

MONTHLY

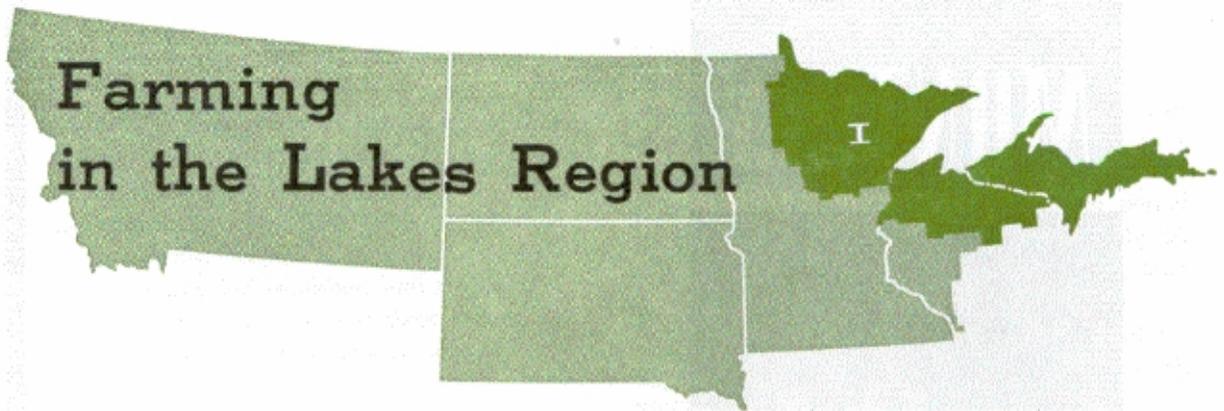
REVIEW

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FEDERAL RESERVE BANK OF MINNEAPOLIS

SEPTEMBER 1963



This article is the ninth in a series concerning agriculture in the Ninth district. The material used as a basis for this article is taken from the research that is in progress in conjunction with the Upper

Midwest Economic Study. Each article discusses a particular "type of farming" area as delineated in the study. In the current issue, the economic picture in Area I is discussed.

Agricultural production throughout much of the northeastern part of the Ninth district is based mainly on roughage production and dairying. Specifically, this region, designated Type of Farming Area I for purposes of the Upper Midwest agricultural study, includes Northeastern Minnesota, Northwestern Wisconsin, and Upper Michigan. Although other roughage-consuming animals such as beef cattle or sheep could be produced more intensively, dairying has several advantages that explain much of its importance. The farms are typically small, and dairying is better able to employ the relatively large labor supply available on these small farms. Excellent outlets for milk are also available in the area.

While the basic enterprise of Area I is dairying, a wide range of other agricultural pursuits is found throughout the region. For example, the area contains some large poultry producing units, both table eggs and turkeys, while in parts of the area, potato production is of some importance, as is fruit production along the Great Lakes.

The growing season is relatively short and cool; it ranges from a low of 80 days along the Canadian border to a high of 140 days in parts of the area where the Great Lakes moderate the season. The

winters are long and cold; minimum season temperatures reach -40 to -50 degrees Fahrenheit.

The area's land surface has a very uneven, poorly drained topography, typical of glaciated areas. Its soils, which range from infertile to relatively fertile, are mainly light-colored acid soils, which formed under cool, moist forests. Many lakes and bogs dot the landscape. Rock outcroppings, sandy ridges and even plains are found within the area.

Land, farm numbers and size

Approximately 13.1 percent of the land in Area I was in farms in 1959. Usually less than 50 percent of the land in a county was reported as farmed land, with some counties reporting as little as 5 percent of the land surface in farms. Between 1940 and 1945, the acreage of land used for farming increased, but since 1945 there has been a substantial decrease. Much of the land in farms in the area is such that it is not easily incorporated into other units. Many of the fields are isolated and could not be economically combined with other units. Thus, in many cases where farmers have left farming for off-farm employment or retirement, the land has been abandoned (table 1).

Because much of the land area is rough, nontill-

able or wooded, the farms in the area are generally small with very little cropland. The average farm in 1959 contained 158 acres with 61 acres, or 38.4 percent, of its land classified as cropland (table 2). Hay production on these farms is mainly from native grasses growing on stony, rough, uncultivable land. Much wooded acreage is used for grazing land.

