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UNIVERSITY FARM, ST. PAUL

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A Program for Minnesota Farms in 1941

ANDREW BOSS

The outlook for American agriculture at the present time is far from reassuring. The destructive effect of the wars in progress dims greatly any hopes that may be held for the immediate opening of foreign outlets for products from our farms.

While there is great need for foods and fats in the countries at war, blockades and lack of transport

prevent delivery. Even though delivery could be made, the purchasing power of those countries is turned toward the provision of implements of destruction rather than of construction. So exhausted will be the purchasing power of those nations at the close of the war that barter or bilateral trade agreements, rather than open commerce, is likely to prevail for many years to come. If they are able to buy at all, it will be at prices much lower than will be attractive or satisfying to American farmers. The long time outlook for satisfactory foreign outlets for our surplus farm products is most discouraging. In giving consideration to this matter we must recognize the fact that Canada and the countries of South America also produce surpluses of our kinds of farm products, and will be competitors in the endeavor to recapture foreign markets.

The domestic outlook can be painted in somewhat brighter colors. Improvement in industrial activity is taking place. There is promise of still greater activity with more complete employment and increased purchasing power on the part of labor. If this expansion is realized and continues it will result in larger consumption of some classes of farm products and some rise in farm prices. One must keep in mind, however, that the present increased industrial activity grows out of the defense program, and that a sudden ending of the war or wars may slow down the factories and stop many pay rolls. The goods now being turned out of the factories are implements for the destruction of wealth rather than for the creation of wealth. While guns, bombs, boats, airplanes, and ammunition may be needed to defend our wealth in the years to come, the wealth itself must come from farms and factories devoted to the production of products useful to those who live upon our farms and in our villages and cities.

University Farm Radio Programs Monday through Friday UNIVERSITY FARM HOUR—6:00 a.m. MID-MORNING MARKETS—10:30 a.m. Station WLB—760 on the dial Neither should we lose sight of the fact that this defense program is supported upon borrowed money. Borrowed money, both public and private, will have to be paid back and with interest. Taxes in future years will be heavy and probably hard to pay. Should farmers enjoy the benefits of an improved domestic market for the next year or for a few years, they should use the

net proceeds to strengthen their position in ownership of the farm unit. Surplus income, if any, should be used to reduce debts or invested in forms of goods that will suffer least if deflation or prolonged depression should come. Under conditions that are likely to prevail only those in sound financial position will be able to retain their farms and carry the load. Farmers should not be feinted out of balance by any picture of short time improvement in domestic outlets and prices. Neither should they contract new debts beyond current ability to pay. In other words, they should use cash income to get out of debt and pay as they go.

The Foundations for a Program.—Any program for farming must be built within the limitations of climate, soil, and topography of the land. It will be modified by both the long time and the immediate economic outlook. Since it is impossible at this time to predict accurately the long time course of economic forces, more than usual weight must be given to the domestic situation and the program immediately ahead. This year's program should be shaped to domestic needs and markets. One should at the same time give thought to the protection of the land, to the conservation of soil fertility, and to the national program.

For 1941 the program may well be built around livestock products. Outlook reports indicate at least another year of favorable ratios between livestock and feed crop prices, in spite of high corn prices. Increased wages to industrial workers are expected to be reflected in greater consumption of meat, milk, butter, and poultry products. Prospective supplies of beef cattle are not sufficiently large to lower seriously the prices that have prevailed throughout the past year. The indicated hog crop is shorter than that of last year, and prices should be reasonably satis-

January 1941

factory. Dairymen have had a satisfactory year, and increased industrial activity should increase rather than decrease demand and prices for dairy products. Increased income will also result in greater use of poultry and poultry products. All in all 1941 looks like a reasonably good year for those who have preserved their foundation herds and flocks and who are in a position to produce economically.

Fortunately Minnesota farmers are blessed with a climate favorable to the production of high quality livestock and livestock products. The land is now producing more abundantly and more regularly than at times in the past. So far as moisture and temperatures are concerned, there is nothing to indicate at present anything other than a normal crop year.

