

whether the return from the herd is large or small; and from every point of view, a good small herd is much more profitable than a large poor one.

Granting these facts, the question arises what the farmer with a herd of dairy cows is to do? First of all the bulletin advises him to find out not only what his herd collectively, but what each cow, is doing. In other words, he should begin a record of both the quantity and of the quality of the milk produced by each cow, and weed out the unprofitable cows, filling their places with better ones bred on the farm, from sires the sons of heavy testing dams, or by the purchase of tested cows, which is difficult to do, as dairymen do not care to sell good ones.

Canadian Butter is Short Keep.

In the weekly report of the Trade and Commerce Department, a well-known British firm of butter importers give the following statements to the Canadian High Commissioner:

Our experience of Canadian butter, which has extended over several years, has proved to us conclusively that it will not keep in a perfect and good condition so long as many other butters which come on this market, notably Australian, New Zealand and Argentine, all somewhat similarly situated to Canadian as regards the distance from our markets, and the first and main recommendation we wish to call your attention to is that the butter made in Canada should not be made as if it were going to be consumed there and then on the spot, but should be made for consumption, say, a fortnight or three weeks after manufacture, on the same principle as is followed in the manufacture of those butters previously mentioned, which have to come a long sea voyage. Canadian butter does not bring as high prices in British markets as Australian, New Zealand, Argentine and other butters, and the only reason we know for it not doing so is this want of keeping property about it, combined with the method of marketing generally adopted.

Hitherto the butter coming from Canada has been bought by merchants in Britain and cold-stored for some months, but it would be a great advantage to Canada if her butter were sent across here directly it is made, and consumed soon after its arrival. We would recommend that the butter made every week for export to this country should, at the end of that week, be shipped, so that it will arrive here in a fresher and more perfect condition than it does when kept in what we are afraid is not a really cold-store in Canada. If the butter is going to be kept for three weeks or a month before being eaten it ought, as soon as possible after it leaves the churn, to be put in a temperature not exceeding 20° Fah., and remain at that until it comes on the market for consumption. We see no reason why Canadian butter, if it were shipped immediately it is made, and kept at this temperature, should not bring on an average something like 5s. per cwt. more than it does now.

Canadian authorities seem somewhat timid about the use of boric compounds in their butter, but if not more than one-half per cent. be used no possible harm can happen to those who eat the butter in this country, and as this amount is allowed by law of the United Kingdom there can be no objection to Canada supplying us with butter containing an equal amount of boric acid to that used in the butters which come from Australia, New Zealand and Argentina.

It may not be known that all the Danish butter that comes into this country is made from pasteurized milk or cream, and as Danish butter brings the highest price of any salt butter in British markets, there seems no reason why Canada should not imitate Danish methods in this respect. A word of warning, however, is necessary about pasteurization. It is a scientific process, and must be done with the greatest exactitude, for unless the proper temperatures are used pasteurization does more harm than good. We mean, if the temperature be not raised sufficiently, then more harm can be done than good. As Professor Storch, of Copenhagen, has discovered a simple chemical test for detecting in the butter how high the temperature of the milk or cream has been raised in pasteurization, it is an easy matter to check slovenly or negligent methods in the act of pasteurizing.

It would be an advantage if Canadian butter contained less moisture than it does at present. If the amount were reduced about two per cent. it would improve the quality of the butter very considerably, because the drier a butter is the longer it will keep without deterioration.

Another matter of great importance is the temperature at which the butter is kept after it is made. Our experience leads us to believe that in the ice-house, and on the railway to the shipping port, the butter is not kept cool enough. As soon as the butter is made and put into boxes it should be placed in a cold chamber at a temperature not exceeding 20° Fah., and kept below this figure all the way to the seaboard and on the steamers during transit to this country. If this were done, we think that a great proportion of the mould that is now found on Canadian butter would never be seen at all. It is a remarkable

fact that Australian and New Zealand butters never show signs of mould. In former days, when Australian butter came at a higher temperature than it does now, mould was very frequent, and we call special attention to this point as a prevention of mould.

