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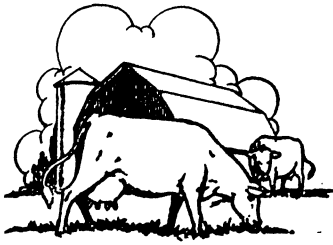
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MINNESOTA farm business NOTES



NO. 363

ST. PAUL CAMPUS, UNIVERSITY OF MINNESOTA

SEPTEMBER 30, 1955

Adjusting Agricultural Production to Effective Demand

O. B. Jesness

The terms "need" and "desire" often are confused with demand. A person may want a certain good or service but that desire does not create a demand unless it is coupled with the means of payment. The term "effective demand" refers to wants backed up by means of payment.

Supplies of various agricultural products on the market at times may exceed the amounts which can be disposed of except at sacrifice prices. This may result from various conditions. Consequently, it is important to locate the causes in any given situation so that the remedies applied will fit the problem.

Among the causes are a general depression, unusually favorable seasons leading to temporary gluts, production cycles, and expansions to meet unusual demand with a lag in the return of former levels as more usual market conditions return.

Depression and Farm Surpluses

Farm surpluses in the 1930's resulted largely from world-wide depression. Unemployment was the rule for millions of workers. Incomes were drastically reduced and consumer demand was curtailed. Markets for farm products which serve as industrial raw materials fell off sharply.

The basic solution for such a situation lies in restoration of nonagricultural production and employment. Permanent curtailment is not called for although some adjustments may help. Many farmers may find such a period a good time to practice "low-pressure" farming to hold cash outlays down and prepare the land for expanded production when conditions again favor larger output.

Diets tend to suffer as incomes drop, so relief and other distribution of food may have a place. Some supplements

to farm income may be necessary to help farmers tide over until recovery gets under way.

The serious effects of business depressions on agriculture demonstrate clearly the direct interest which farmers have in doing everything possible to avoid depressions and to speed recovery if a depression strikes.

Weather Surpluses

Surpluses may occur for some farm products, especially those grown in localized areas, as a result of unusually favorable weather. The potato crop totaled about 389 million bushels in 1947, while the crop the following year on practically the same number of acres was nearly 450 million bushels.

Such decided supply changes can bring very sharp price drops or rises, particularly for a commodity such as potatoes with a highly inelastic demand. Different growers may be affected differently. An area which has a good crop in a year of short supply is fortunate. One which has a small yield in a year of high output and low prices gets hit by both lack of volume and unsatisfactory prices.

Concerted action to restrict marketings to better grades may help ease a seasonal surplus problem. In aggravated cases there may be a place for public programs to expand uses of some of the surplus. Adoption of better production practices may reduce the range of year-to-year variations. Some variations are inescapable. Consequently, growers find it advantageous to base their operations on the average of a period of years so that good years will offset poor ones.

Production Cycles

Cattle and hogs display fairly regular cycles in production and prices. Producers respond to attractive prices by expanding numbers with the result that

subsequent supplies bring lower prices.

The remedy for cyclical swings of this sort lies mainly in the producers' hands. They need to resist the temptation to over-produce when prices are favorable and to curtail production too drastically when prices are down. Greater emphasis needs to be given in production plans to price prospects rather than to prices prevailing at the time plans are made.

Present Surpluses

The present farm surplus problems arise mainly from situations other than those reviewed. To be sure, the decided increase in cattle marketings which brought sharp declines in cattle prices in 1952 and 1953 is an illustration of the cattle cycle. The same applies to hogs. Low egg prices in the limelight in 1954 represented a production response of farmers to higher prices some months before.

However, the surpluses in the public eye today involve products in the hands of or obligated to the Commodity Credit Corporation as a result of the government's price support programs.

These surpluses are not caused by depression, by production cycles, or primarily by unusually good weather. They represent a carryover of war-expanded production into a period when the unusual demands of war have tapered off. These surpluses also are a result of increasing productivity. The relatively inelastic demand for farm products adds to disposal problems. They require different lines of attack than depression situations.

The Wheat Problem

Wheat presents the most difficult problem. The United States and much of the rest of the world had ample stocks when World War II started. In

(Continued on page 2)

Farm Living Depends on Total Income

Frank T. Hady*

Anyone who attempts to jump directly from the level of farm incomes to the level of farm living in Minnesota can be greatly misled. Available evidence shows that there may be much less difference in the way farmers live in different parts of the state than one would expect from the differences in farm income. This article attempts to show how and why this is true.

To illustrate the problems involved, five counties were chosen from the northeastern cutover portion of the state and five from the western and southwestern portion. The northeast represents the less developed farming area, while the west and southwest counties are among the best in the state. Data are from the 1954 Census of Agriculture.

