

will, I believe be found to be the effective way, not merely to check but to wipe out the milk-borne diseases. I think the time has come to recognize these facts frankly. The time has come to insist urgently upon pasteurization and to consider and work out the problem of making this protection thoroughly efficient by municipal pasteurization."

The foregoing are the views of a man who has given very careful thought to the milk question for a large city. He has not only given time and thought to the problem, but he has spent large sums of money in providing laboratories where pure milk has been prepared and sold to the poor people of New York at cost; and where the people were unable to pay for it, the milk has been provided free. His reward has been in seeing the death rate among children very materially lowered as a result of his philanthropic efforts.

In case readers may think there is no need for similar work in Canada, we would refer them to a bulletin on "The Milk Supply of Montreal," published by Macdonald College in 1914, which, by the way, is one of the most comprehensive bulletins on the city milk question, which has come under our notice. The authors state: "The enormous death rate of infants in Montreal due to intestinal disease is due in great measure to improper methods of feeding and to dirty milk." They go on to quote: "Out of every hundred children born in the city of Montreal, thirty-two die before the end of their first year, and out of every hundred deaths at all ages occurring in this city fifty-three are children under five years of age, and of these 70 per cent. are under the age of twelve months. In 1910, more than 4,500 infants under one year of age died in the city!"

The foregoing statements are startling. As students of problems in Canadian development, and of methods for increasing population in this country of vast areas, we may very well ask, would it not be the part of wisdom to save the native born by every possible means, rather than spend money to bring in people who are foreigners? Is not each child born in, and raised for, Canada, worth considerably more than a person born outside of, and foreign to the customs and genius of Canada and the Canadians?

As we have seen very few press references to this Macdonald College Bulletin on the Milk Problem we shall review it briefly in next issue of "The Farmer's Advocate."

O. A. C.

H. H. DEAN.

POULTRY.

Does Farm Poultry Pay?

Were this question asked of the farmers of this country, I doubt not but what 95 per cent. would have to answer they do not know. Many reasons might be given for it, but in a general way it is the indifference to what is supposed to be a somewhat insignificant line of farm work. In the summer time most of the farm hens lay eggs, require no care and pick up their own living; but in the winter time the "brutes don't lay" and still have to be fed, which naturally puts them in the class of stock that eat more than they are worth; don't pay and, therefore, are looked after whenever it is convenient. If we would stop to consider the actual cost of feeding the farm flock of hens a year and figure up what they produce, we would find that in the majority of cases, even under adverse conditions, they are paying for their keep. If such be the case under poor conditions, we may assume that hens will pay well on the money invested if they are looked after properly. No class of stock will respond so quickly to proper treatment as the hen, but, on the other hand, no class of stock will show the effects of improper care quicker than poultry. Were we to investigate more closely, we would find that on the farms, where hens do not pay they have to shift for themselves and receive no attention, except when eggs or table poultry are required. We would far sooner see fewer hens on our farms, under better conditions, so that they would pay than see large flocks kept at a loss. Hens kept under filthy, unclean conditions will never show large returns in the egg basket. This is one of the most serious drawbacks to profitable poultry keeping on the farm. Dirty poultry houses and filthy habits of feeding are the direct causes of diseases and deaths in young and old stock, and probably 90 per cent. of the mortality is due to these conditions.

Eggs and meat are the two chief sources of revenue from the farm flock of hens, and the farmer or his wife should direct their efforts to secure the largest number of eggs and get a good class of table poultry. This does not mean killing off the entire farm flock and starting in fresh with pure-bred hens, but rather gradually weeding out, developing and breeding up the flock to a high average.

Eggs and dressed poultry are always in demand, and good prices can be realized for these poultry products at all times of the year. A

flock of heavy layers does not cost any more to feed than one of poor layers, and, as for meat production, a pound of pure-bred or grade chicken is always cheaper to produce than a pound of mongrel. As far as breeds are concerned, there is but very little difference in the cost of producing a pound of meat or a dozen of eggs in any of the utility breeds. Choose the breed that meets your requirements as to eggs and table poultry, then follow proper methods of rearing, feeding and housing, and you will find that poultry keeping on the farm pays no matter what breed you have.

Poultry keeping pays best where a variety of poultry products are produced, such as market eggs, eggs for hatching, broilers, roasters and fowl. Eggs are, of course, the best paying proposition on a farm, in that all the feed required to produce them can be had at first cost, and a good deal of it is, in fact, nothing more than waste on a farm. I venture to say that the cost of summer eggs on the farm is not more than eight cents a dozen—if it is more than this there is something wrong. Winter eggs should not cost more than 15 cents a dozen—if they do there is something wrong again; either the stock consists of poor layers or the kind of food or the way of feeding it is at fault. In a flock of 400 White Leghorn pullets our eggs during the month of February cost us 12½ cents a dozen, and this where we had to pay retail prices for the feed. In order to make the farm hens pay better, you should aim to have some class of poultry product always to sell. Winter eggs are, of course, the best paying thing in poultry keeping.

As soon as the price for these comes down, you should have eggs for hatching to sell, providing you have a good strain of bred-to-lay hens. Broilers follow next, and this line, if properly managed, pays large profits. Only one breed, however, is specially adapted for this—the White Leghorn. Any farmer who is so situated that he

quires skill, and unless you are experienced you had better leave it alone.

