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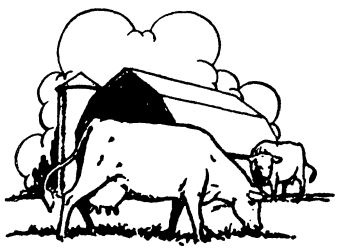

MINNESOTA farm business NOTES

NO. 379 ST. PAUL CAMPUS, UNIVERSITY OF MINNESOTA JANUARY 28, 1957

CASH RECEIPTS AND NET CASH INCOME INCREASE

R. W. Cox

Minnesota farmers fared slightly better in 1956 than in 1955.

Preliminary estimates indicate that cash receipts from marketings in 1956 were slightly above the total for 1955. Total receipts are estimated at $1,275,000,000 compared with $1,247,000,000 for 1955 (table 1). Receipts from crops, dairy products, and turkeys topped those in 1955 by substantial margins but receipts from livestock and eggs were down sharply.

These figures are totals for the state and do not indicate the situation of the individual farmer.

The increase in receipts from crops was due both to an increase in volume of sales and a slight increase in prices. The index of crop prices was about 5 percent higher in 1956. With the exception of wheat and barley, prices of all the principal crops averaged slightly higher.

Live weight of hogs sold by Minnesota farmers in 1956 was 3 percent less than in 1955. The average price for the year was down 4 percent and total value about 6 percent less.

Although hog prices were fairly good in the first seven months of 1955, they dropped to very low levels during the latter part of the year. The low level continued during the first part of 1956, and prices were much lower than in the corresponding period of 1955. Prices during the past fall and early winter, however, were substantially above those of a year ago.

Cattle sales increased last year, but prices were almost 9 percent lower. The total returns from cattle and calves were about 4 percent lower.

Almost 12 percent more fluid milk was sold to dairy plants in 1956. Prices averaged $3.20 per hundred weight compared with $3.10 in 1955. Receipts increased from 179 million to 210 million dollars.

Butterfat sold in cream to dairy plants was 77 million pounds or 13 percent less than in the previous year, indicating a further shift to whole milk delivery. Prices averaged about the same. Receipts from sale of cream at wholesale dropped from 54 million to 48 million dollars.

The total sales of milk and cream, including both wholesale and retail, were 259 million dollars—24 million dollars more than in 1955.

Minnesota farmers sold almost the same number of eggs in 1956 as in 1955 and at a slightly lower price. Receipts dropped 5 percent. Receipts from sale of farm chickens and broilers were the same both years.

The 1956 turkey crop in Minnesota was at a record high of 9,560,000 birds, 19 percent above the previous high in 1955. Last year's turkey crop consisted

(Continued on page 3)

Table 2. Percentage Distribution of Cash Sales of Agricultural Products by Minnesota Farmers, 1935-1956

Products	Average 1935-39	Average 1940-44	Average 1945-49	Average 1950-54	1954	1955	1956
				percent			
Crops	24.2	21.0	28.1	27.1	29.2	32.2	33.4
Livestock							
Hogs	19.9	25.1	20.4	20.3	21.1	17.0	15.5
Cattle, calves	16.1	14.8	15.0	19.0	17.0	16.5	15.6
Sheep, lambs	2.1	1.7	1.2	1.2	1.1	1.1	1.1
Total livestock	38.1	41.6	36.6	40.5	39.2	34.6	32.2
Dairy products	26.2	21.3	20.1	19.0	18.7	18.8	20.3
Other livestock products							
Eggs	5.8	9.4	9.5	8.4	7.7	8.8	8.2
Chickens	3.1	3.7	2.6	1.4	1.0	1.1	1.1
Turkeys	1.6	1.9	2.2	2.4	2.7	3.0	3.2
Others	1.0	1.1	.9	1.2	1.5	1.5	1.6
Total other livestock products	11.5	16.1	15.2	13.4	12.9	14.4	14.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 1. Annual Cash Sales of Agricultural Products by Minnesota Farmers, 1935-1956

