Farming



What is a sound full-time farm operation? To answer this question we must distinguish between the area where corn can be grown for grain (area II) and the area where corn generally does not mature but is grown for silage (area I).

The chart to the right shows what type of operation and size of farm is needed in Area I to return \$3,000 for labor. Some very important conclusions can be drawn from this chart.

Any time labor has to be hired, the income will be less than \$3,000 for the operator. In general, an operator with some family help can handle a business efficiently that requires no more than 3,500 hours of labor per year. On that basis the following enterprises alone will not provide a reasonable income:

1. Beef cow herds.
2. Dairy herds averaging less than 350 pounds butterfat per cow in the processed milk market (even though operated efficiently).
3. Dairy herds selling cream.

Sheep and pig enterprises do not require too much labor. However, sheep do have peak labor loads requiring outside labor, and bears and wolves often cause large losses. In hog raising, sanitation, price fluctuations, etc. may cause some serious management problems. Consequently both sheep and hogs are undesirable for full-time business activity, but they can be used as supplementary enterprises.

Land is very limited on most farms in this area, with usually less than 100 acres of cropland available. On that basis, raising feeder cattle as a full-time business is also questionable.

The following enterprises can provide a full-time farm income on farms with less than 160 but more than 60 acres of cropland.

1. An efficiently managed herd of at least 20 cows averaging 350 pounds butterfat in a grade A fluid market.
2. Large poultry operations, if a good market can be obtained.

Here's What is Needed to Return \$3,000 for Labor

With these livestock		At these prices	You will need			
			Number of animals	Acres of land*	Hours of labor	
Dairy—high efficiency	Fluid market	\$1.15 per pound butterfat	19 cows	60	2,650	<i>Possible</i>
350 pounds butterfat	Stanchion barn					
350 pounds butterfat	Processed market	\$.85 per pound butterfat	33 cows	100	3,500	<i>Possible</i>
	Loose housing					
Dairy—good efficiency	Fluid milk market	\$1.15 per pound butterfat	23 cows	105	3,200	<i>Possible</i>
350 pounds butterfat	Stanchion barn					
350 pounds butterfat	Processed market	\$.85 per pound butterfat	45 cows	200	4,600	?
	Loose housing					
Poultry†						
220 eggs per hen		\$.33 per dozen	3,000 hens	2,500	<i>Possible</i>
20 pound turkey		\$.25 per pound	4,000 turkeys	2,000	
Sheep						
125 percent lamb crop		\$18 per cwt	400 ewes	160	1,600	?
90 pound lamb		\$.62 per pound wool				
8 pound wool clip						
Feeder pigs†						
7 pigs per litter		\$12 per pig	1,300 pigs	3,400	?
Hogs†						
Raising pigs and fattening at 225 pounds		\$16 per cwt	600 hogs	2,500	?
Pasture fed calves						
550 pound gain (bought at 400 pounds sold at 950 pounds)		Bought \$18 per cwt Sold \$20 per cwt	235 feeders	160	3,000	?
Beef cow herd						
90 percent calf crop		\$20 per cwt	200 cows	350	6,000	<i>No</i>
450 pound calf						

* Land producing 2½ tons of hay or its equivalent. With higher or lower yields relatively less or more acres are required.

† Feed for these enterprises is all purchased since no corn is produced.

3. Sheep or feeder cattle in combination with poultry or feeder pigs. A combination, for instance, of 150 ewes with poultry—2,000 hens or 2,500 turkeys—is a potential for a 60-acre farm, buying all the feed for the poultry. Also a combination of 100 pasture-fed calves with 1,800 hens or 2,300 turkeys gives the potential \$3,000 labor income for this same size unit.

4. Fattening hogs, raising feeder pigs, and poultry could all supplement the minimum dairy enterprise of 20 cows.

The Corn Producing Area

In the area producing corn more alternative and higher income potentials are available. Assuming a 50-bushel corn and 2½-ton hay yields, the minimum size of the dairy herds and requirements in land and labor would be approximately 10 percent less.

