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# FARM BUSINESS NOTES

Prepared by the Divisions of Agricultural Economics and Agricultural Extension  
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NO. 260

UNIVERSITY FARM, ST. PAUL

AUGUST 23, 1944

## The Feed Situation

S. A. ENGENE

### University Farm Radio Programs

**HOMEMAKERS' HOUR—10:45 a.m.**

**UNIVERSITY FARM HOUR—12:30 p.m.**

**THE FRIENDLY ROAD—1:00 p.m.**

Station WLB—770 on the dial

The feed situation continues to dominate the future of livestock production. The large feed reserves of the past years are gone. The number of livestock, especially hogs, is decreasing. But the war is not yet over. Exceptionally large needs for livestock and livestock products will continue for some time into the future. A careful analysis of the feed situation and possibilities for continued livestock production is necessary as a guide to production plans.

High crop yields and small numbers of livestock during the late thirties permitted the accumulation of large reserves of feed grains, especially corn. Large crops continued into the war years. With low feed prices and rising livestock and livestock product prices, livestock production rose to levels higher than at any time in the past history of the country.

This level of livestock production was greater than could be maintained with current feed production. Feed reserves, including those of wheat, in this country and in Canada, were drawn upon to provide feed for this tremendous number of livestock. Now most of this surplus is gone. Livestock in the near future must be fed from current production of crops.

The volume of livestock production is now going down. The number of pigs saved during 1944 will be about 25 per cent below 1943, but about equal to the number in 1939-1941 and slightly above the predrowth years of 1929-1933. Present indications are that the number of hens during the coming year will be 8 to 10 per cent below last year. The number of sheep is going down and indications are that the number of cattle may soon begin to decrease.

How far should the level of livestock production be reduced? Has the reduction already gone too far or has it not gone far enough? Part of this answer depends upon the war situation. How long will we continue to need food in its present volume? Since the future of the war is indefinite, this question cannot be answered at the present time. But the feed supplies available during the next year or two will determine the maximum volume of livestock

production that can be maintained.

The production and consumption of feed grains in Minnesota over a period of years are presented in table 1. During the five-year period 1936-1941, production exceeded the amount fed and sold; reserves of feed accumulated on farms. During the three feeding seasons starting in 1941, 1942, and 1943, the quantities of grains sold and used

for feed exceeded production, in spite of record high crop production. Most of the feed reserves built up during the earlier years were used.

According to present prospects, feed grain production in 1944 will be approximately equal to that in 1943. This estimate may change as the year progresses and the corn crop matures. Feed grain needs, however, will be reduced, principally due to the large reduction in the number of hogs. According to present prospects, there should be enough feed for current livestock needs and normal sales and for some rebuilding of reserve feed stocks on farms.

Although the most serious crisis apparently is past, many problems still remain. It is possible that some of this extra grain may be needed to supplement short roughage supplies during the coming winter. In many cases, the feed

Table 1. Feed Grain Production and Requirements in Minnesota

Crop	Average 1936-41	1941-42	1942-43	1943-44	1944-45*
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
<b>Production minus seed</b>					
Corn .....	3,529	4,574	4,890	5,122	5,141
Oats .....	2,180	1,660	2,649	2,065	2,584
Barley .....	1,081	973	1,112	480	313
<b>Quantity fed</b>					
Wheat .....	156	132	138	140	140†
Rye .....	54	28	34	35	35†
<b>Total available</b> .....	7,000	7,367	8,823	7,842	8,213
<b>Needed for livestock</b> .....	5,234	6,553	7,696	7,371	6,086
<b>Available for other uses</b> .....	1,766	814	1,127	471	2,127
<b>Sales off farms</b> .....	1,546	1,333	1,482	1,071	?
<b>Changes in feed reserves</b> .....	+220	-519	-355	-600	?

\* August 1 crop estimates.

† Estimates of probable feed.