Products	Average 1935-39	Average 1940-44	Average 1945-49	Average 1950-54	1954	1955	1956
				million dollars			
Crops	80	134	320	339	362	401	426
Livestock							
Hogs	65	159	233	254	261	211	198
Cattle, calves	53	94	171	238	210	206	199
Sheep, lambs	7	11	14	15	14	14	14
Total livestock	125	264	418	507	485	431	411
Dairy products	86	136	229	238	231	235	259
Other livestock products							
Eggs	19	60	108	106	95	110	104
Chickens	10	23	30	18	13	14	14
Turkeys	6	12	25	30	33	37	41
Other	3	7	10	15	18	19	20
Total other livestock products	38	102	173	169	159	180	179
Total	329	636	1,140	1,253	1,237	1,247	1,275

PLANNING FOR 1957 ON THE FARM

George A. Pond

MINNESOTA
farm business
NOTES

Prepared by the Department of Agricultural Economics and Agricultural Extension Service.

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The General Outlook

The farm outlook has brightened materially during the past year. With record yields for most crops, there are ample feed supplies. Increases in the yield of cash crops coupled with some price advances provide for crop income well above that of the year just ended.

The prices of cattle, hogs, lambs, wool, milk, and butterfat have increased during the year. Of our important sale products, only poultry and eggs have suffered price wise.

The prices of most goods and services used in farm production have changed little during the year. Those of farm origin such as feeds are at approximately the level of a year ago. With more products to sell and sale prices strengthening, the farmer may look forward to a more favorable level of earnings in 1957.

Real estate values per acre in Minnesota increased from an index of 141 (1947-49 = 100) in July 1955 to 147 in July 1956. This suggests optimism in the outlook for agriculture on the part of buyers. It also reflects the need for larger farms, in order to use modern techniques in farming more effectively.

The Cropping Program

Corn is dominant among the major crops in Minnesota. In adapted areas it will yield a higher return per hour for the labor spent on it than any other major crop. It will produce digestible feed at a lower cost per pound than any competing grain crop.

Corn acreages will be more limited than in 1956 for those qualifying for A.S.C. price supports. For the man who feeds most of his crop, the maximum acreage that can be grown with the available labor and equipment and within the bounds of reasonable soil conservation may be a desirable goal.

Farmers who plant within their allotment may increase the corn available for feeding by substituting oats or hay for corn as a silage crop. Oats is the principal small grain crop in Minnesota. Oats is an expensive source of feed nutrients as compared with corn. However, the crop has an important place in our cropping systems as a companion crop for hay and pasture seedings and as a source of bedding for livestock.

Harvesting oats as silage results in a large increase in the quantity of digestible feed per acre and also in the quality as measured by protein content. For the farmer who can find some substitution for oat straw for bedding, silage may be the best use of the oat crop.

Soybeans, wheat, and flax are important cash crops in Minnesota. Soybeans have ranked second to corn as cash crop wherever adapted. The wheat acreage will be definitely restricted by the A.S.C. program. Soybeans and flax may be useful as substitutes for corn and wheat where the acreage of these crops is reduced by A.S.C. acreage compliance.

Hay and pasture crops play an important role in Minnesota agriculture. Emphasis in 1957 should be on improving the quality and yield of our forage crops rather than on expanding the acreage. This involves better hay and pasture seeding mixtures, more generous use of commercial fertilizer and lime and more attention to harvesting so as to maximize yield and quality. Rotation grazing combined with good stands and adequate fertilization will provide the maximum quantity and quality of pasture production.

The use of fertilizer and lime to the extent indicated by soil testing, by local experience, and by experiment station recommendation should be practiced for all crops. On most farms it is cheaper to increase production by proper fertilizer applications than by buying or renting more land.

The Livestock Program

There is no reason for any radical shift in livestock production in 1957. Since a large proportion of our crops are marketed through livestock, it is important to keep crops and livestock in balance. The emphasis should be on selecting the kind and amount of livestock that best fit the farm and the farmer's experience and preferences.

