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AGRICULTURAL EXTENSION DIVISION
UNIVERSITY OF MINNESOTA

F.W. Peck, Director

MINNESOTA FARM BUSINESS NOTES

No. 97 December 20, 1930

Prepared by the Division of Agricultural Economics
University Farm, St. Paul, Minnesota

ELEMENTS OF COST IN DAIRY, SWINE, AND POULTRY

Prepared by G. A. Pond

Money Costs are of Limited Significance

Any figure expressing the cost of producing a farm product in terms of money is of limited significance. It applies only to a particular time and place. Two elements make up the money cost figure,- quantities of goods and services used in production, and prices. Of these two, price is a much less stable element. Prices not only change from day to day and week to week but they vary from locality to locality. The prices of some cost elements vary much more than those of others. Furthermore, many of the elements of farm cost, such as family labor and farm by-products have no regular market price. Any price attached to them is an estimate based on some alternative use or substitution cost.

Physical Elements of Cost have a Stable Value

Costs expressed in quantities of feed, labor, or other factors of production are based on a definite physical unit. They serve a number of purposes. By applying current prices or probable future prices to them, it is possible to compute a money cost of immediate significance. They may be used as a basis for budgeting possible changes in the farm organization. They also serve as a measure or standard by which farmers who are keeping accounts may check their efficiency as producers thru comparing the quantities of feed and labor they use in producing a given product with that used by other farmers. These comparisons may be made either between physical quantities or by applying the same prices to both sets of quantities and making the comparison in terms of money. By using these quantities as a base, costs can always be kept up to date or projected into the future. Only as methods of production change do these elements of cost change materially.

Farm Accounting Studies Furnish Physical Cost Data

The data on elements of cost in livestock production as presented in this article were obtained from detailed accounting studies on groups of farms representative of the important types of farming in different parts of the state. These accounts have been kept in cooperation with the University of Minnesota and the U. S. Department of Agriculture. They have been carefully supervised and checked for accuracy. Since, in general, only the better farmers are interested in keeping accounts, these figures represent the accomplishment of fairly efficient producers and hence should prove useful as a standard for purposes of comparison.

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Dairy Cows

Elements of cost in maintaining dairy cows are presented in Table I. The butterfat production figure is based on the butterfat actually utilized and includes the fat in cream or milk sold, used in the house, or fed to calves. Production for the same herd computed according to the methods of a dairy herd improvement association would be 10 to 15 per cent higher.

Table I Quantities of Feed, Labor and Horse Work per Dairy Cow per Year

County	Steele	Cottonwood & Jackson	Pine	Polk	6 counties* S.E. Minn.
Years covered	1920-24	1920-24	1925-27	1926-28	1928-29
Number farm years	111	46	72	51	297
Average cows per farm	15.8	9.5	11.0	10.4	14.4
Butterfat production, lbs.	193	166	255	184	245
Farm grains, lbs.	1516	1022	814	1006	1587
Commercial feeds, lbs.	141	9	492	255	224
Oilmeal, lbs.	34	18	178	10	62
Total concentrates, lbs.	1691	1049	1484	1271	1873
Dry roughage, lbs.	2472	2630	3327	4358	3739
Succulent roughage, lbs.	8273	3330	6755	5118	7266
Pasture, days	182	219	162	158	155
Man labor, hrs.	166	154	197	173	**-
Horse work, hrs.	9	6	8	3	**-

* Dodge, Freeborn, Goodhue, Rice, Steele and Waseca counties.
**No labor data available.

Swine

Production of hogs as reported in Table II is based on the entire swine herd. The net production of hogs is obtained by adding together the weights of

Table II Quantities of Feed, Man Labor and Horse Work per 100 Pounds of Hogs Produced

County	Steele	Cottonwood & Jackson	Pine	Polk	Rock & Nobles	*6 counties S.E. Minn.
Years covered	1920-24	1920-24	1925-27	1926-28	1929	1928-29
Number farms	106	105	69	72	22	290
Pounds hogs per farm	13128	12500	1959.	6522	29029	13149
Farm grain, lbs.	417	480	165	454	550	479
Commercial feeds, lbs.	11	4	69	16	4	10
Tankage & oilmeal, lbs.	3	3	2	0	5	1
Total concentrates, lbs.	431	487	236	470	559	490
Skimmilk & buttermilk, lbs.	364	122	1472	240	35	491
Potatoes & roots, lbs.	-	-	174	-	-	-
Pasture, days	30	27	19	15	21	30
Man labor, hrs.	5.5	3.3	9.9	3.0	2.8	**-
Horse work, hrs.	0.6	0.5	0.5	0.3	0.8	**-

