

he needs a clear head much more than hard hands. I must say that the most valuable commodity on our farms to day, which is rather scarce, is common sense with good skill. A man has no common sense who succeeds at knowledge as applied to his own business. Farmers should have particular, accurate and practical knowledge of their own calling. We hear it said often: "Oh we cannot compete with the cheap beef of the West," or such like things. Why is this? because we have not enough knowledge and don't put the knowledge we have into practice to aid us in our work.

There is a market for pork and bacon. We find that a large quantity of pork and bacon is imported here from the Western states. Well, the hog is not such an undesirable citizen if he is well fed and well kept. He is the one great citizen of the American Republic that has helped most to make it wealthy. We send to England of pork and bacon 8,530,000 lbs. and she buys abroad 545,000,000. I should like to lay down the proposition and make it clear, namely: that men who farm for profit should concern themselves far more with getting profit by reducing cost than by trying to raise the market price. There is only one way in the world whereby a man can raise for himself with certainty the market price of anything he sells and that is by improving its quality. Quality governs to every man the price he may obtain. And, as an illustration, let me say this: in all large cities butter ranges in prices from 10 to 25 cts a pound. Now no single farmer and no combination of farmers can force the butter market up or down. If it is forced up too much, then the butter that would otherwise go abroad is kept at home, if it is forced down, the butter is sent abroad. Thus, we cannot influence the market price, but any man can raise himself from being a 10 cent a pound man to being a 25 cents a pound man by sending to the market just the butter for which the people will pay 25 cts. a pound. Men are always looking for profit at the Market-end instead of the Home-end of their business and being mistaken in the direction of their effort, they have small success. Profit lies in any business between the price that is realised and the cost of production. If we can reduce the cost of production, we lengthen our line of profit certainly at one end in lessening the cost; and if the market goes up, we have two profits; one made by our skill and the other by the rise in the market. If the market goes down, we still have our profit at the safe end of our endeavor by having reduced the cost of production. So the man who can reduce the cost of production is the man who is farming with most profit, because reduction in the cost of production does not reduce the price he may realise. As an illustration: suppose that two men are living on neighboring farms and one man produces his butter at 25 cts. a pound. He feeds hay and meal to rather poorly bred and badly kept cows and his butter cost him 25 cts. a pound. The other man keeps cows that are better adapted for butter-making, feeds them on the cheapest kind of suitable food, including corn ensilage, and produces butter equally fine at a cost of 15 cts. a pound. They both sell in the same market. The man who produces his butter at 15 cts. a pound gets an equal price but a larger profit. He has a profit where his neighbor has none. So our endeavor should be to reduce the cost of production rather than to raise the price to be realised, except in this that the price can be modified by an

improvement in quality. The world to day wants food in the form of animal products and the farmer who would farm skilfully and successfully must keep stock that through them he may provide the kinds of food that people want and are willing to pay a high price for.

Having spoken generally, so far, I now come down to dealing with the animal which, as I said before, is the supplement to the cow in producing food. Farmers seldom understand the hog or they would keep more at their places. It does not pay to import \$2,000,000 worth of pork and export hog feed to other countries. If we would feed the hogs ourselves and sell the bacon we should have the producer's profit and the manufacturer's profit. It does not pay us to buy pork and rob the soil of all kinds of grain to give others the manufacturer's profit.

In feeding hogs the man who feeds them well will succeed with them. You must remember that the hog has a preference for being clean. I have read that in feeding a great many pens, one side of each was kept clean for a week, afterwards the pigs themselves kept that clean for their bed. One week's education did it, and if the hog gets a good chance and a good example he is all right. Every farmer with 100 acres, it is said, ought to feed 20 to 100 hogs. The common way of constructing floors of pens is unsuitable. If the floor slopes backwards from the trough it will be kept wet, that means sickly hogs that do not thrive well; it is better to have the floor slant towards the trough. Twice the profit can be made when the hog lies dry all the while, and, besides, the health of the hogs is much better. Then the feeding trough should have its holding capacity in length and not in depth.

It pays to feed them good clean food; they will thrive and do well on the waste from the table, but it should be kept in a clean tub or barrel and not in one which is never cleaned out in which it becomes fermented and sour and makes bad blood.

Hogs fed on clean food should gain at least 1 lb for every 4½ lbs. of grain used. I quote here from a report of the professor of Dairy husbandry at the Ontario agricultural college.

Dairy men neglect one of the best servants they can have in the animal creation when they do not avail themselves of the hog to aid in making money from the by-products of milk. The attitude of the farmers towards the pig has been an unfriendly one. It is a popular though untrue saying that the only good Indian is the dead Indian, and the farmers seem to cherish a similar belief in regard to the hog. That opinion however is in direct opposition to the best interests of the men who keep cows for the manufacture of dairy products. If the man who keeps 10 cows will fatten 20 hogs in the summer and half as many in the winter, he will find, perhaps to his amazement, that this little branch of business will bring him in more money and profit than he thought could be made from it. Whey is a valuable hog feed. There are nearly seven pounds in every hundred pounds of whey which the hog can use to advantage.

The elements of food value in 100 lbs of whey should produce at least 2 lbs. of live weight in hogs; one hundred lbs. of whey fed in the most judicious manner should produce 2 lbs. of pork; it will not do so, if fed alone, but fed in combination with other foods, it will. Sows like cows should be selected for their profit making powers. A man who

knows that unless he has a good dairy cow he need expect no profit from her, often acts as though he believed that anything that grunts will make money for him out of its feed; but the gruntings are the main part of it with some hogs.