The number of farms in Area I declined almost 20,000 in the ten-year period between 1949 and 1959. In the latter year, the total number amounted to 30,064 farms, down from 50,060 in 1949. More than 70 percent of the farms in the area were less than 220 acres in size in 1959; almost 30 percent were less than 100 acres in size. These proportions have changed considerably over time, in part through abandonment of small units and through consolidation of smaller farms into larger farm units. During the period 1949 to 1959, the proportion of farms with less than 100 acres was 43 percent of the total. During the same ten-year period, the proportion of farms of over 220 acres in size increased from 16.5 to 28.5 percent of the total of all farms.

Commercial farms, farms with farm products sales of over \$2,500, accounted for only 26 percent of all farm numbers in Area I in 1949; this proportion had risen to 43 percent by 1959. Most of the commercial farm group had a sales volume of between \$2,500 and \$9,999. Only 1.7 percent of all farms in Area I had sales of \$10,000 and over in 1949; this had risen to 4.6 percent by 1959. Non-commercial farms made up 74.4 percent of all farms in Area I in 1949, compared with 57.1 percent in 1959.

Farm production and sales

Dairy cow numbers, the major kind of livestock in Area I, moved downward during the 1949-1959 decade. Milk cow numbers increased from 284 thousand in 1949 to 302 thousand in 1954, and dropped to 204 thousand in 1959. The total number of cattle and calves, largely dairy cattle, equalled 433 thousand head in Area I in 1959. Sheep and

TABLE 1 — LAND IN FARMS, AREA I

Year	Acres
1939	6,581,000
1944	6,962,000
1949	6,878,000
1954	6,237,000
1959	4,749,000

Source: Census of Agriculture.

TABLE 2 — AVERAGE SIZE OF FARMS AND CROPLAND ACREAGE PER FARM, AREA I

Year	Average size of farms (acres)	Cropland per farm (acres)	Percent cropland
1939	102	n.a.	n.a.
1944	122	41	33.8
1949	137	49	35.6
1954	152	56	37.0
1959	158	61	38.4

Source: Census of Agriculture.

TABLE 3 — NUMBER OF LIVESTOCK PER FARM, AREA I

Year	Cattle and calves	Milk cows	Sheep and lambs	Hogs and pigs	Chickens
			(number of head)		
1939	14	6	22	3	42
1944	16	8	25	3	56
1949	15	8	32	6	54
1954	19	10	41	7	71
1959	21	11	55	11	84

lambs, and hogs, minor enterprises in the region, have shown some increases in numbers in Area I since 1949; chickens, on the other hand, have declined in numbers.

The number of milk cows per farm in Area I nearly doubled between 1939 and 1959, while total cow numbers declined in the area as a whole (table 3). The other types of livestock have shown similar upward trends in numbers per farm.

Milk production in Area I was estimated at 1,844 million pounds during the five-year period 1954-1958, 7.7 percent above the 1939-1943 level (table 4, next page).

The trends in dairying that are evident throughout the industry are also apparent in Area I. It

was noted that average herd size nearly doubled during the last 20 years. During the same period, milk production per cow advanced from 5,098 pounds during the period 1939-1943 to an average of 6,167 pounds per cow during the 1954-1958 period; this was a 21 percent increase in output per cow. Approximately four-fifths of the farmers in Area I reported keeping milk cows throughout the 20-year period.

Among the dairy farmers in the area are a large number who maintain small herds as a source of income supplemental to off-farm work. The fact that output per cow only reached 6,167 pounds in the period 1954-1958 indicates that much of the industry has not received the attention that is true in the areas where a larger share of the industry is composed of larger, more specialized operators. For example, production per cow reached 7,208 pounds in the dairy belt just south of Area I in the period 1954-1958, which was a 16.9 percent greater output per cow than that realized in Area I.

While 39.1 percent of the commercial farms in Area I reported herds of less than 10 cows in 1954, only 2.3 percent of the herds exceeded 30 cows in number (table 5).