In general the trend is toward fewer kinds of livestock on a given farm and increased specialization. This enables the farmer to keep more nearly abreast of the new techniques in livestock feeding and management.

Hogs have recovered rapidly from the price depression of a year ago. They are perhaps the brightest spot in the livestock picture—especially for those who have planned early spring farrowings. Numbers have been adjusted downward. The decrease in compliance with A.C.P. corn allotments suggests, however, that there may be more "free corn" available this year. If summer and fall farrowings are stepped up this year to market this corn it will speed up the hog cycle and prices may break to some extent before this year is over.

Dairy cattle adjustments have been in the direction of fewer but larger herds. This appears to be a move in the right direction, especially for those with a grade A milk outlet and when accompanied by increased attention to breeding and feeding. Larger herds are needed to justify such investments as bulk tanks and labor saving equipment and barn adjustments. Lower costs and higher quality production are the key to profits in dairying.

Beef cattle numbers are still close to the all time peak. Disastrous drouth conditions have forced some curtailment in the southwestern states but in general, cattle numbers can be adjusted only slowly.

The adoption of new techniques in feeding and of labor saving practices in production offer the best prospect of increased profits in beef production. A dollar saved in production costs has the same effect on profits as a dollar added to the sale price. This is equally true of other classes of livestock.

Sheep are relatively unimportant in Minnesota and numbers have remained fairly constant in recent years. For farmers that have the equipment and the "know how," sheep have a place in the farm business; but there is little ground for encouraging any general increase or decrease.

Poultry and eggs are in a relatively unfavorable price position at present. The general trend toward larger units and more specialization has gone farther with poultry than with any other class of livestock. Turkey and broiler production have already moved largely from a farm enterprise to a "factory" type of production.

Egg production seems to be heading that way. Some careful observers of recent developments in egg production

suggest a minimum size laying flock of 2,000 to 4,000 birds for efficient production. As long as there is a poultry house on the farm and family labor that might not otherwise be profitably employed, we will still have small poultry flocks on many farms. But, in general, the farm flock of 100 to 500 birds seems likely to fade gradually from the picture.

Adjusting to New Techniques in Farming

New techniques have been crowding their way into the farm picture in recent years at an ever accelerating pace. Gasoline and electric power, combines, windrow balers, forage harvesters, pipe line milkers, bulk tanks, mechanical feeding and barn cleaning equipment, and sprinkler irrigations are examples from the mechanical field.

New high yielding and disease resistant crops, weed spraying, soil testing, and the use of commercial fertilizers and soil supplements are revolutionizing crop production.

In the livestock field we have artificial insemination, rotational cross breeding formula feeds—many of which are fortified with vitamins, hormones, antibiotics, and trace elements—and an ever increasing list of innovations.

Since no one person can keep abreast of all these, specialization—especially in livestock production—is increasing rapidly. Those who first master these new techniques profit most from their use.

Many, if not most, of these techniques call for a large business if they are to be used economically. This is especially true of large power and machine units. The operator of the small farm will often find it more profitable to employ custom harvesting or other equipment than to own it. He may lose something in timeliness or quality of work but the funds or credit saved are available for other uses that may be more profitable.

That these new techniques have a definite effect on farm size is indicated in the fact that the number of farms in Minnesota decreased 19 percent from 1935-1954. The size of farms increased 21 percent.[1] There was practically no change in total acres in farms. This trend is likely to continue.

Some operators of small farms have maintained satisfactory earnings by keeping up with the new techniques, by more specialization and intensification, and by keeping their machinery costs down by hiring custom services. Others have found it necessary to find outside employment to supplement their farm income.

In some areas, with soils of only moderate productivity and where outside jobs are available, it may be wise to accept work off the farm and supplement the wages received by putting the crop land into the A.C.P. conservation reserve.

Industrial activity is now at a high level. This may be a good time (in well developed farming areas) for the operator of an inadequate farm to consider transferring to full-time nonfarm employment. His small farm may be readily saleable to a neighbor who needs more land to round out an adequate scale of operation and who therefore can afford to pay the current market price for the land.