Table 2. Roughage Production and Requirements in Minnesota

Crop	Average				
	1936-41	1941-42	1942-43	1943-44	1944-45*
	tons	tons	tons	tons	tons
<b>Production</b>					
Tame hay .....	4,455	5,453	5,473	5,480	4,565
Wild hay .....	1,462	1,489	1,449	1,449	1,455
Corn silage† .....	1,572	1,753	1,689	1,618	1,650
Corn fodder .....	936	554	750	817	1,000
<b>Total</b>					
Used for feed.....	8,425	9,249	9,361	9,364	8,670
Change in feed reserves.....	-103	+248	-141	-207	-690

\* August 1 crop estimates.

† Hay equivalent; 1/3 weight of silage.

and the livestock may not be on the same farms. It will be necessary for some farmers to buy feed. Since farmers will be desirous of rebuilding fair reserves on their farms, many of them may be unwilling to sell to their neighbors.

The situation seems even brighter for 1945. With normal weather, production in 1945 may be slightly larger than in 1944. It is probable that livestock numbers will decrease to some extent. It should, therefore, be possible to rebuild sizeable reserves of feeds. In fact, it seems possible that these reserves can be built to a safe level and still increase hog farrowing in 1945 to 10 or 15 per cent above the 1944 level.

While the feed grain situation has improved, the roughage supply will be seriously short. Hay was scarce during the past feeding season. It seems probable that the situation will be more serious during the next year or two. Since roughages are bulky and difficult to ship, the situation can become extremely critical in many local areas.

The production and livestock needs of roughages in Minnesota are presented in table 2. Supplies and feed needs of roughages of all kinds balanced fairly well from 1936 to the spring of 1942. It was necessary, however, to draw on feed reserves to some extent during the past two years. On May 1, 1944, the feed carry-over on farms in Minnesota was 485,000 tons, or only 5 per cent of a normal year's requirements. In spite of the possibility of some reduction in cattle numbers and careful feeding during the coming year, a serious shortage of roughage seems probable, a shortage equal to possibly 5 per cent of the needs at normal feeding rates.

Expansion of cattle numbers is one of the large factors responsible for this shortage of roughages. The number of cattle in Minnesota, as in the entire United States, is approximately 10 per cent above the previous peak in cattle numbers. The acreages of hay and pasture were at record levels in 1940 and 1941, making possible this increase in cattle numbers. Since that time, the acreage has been reduced steadily. In many areas, the age of the stands of hay and pasture has been increasing, with reductions in yields. Favorable weather during the past two years has eased the situation. Hay yields have been fairly high and pastures have been green throughout most of the summer.

With very limited seedings of hay and pasture crops during 1944, it seems probable that this reduced acreage of hay and pasture will continue through the feeding season of 1945-46. Weather less favorable than we have had

in the last few years would make the situation much more serious.

The present situation calls for quick and drastic action. Quotations of \$30 a ton for hay of only fair quality were not at all uncommon during the past spring. On the basis of present prospects, the situation will probably be even worse next spring. Steps must be taken immediately to correct it.

It is too late now to raise additional hay in 1944, but hay supplies can be supplemented by saving all possible straw and cornstalks during the coming fall. Much of the late planted corn can be used to good advantage as corn fodder or silage. Careful feeding during the year will help to stretch the feed supply. Sale of some cattle and sheep may be advisable or necessary on some farms.

An immediate check of prospective supplies and probable needs will be helpful. In some cases hay can be bought this fall to supplement short supplies. Sales of surplus livestock can then be made when prices are favorable and while there is still sufficient feed for the remaining livestock.

Since a shortage of roughage will probably continue for another year, special attention should be given during the coming winter to planning adequate acreages of annual hay and pasture crops and legume seedings in 1945. Hay and pasture will continue to be the basic feeds for cattle and sheep.

## Source and Disposal of Feed Grains

TRUMAN R. NODLAND

The records of the cooperators in the various Farm Management Services in Minnesota give some information as to the quantity of feed grain available on farms and the disposal made of these grains. The data in table 1 show the source and disposal of feed grains on an average of 167 farms in each of two areas (southeastern and southwestern Minnesota) for the period 1940-1942.