An important influence on dairy production is the presence of the Federal Market Orders in operation in the area. The supply areas for three of the Orders fall partly or entirely within Area I; these are the Duluth-Superior, Upper Peninsula of Michigan, and the Northwestern Wisconsin Market Orders. The Duluth-Superior Order has been in effect since 1941, while the other two markets obtained Federal Order status in December 1958. The supply area of the Duluth-Superior fluid milk market lies entirely within Area I (chart 1).

Milk production per farm supplying the Duluth-Superior market exceeded the production of other dairy farms in the area by nearly two-to-one in 1959. Per farm output among the Duluth-Superior area fluid milk producers averaged 146,390 pounds in 1959 (table 6); these are relatively

TABLE 4 — TOTAL MILK PRODUCTION, NUMBER OF COWS AND MILK PRODUCTION BY FIVE-YEAR PERIODS, AREA I

	Total milk produced (millions of pounds)	Number of cows (thousands)	Production per cow (pounds)
1939-1943	1,713	336	5,098
1944-1948	1,786	338	5,284
1949-1953	1,751	297	5,896
1954-1958	1,844	299	6,167

TABLE 5 — DISTRIBUTION OF COMMERCIAL FARMS REPORTING MILK COWS, ACCORDING TO HERD SIZE, AREA I, 1954

Herd size	Number of farms with milk cows	Percent of total
Less than 10	9,355	39.1
10-29	14,019	58.6
30-49	501	2.1
50 and more	44	.2
Total	23,919	100.0

TABLE 6 — TOTAL MILK PRODUCTION, NUMBER OF PRODUCERS, AVERAGE PRODUCTION PER PRODUCER, DULUTH-SUPERIOR FLUID MILK MARKET

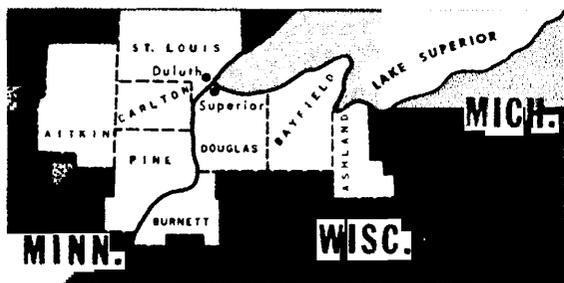
Year	Total pounds of milk produced (millions)	Number of producers	Pounds of milk per producer
1950	107.4	1,409	76,224
1954	147.1	1,521	96,713
1959	176.4	1,205	146,390

large, specialized producers who depend on dairying or at least on farming for their entire income.

The total milk supply entering the Duluth-Superior market increased by nearly two-thirds since 1950, to 176.4 million pounds in 1959. Milk production in Area I outside of the Duluth-Superior market remained essentially unchanged during the same period.

Hay, an important crop in this dairy area, was harvested from an average of 730 thousand acres per year during 1954-1958. Oats, the next most important crop in acreage terms, was harvested from 297 thousand acres. Oats is the most important feed grain crop produced in the area, be-

Chart 1 — Major fluid milk supply area for Duluth-Superior



cause it is best adapted to the short, cool growing season. Corn ran a poor third in importance in acre terms; it was harvested from 73 thousand acres, and a substantial portion of this was ensiled.

Yields in the area during the 1954-1958 period were relatively low. The average yield of oats was 38.5 bushels per acre; corn yielded an average of 37.1 bushels per acre, and barley yielded an average of 21.5 bushels per acre.

Yield differences were evident when comparing the commercial and noncommercial averages for the study period. The commercial farm yield for oats exceeded the noncommercial farm yield by 9.7 bushels per acre; corn likewise was 4.0 bushels per acre greater on the commercial farms — and such was the case for each of the commodities. The higher yields of the commercial farms reflect better management, which includes greater use of improved techniques and generally more careful attention to the entire farm operation.

The total agricultural product marketings from Area I averaged \$113.8 million per year during the 1954-1958 period. Among the livestock commodities, dairy products sales yielded an average of 52.4 percent of the total value of all sales during 1954-1958. Cattle and calves brought in 13.3 percent more, a good share of which were from the sale of cull dairy cattle. Poultry ranked third among the livestock, as well as among all commodities, as a provider of cash receipts; receipts from the sales of poultry products accounted for

an average of 11.1 percent of the area's cash receipts in 1954-1958 (table 7).