Table 1 gives the proportion of farms having different levels of value of products sold from the farm. This is a rough measure of gross income from the farm. The differences are very striking. About two-thirds of the farms in the western and southwestern counties have sales of more than \$5,000 while less than 10 per cent of the farms in the northeast are in this gross income class.

Table 1. Proportion of Farm with Different Levels of Value of Products Sold

Area and county	Value of products sold (dollars)		
	5,000 and over	2,500-4,999	Under 2,500
percentage of farms			
Northeast			
Aitkin	5	20	50
Beltrami	7	18	44
Carlton	11	23	28
Crow Wing	8	19	33
Itasca	4	7	34
West and southwest			
Big Stone	66	24	10
Pipestone	61	23	11
Rock	70	19	9
Stevens	62	27	6
Traverse	68	20	8

But now let's look at the picture of other income (off the farm) as measured by employment off the farm. This is shown in table 2.

Again the areas are strikingly different. From one-third to more than half of the families in the northeast area have more income from off-farm sources than they do from the farm.

Table 2. Proportions of Farms with Income from Work Off the Farm

Area and county	Operator working off farm	Working off farm 100 days or more	Where off-farm income exceeds value of agricultural products sold
			percentage of farms
Northeast			
Aitkin	56	36	38
Beltrami	58	33	32
Carlton	63	51	52
Crow Wing	65	42	37
Itasca	75	56	58
West and southwest			
Big Stone	25	3	3
Pipestone	28	4	2
Rock	29	4	1
Stevens	35	7	4
Traverse	40	9	7

In the better farming area the percentage is negligible. Farmers in the two areas receive the income from which they live from different sources.

The census provides some data which indicate levels of farm living. Automobiles are now so universal in all areas they can be disregarded for purposes of comparison. The same holds true for washing machines and probably for radios. Other items are shown in table 3.

The differences between the areas are not very great in any of the items shown. They vary almost as much from county to county in the same area as they do between areas. Farmers in the good areas fully employ themselves at home on the farm while farmers in the poorer areas fully employ themselves by spending part of their time on the farm and part at work off the farm. Both enjoy many of the same consumer items.

Table 3. Percentage of Farms Having Certain Items of Home Living Facilities

Area and county	Tele- phone	Elec- tricity	T.V. sets	Piped water	Home freezer
Northeast					
Aitkin	63	91	18	44	17
Beltrami	65	90	5	37	17
Carlton	58	99	37	63	37
Crow Wing	52	90	19	52	32
Itasca	70	92	10	44	42
West and southwest					
Big Stone	68	98	9	45	39
Pipestone	80	93	32	59	40
Rock	82	99	44	63	50
Stevens	71	96	8	50	41
Traverse	56	92	15	51	41

MINNESOTA farm business

NOTES

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

Published by the University of Minnesota Agricultural Extension Service, Institute of Agriculture, St. Paul 1, Minnesota.

Adjusting Production—

(Continued from page 1)

fact, this country used large amounts of wheat for feed and industrial alcohol to meet war needs.

Disruption of agriculture and trade left Western Europe short of food supplies during the latter part of the war and the early postwar years. To help meet this need, United States wheat acreage was expanded from 50-60 million to about 80 million acres. This country, which had produced only one billion-bushel crop previously, exceeded this every year except one during 1944-53. This was all to the good while world needs provided exports of 300 to 500 million bushels.

As agriculture in Western Europe recovered and increasing amounts of wheat became available in other countries, supplies again began to pile up at home. In spite of marketing quotas, drouth, and rust, stocks have mounted so that on July 1 the carryover was a record—over a billion bushels.

Marketing quotas are not too well suited for the job of shrinking wheat output to fit available markets. Present quotas do not make adequate distinction among classes and grades of wheat. They do not distinguish between those areas and producers who have expanded and those who have not. Quotas shift surplus problems to feed grains and soybeans, suggesting that the use of diverted acres will need to be severely restricted if the program continues. In short, present quotas keep more land and other resources available for wheat than current or prospective demand requires.

Adjustments

Lower supports may ease the problem by encouraging some wheat producers to shift to alternative crops. If prices are lowered sufficiently, exports and feeding of wheat will be expanded.

However, the needed adjustment is not likely to be obtained without a pro-

* Agricultural Research Service, USDA.

Farm Machinery Investment Is High

Hans Pilhofer

Modern farming requires large machinery investments. Data from the Southern Minnesota Farm Management Services show how large the average machinery investment for 237 farms was in 1954:

Auto and truck (farm share).....	\$1,412
Tractors	1,962
Other machinery	5,312
Total	\$8,686

These are the present values as given by the farmers in their account books. This was about as high as the investment in buildings (excluding dwelling), which was \$9,796, or livestock, which was \$8,880.