Although weather conditions during this three-year period were, in general, very favorable for crop production, there was not much change in inventory carry-over at the end of the year as compared with the average amount on hand at the beginning of the year. A large increase in livestock numbers required all the feed farmers raised during these favorable crop years and a considerable amount of the sealed grain on hand. All sealed grain has been included in the inventories and is partially responsible for the large inventory stocks.

Corn is by far the most important single feed grain crop on these farms, with oats ranking second. Sixty per cent of the tonnage of grains fed in the southeastern area and 73 per cent in the southwestern area was corn. Hybrid seed corn grown on some of these farms has not been included in the tabulations for corn. Wheat purchases during the period were larger than usual because of the sale of government-owned wheat to farmers for feed purposes. Crops sold include the landlord's share of the crop on

Table 1. Source and Disposal of Feed Grains per Farm, 1940-1942

Crop	Quantity available			Disposal made of the grains			
	On hand Jan. 1	Purchased	Raised	Sold	Seeded	Fed	On hand Dec. 31
	<i>Southeastern Minnesota</i>						
Corn, bu. ....	1,610	470	1,835	184	.....	2,038	1,693
Oats, bu. ....	507	330	702	49	47	919	524
Barley, bu. ....	436	25	391	151	27	295	379
Wheat, bu. ....	113	100	129	59	10	137	136
Oats & barley, bu. ....	385	42	617	21	28	591	404
Oats & wheat, bu. ....	69	4	105	2	6	101	69
Rye, bu. ....	24	2	14	4	1	14	21
Soybeans, bu. ....	24	3	49	18	5	16	37
Total, tons .....	77.4	23.1	92.1	12.4	2.6	97.5	80.1
	<i>Southwestern Minnesota</i>						
Corn, bu. ....	4,313	1,393	3,364	997	16	3,748	4,309
Oats, bu. ....	1,235	360	1,592	251	123	1,675	1,138
Barley, bu. ....	523	56	660	479	46	234	480
Wheat, bu. ....	60	81	63	43	6	82	73
Oats & barley, bu. ....	90	6	154	6	7	145	92
Oats & wheat, bu. ....	14	2	32	2	2	26	18
Rye, bu. ....	21	5	16	15	1	9	17
Soybeans, bu. ....	33	24	77	49	18	10	57
Total, tons .....	158.5	49.6	143.8	46.8	4.4	143.8	156.9

share-rented farms unless this share was purchased by the tenant.

In southeastern Minnesota an average of 193 tons of grain was available on these farms, 40 per cent represents carry-over from the previous year, 48 per cent was raised during the year, and 12 per cent was purchased. Approximately one half of this supply of grains was fed, 42 per cent was held over as inventory stocks, 6 per cent was sold, and 1.5 per cent was seeded. In southwestern Minnesota an average of 352 tons of feed grains was available, 45 per cent represents carry-over from the previous year, 41 per cent was raised during the year, and 14 per cent was purchased. Forty-one per cent of this supply of grains was fed, 45 per cent was held over as inventory stocks, 13 per cent was sold, and one per cent was seeded.

The farmers in southeastern Minnesota fed slightly more grain than they raised. In the southwestern section the average tonnage of grain fed was equal to the tonnage raised. Some farmers sell considerable grain whereas others purchase large amounts of feed, but for the whole group of farms purchases are approximately equal to the sales.

### Proportion of Feed Utilized by Different Classes of Livestock

G. E. TOBEN

Feed records kept by 139 representative dairy farmers in the Southeastern Minnesota Farm Management Service show the amount and kind of feed used and the distribution of this feed by classes of livestock (table 1). In 1943 these farmers fed 285 tons of feed per farm. Half of this tonnage was roughage, a third was concentrates, and the balance was milk or milk products.

Hogs consumed 58 per cent of the total concentrates, yet they accounted for less than one fourth of the total animal units of livestock. Almost three fourths of the corn fed went to hogs. In addition they were the principal consumers of small grain, receiving more than two fifths of it. Dairy cows and chickens were next in importance as consumers of small grain since each received a little more than one fifth. Hogs took second place as consumers of commercial feeds. They received 37 per cent; whereas chickens received 41 per cent.