Crop sales, which accounted for an average of 13.2 percent of the total cash receipts during 1954-1958, included potatoes at 3.5 percent, all of the feed grains and coarse grains at less than 1.0 percent each, and an "other crop" category which accounted for 7.9 percent. Among the numerous crops in the "other" category would be included tree fruits, cranberries, clover, grass seeds, and so forth.

TABLE 7 — DISTRIBUTION OF CASH RECEIPTS AMONG COMMODITIES, AREA I, 1954-1958

	All farms	Commercial (percent)	Non- commercial
All products	100.0	100.0	100.0
All crops	13.2	15.0	8.1
Dairy products	52.4	49.6	60.0
Livestock and livestock products	19.3	19.1	20.0
Poultry products	11.1	12.5	7.2
Forest products	4.0	3.8	4.5

Capital investment

The annual capital investment in the agriculture of Area I during the period 1954-1958 averaged \$490.6 million. This was about equally divided between the commercial and noncommercial farms of the area. However, in 1954 only 30.1 percent of the farms were in the commercial group compared with 69.9 percent in the noncommercial group.

Of the \$490.6 million agricultural investment, \$300.2 million, or 61.2 percent, was in land; \$81.3 million, or 16.6 percent, in livestock; and \$109.1 million, or 22.2 percent, in machinery. The noncommercial farms held a lower proportion of their investments in livestock than did the commercial farms, 14 percent compared with 19.2 percent. Noncommercial farmers, on the other hand, had a slightly higher proportion of their investments in land and machinery than did the commercial group. Differences within the area were slight; however, in Wisconsin the livestock investment was 21.1 percent of the total compared with 16.6

percent for the area as a whole, while the machinery investment in Wisconsin accounted for 17.5 percent of total investment compared with 22.2 percent for all of Area I.

Of the total livestock investment of \$81.3 million, 94.3 percent, or \$76.7 million was accounted for by cattle and calves; sheep and lambs accounted for \$2.9 million, or 3.6 percent, while all other livestock made up \$1.7 million, or 2.1 percent of the total.

The investment per commercial farm during 1954-1958 averaged \$19,842, while the average noncommercial farm unit had an investment of \$8,594. Among the major categories, the real estate investment of the commercial farms averaged \$11,787 per farm compared with \$5,410 per farm for the noncommercial farms. Livestock investments per farm averaged \$3,810 per commercial farm during 1954-1958, while the average noncommercial unit had a livestock investment of \$1,200. Machinery investments per farm for the study period averaged \$4,245 and \$1,984, respectively, for the commercial and noncommercial farms.

Production expenses

Farm production expenses totaled \$91,485 thousand per year for the entire Area I during the 1954-1958 period. Cash farm expenses accounted for 74.9 percent of the total with depreciation taking up the balance, 25.1 percent.

Commercial farms had a substantially higher proportion of their production expenses accounted for by cash expenses than did the noncommercial units, 80.5 percent compared with 66.3 percent. Thus, depreciation was relatively less important among the items of expense for commercial farms; depreciation accounted for 19.5 percent of the total expense outlays of the commercial units, and 33.7 percent in the case of the noncommercial farms.

Among the specified cash production expenses, feed purchases were high, accounting for 20.4 percent and 15.8 percent of all production ex-

penses, respectively, for the commercial and non-commercial farms. Large sections of Area I are feed deficient.

Labor utilization

The relatively large number of small size farm units in Area I accounts for a rather severe problem in agricultural underemployment. A comparison of the amount of labor available for farm tasks with the amount of labor needed indicates that only 37 percent of the work force was efficiently utilized. Among the commercial farms, only 53 percent of the labor available for farm work was utilized during the period 1951-1958; and among the noncommercial units, the proportion of utilization dropped to 27 percent.

Farm income

The total gross income of all farms in Area I on an average annual basis was \$146.3 million in the period 1954-1958. Cash receipts from farm marketings accounted for \$113.8 million of the \$146.3 million total, while government payments contributed \$2.9 million, and the noncash items (farm dwelling rental value plus farm produced and consumed products) accounted for \$29.6 million.