[1] Much of this has resulted from the elimination of small inadequate farms. Farms under 180 acres in size have decreased nearly 33 percent in number and those larger than 180 acres have increased only 11 percent.

CASH RECEIPTS—

(Continued from page 1)

of 7,950,000 heavy breeds, an increase of 47 percent over 1955, and 1,610,000 light breeds, 39 percent below the previous year. Prices received by farmers dropped about two cents per pound but the value of sales rose from 37 million dollars to 41 million dollars.

Cash sales of crops and livestock each accounted for about one-third of the total cash receipts (table 2). Dairy products contributed 20 percent and poultry and other livestock products 14 percent to the total.

Cost Rates Were Higher

The general level of farm cost rates, that is, prices paid for goods and services, rose about 2 percent in the past year. There have been some significant differences in the cost rates of individual items over the past several years. For example, farm cost items that are mainly farm produced, such as feed and livestock, have gone down in price. Wage rates, taxes, interest, and prices paid for industrial items—such as fertilizers, building and fencing materials, farm machinery, motor vehicles, and motor supplies—have moved upward.

Table 3. Index of Prices Received and Prices Paid, 1935-39 = 100

	Indexes*		Ratio of index of prices rec'd. to prices paid
	Prices rec'd.	Prices paid	
1935-39	100	100	100
1940-44	137	122	112
1945	175	152	115
1946	212	166	128
1947	264	192	138
1948	280	208	135
1949	228	200	114
1950	235	204	115
1951	272	225	121
1952	262	229	114
1953	239	223	107
1954	218	224	97
1955	198	224	88
1956	195	228	86

* Index of prices received is based on Minnesota farm prices. Index of prices paid is a national index. No Minnesota index of prices paid is available.

A comparison of the index of prices received and the index of prices paid provides some information on the cost-price squeeze and the purchasing power of the farmer's dollar. The index of prices paid used in this connection represents the prices paid for production and living items including wages, interest, and taxes.

The ratio of the indexes of prices received to the indexes of prices paid reached a peak of 138 in 1947 (table 3). This means the purchasing power of the farmer's dollar was 43 percent above the base period, 1935-39.

The cost price squeeze is well illustrated by the decline in the ratio during the past few years. The ratio was 86 in 1956, the lowest during the past 20 years. That is, the purchasing power of the dollar was 16 percent less than in the base period and 38 percent less than the peak in 1947.

Net Cash Income Increases Slightly

Minnesota farmers' cash expenditures for items used in production are available for the period 1949 to date. The difference between cash receipts and cash expenditures is the net cash income from farming operations.

Although cash receipts have increased moderately during the past two years, expenditures have increased by about the same amount (table 4). The net cash income in 1956, however, was slightly higher than in 1955.

Table 4. Cash Receipts, Expenditures, and Income, 1949-1956

	Cash receipts	Cash expenditures*	Net cash income
	million dollars		
1949	1,177	735	442
1950	1,184	794	390
1951	1,281	879	402
1952	1,286	899	387
1953	1,298	870	428
1954	1,238	881	357
1955	1,247	891	356
1956†	1,275	908	367

* Data on cash expenditures, 1949-55 were obtained from the USDA *Farm Income Situation*, No. 160, Sept. 1956.

† Preliminary estimates.

Minnesota Farm Prices Nov. and Dec., 1956

Prepared by R. A. Andrews

Average Farm Prices for Minnesota November 1956, December 1954, 1955, 1956*

	Nov. 1956	Dec. 1956	Dec. 1955	Dec. 1954
Wheat	$ 2.12	$ 2.09	$ 2.11	$ 2.28
Corn	1.12	1.10	1.13	1.24
Oats	.66	.67	.57	.68
Barley	.93	.94	.90	1.05
Rye	1.20	1.14	.91	1.07
Flax	3.12	3.12	2.89	3.10
Potatoes	.66	.60	.90	.80
Hay	16.10	17.20	15.00	17.00
Soybeans†	2.23	2.21	2.06	2.47
Hogs	14.10	16.10	9.90	16.50
Cattle	12.90	13.00	12.20	14.70
Calves	15.90	17.20	16.70	15.30
Sheep-lambs	16.27	16.66	15.12	16.80
Chickens	.106	.111	.151	.130
Eggs	.290	.270	.400	.220
Butterfat	.650	.640	.620	.630
Milk	3.40	3.30	3.20	3.25
Wool†	.43	.48	.35	.48

* Average prices as reported by the USDA.
† Not included in Minnesota farm price indexes.