The costs of replacing these machines is a big item to the farmers. The average outlays on machinery on these farms from 1940 to 1954 were:

Auto and truck (farm share) and tractor	\$ 9,707
Other machinery	13,106
Total outlays 1940-54	\$22,813
(Operating costs excluded)	

and domestic outlets, certain production adjustments remain essential to achieving the proper balance between available supplies and effective demand. Those adjustments need to fit the situation for the particular commodities involved.

The average outlays per farm for new buildings during the same period were \$9,492. In other words, the farmers spent more than twice as much for machinery as they did for buildings.

Machinery Costs Vary with Farm Size

The total investment and costs for machinery vary according to the size of the farm, but the distributions of these costs are not affected equally by the size of the farm or the type of farming, as shown in the table.

Farm types with larger acreages require larger investments in machinery. For example, the 23 dairy farms, with 1.6 workers and 210 acres of land, had \$6,714 invested in machinery while the 24 farms raising feeder cattle, hogs, and cash crops, with 1.9 laborers and 365 acres, invested \$11,364 in machinery.

Measured on a per acre basis, large acreage farm types had a smaller machinery investment than small-acreage types, although the difference was not large. As with machinery investment per acre, on farm types with larger acreages the machinery investment comprises a smaller percentage of total assets than on farm types with smaller acreages. These differences were not very large, however, with percentages ranging only from 18 to 14.

Annual costs for owning and operating machinery were higher on the large farms than on the small, but they constituted about the same percentage of the total operating expense.

Feed Grains

Although feed grains are in plentiful supply, they do not at present involve the storage headaches of wheat and some other products. However, marketing quotas on wheat (without restrictions on the use of diverted acres) are shifting part of the surplus problem to feed grains. In turn, this may lead to expanded output and lowered prices for livestock and livestock products. Price support programs need to avoid creating incentives for unneeded production. Most farmers grow feed for use on their own farms. Major responsibility for balancing output and requirements can be left with the farmer.

Expanding Consumption

A popular observation is that surpluses result from "underconsumption rather than overproduction." This assumes that the market can be expanded to absorb the supply. It is said that there cannot be oversupply as long as there are hungry people in the world.

This glosses over the fact that need and demand in the market are not identical. Someone has to provide the means of payment. Even if this is done, it is far from simple to move large stocks into consumption without disrupting existing markets. Nor is expansion of consumption an easy remedy. The human stomach does not have unlimited capacity. In a well fed population, an increase in intake of one food tends to be offset by decreases in others.

While everything possible should be done to get sound expansion in foreign

Machinery Investments, Costs, and Other Items as Related to Type of Farming; Southwestern and Southeastern Minnesota Farm Management Services, 1954

Item	69 general livestock farms	41 dairy and hog farms	23 dairy farms	64 general livestock and crop farms	16 dairy, hog, and crop farms	24 beef, hog, and crop farms
Investment per farm						
Machinery and power	\$ 7,945	\$ 7,364	\$ 6,714	\$ 8,756	\$ 9,036	\$11,364
Land and buildings	21,697	23,158	18,616	29,673	32,998	41,309
All farm assets	43,886	45,516	37,716	55,129	57,398	78,711
Machinery investment per acre	40	37	32	32	32	31
Machinery investment as percentage of all farm assets.....	18	16	18	16	16	14
Ratio of investment in land and buildings to machinery	2.7:1	3.1:1	2.8:1	3.4:1	3.6:1	3.6:1
Machinery cost per farm*	\$ 3,040	\$ 3,173	\$ 2,998	\$ 3,825	\$ 3,916	\$ 4,251
Total cost per farm†	8,783	8,844	8,411	10,254	10,999	13,013
Machinery cost as percentage of total cost	35	36	36	37	36	33
Acres per farm	200	200	210	275	285	365
Workers per farm	1.6	1.7	1.8	1.7	1.9	1.9

* Depreciation, gas, oil, repairs, etc., for farm share of auto and truck, tractor, machinery, and livestock equipment, including hired power and machines.

† All farm operating costs except operator's labor.

Minnesota Farm Prices, *The Outlook Corner* — Farm Size July and August 1955

Prepared by Harlan C. Lampe

Average Farm Prices for Minnesota, July 1955, August 1953, 1954, 1955*

	July 1955	August 1955	August 1954	August 1953
Wheat	\$ 2.21	\$ 2.08	\$ 2.18	\$ 1.98
Corn	1.33	1.21	1.41	1.34
Oats	.55	.48	.60	.66
Barley	.97	.88	1.06	1.04
Rye	.86	.77	1.02	1.01
Flax	2.99	2.85	3.12	3.26
Potatoes	1.70	.80	1.35	1.30
Hay	15.00	14.10	15.60	14.40
Soybeans†	2.11	2.10	3.25	2.32
Hogs	15.50	15.70	20.80	23.00
Cattle	16.70	16.30	16.70	17.10
Calves	17.50	18.00	16.50	19.00
Sheep-lambs	18.05	17.15	17.70	19.38
Chickens	.177	.156	.134	.198
Eggs	.28	.34	.32	.455
Butterfat	.62	.61	.62	.71
Milk	3.05	3.15	3.10	3.45
Wool†	.41	.39	.50	.48

* Average prices as reported by the USDA.