Production expenses cut into the \$146.3 million gross income to the extent of \$91.5 million, leaving an average annual total net income of \$54.8 million for Area I farmers during the 1954-1958 study period.

Among the groups of farms, the 30.1 percent of all the area's farms classified as commercial farms earned \$39.8 million of net income; this left \$15.0 million for the 69.9 percent of the farms classified as noncommercial units. The average annual 1954-1958 gross income per commercial farm in Area I was \$7,742 compared with \$1,779 per noncommercial farm (chart 2).

Production expenses during 1954-1958 averaged \$4,512 per commercial farm, and \$1,254 per non-commercial farm. Thus, the total net income for the two size groups was \$3,230 per year per farm

Chart 2 — Per farm gross income, expenses and net income, 1954-1958 average, Area I

	All Farms	Commercial	Non-Comm.
Cash receipts from farm mktgs.	2779 ⁰⁰	6775 ⁰⁰	1060 ⁰⁰
Government payments	70 ⁰⁰	116 ⁰⁰	50 ⁰⁰
Noncash income	723 ⁰⁰	851 ⁰⁰	669 ⁰⁰
Gross farm income	<u>3572⁰⁰</u>	<u>7742⁰⁰</u>	<u>1779⁰⁰</u>
Cash expenses	1673 ⁰⁰	3629 ⁰⁰	831 ⁰⁰
Depreciation	561 ⁰⁰	883 ⁰⁰	423 ⁰⁰
Production expenses	<u>2233⁰⁰</u>	<u>4512⁰⁰</u>	<u>1254⁰⁰</u>
Net income	1339 ⁰⁰	3230 ⁰⁰	525 ⁰⁰
Estimated costs of capital and operator's labor	3355 ⁰⁰	4411 ⁰⁰	2900 ⁰⁰
Returns to management	<u>-2016⁰⁰</u>	<u>-1181⁰⁰</u>	<u>-2375⁰⁰</u>
Net cash income	1176 ⁰⁰	3262 ⁰⁰	279 ⁰⁰

for the average commercial units and \$525 for the average noncommercial farm.

Because the net farm incomes are very low in Area I, off-farm work looms high in importance as a source of income. Among the commercial farms in Area I, 44.6 percent of the operators worked off the farm in 1954, the first year of the study period, and 9.0 percent of them reported earning more gross income from off-farm work than from farm work. The noncommercial farm operators worked off the farm to an even greater extent; 71.7 percent of them reported working off the farm in 1954, and 55.0 percent of them earned more gross income from off-farm sources than from farming.

The economic condition of farmers in Area I can be better seen through an analysis of the per farm net incomes. As noted earlier, the 1954-1958 per farm net incomes for the average commercial

and noncommercial units in Area I were \$3,230 and \$525, respectively. In each case, this is the total return to the operator for his management and labor, to his capital, and to the unpaid family labor. To estimate the cost of using the labor (operator and family labor) and the capital tied up in the farm business, dollar values were assigned to these production resources. These dollar values approximate the returns which these factors could have earned if used in alternative lines. Deducting the labor charges (calculated at a weighted average farm labor wage rate) and the capital charge (calculated at 5 percent of total investment) from the total net incomes results in a deficit of \$1,181 per year per commercial farm and an annual deficit of \$2,375 per noncommercial farm. Neither the average commercial nor the average noncommercial farm had sufficient earnings to cover all

(Continued on page 12)

The colorful canning industry



For over 150 years, the commercial canning of fresh foods has influenced the eating habits of people in the western world, and the present day finds “canned goods” occupying much space on supermarket shelves. The vegetables grown for canning by commercial processors amount to more than half the total tonnage of all vegetable crops grown in the U.S. — and some of these vegetables, particularly corn and peas, have brought the Ninth district an important and rewarding industry.

The idea behind the canning industry originated to meet a need. In 1795, France was involved in a war and a revolution, and the mortality rate was high among the French troops, due not so much to the cannon and the sword as to scurvy and other diseases resulting from the lack of fresh food. Emperor Napoleon Bonaparte offered a prize to the citizen who could come up with a method to keep food fresh during long campaigns, and in 1809, a restaurant chef named Nicolas Appert was awarded the prize for a procedure modeled after the theory that if food is sufficiently heated and then sealed in a container that excludes air, the food will keep. During the same year, a man named Durand in England introduced and patented the first “tin canister,” a small receptacle made of iron coated with tin.