For beef cows, sheep, and poultry the situation would remain nearly the same as in the other area if operated on a single enterprise basis.

For feeder cattle the situation changes drastically. Now 100 pasture-fed calves on 160 acres of cropland can provide \$3,000 labor income.

The raising and fattening of hogs becomes quite profitable.

Enterprises that could best be combined to get a \$3,000 income in this area are:

1. Dairy herd of at least 19 cows averaging 350 pounds of butterfat in grade A fluid market on minimum of 55 acres of cropland operated at high efficiency.

2. 150 ewes and 150 hogs on minimum of 100 acres of land.

3. 50 feeders (pasture-fed calves) and 125 hogs on minimum of 120 acres of land.

4. Specialized poultry.

Even though all these enterprises are a possibility on farms with less than 160 acres of cropland, an efficient highly productive dairy herd in a fluid milk market combined with hogs (as far as feed supplies permit) has the best potential.

On farms larger than 160 acres generally a combination of either sheep or feeder cattle with hogs has the best income possibilities. Variations in potential yield, capital supply, and labor supply may influence this transition area of 160 acres.

Part-Time Farming

Farm residents having an outside job are becoming more numerous. Often the person is forced to take outside work because the farm does not provide an adequate income. In other cases a person employed in industry intends to supplement his income with farming. Whatever the situation may be, only a limited amount of labor will be available for farming, and the size of farm business usually has to be small.

A certain minimum size is required to make farming profitable. Some enterprises require so much labor to be profitable that hardly any labor is left for outside employment. For instance, it takes approximately the income of 15 cows, producing 350 pounds of butterfat in a grade A market, to pay for the expenses necessary to operate a farm that will provide the feed for these 15 cows. In other words, a farm with 15 cows would normally show little if any net income even under good management. The cows in excess of 15 start showing a net profit. However, the labor required to raise the feed and take care of 15 cows already amounts to 2,100 hours. Obviously working off the farm and still running a dairy farm is most difficult. This leads to some important management considerations.

First, because of the limited available labor the part-time farmer should select enterprises that can be operated on a small scale and yet show rather high returns per hour of labor.

Second, he should cut his overhead cost down to a minimum. This is a different approach than used for the full-time farmer.

The potential returns per hour of labor for enterprise units requiring less than 1,000 hours per year and operated at good efficiency are:

Beef—30 cow herd.....	\$.45
Beef—50 feeders	\$1.00
Sheep—40 ewes	\$2.50
Chickens—1,000 hens	\$1.23
Turkeys—1,000	\$1.50
Hogs—1 to 10 litters.....	\$1.15

These figures do not consider the cost of a general nature such as car expenses, depreciation, and upkeep of machine shed, garage, corncribs, marketing expense, etc.

Obviously sheep fit best into part-time farming. Turkeys, hens, or pigs are other possibilities, but with considerable lower income potential. Dairy cannot be considered because of its high labor requirements. Feeders might have limited potential.

Overhead cost can be cut most effectively by keeping machinery and equipment cost to a bare minimum. In many cases the part-time farmer with a full-time job may not try to raise any improved crops but depend on the native grass for feed supplies. He may use the grass for pasture and have a neighboring farmer harvest the surplus grass for hay on a share basis. The livestock has to be fitted to this limited feed supply. However, it is usually sufficient for a small ewe flock. If more feed is needed a fertility program on the grasses may be the answer.

In cases of limited outside employment a considerable larger farm business and consequently more feed supplies are necessary. Often it is possible to get jobs done cheaper on a custom basis than by buying machinery.

In the area producing corn, feeder cattle and hogs become more competitive and returns per hour are nearly the same as those for poultry. Again, however, sheep has the best potential if well managed.

This publication has been prepared in connection with the Rural Development program. Congress authorized this program to help families in low income areas. The purpose of the program is to raise living standards through further strengthening of family farms or through development of other opportunities for farm families. In Minnesota the state advisory committee on Rural Development includes representatives of a number of state and federal departments, farm organizations, business groups, and educational institutions.

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