Building the Program.-Building a farm program begins with selection of the crops to be grown. Since this is to be a livestock year, special attention should be given to the feed and forage crops. Once more I should like to hammer home the importance of the pasture crops. Farmers of Minnesota could have a full 6 months of good pasturage for their herbivorous animals. Few of them do. And yet, there is no feed that will compare in palatability, effectiveness, and economy with good pasturage. For pasture purposes a combination of grasses and legumes has many advantages. Unless provided for in last year's seedings it is too late to arrange for it now. It is not too late to prepare for 1942, however. Make a generous provision for next year by seeding a good acreage this coming spring. Grass and legume seeds are cheaper than usual. It will be a good year to get started. If not all is needed for pasture the pasture crops will keep down weeds and improve the soil.

The absence of a permanent grass pasture does not mean that pasturage cannot be provided. A combination of the cereal grains—oats, barley, and fall rye—sown early will provide feed until June or July. Sudan grass can be made ready for pasture by July 1st to 10th, and for the balance of the summer months meadows, stubble fields, and fall rye sown in August will complete the season. Such pastures yield well but are more troublesome and expensive than the regular grass and legume pastures. Be sure to provide now for next year's pasture by generous seedings to grasses and legumes.

Next to good pasturage in value and usefulness for livestock production are good quality hays and cured forages. Legume hay or mixtures of legumes and grasses yield well and are high in protein content. Little grain need be fed to dry cows and other store stock when generously supplied with good mixed hay. It is a large factor in cutting down grain feeds for dairy cows also.

A short hay crop can be well supplemented with soybean hay, sudan grass hay, or with hay made from the cereal crops. These, supported by corn or cane fodder or by good quality silage, lay the ground work for low cost animal products.

Feed grains should make the next demand for land. Some will be needed for dairy cows in high production and for finishing cattle, hogs, and sheep for the market. Corn should predominate, but generous provision of oats and feed barley is advisable on any farm where a diversity $_{0f}$ livestock and poultry is raised.

The balance of the land, if any, may be filled in with wisely chosen cash sale crops, those suited to the soil, the climate, the equipment at hand, the labor supply, and the market to be served. At present flax, wheat, barley, soybeans, and special crops such as canning crops—sugar beets, potatoes, beans, etc.—seem most adaptable and promising.

Converting the Feeds to Foods.—There is little market for pasture products except through the medium of livestock. Cured hay and forages are too bulky and too low in value to permit profitable transportation over long distances. The chief function of livestock on a farm, therefore, is to convert pastures and feed crops into concentrated food products of relatively higher value that can be shipped, profitably, long distances to terminal markets and large population centers. The care of livestock also gives productive employment to labor that on many farms would not otherwise be employed.

The kind of livestock to produce on any farm should be determined by (1) the feed supplies that can be provided, (2) by the kind and amount of labor available to care for it, and (3) by the facilities available for feeding, housing, and caring for the stock.

Which Shall It Be?—The 1941 outlook is equally favorable for the production of beef or of dairy products. Feeds converted into either meat or products of the dairy are likely to give reasonably good returns. Farmers who have plenty of grazing lands and feed crops, but who are short on family labor, may find beef production to their advantage. Those having family labor in addition to feed supplies may well put the emphasis on dairy production. The net income of the dairy is likely to be the largest because of the larger employment of family labor on the dairy farm.

Whether beef cattle or dairy cows are kept, hogs should be raised in that part of the state where corn can be matured or where other suitable feed grains can be economically supplied. The hogs will salvage the by-products of the dairy or of the feed lot and add liberally to the net income of the farm. The outlook for hog prices promises better returns from hog raising than were obtained in the year just closing. Hog production will stand some expansion.

There is no reason for decreasing production of either sheep or poultry. The supplies of either are not excessive and those equipped for raising either class should plan for at least their usual production. It is out of such things as these that a well rounded program for any farm can be set up. But it is well to remember that the operator largely determines what the result will be.