Roaster production is the best paying and the easiest line to follow on the average farm. For this the hens can be used for hatching the eggs and the chicks can be raised with hens. It requires but very little in the way of equipment and skill, and there is always a little money in it. Last season, however, a good many of our farmers found prices too low to make it pay. The lesson to be learned from last year's experience is to market earlier in the fall and distribute over a longer period, say start to kill off September 15 and continue late in the fall. Last year it was almost impossible to get a chicken even in the middle of October. Old hens then sold at 16 cents a pound and broilers, so late in the season, at 20 cents a pound. A month later chickens were selling as low as 10 cents a pound. The market was literally glutted and, worst of all, the stuff was in a terrible condition. There was raw, unfinished, poorly killed and poorly dressed poultry of all descriptions in abundance. The high price of feed aggravated the conditions. After New Year, as soon as the market was relieved, prices immediately recovered and choice roasters sold at 20 cents a pound. This shows us that our farmers should market earlier and distribute it over a longer period of time.

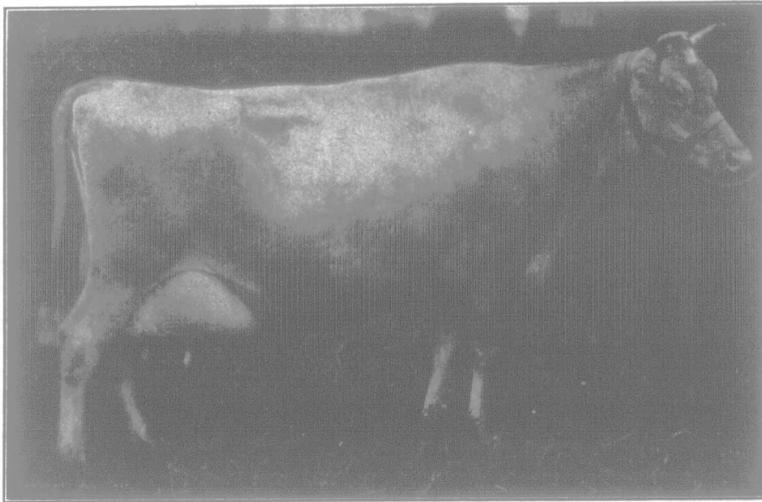
Another point I wish to mention is the money our farmers are losing by not fattening their cockerels before selling them. Our work last fall showed that chickens bought of our farmers can be fattened at a profit of 15 to 20 cents each in three weeks' time. When large wholesale firms can instal fattening equipment and make money fattening chickens, surely then, our farmers could do even better in that they have everything at first cost. Here again is a place where our farmers can make more money from their poultry if they follow different methods.

In poultry production there is room for a good many more larger producers. Many of our farms could stock up with poultry a good deal heavier. While we do not advocate extensive poultry culture, still the average farm flock should have anywhere from 75 to 200 laying hens. This number would make it worth while spending more time on the hens, giving them better attention, and in this way avoid some of the losses that occur when only a few chickens are raised and but little time is spent with them.

A close study of conditions shows me that the death rate in young chickens is 50 per cent. higher than it need be under proper conditions. Every chick that dies cuts down the profits, in that it increases the cost of those living. Disease, vermin, improper conditions, rats, crows, hawks and various other things contribute their share of the loss. Disease can be prevented by having the coops clean, feeding out of clean troughs and drinking vessels and feeding clean food. Insect powder on the hens and chicks will keep them free from lice. Coal oil and carbolic acid sprayed on the roosts in the hen house and in the coops where the chicks are will keep them free from red mites. Rats can be kept away from the chicks by having wooden floors in the coops and closing the coops at night so that no rats can get in. Rats very seldom take chicks during the day, but in a single night I have known one rat to kill off 15 to 20 chicks. Crows and hawks are a little more difficult to handle, but usually a shot gun, used early in the season, will tend to keep these enemies at a distance. A few dead crows suspended from a pole by a cord will have the effect of keeping the other crows away. Ordinary binder twine strung across the place where the chickens are reared will help to keep the crows away. String up strands 10 feet apart each way and 10 feet off the ground, and crows will not dare to get underneath this net work.

Hatch the chickens early and feed plenty of dry mash, such as equal parts of wheat and barley chopped fine and hulls sifted out, and buttermilk to drink, and you will get good, strong, vigorous, well-matured chickens by October 1—pullets that are ready to do business as winter egg producers and cockerels that, with a few weeks of fattening, will command the highest market prices. Winter eggs should be the biggest source of profit from the farm hens.

Spring work with the laying hens consists in



A Winning English Jersey.

can ship dressed broilers easily to a good market, could make quite a little money out of his early chickens by selling them as broilers. Probably this line requires a little more equipment than any other line, but if a farmer has an incubator and a brooder, anyway he could easily get a good start. As soon as the broilers begin to go down in price, the roasters should be ready to be killed off. Previous to this the old hens should be killed off. This should be done during July or at the end of the laying period. First get all the eggs they lay, then get rid of them. Here is where a good many make a mistake; they keep too many old hens, and if they do kill them off they do it at the wrong time of the year. The price of old hens now is 17 cents a pound dressed, so get rid of them. Broilers sell readily at 50 cents a pound.

Our first flock of 180 broilers hatched March 23, were marketed during the period from May 7 to June 4 at a total weight of 202 pounds, and the amount received for them was \$100.94. These broilers cost us about 35 cents each all told to produce, thus leaving us a very substantial profit. We do not give these figures to indicate that any farmer could do the same, for we know that situated as we are, close to the city, we can get better prices than a farmer living out in the country could, and our facilities for handling the product are better than a farmer generally could have, but at the same time there is money in this line for anybody close to the main line of any railway so that the broilers can be shipped in good condition. If you are close to the station and have ice so that you can cool the carcasses properly, pack and send them in first-class shape, you can readily secure 35 cents a pound for them at 8 to 12 weeks of age, providing they are milk fed, properly fattened, killed and dressed. This is a line, however, that re-