

grain or meal. Did you feed any roots, or anything?

Mr. S. — Well, they got some small potatoes and apples, a few pumpkins, and a little bit of rape in the fall.

Writer — What would that stuff be worth?

Mr. S. — Oh, nothing much.

Writer — Would \$25 pay for it?

Mr. S. — Oh, yes, more than pay for it.

Writer — Well, how do you figure out your cost?

Mr. S. — Well, 200 bushels barley, that is \$130; 200 bushels oats, that is \$120; and four tons shorts, that is \$100; \$25 for pasture, etc., and four sows' keep, that is \$80, for I reckon it costs me \$20 to keep a sow a year. That is —?

Writer — That is \$455.

Mr. S. — Well, I got \$418, so you see I lost lots of money.

Writer — You forgot the three pigs you kept, and you charged 20 bushels extra barley, and you charged present market prices for your grain. I would figure it out this way: Your sows cost, say, \$10 for these litters. They gave you litters this spring, I suppose?

Mr. S. — Yes.

Writer — Well, sows, \$40; barley, 180 bushels, at 55 cents, \$99; oats, 200 bushels, at 50 cents, \$100; shorts, 4 tons, at \$24, \$96; potatoes, etc., \$25; total, \$360. You got \$463, or the equivalent, which makes \$103 profit.

Mr. S. — But barley is worth 65 cents, and oats 60 cents a bushel.

Writer — They were not those prices in the fall, when you would probably have sold. Besides, you would have had to clean, bag and haul the grain 8 miles — that is a consideration, is it not?

Mr. S. — Well, I suppose one might look at it in that way.

Mr. S. still has his four sows, and is not quite so pessimistic as he was. I wonder how many farmers there are in this Canada of ours who figure it the same way as Mr. S.? How many use round numbers and top prices when figuring the cost, but neglect little odds and ends like a pig killed or a sow kept, when figuring the returns? And another item very seldom considered in the returns is the manure, than which no better fertilizer can be found.

From a number of years' experience with a herd ranging from 100 to 400 pigs of various breeds, under most adverse conditions as to housing, and most expensive as to care and feed, I am of the opinion that, taken one year with another, the pig business can be made to yield good profits. This I say, taking into consideration the high prices ruling at present, and likely to maintain for another year at least, for all feedstuffs; and not overlooking the possible drop in prices for the finished product.

One great aim must, however, be kept constantly in view; that is, lower the cost of production. The farmer cannot control the selling price of the hog. That, like prices for most other commodities, is controlled entirely or very largely by supply and demand. The cost of production is likewise influenced to a considerable extent by the same great law, in so far as it affects the prices of feedstuffs, but the skill and knowledge of the breeder and feeder enter at this point, and may very easily make a difference of one-half in the cost of production, with the same class of swine and the same prices for feeds. This may seem to some a rather too great difference in cost to attribute to skill and knowledge, but my experience would seem to indicate that it is probably underestimated, rather than overstated.

I would suggest, as lines along which improvement or effort at lowering cost might be made:

1. Selection of sire and dam.
2. Raising young sows.
3. Feeding old sows.
4. Care and management of young pigs.
5. Economy in feeding or finishing off.
6. Winter feeding-off.

Selection of Breeding Stock. — A very great difference exists in strains or families of different breeds, as well as among cross-breeds, as to fecundity or size of litters. Care should be taken to keep sows from large litters. No sow gives a very large litter every time, but the average should be good. The same peculiarity should be in evidence in the dam of the sire selected. Another point, and one very commonly neglected, is to see that families from which selections are made are quick-growing, easy-feeding and early-maturing animals.

There is no doubt that attention to these points means a difference of from 20 to 30 per

cent., between well-selected and poorly-selected breeding stock — say, 25 per cent.

Raising Young Sows and Boars. — The breeding stock once selected, may usually be fed as are feeding pigs until four or five months old. After this age, they should be put on a special ration; that is, a ration likely to induce growth, roominess and bone development, rather than smoothness and trimness. In this way the chances of the sow becoming a good dam and a prolific breeder are greatly increased. This means an improvement of, say, 5 per cent.

Feeding Old Sows. — Health and thrift of the stock, number and vigor of the young, and economy of the feeding operations, must be the aim in feeding old sows. After five years' experimenting with 40 to 60 sows annually, the writer considers the following plan the most economical, and the most satisfactory as to results: The sows should be housed in well-ventilated quarters. Small cabins outside do very well. They should be fed outdoors. Their food should consist largely of rough and succulent feeds, as clover, hay and roots. The meal should be light in character, and rather sparing in quantity, especially early in the winter. To illustrate, take this feeding record of a bunch of sows at the Experimental Farm in 1907-08.

FEED REPORT

Amount of Feed Consumed by 29 Brood Sows from December 1st, 1907, up to March 14th, 1908.

Week ending.	Roots.	Bran.	Shorts	Clover
	lbs.	lbs.	lbs.	hay.
Dec. 7	2,600	300	...	50
Dec. 14	2,600	300	...	50
Dec. 21	2,650	250	...	100
Dec. 28	2,650	250	...	100
Jan. 4	2,700	200	...	100
Jan. 11	2,700	200	...	100
Jan. 18	2,700	200	...	105
Jan. 25	2,100	140	280	100
Feb. 1	2,450	150	300	150
Feb. 8	2,450	238	476	150
Feb. 15	2,450	238	476	100
Feb. 22	2,400	300	575	100
Feb. 29	2,250	336	672	100
Mar. 7	2,200	350	700	100
Mar. 14	2,200	336	672	100

37,100	3,788	4,151	1,550
Cost to feed 29 brood sows for 105 days:			
37,100 lbs. roots, at \$2 per ton	...	\$ 37.10	
3,788 lbs. bran, at \$22 per ton	...	41.66	
4,151 lbs. shorts, at \$25 per ton	...	51.81	
1,550 lbs. hay, at \$7 per ton	...	5.42	
		\$135.99	

105 days, cost per pig per diem, 4.46 cents.
First 7 weeks, or 49 days, cost per diem, 2.77 cents.