"Heads Up Farming"

For some years past I have talked and advocated what I have called "Low Pressure Farming." The implication has been that the land would be less intensively tilled, that less labor would be used with consequently lowered gross incomes and less expense. Mature consideration has convinced me that something else is required. At any rate, that term does not mean what I now have in mind as a program for Minnesota farms in 1941. Present conditions call for a "Heads Up" type of farming rather than a low pressure type.

Those of you who are familiar with land clearing methods will remember that after a charge of dynamite has been placed and is ready for exploding, the signal "Heads Up" is shouted. The signal implies that all should be observant and on the alert to dodge the falling fragments. Dangers at this time beset the farming business. Our old production plans have been shattered. Certainly our former marketing program has been exploded. Possibly our long time farming objectives have also been hit. The air is full of fragments from the explosions and one needs to be alert and on the job to avoid serious damage to one's income or outright financial decapitation. So it is "Heads Up" with a sharp outlook on three items that vitally affect net farm income, and the satisfactions found in farm life. Here are the items: (1) Low Operating Expense; (2) High Gross Returns; (3) No Leaks (Waste). Result=High Net Income.

To bring out more clearly methods employed in "Heads Up Farming" suggestions are presented in chart form.

"HEADS UP FARMING"

 (1) Low Operating Expense (2) High Gross Returns (3) Kilk (4) Meat (5) Eggs and poultry (6) Cereals (7) Vegetables (7) Vegetables (7) Vegetables (7) Vegetables (7) Vegetables (7) Vegetables (8) On high return crops (9) High Gross Returns (1) Expend Labor Wisely (9) A. On best soil (9) On high return crops (1) Vegetables (1) Vegetables (2) High Gross Returns (1) Expend Labor Wisely (1) Expend Labor Wisely (2) High Gross Returns (1) Expend Labor Wisely (2) On high return crops (2) Good cash sale crops (2) High Gross Returns (2) High Gross Returns (2) On high return crops (2) Good cash sale crops (2) Good cash sale crops (2) High Gross Returns (3) Milk (4) Meat (5) Eggs and poultry (6) Cereals (7) Use Adapted and Tested (7) Vegetables (8) Cow machine costs (9) Y Use Adapted and Tested (9) V Use Adapted and Tested (9) V Use Adapted and Tested (1) Finue acre costs (2) High Gross Returns (3) Cosh crops (4) Figure acre costs (5) Without 	Items In	ivolved
I. Use Low Cost Home Grown Feeds and FoodsI. Expend Labor Wisely A. On best soilA. Livestock feedsA. On best soilA. Livestock feedsB. On high return crops1. Pasture cropsC. On high return cows or other livestock3. Feed grain cropsC. On high return crops3. Feed grain cropsA. Best soil to1. VegetablesI. High return crops2. FruitsCood cash sale crops3. MilkIII. Time Operations Well4. MeatA. Preparation of land5. Eggs and poultrySowing the seed6. CerealsC. Tillage operationswhole wheat, cornI. Sowing the seed1. Use all available family laborI. Quantity2. Hire only for productive workI. To replace human labor1. To replace human laborS. Feed grains2. By full duty useS. Hire? Rather than buy?4. Figure acre costs with—withoutSawing the seed	1) Low Operating Expense	(2) High Gross Returns
4. Figure acre costs with—without	 Low Operating Expense Use Low Cost Home Grown Feeds and Foods A. Livestock feeds Pasture crops Hay and forage crops Feed grain crops Family foods Vegetables Fruits Milk Meat Eggs and poultry Cereals	 (2) High Gross Returns (2) High Gross Returns I. Expend Labor Wisely A. On best soil B. On high return crops C. On high return crops C. On high return crops C. On high return crops 2. Good cash sale crops III. Time Operations Well A. Preparation of land B. Sowing the seed C. Tillage operations D. Harvesting Quality IV. Use Adapted and Tested Varieties — Apply fertilizers where needed. V. Get Better Than Average Production A. From corn (use hybrid) B. Feed grains C. Cows—hogs—hens D. Cash crops
with—without	4. Figure acre costs	
	with—without	