Ten years later, Monsieur Appert’s process and some of Mister Durand’s canisters came to the U.S. American bookkeepers shortened the English word “canister” to “can” and introduced the

term “canning,” which came to mean the operation — in the factory or at home — of sterilizing food by heat and sealing it in airtight containers made either of glass or tin-plated iron. The new methodology found its first American customers in the people traveling west to settle the new country, but its first large scale expansion began in the 1860s, when commercially canned foods were rationed to Civil War troops whose enthusiasm for them carried over past the end of the war.

Further expansion characterized the half-century of commercial canning following the War Between the States. And, in addition, the application of scientific discovery took form in improved techniques and mechanical developments, and in new types of canned foods. All of this helped make commercial canning and its product a progressively valuable and wholesome addition to industry and the American diet. The 20th Century witnessed continued industry growth and the further development of automatic machinery and procedure. Scientific research presented important findings that resulted in improving the quality and the output of the industry’s product. Research was applied to the growing and control of the raw products on the farm, with the result that many strains of fruits and vegetables especially suited to canning were introduced — and accepted.

Production of canned foods has increased 20 times since the turn of the century, a gain matched by few U.S. industries and a certain indication of

consumer acceptance. Canning today is a multi-million dollar industry, widely distributed throughout the U.S. and its territories, and producing a wide variety of canned fruits, vegetables, juices, soups, meat, fish, milk and specialty products, in both cans and glass containers.

Geographically, the U.S. canning industry has plants in every state but Nevada. A considerable degree of localization exists, of course, according to product; as the industry grew, its various branches tended to concentrate in regions where soil and climatic conditions were most favorable for the production of a particular product or group of products. As a result, the canning of an item may be confined to certain localities. On the other hand, some products are canned in many areas; corn, for example, is canned in 30 states and peas in 27. However, even in this case, over half of the peas and corn grown and canned in the U.S. come from one general region. This is a more-or-less rectangular area which covers southeastern Minnesota and the bottom half of Wisconsin, and a large part of which is included in the Ninth district.

Wisconsin ranks first in the U.S. in the production of both peas and corn for canning, while Minnesota ranks second in the production of corn and third in the growing of commercial canning peas. Wisconsin grows 40 percent of the country's canning peas, while Minnesota grows 12 percent; of the U.S. canning corn crop, Wisconsin produces 30 percent and Minnesota accounts for 21 percent.

The district's canned corn and peas industry consists of a few large and several small processing plants, most of which are established on the outskirts of rural communities adjacent to large canning crop fields. Minnesota accounts for 24 canneries and the Wisconsin counties within the district, for 11. The location of canneries in rural areas permits processing of crops at exactly the proper degree of maturity and minimizes the time taken to carry the harvest from field to processing plant. The maximum quality of peas and corn lasts only from three to six hours, and if a crop is picked after it has passed its peak of flavor, the

total value of the harvest can drop as much as \$100 per acre in less than a day. Both peas and corn must be in the can by a few hours after harvest, to prevent discoloration and deterioration of flavor.

The canning process involves cooperation between crop grower and processor. Some district farmers own and operate their own small canning factories where their crops are processed and sold under private labels; similarly, some canners become farmers as they grow a part or all of their own crops. However, considerably more than half of the volume of district crops grown for canning is produced by farmers and sold to canners. Most of these crops are grown under contract, insuring the farmer a market for his entire production at a price agreed upon before the crop is planted; the contract also specifies crop acreage. The processor conducts most of the specialized services — such as pest control, harvesting, and so forth — and provides necessary technical advice. The grower furnishes the land, prepares the soil and plants the crop.

Canning companies rely heavily for manpower on the people in the canning communities. And the local citizenry depends a great deal on the town cannery; canning plants contribute sizably to the cash incomes of many small towns. One large company located in southern Minnesota, for example, has a permanent staff of 1,400 employees — which jumps to 18,000 in the course of a week during the busy season. While some of a plant's "canning season" workers are migrant field laborers, a number of them in the field and in the factory itself, are local citizens adding to their own and their families' income; many are college students earning tuition.