As indicated, these sows cost 4.46 cents a day to feed, or \$4.68 for the winter, each. This experience was repeated in 1908-09, with quite as satisfactory results, as the following figures will show:

COST OF WINTERING 27 BROOD SOWS — WINTER 1908-1909.

Periods.	No. of days.	Bran. Lbs.	Amount of feed consumed.			Total cost of feed. \$	Cost per pig. \$	Cost per day. c.
			Shorts. Lbs.	Roots. Lbs.	Clover. Lbs.			
Nov. 1 to Nov. 30, 1908.....	30	1,400	460	25.35	.93	3.1
Nov. 30 to Dec. 31, 1908 ...	31	1,200	700	10,420	300	32.82	1.21	3.9
Dec. 31, '08, to Jan. 31, '09 ...	31	1,350	710	11,020	650	36.33	1.34	4.3
Jan. 31 to Feb. 28, 1909	28	1,210	605	8,400	600	30.76	1.13	4.0
Feb. 28 to March 13, 1909	13	800	400	4,200	300	18.65	.69	5.3

Total number of pigs, 133; total cost of feed, \$143.91; average cost per pig, \$5.33; average cost per pig per day, 4 cents.

Lowness of cost is, however, not the only consideration, and here the results of the feeding system outlined were even more satisfactory, since, in 70 or 80 sows so fed in the two years, not more than one or two litters were unsatisfactory in either quality or number. It is possible, in this way, to save from 10 to 20 per cent., in the cost of the young dropped. That is, by selection and care, along with judicious feeding of the breeding stock, one may effect a saving of from 25 to 40 per cent. before even starting to feed the young ones.

Care and Management of Young Pigs. — The youngsters from birth must have an abundance of pure air, dry quarters, and just sufficient food of the right kind. Very seldom, indeed, are all these requirements fulfilled on our Canadian farms. Dampness and foul air are the most

commonly observable defects. To overcome these, better ventilation and more hygienically-constructed piggeries are necessary. This is, however, a question in itself, and one which I should like to take up at some future time in detail. The feed of the youngsters must necessarily be through the mother for a couple of weeks. Any overfeeding or unsuitable food is fatal at this period. Cooling food, rich in milk-producing elements, is the right thing. Skim milk, cooked turnips or raw mangels, bran, shorts, oil-cake meal and oats are the best feeds. Teaching the youngsters to eat at an early age is important. Giving them the right food in proper condition is of more importance still. Cleanliness is necessary; a sufficiency of food, and no more, is imperative. Skim milk or whey, always sweet, or always sour, with a little feed flour added, does well. Lacking whey or skim milk, then oat chop, with hulls sifted out, coarse feed flour, and oil-cake meal, equal parts, in a thin gruel, is about right. Getting them out on the land early in the game is highly advisable. Some succulent feed when quite young is beneficial. Pulped roots, clover or rape, are all suitable. A certain amount of pasture or green feed is always profitable. Overdoing with these is not economical at any stage.

Finishing Off. — The final period should begin while the pigs are still young. They should, in fact, always be in good condition. To attempt to economize by feeding on green feed exclusively, or almost entirely, is mistaken economy. Keep pigs thrifty and doing. In summer, meal, green feed, shade, and an abundance of water, with only a very small run, are the best conditions. In autumn, replace the green feed with pulped sugar beets and mangels or cooked potatoes, turnips or pumpkins, about equal weights of meal and roots fed mixed and in a thick slop. Do not cook meal. Feed warm in cold weather, if convenient. Feed meal mixtures of medium weight; too open and light makes paunchy pigs; too close and heavy means indigestion. Feed regularly; feed a uniform ration as to quality and quantity. Feed at least three times a day. Keep pigs dry, cool and well watered, in summer. Keep air pure, floor dry, bed clean, and pigs active in fall and winter. Good feeding and good care means all of 50 per cent. difference in cost of gains.

To summarize, I am certain that pigs ready for the market, that have been raised in the right way, fed off with the right feeds, under proper conditions, and which are the get of properly-selected and properly and economically fed breeding stock, are frequently put on the block at half the total cost of other similar-looking pigs that have been raised in a haphazard way from poorly-selected breeding stock, and then fed, as is too often the case, on too expensive foods, badly proportioned in mixing, and badly handed out to the pigs under bad conditions as to housing, water and air. This being the case, as I am sure not a few will admit possible, and too frequently true; it is in the writer's opinion, not the pig, nor the country, nor the prices for feeds and product, that are to blame, but rather the too great care-

lessness of a large number of our farmers who fail to give this question the attention and study that are absolutely necessary to insure success, no matter what the conditions.

There is another feature of the pig-feeding problem that in my opinion accounts in no small measure for the smallness of our pork product. I am inclined to think that not a few of our Canadian farmers go out of the pig business largely because they do not like it. This would explain in large measure the promptness with which the supply falls off, when to the loose figurer or casual observer the margin of profit looks small.

Beef-raising is not always profitable, but we keep at it. Dairying is too often, under existing conditions, not very profitable, if all the cost be counted, but we keep at it. Not so with