I. Avoid Labor Waste	III. Avoid Crop Waste					
A. On unproductive enter-	A. Poor seed					
prises	B. Weed competition					
B. On low-producing livestock	C. Careless harvesting					
C. Partial loads to field or	D. Poor storage					
market	E. Unused crop residues					
D. Overtending livestock	IV. Avoid Livestock Waste					
1. Pasture feeds	A. From preventable disease					
Self waterers	B. From poor sanitation					
3. Self feeders	C. Under pasturage					
II. Avoid Machine Power Waste	D. Overfeeding					
A. Poorly groomed—lack of	E. Poor timing for market					
oil and grease	· · ·					
B. Under loads						

C. Less than full duty

RESULT: HIGH NET INCOME

The Amount and Expenditures for Hired Labor on Minnesota Farms

REX W. Cox

The amount of labor hired in the operation of farms depends on the total size of the farm business and on the efficiency of labor performance. The total size of the farm business in Minnesota measured in terms of work units has shown a significant increase during the past 30 years as a result of an expansion of both the crop and livestock enterprises. The relative changes during this period are shown in table 1. For example, the size of the total farm business averaged 42 per cent greater during the period 1931-35, than during the years 1911-15. The size has declined some in recent years, but there is no indication that the trend will continue downward.

Table 1. Total Size of the Farm Business, Months of Labor Hired, Average Monthly Wage Rates, and Expenditure for Hired Labor on Minnesota Farms

	Total Size of the Farm Business	Months of Labor Hired	Average Monthly Wage	Average Annual Expenditures
	Per cent of 1911-15	Per cent of 1911-15	Dollars	Dollars
1911-15	100	100	28.10	13,119,000
1916-20	112	103	48.00	23,133,000
1921-25	127	106	37.60	18,564,000
1926-30	131	97	41.20	18,583,000
1931-35	142	92	20.30	8,763,000
1936-40	137	78	28.60	10,355,000

While the size of the farm business was increasing rapidly during the first 15 years of the 30-year period, the months of labor hired annually increased only moderately. During the succeeding 15 years, the months of labor hired decreased rapidly, and for the period 1936-40, the number of months averaged 78 per cent of the corresponding number in 1911-16. The relative decrease in the amount of hired labor necessary to the operation of the increasing size of the farm business during the 30 year period was largely a reflection of the increasing efficiency of labor made possible by greater use of machines, that is, larger machines and more mechanical power.

Monthly wage rates (in addition to board) reached a peak during the first world war (table 1). The lower levels prevailing during 1921-25 were followed by a moderate increase during the next five years. The decline initiated by the depression resulted in the monthly wage rate dropping to the relatively low level of about \$20 during the years 1931-35, a decrease of more than 50 per cent from the average rate of the preceding five years.

The annual cash expenditures for hired labor on Minnesota farms averaged about 23.1 million dollars during the years, 1916-20, and about 18.5 million during the succeeding 10 years. The low level of rates and the increasing efficiency in the utilization of labor accounted for the reduction to about 8.7 million dollars annually during 1931-35. Although rates have shown a considerable advance in recent years, the continued increase in efficiency of labor has retarded any rapid advance in the total expenditures for hired labor.

Minnesota Farm Prices for December, 1940

Prepared by W. C. WAITE and W. B. GARVER

The index number of Minnesota farm prices for the month of December, 1940, was 68. When the average of farm prices of the three Decembers, 1924-25-26, is represented by 100, the indexes for December of each year from 1924 to date are as follows:

1924— 92	1929- 96	1934— 67	1939— 64*
1925—104	1930— 73	1935 79	1940- 68*
1926—104	1931- 50	1936 91	
1927- 95	1932- 36	1937— 78	
1928— 95	1933— 41	1938 66	
 Preliminary. 			

The price index of 68 for the past month is the net result of increases and decreases in the prices of farm products in December, 1940, over the average of December 1924-25-26, weighted according to their relative importance.