Longer periods of work for seasonal cannery workers have resulted from several recent developments which helped to lengthen the canning season. Canners themselves have assisted in the development of new varieties of crops that mature at different times during the growing season. They have advised on spacing planting dates, and some have added new products to keep cannery workers

and machinery busy after the harvests have been processed.

In addition to the regular and seasonal cannery employees, a warehouse force works throughout the year in almost all canneries to take care of labeling the cans and shipping them to local distributors—and in the case of large plants, to destinations all over the world.

Even in the case of the smaller canners, the production of vegetables for canning has become an industry based on big business principles. Costs

of equipment and operation become less as fields become larger, and the desire for increased efficiency is pushing all types of canning crop growers—the farmer-canners, the contract farmers and the processors who farm their own land—toward larger, more economical units.

Newer and bigger equipment and improved methods are constantly being introduced to meet the demands of efficiency, economy and quality always present in the competitive, dynamic and important canned food industry.



Current conditions . . .

District agricultural prospects improved during late July and August following receipt of generous rainfall over much of the area. Based on August 1 estimates by the Department of Agriculture, total district crop production in 1963 will be substantially above the most recent five-year average. Some crops, however, such as oats, barley, flax and rye, are estimated at less than last year's near record output. Wheat, the area's most important cash grain crop, will total slightly higher than in 1962 in spite of a 27 percent decline in Durum wheat production. Winter wheat, on the other hand, may total a 50 percent increase. Currently, corn and soybean crop prospects are very good with increases estimated at 15 percent and 26 percent, respectively, in production.

The index of prices received by farmers during July showed a recovery from the spring and early summer slump with prices for cattle, hogs and milk exhibiting a moderately strong comeback. District cash farm incomes during this third

quarter of 1963 are expected to reflect these better prices and the improved marketing picture.

The nonagricultural performance of the district's economy appears to be expanding but only at a moderate pace. The employment picture remains static with no particular expansion movement evident as of mid-August. Residential and nonresidential construction activity has been on the plus side but slow. The employment in and output of the district's iron ore and copper mines and oil wells has been falling behind year-ago performances.

Total deposits (demand and time) declined more during July than usually occurs on a seasonal basis, with the trend of deposits up in early August as farm marketings were expanded. The volume of loans at district banks declined moderately during July but gained in early August (latest available data). Bank investments showed about the same directional changes as the loan statistics.

District banks continue to be net purchasers of federal funds and to borrow on a relatively moderate basis at the Federal Reserve bank.

The following selected topics describe particular aspects of the district's current economic scene:

CASH FARM RECEIPTS

Midyear cash receipts from farm marketings in the Ninth district were slightly higher than the 1962 first half totals. Farmers had received \$1,504 million during the January through June period of 1963, a 2.5 percent improvement over the same period of 1962. Two states indicated marked improvement in incomes. In North Dakota the first half total was \$272 million, up 44.3 percent, and in Montana the figure was \$140 million, up 17.8 percent. A slight decline in cash receipts occurred in South Dakota where receipts had slipped 3.9 percent under the January-June 1962 total. In Minnesota, the decline amounted to 7.4 percent. Midyear cash receipts for the U. S. were up 1.8 percent.

CASH RECEIPTS FROM FARM MARKETINGS, JANUARY-JUNE

State	1962 (thousands of dollars)	1963	1963 as percent of 1962
Minnesota	\$ 723,243	\$ 669,269	92.6%
Montana	118,656	139,829	117.8
North Dakota	188,545	272,032	144.3
South Dakota	302,330	290,505	96.1
Ninth District*	1,467,734	1,504,687	102.5
United States	14,782,157	15,046,929	101.8

*Includes 15 counties in Michigan and 26 counties in Wisconsin.

The cash receipts figures for the month of June (the latest available) were off 2.6 percent from the same month of 1962. This drop can be largely attributed to lower cattle and hog prices. Prices received by farmers during July and early August

have largely recovered from that slump, however, with prices for cattle, hogs and milk particularly strong at mid-July.