Not only did hogs receive the major portion of the grain but they also received more than 60 per cent of the milk and milk products. They received all of the whey, most of the buttermilk, and about two thirds of the skim milk. Calves received about a third of all milk fed. They received all the whole milk and about 30 per cent of the skim milk. Chickens received only a small portion of the milk fed.

Cattle utilized most of the roughage. About 90 per cent of the legume hay and practically all of the silage was fed to cattle. The cows alone received about two thirds of all legume hay and three fourths of the silage. They were also the major consumer of fodder and stover but utilized less nonlegume hay than horses.

Pasture furnished a substantial portion of the livestock feed. The 194 animal unit months of pasture amounted to 4.1 months of pasture per animal unit. Some classes of livestock were on pasture more months than others. Sheep, for example, were on pasture for 6.6 months; whereas some livestock were not pastured at all. Dairy cows were pastured an average of 5.3 months. They represent the largest single class of livestock, and receive about half the total pasture.

Table 1. The Average Quantities of Feed Fed per Farm and the Proportion Utilized by Different Classes of Livestock, 139 Dairy Farms in Southeastern Minnesota, 1943

Kinds of feed	Quantity of feed fed (tons)	Per cent of each kind of feed utilized by each class of livestock					
		Dairy cows	Other cattle	Hogs	Sheep	Chickens	Horses and colts
Corn (shell basis).....	62.1	12	6	71	1	8	2
Small grain .....	35.5	24	7	43	1	21	4
Commercial feeds .....	9.3	18	4	37	.....	41	.....
Total concentrates .....	106.9	17	6	58	1	15	3
Legume hay .....	52.0	65	24	.....	3	.....	8
Nonlegume hay .....	11.2	29	28	.....	2	.....	41
Fodder and stover.....	3.5	55	21	.....	4	.....	20
Total dry roughage.....	66.7	59	24	.....	3	.....	14
Silage .....	77.7	72	27	.....	1	.....	.....
Whole milk .....	3.0	.....	100	.....	.....	.....	.....
Skim milk .....	27.8	.....	29	64	.....	7	.....
Buttermilk .....	2.4	.....	.....	98	.....	2	.....
Whey .....	.9	.....	.....	100	.....	.....	.....
Total milk .....	34.1	.....	33	61	.....	6	.....
Months of pasture*.....	194.4	48	18	20	7	.....	7
Animal units of livestock†	47.3	17.6	10.0	11.0	2.2	2.5	4.0

\* Months of pasture is in terms of animal units.

† An animal unit is the equivalent of one mature cow, horse, feeder steer, feeder heifer, two head of other cattle, two colts, five hogs, ten pigs, seven sheep, fourteen lambs, or 100 hens.

# Minnesota Farm Prices for July, 1944

Prepared by W. C. WAITE and R. W. COX

The index number of Minnesota farm prices for July, 1944, is 175. This index expresses the average of the increases and decreases in farm product prices in July, 1944, over the average of July, 1935-39, weighted according to their relative importance.

**Average Farm Prices Used in Computing the Minnesota Farm Price Index, July, 1944, with Comparisons\***

	July 15, 1944	June 15, 1944	July 15, 1943		July 15, 1944	June 15, 1944	July 15, 1943
Wheat	\$ 1.45	\$ 1.45	\$ 1.24	Hogs	\$12.70	\$12.60	\$13.00
Corn	1.02	1.01	.94	Cattle	12.00	12.40	12.20
Oats	.72	.73	.61	Calves	13.40	13.40	13.40
Barley	1.13	1.13	.91	Lambs-Sheep	12.35	12.45	12.75
Rye	1.03	1.00	.89	Chickens	.21	.21	.21
Flax	2.85	2.86	2.85	Eggs	.30	.28	.34
Potatoes	1.10	1.05	1.55	Butterfat	.53	.53	.51
Hay	8.60	9.40	6.20	Milk	2.70	2.65	2.65
				Wool†	.44	.43	.45

\* These are the average prices for Minnesota as reported by the United States Department of Agriculture.

† Not included in the price index number.

