



Lincoln Ewe Lambs.

First in class, first in pen of three lambs, first in pen of five lambs, over all breeds, winning the Drummond Cup. Property of John S. Gosnell & Sons, Ridgetown, Ont.

Some Swine Experiments.

Address by Prof. G. E. Day, Ontario Winter Fair, 1910.

The great difficulty in connection with arriving at the cost of producing stock is to know what to charge for foods consumed. Somebody says, "That is easy; charge market prices, of course." But if we charge top market prices for foods, we find that the margin between the cost price and the selling price is usually small, unless the farmer has a special market for his products. In other words, a man who had to buy all the food for his stock would find difficulty in making ends meet, unless he obtained fancy prices for his output. He would be placed in the same position as a manufacturer who bought his raw materials from retailers, paying the highest retail price. No manufacturer could show a profit if he followed such a plan, and if live stock can be made to show a profit above the retail price of the raw material used in its production, it simply goes to show that the live-stock business is a long way better than any manufacturing business under the sun.

Even in the case of purchased foods, the actual cost may, in some cases, be less than the apparent cost. For example, most farmers purchase foods for stock with money obtained from the sale of grain or other produce. Suppose that a farmer sold wheat at \$1.00 per bushel, and used the money to purchase middlings at \$25 per ton, the \$25 paid for a ton of middlings does not represent the actual cost to the farmer. The actual cost to the farmer of a ton of middlings is twenty-five bushels of wheat, plus any incidental expense and labor incurred in effecting the exchange. It will be seen, therefore, that the cost of the ton of middlings to the farmer depends entirely upon what it cost him to produce his wheat, and it is right here where live stock performs one of its very important functions, namely, that of enabling the farmer to reduce the cost of production, provided he realizes the importance of making the most of the manure they produce.

In our calculations, which follow, we have charged purchased foods at what was paid for them, but some of the other foods are, possibly, not quite up to their retail value, because the grain which we fed was as it came from the threshing machine. We feel that the charges are high, and that the actual cost of the pigs in question was less than is represented.

COST OF RAISING PIGS.

In the spring of 1910 we had nine breeding sows—six Yorkshires, two Berkshires, and one Tamworth.

The first sow farrowed on April 13th, and the last one on June 22nd.

The pigs were weaned at six weeks old, except the last litter, which was weaned on July 28th, the pigs being only five weeks old.

A record was kept of all food consumed by sows and pigs from the time each sow farrowed, until July 28th, when the last litter was weaned.

The nine sows raised 72 pigs, and the average age of the pigs on July 28th was 79 days, or, approximately, eleven weeks.

Taking in each sow when she farrowed, and carrying her and her pigs along until July 28th, we found that the sows and their pigs together consumed the following quantities of food, which have been valued at what we regard fair market values:

Wheat middlings, 5,030 lbs., at \$22 per ton	\$ 55.33
Barley, 2,965 lbs., at \$22 per ton	32.62
Oil cake, 250 lbs., at \$38 per ton	4.75
Skim milk, 17,016 lbs., at 20c. per cwt.	34.05
Total	\$126.75

Therefore, the total value of food consumed by sows and pigs from the time the pigs were born until the last litter was weaned, amounted to \$126.75.

Maintenance of Dry Sow.—To arrive at the total cost of the pigs, we must make a charge for maintaining the sow after her pigs are weaned, and before she produces her next litter. In previous calculations, we estimated the cost of maintaining a dry sow at 75 cents per month. Lest this estimate be regarded as too low under present conditions, we shall place it at \$1.00 per month. If a sow raises two litters per year, and nurses each litter six weeks, there will be left about 9 1/2 months each year between litters, which, at \$1.00 per month, amounts to \$9.25. Only half of this amount, or \$4.63, should be charged against any one litter.

Interest, Risk, Labor, and Manure.—These are controversial points, and the allowance which should be made for each is difficult to estimate. In the meantime, therefore, we shall leave these items out of consideration.

Total Cost of Pigs.—It has been stated that the average age of the 72 pigs was 11 weeks when this part of the experiment closed. The cost, therefore, of these 72 pigs, at 11 weeks old, omitting risk, interest, labor, and manure, was as follows:

Service fees, 9 sows, at \$1.00	\$ 9.00
Maintenance of dry sows—9 sows, at \$4.63	41.67
Value of food consumed by sows and litters (average age of litters, 11 weeks)	126.75
Total cost of 72 pigs	\$177.42

Average cost of 1 pig 11 weeks old, omitting risk, interest, labor, and manure, \$2.46.

In 1906, with 12 sows, we found that, on an average, a pig six weeks old cost us \$1.27. This year we charged higher prices for food than we did in 1906, so that a cost of \$2.46 for a pig 11 weeks old is a better record than that of

1906. The improvement is due mainly to the fact that our sows raised larger litters this year.

An average of 8 pigs per litter for 9 sows, is more than can be ordinarily expected, but, where only one or two sows are kept, 8 pigs to a litter is not an unreasonable expectation.

RETURNS FOR FOOD CONSUMED BY HOGS.

In the Ontario Agricultural College report for 1907 there is a table showing the prices yielded for food consumed by 297 hogs, at various selling prices per pound live weight for the hogs. The table shows that if the hogs were sold at:

(a) 5 cents per pound, they would give \$23.87 per ton for meal, 20 cents per cwt. for milk, and 10 cents per bushel for roots.

(b) 6 cents per pound—\$30.71 for meal; 20 cents for milk, and 10 cents for roots.

(c) 7 cents per pound—\$37.55 for meal; 20 cents for milk, and 10 cents for roots.

Regarding the hogs used in this year's test, it has been shown that, at 11 weeks old, they cost us \$2.46 each, omitting the items of interest, risk, labor, and manure. However, since we selected the best 40 pigs out of 72 for our test with alfalfa, milk, etc., and since no charge was made for interest, risk or labor, we shall charge the pigs used in this calculation at \$5.00 each, instead of \$2.46. We are also charging 20 cents per cwt. for milk, and \$3.00 per ton for green alfalfa. Whatever is left, therefore, after deducting the cost of the pigs at 11 weeks old, and the value of the milk and alfalfa, from the value of the pigs when marketed, will represent the cash received for the meal consumed. The amount to be deducted from the selling price is as follows:

40 pigs, at \$5.00 each	\$200.00
10,760 pounds skim milk, at 20 cents per cwt.	21.52
1,467 pounds green alfalfa, at \$3 per ton	2.20
Total	\$223.72

The following table shows the prices which would be realized for foods consumed by these hogs had they been sold at 5 cents per pound, 6 cents per pound, 7 cents per pound, and 8 cents per pound, live weight. Prices realized for foods consumed by 40 hogs:

Assumed selling price of hogs, live weight.	Price received per ton for meal.	Price received per cwt. for milk.	Price received per ton green alfalfa.
If sold at 5c. per lb.	\$20.45	20c.	\$3.00
If sold at 6c. per lb.	31.30	20c.	3.00
If sold at 7c. per lb.	42.16	20c.	3.00
If sold at 8c. per lb.	53.00	20c.	3.00

It is of interest to note that the results agree fairly well with those reported in 1907.

These results also show that the hog is able to give a good account of the food he consumes, when he is sold at 6 cents or more per pound.

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Champion Hereford Cow, Royal Show, England, 1910.