In selecting a sow she should be selected first for her length, then for her depth and then for her breadth, a sow should be made to farrow in March or April and September. A breeding sow should never be fed on decayed food. Waste from the table and kitchen is wholesome food for pigs when it is fed clean and before it becomes decomposed, but a never empty and consequently never clean swill barrel is a menace to the health of the hog and a hindrance to profit. The quarters of a breeding sow should be comfortable in winter. Their sleeping place should be well ventilated and dry.

A boar should be selected for length, breadth and depth, he should have proportionally large bones, for small bones are indicative of a weak constitution and a disposition to lay on lard instead of lean meat; a plentiful supply of hair indicates a strong constitution and a predisposition to lay on flesh.

Young pigs should be suckled for about three months, (1) if they are weaned when five or six weeks old they will not do as well. The sow can nurse them as well as if properly fed, and the pigs will grow and thrive so much the better. Skim milk, butter milk, and bran should form some part of a milking sow's ration. It is profitable to scald or boil her feed, until after the pigs are weaned. The little pigs should always have access to cold water for drinking. In feeding and fattening little pigs they should have the trough room in length not in depth. Many hog troughs seem to have been constructed with the object of affording both accommodation for the pigs, so deep and so wide are they, that pigs take headers right into them. The feed for little pigs should be sweet not sour. In the souring of whey some of the sugar is converted in acid lactic. Acid has no feeding properties. It has a slightly helpful digestive action, so that whey or milk which is sour will do a pig no harm, but part of the food value has been lost. All meal fed with whey had better be a mixture of grains; peas, wheat middlings and bran are suitable.

Hog manure is one of the best fertilisers. In feeding hogs little is taken off the farm, much is left on it of manure value and satisfactory money returns may be realised. In addition to these reasons I believe the hogs of the country are an unrecognised and undeveloped source of wealth for men who endeavor to understand and use them well.

Three times a day is not too often to feed them. The hog does not take any harm from having food before it all the time. It is not like a horse or a cow in that respect.

The total value of bacon, hams and pork imported into Great Britain in 1891 was \$48,868,234. The total value sent from Canada in the year ending 30th June 1891 was 7,530,079 lbs. with a value of \$626,037. Denmark with a population of about 65,000 greater than Ontario sent over 50,000,000 lbs. for which she realized an average of 12 cts. a pound. We realized about 8½ cent, and the bacon from the United States was entered at an average of about 7 cts. a lb. The Danes have learned to cater for their customers and have not believed in trying to sell lard to a man who

wants to eat lean pork. So it will pay us to get leaner and less lardy hogs. The quality that is wanted is lean pork from dairy fed swine. To meet the requirements of the English markets larger numbers of our swine should be sold by our farmers alive. They could then be slaughtered at packing houses where the carcasses could be treated and cured in a uniform, satisfactory manner. As a rule, it pays the farmer and feeder better to sell his swine on foot than to market them as dressed hogs. Canada competed in the English market with the United States which sent to England the largest proportion of the bacon she imports. That realized 7 cts. lbs., and our bacon will sell for a cent to a cent and a quarter higher because our pigs are fed on the by-products of the dairy and mixed cereals, while theirs are fed chiefly on corn. We can increase the profit by reducing the cost through economic fattening and selling the animals before they are too large and too old.

Experiments show that 4½ lbs. of grain will give 1 lb of increase in live weight of swine, and that it is not profitable to fatten swine for any market after the weight of the animal exceeds 200 lbs. alive.

#### EXPORT HAY.

It is probable that Canadian hay will not meet with immediate acceptance on the English market, as the English, especially the farmers, are notoriously repugnant to anything they are not accustomed to. Canadian hay is chiefly timothy, which the English do not produce much and the taste for which they and their animals would have to acquire. There will probably be found other differences between the methods of cultivation and curing which will act, temporarily, at least, as a hindrance. Necessity is, however, a great destroyer of prejudices. It is a question, too, whether it is good economy to export fodder at almost any price. Hay is not quite so exhaustive to the soil as wheat, but it is very exhausting for all that. It is calculated that every ton of timothy hay takes from the soil nutritive elements, which are comparatively limited in most soils, to an extent that would cost at least five dollars to replace. To export hay at the low prices that have ruled during the last few years means simply to sell both the labor and the productiveness of a farm at about the cost price of one of them. That is a beggaring operation. There are whole districts in the Province of Quebec in which farms have been more or less exhausted without enriching their workers. A well-managed dairy farm could probably be worked forever without impoverishing it appreciably, and to the enrichment of its owner. Fine butter, for which there is always a good demand at fair prices, is among the least exhausting of all products. Butter, said one who has studied the subject, is mostly 'pure sunshine.' Timothy hay, straw and grain taken from the land potash, phosphates and other matters, which are restored to it if the farm is a dairy one and the manure is used upon it, but which are sent away if the grain and hay or straw is sold. Our farmers might restore these elements if they used mineral manures, like nitrates and phosphates and vegetable ones, like wood ashes. But wood ashes are now too scarce and dear, and phosphates are so difficult of reduction and so costly that they also are little used, although Canada is possessed of large tracts of them.

WITNESS.

(1) Two months is enough.—Ed.