Average Farm Prices Used in Computing the Minnesota Farm Price Index, December 15, 1940, with Comparisons*

	Dec. 15, 1940	Nov. 15, 1940	Dec. 15, 1939		Dec. 15, 1940	Nov. 15, 1940	Dec. 15, 1939
Wheat	\$0.72	\$0.74	\$0.83	Cattle	\$7.60	\$7.30	\$6.90
Corn	.45	.49	.40	Calves	8.80	9.00	8.10
Oats	.27	.27	.30	Lambs-Sheep	7.80	7.96	7.42
Barley	.38	.37	.41	Chickens	.10	.10	.09
Rye	.36	.37	.47	Eggs	.22	.21	.15
Flax	1.42	1.40	1.81	Butterfat	.37	.33	.31
Potatoes	.39	.35	.49	Нау	4.86	4.45	4.42
Hogs	5.40	5.40	4.80	Milk	1.70	1.65	1.65

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

The index, at 68, indicates no general change in the level of farm prices from November, when the index was also 68. Wheat, corn, and rye showed declines, while the price of oats was unchanged and barley and flax prices advanced a little. Hogs remained unchanged at \$5.40, while cattle advanced 30 cents. Calves and lambs declined around 20 cents. The price of butter showed the greatest rise, advancing 4 cents from 33 cents for November to 37 cents for December. This is considerably more than the usual November to December seasonal rise. Eggs advanced in price but at a rate less than the usual seasonal rise for the period.

Indexes	and	Ratios	of	Minnesota	Agriculture *
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	Dec. 1940	Nov. 1940	Dec. 1939	Average Dec. 1924-26
U. S. farm price index	74.3	72.3	70.6	100
Minnesota farm price index	67.9	67.7	63.5	100
U. S. purchasing power of farm products	92.5	90.3	88.0	100
Minn. purchasing power of farm products	84.6	84.4	79.2	100
Minn. farmers share of consumers food				
dollar		45.0	42.2	56.2
U. S. hog-corn ratio	10.3	9.9	10.0	13.3
Minnesota hog-corn ratio	12.0	11.0	12.0	15.7
Minnesota beef-corn ratio	16.9	14.9	17.3	8.8
Minnesota egg-grain ratio	22.5	21.0	14.4	26.7
Minnesota butterfat-farm-grain ratio	45.1	39.6	36.0	42.6

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

Pig Survey

The December 1 Livestock Survey of the U.S.D.A. Agricultural Marketing Service indicates a 13 per cent decrease from 1939 in the 1940 fall crop of pigs saved, although the 1940 fall crop was 11 per cent above the 10year average of 1929-38. The number of sows fall-farrowed in 1940 was likewise 13 per cent below 1939 and 7 per cent above the 10-year average. The total number of sows farrowed for spring and fall 1940 was 10 per cent below 1939 totals and 6 per cent above the 10-year average.

Sows Fullowed							
State		Spring		Fall			
or Division	1939	1940	Per cent of 1939	1939	1940	Per cent of 1939	
U. S	8,695	8,057	93	5,192	4,504	87	
Minn.	744	714	96	210	206	98	
W. N. C.	4,119	3,771	92	1.620	1.426	88	

Pigs Saved

State	Spring		Fo	Per Litter,	
Division	1939	1940	1939	1940	Number
U. S	53,207	48,389	32,687	28,587	6.35
Minn.	4,620	4,420	1,319	1,306	6.34
W. N. C.	25,377	23,051	10,216	9,061	6.35

The number of pigs saved per litter from U.S. spring farrowings was slightly (2 per cent) lower for the spring crop of 1940 than for 1939. On the fall farrowings the pigs saved per litter was slightly better for 1940 than for 1939. Combining the two crops, the U.S. ratio was slightly poorer for 1940 than for 1939. For the U.S. combined crops the ratio for 1940 was 6.13 pigs, while for Minnesota it averaged 6.22, and for the West North Central States it was 6.18 pigs.

Reports on breeding intentions up to December 1 for spring, 1941, indicate a further decrease of 14 per cent in the number of sows farrowed from the spring 1940 figure.



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