DISTRICT BANKING SCENE

Bank credit in the Ninth district declined in July and then advanced during the early weeks of August. The fall of credit during July was quite moderate in relation to the usual seasonal change in this factor; it consisted almost entirely of a reduction in security holdings rather than loans outstanding. At the larger city banks in the district the slight advance of loans outstanding to other than domestic commercial banks was more than offset by a reduction of security holdings. At country banks, where a reverse pattern of change prevailed, the gain in security holdings was approximately balanced by a fall in loans. During the first two weeks of August the downward movement of credit was altered. Loans and investments at both city and country banks rebounded sharply and virtually eliminated the losses of July.

Total demand deposits in the district exhibited a more than seasonally expected decline in July as the result of government withdrawals. During the first part of August, however, personal and business demand deposits, which had shown only a slight decline in July, moved rapidly upward and offset more than half of the earlier decline. Time and savings deposits, which serve many householders as means of safeguarding and earning a return on funds provided from current income, continued their persistent upward climb in both July and early August and enhanced the ability of district banks to carry loans.

The loss of demand deposits in July and the subsequent gain in the following weeks brought corresponding movements in bank reserves. To retrieve part of the July reserve loss so that legal reserves would be adequate, district banks increased their purchases of federal funds. The return of deposits and reserves in August permitted a reduction of such purchases.

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costs fully. The implication of this is that if they would have had their capital invested at 5 percent per year elsewhere and their labor employed at a modest wage, they would have been better off in strict dollar terms. Nonmoney considerations, such as country living, independence, and so forth, of course cannot be measured, but these factors do in fact enter and, to some extent, alleviate the income situation.

Net cash income

The cash income flow of the farm may be the crucial figure which determines the ability of the unit to survive. Gross cash income includes only the cash items: cash receipts from marketings and government payments. The cash production expenses are deducted from the gross cash income to obtain an estimated net cash income.

During the period 1954-1958, the commercial farms in Area I averaged \$3,262 per year for net cash income. The annual depreciation of the average commercial farm unit was \$882. If capital replacement were to be made at exactly the rate of annual depreciation, \$882, the balance of cash left for living expenses would be \$2,379 without any debt repayment provisions. Thus, the average commercial farm in Area I is in a relatively weak financial position.

The net cash income position of the average noncommercial farm at \$280 per year during 1954-1958 has to be coupled with off-farm work. If the average noncommercial farm family in Area I had been without off-farm work, it would have experienced extreme poverty.

Summary

The financial position of a very substantial part of the entire farming community of Area I is poor—the average commercial and the average noncommercial unit during the 1954-1958 study period was in a weak or nonsustainable position. This situation in Area I was not unique to the

1954-1958 period; it has long been an area of small farms receiving chronically low farm incomes. Reflections of this are found in the sharp drop in farm numbers in the area and the very substantial abandonment of farmland which has occurred. For example, in the ten-year period 1949 to 1959 the number of farms dropped by 40 percent to 30,064 units. Simultaneously, the land in farms dropped by 2.2 million acres or nearly one-third. A part of this was no doubt attributable to the soil bank conservation reserve program which began in 1956.

Evidence that the younger people, those with alternative job opportunities, are the ones who have left Area I in greater numbers than are typical in most farm areas, is found in the fact that the average age of farm operators in Area I is relatively high. The average of all operators in Area I in 1959 was 51.3 years, compared with 48.1 years for the average age of all operators in the State of Minnesota. Also in Area I, 16.4 percent of the operators reporting in 1959 listed their ages as 65 years old or older; Minnesota as a whole reported 10.5 percent of the operators of farms in this age group.

Low farm incomes in Area I, coupled with a disproportionately large amount of unproductive land, much of which cannot be readily combined into larger economic farm units, are strong evidence that the trend in the organization of the area's agriculture will continue to be toward fewer farms and less land used in farming. This differs sharply from the typical trend in agriculture, which has been toward fewer but larger farm units. In Area I, this trend toward fewer farms and more land abandonment is likely to accelerate because of the relatively large proportion of farm operators reaching retirement ages. Further, the trend will be accentuated by the fact that the income opportunities from farming for a large proportion of the existing farms are not sufficient for the existing units to continue in operation by a son, a son-in-law, or another young man.