* Dodge, Freeborn, Goodhue, Rice, Steele and Waseca counties.
**No labor data available.

hogs sold, on hand at the end of the year, and butchered for home consumption and subtracting from this the sum of the weights of hogs on hand at the beginning of the year and those purchased during the year. The total feed and labor for the entire swine herd is then divided by this figure to get the quantities per 100 pounds. The figures cover not only the feed for the hogs marketed but also an allowance for the breeding herd that produced them and for any hogs that die before reaching market age. The large amount of feed per 100 pounds in Rock and Nobles Counties is in part due to heavy cholera losses on several farms.

Poultry

The elements of cost in poultry production as shown in Table III are based on 100 mature chickens as a unit. Two birds under 6 months of age are considered equal to one mature chicken. The feed and labor cover both the laying flock and the rearing of poultry for sale or for maintaining the flock. Some measure of the relative importance of egg production and of rearing chickens is indicated by the percentage that laying hens constitute of the total flock.

Table III Quantities of Feed, Man Labor and Horse Work per 100 Chickens

County	Steele	Cottonwood & Jackson	Pine	Polk	Rock & Nobles
Years covered	1920-24	1920-24	1925-27	1926-28	1929
Number farm years	96	96	72	54	22
Chickens per farm	169	170	105	173	255
% hens of total chickens	69	71	74	60	52
Eggs per hen	76	69	128	74	75
Farm grains, lbs.	2826	3885	1687	4394	3847
Commercial feeds, lbs.	84	66	3714	324	330
Meat scraps, lbs.	9	4	38	20	65
Total concentrates, lbs.	2919	3955	5439	4738	4242
Skimmilk, lbs.	702	1013	*10362	2023	436
Roots & other succulence, lbs.	-	44	802	86	6
Man labor, hrs.	201	198	291	162	166
Horse work, hrs.	4	10	4	8	5

*7430 lbs. fed as cottage cheese.

MINNESOTA FARM PRICES FOR NOVEMBER 1930
Prepared by D.D. Kittredge and A.E. Erickson

The index number of Minnesota farm prices for the month of November 1930 was 75.7. When the average of farm prices of the three Novembers of 1924-25-26 is represented by 100, the indexes for November of each year from 1924 to date are as follows:

November	1924 -	91.9
"	1925 -	105.1
"	1926 -	104.4
"	1927 -	96.3
"	1928 -	96.4
"	1929 -	100.6*
"	1930 -	75.7*

*Preliminary

The price index of 75.7 for the past month is the net result of increases and decreases in the prices of farm products in November 1930 over the average of November 1924-25-26 weighted according to their relative importance. These increases ranged from approximately 4 per cent to 2, and the decreases from 70 per cent to 13. The products ranked according to the size of their percentage increases or decreases in this comparison are shown in the following list;

Principal Farm Products which Showed Price Increases and Decreases in November 1930 when Compared with Average Prices in November 1924-25-26
(arranged in descending order of percentage change)

Increases	Decreases	
Cattle	Rye	Corn
Calves	Wheat	Hogs
	Lambs-Sheep	Chickens
	Barley	Potatoes
	Oats	Hay
	Flax	Milk
	Eggs	Butterfat

Although the Minnesota index for November 1930 does not measure price changes from October 1930, a comparison of month to month changes in price has been made. The increase is 23 per cent. The decreases range from 24 per cent to 2. The products ranked according to the size of their percentage increase or decrease in November 1930 over October 1930 are shown in the following list:

Principal Farm Products which Showed Price Increases and Decreases in November 1930 when Compared with October 1930
(arranged in descending order of percentage change)

Increase	Decreases	
Eggs	Corn	Chickens
	Rye	Calves
	Potatoes	Cattle
	Oats	Butterfat
	Wheat	Hay
	Barley	Milk
	Flax	Lambs-Sheep
	Hogs	