Livestock prices increased 9 percent from November to December. The rise was largely due to a substantial and unexpected increase of $2.00 per hundredweight in hog prices. Crop and livestock product prices in December average about the same as in November.

The livestock price index was 55.4 points or 35 percent higher in December 1956 than December 1955.

Comparison of November and December Prices

Commodity class	Average December prices as a percentage of average November prices
Crops	99
Livestock	109
Livestock products	100
All commodities	104

Indexes for Minnesota Agriculture*

	Average Dec. 1935-39	Dec. 1956	Dec. 1955	Dec. 1954
U. S. farm price index	100	221.1	208.0	223.0
Minnesota farm price index	100	193.5	169.1	195.1
Minnesota crop price index	100	210.0	207.7	229.6
Minnesota livestock price index	100	213.8	158.4	211.3
Minnesota livestock products price index	100	158.2	167.5	157.8
Purchasing power of farm products				
United States	100	95.3	92.9	99.6
Minnesota	100	83.4	75.6	87.2
U. S. hog-corn ratio	13.5	13.3	9.2	12.2
Minnesota hog-corn ratio	15.9	14.6	8.8	13.3
Minnesota beef-corn ratio	14.0	11.8	10.8	11.8
Minnesota egg-grain ratio	20.7	10.4	15.5	7.8
Minnesota butterfat-farm-grain ratio	40.4	31.6	33.3	29.1

* Minnesota index weights are the average of sales of the five corresponding months of 1935-1939. U. S. index weights are the average sales for 60 months of 1935-1939.

The Outlook Corner— Land Use

Land Use in the United States

Major uses	1900	1920	1940	1950
Land in farms				
Cropland	319	402	399	409
Plowable pasture	90	105	111	100
Other open pasture	186	223	350	385
Woodland pasture	87	77	100	135
Woodland not pastured	104	91	57	85
Other land in farms*	53	58	44	45
Total in farms	839	956	1,061	1,159
Land not in farms				
Pasture and grazing	625	502	382	290
Forest land	318	319	325	311
Other nonfarm land†	121	126	137	144
Total not in farms	1,064	947	844	745
Total all land	1,903	1,903	1,905	1,904

* Farmsteads, roads, waste, etc.
† Towns, highways, railroads, parks, wastelands, etc.

There is increased interest in the land resources of the United States. With an increasing population there is concern about food production. At the same time there is concern about the source of the current surpluses of agricultural products.

The table below shows the shifts in land use in the United States from 1900 to 1950. The acreage of cropland has been practically constant at about 400 million acres since 1920. The acreage of plowable pasture also has remained quite stable since 1920.

The acreage of plowable land (cropland plus plowable pasture) has been about 500 million acres since 1920.

The acreage of permanent pasture also has remained quite steady—at about 800 million acres. Much of this is dry, mountainous, or wooded and has a rather low carrying capacity.

Forest land not pastured has remained quite steady. The forest land in farms and outside of farms totals about 400 million acres, or one-fifth of the land in the nation. In addition to this, 135 million acres of pasture land in farms is wooded.

This permanent pasture or grazing land is steadily being transferred to farms. In 1920, only 300 million acres was in farms; by 1950, this had increased to 520 million acres.

The use of the land of the United States has not changed greatly over the last few decades, even though the ownership has changed. In other words, the surpluses do not seem to be due to shifts in use of the land. Only minor shifts seem feasible for the future. Changes in production will have to come largely from shifts in the kinds of crops grown on the plowable land and in the practices that increase yields.

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