Prices of products sold by Minnesota farmers with the exception of hay and cattle changed but slightly from June to July. The Minnesota farm price index is three points higher than one year ago. The index of crop prices advanced about 16 per cent, most of the rise occurring during the first half of the 12-month period. The index of livestock prices declined slightly and that of livestock product prices remained about the same. The purchasing power of Minnesota farm products has declined during the past year because of the rise in the prices of things bought by farmers.

The beef-corn ratio is slightly less than in June but the egg-grain ratio is somewhat higher. If the subsidy payment of 6 cents per pound of butterfat is added to the reported price of this product, the butterfat-farm-grain ratio would be raised to 27.1.

**Indexes and Ratios for Minnesota Agriculture\***

	July 15, 1944	July 15, 1943	July 15, 1942	Average 1935-39
U. S. farm price index	179.8	180.7	147.0	100
Minnesota farm price index	174.8	171.6	144.6	100
Minn. crop price index	185.9	160.8	117.7	100
Minn. livestock price index	159.3	162.4	156.8	100
Minn. livestock product price index	183.9	183.8	144.7	100
U. S. purchasing power of farm products	127.7	133.6	120.1	100
Minn. purchasing power of farm products	124.1	127.0	118.1	100
Minn. farmers' share of consumers' food dollar	62.6†	62.8	57.3	47.0
U. S. hog-corn ratio	10.9	12.2	16.6	11.9
Minnesota hog-corn ratio	12.5	13.8	19.0	14.3
Minnesota beef-corn ratio	11.8	13.0	14.7	12.0
Minnesota egg-grain ratio	14.1	18.2	19.8	14.4
Minnesota butterfat-farm-grain ratio	24.4	27.6	31.0	29.8

\* Explanation of the computation of these data may be had upon request.

† Figure for May, 1944.

# Parity Prices

The term parity as applied to the price of an agricultural commodity is that price which will give to the commodity a purchasing power equivalent to the average purchasing power of the commodity in the base period, 1910-14. The parity price for a particular period is calculated by multiplying the average price of the commodity in 1910-14 by an index which represents the prices of articles bought by farmers, interest payments, and tax payments in the current period relative to the base period, 1910-14. The result is divided by 100. For example, the Minnesota farm price of wheat averaged \$0.89 per bushel in 1910-14. The index representing prices paid, interest, and taxes was 170 in July, 1944. Therefore, the parity price of wheat then was equal to  $170 \times \$0.89$  or \$1.51.

100

The average prices for July, 1935-39, of only four Minnesota farm products were equal to or above the parity prices. In July, 1944, prices of all the main products except wheat and rye were equal to or above parity prices.

**Prices Received and Parity Prices of Minnesota Farm Products**

	Prices received			Parity prices	
	Average 1910-14	Average July 1935-39	July 1944	Average July 1935-39	July 1944
Wheat (bu.) dollars	.890	.93	1.45	1.15	1.51
Corn (bu.) dollars	.492	.66	1.02	.63	.84
Oats (bu.) dollars	.338	.29	.72	.44	.57
Barley (bu.) dollars	.580	.46	1.13	.75	.99
Rye (bu.) dollars	.644	.48	1.03	.83	1.09
Flax (bu.) dollars	1.678	1.62	2.85	2.16	2.85
Potatoes (bu.) dollars	.506	.74	1.10	.65	.86
Hogs (cwt.) dollars	7.081	8.66	12.70	9.13	12.04
Cattle (cwt.) dollars	4.777	6.88	12.00	6.16	8.12
Calves (cwt.) dollars	6.398	7.68	13.40	8.25	10.88
Lambs—sheep (cwt.) dollars	5.374	7.74	12.35	6.93	9.14
Chickens (lb.) cents	9.9	12.2	21.0	12.7	16.8
Eggs (doz.) cents	17.5	17.1	30.4	22.5	29.7
Butterfat (lb.) cents	29.5	28.0	53.0	38.0	50.1
Milk (cwt.) dollars	1.469	1.55	2.70	1.89	2.50
Index of prices paid, interest, and taxes	100	129	170		

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PAUL E. MILLER, Director

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