† Not included in Minnesota Farm Price Indexes.

In past issues the sources of error in making month-to-month comparisons of the Minnesota farm price index have been discussed. Space limitations prevent the inclusion of sufficient information to make valid comparisons pos-

Comparison of July and August Prices

Commodity class	Average August prices as a percentage of average July prices
Crops	92
Livestock	99
Livestock products	102
All commodities	98

Indexes for Minnesota Agriculture*

	Average August 1935-39	August 1955	August 1954	August 1953
U. S. farm price index	100	220.6	237.7	244.3
Minnesota farm price index	100	200.2	219.4	232.9
Minnesota crop price index	100	198.1	223.6	220.1
Minnesota livestock price index	100	205.2	235.0	252.2
Minnesota livestock products price index	100	199.2	197.4	237.0
Purchasing power of farm products				
United States	100	98.9	105.4	109.9
Minnesota	100	89.7	98.5	104.7
U. S. hog-corn ratio	12.3	12.1	14.1	15.9
Minnesota hog-corn ratio	14.6	13.0	14.8	17.2
Minnesota beef-corn ratio	12.0	12.5	11.8	12.8
Minnesota egg-grain ratio	15.9	13.4	11.3	16.9
Minnesota butterfat-farm-grain ratio	33.5	34.9	29.3	32.7

* Minnesota index weights are the average sales of the five corresponding months of 1935-39. U. S. index weights are the average sales for 60 months of 1935-39.

The Outlook Corner — Farm Size

The average size of farms is increasing. Figures from the 1954 Census of Agriculture, just released, show the amount of the change. Data for the northeastern counties of Minnesota were given in the last issue; data for the southern and western counties are given here.

In these counties:

1. There were 9 per cent fewer farms in 1954 than in 1939.

2. The average size of farms rose from 187 to 206 acres.

3. The number of farms under 10 acres increased. Most of these are part-time farms near cities.

4. The number of farms with 10 to 179 acres decreased, although the change was not large.

5. The number of farms with 180 to 499 acres increased, but, again, the change was not great.

6. There was a sharp increase in the number of farms with 500 acres or more. However, there are not many of these large farms.

7. Apparently some of the small farms are being added to others to make larger farms.

8. Even after these changes, more than one-half of the farms are less than 180 acres in size and three-fourths are less than 220 acres.

Mechanization is making enlargement of farms possible and desirable. One man can now handle more acres than

formerly. He also needs more acres to cover the overhead costs of the machines. Even though farms have increased slightly in size, the number of hired workers on farms has decreased.

Many farms are too small to make effective use of machinery. Besides, developments in farm machinery will continue. Hence, we will see further consolidation of farms.

Number of Farms, by Size South and West Minnesota* (Type-of-Farming Areas 1, 2, 3, 4, 6, and 7)

Acres per farm	1939	1949	1954
Under 10	3,622	4,342	4,380
10-29	4,596	4,126	3,612
30-49	5,626	4,466	3,831
50-69	3,062	2,766	2,537
70-99	17,343	13,431	11,745
100-139	17,198	15,862	14,120
140-179	35,799	32,716	29,922
180-219	13,622	14,419	13,974
220-259	13,849	14,452	14,182
260-499	24,389	25,513	26,489
500-999	3,408	3,927	4,421
1,000 and above	376	523	651
All farms	142,890	136,543	129,864
Acres in farms (thousands)	26,697	26,931	26,789
Acres per farm	187	197	206

* Includes Roseau, Marshall, Pennington, Red Lake, Polk, Mahnomen, Becker, Wadena, Todd, Stearns, Wright, Carver, Scott, Dakota, and Washington, and all counties south and west of this group.

UNIVERSITY OF MINNESOTA, INSTITUTE OF AGRICULTURE, ST. PAUL 1, MINN.

Cooperative Extension Work in Agriculture and Home Economics, University of Minnesota, Agricultural Extension Service and United States Department of Agriculture Co-operating, Skuli Rutford, Director. Published in furtherance of Agricultural Extension Acts of May 8 and June 30, 1914.

UNIVERSITY OF MINNESOTA
Institute of Agriculture
Agricultural Extension
St. Paul 1, Minn.

SKULI RUTFORD, Director

Minn. 7-9-55-2150
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