Although we are generally against government interference in the manufacture of any of the products of the country, or interference with the manufacturers in their methods, we believe there are some cases where government interference is valuable, and notably has this been shown in New Zealand, where government graders have been employed to grade the butter into three distinct classes: first, second and third. A great advantage has accrued to the makers of butter from the grader examining each factory's butter at the seaboard before shipment, and reporting to the factory the grade which it attains. This is a very great stimulus to a factory to get its butter graded in the first grade. The practical result of this grading has been that New Zealand butter now holds a higher position than Australian, while in former years Australian was far above New Zealand. If the Canadian Government could arrange to grade the butter in this way it would facilitate the purchasing of the butter, as a trustworthy standard would be set up on which buyers at this end could rely to purchase without seeing the goods, the guarantee being the Government grade, the same as it is with New Zealand. These same graders at the port of shipment might supervise the temperature at which the butter arrives from the interior, and have the power to check it being put on board a steamer if it were over a certain degree Fahr. It is clearly unfair to a buttermaker who has taken very great pains to keep his butter at a proper temperature to have it stowed in the ship by the side of butter many degrees higher, and thus making it liable to deterioration.

It is generally conceded that the standard of quality of Canada has been improved, and the refrigerator service has likewise been found of a more satisfactory character. The call for very mild, almost saltless, butter becomes greater every year, and the nearer Canadian butter can be landed here to approximate fresh-made, the better the price and demand.

The Tring Dairy Test.

The sixty-fifth annual show of the Tring Agricultural Society, England, was held in Lord Rothschild's Park on August 4th. A butter test and milking trial of dairy cows is always an important feature of this show, and the single day records of milk and butter production are invariably of a very high order.

In the butter test, cows of any breed not exceeding 900 lbs. live weight competing, the first prize of £20 went to Lady de Rothschild's Witch, a Jersey; her yield of milk 165 days after calving being 38 lbs. 15 ozs.; of butter, 2 lbs. 2½ ozs.; ratio, milk to butter, 17.92; points, 46.75. Second prize, Mr. Smith-Barry's Nimble; 141 days after calving; milk, 30 lbs. 5 ozs.; butter, 2 lbs. 4½ ozs.; ratio, 13.28; points, 46.60. Third prize, Lady Smyth's Louisiana Loo, 130 days in lactation; milk, 29 lbs. 15 ozs.; butter, 2 lbs. 2½ ozs.; ratio, 13.88; points, 43.50.

In the test for cows, any breed or cross exceeding 900 lbs., the first prize of £20 and gold medal went to Dr. Watney's Jersey cow, Blackberry, which yielded, 126 days after calving, 37 lbs. 10 ozs. milk, and 2 lbs. 15½ ozs. butter, a ratio of 12.74. The second prize and silver medal went to Dr. Watney's Red Maple (Jersey), her yield 97 days after calving being, of milk, 55 lbs. 2 ozs.; butter, 2 lbs. 12 ozs.; ratio, 20.04. Third prize went to Dr. Watney's Violette; milk yield, 98 days in lactation, 47 lbs. 8 ozs.; butter, 2 lbs. 11½ ozs.; ratio, 17.57.

In the milking trials for cows not exceeding

900 lbs., the first prize went to Captain Smith-Neil's Doctor, 85 days in milk; yield of milk, 63 lbs. 1 oz. Second prize went to Lord Raleigh's Rachael, 146 days in milk; yield of milk, 40 lbs. 15 ozs.

In the class for cows exceeding 900 lbs., the first prize went to Mr. R. W. Hobbs' Rose 26th, dairy Shorthorn; 54 days in milk; yield of milk, 72 lbs. 6 ozs. Second prize, Mr. J. Evens' Burton Cross 2nd, a Lincoln Red; days in milk, 29; milk yield, 71 lbs. 12 ozs.

The Jersey vs. the General-Purpose Cow.

I was always strong in the opinion that if ever Jersey cows were to become popular with the general farming public they would have to be of a good size of body, with strong constitution, as well as being large butter and cream producers, so in laying the foundation of my herd, with this object in view, I selected the St. Lambert family of Jerseys. I was deeply impressed with the wisdom of this after reading Valancey E. Fuller's book on "The St. Lambert Jerseys," a book that should be read by every fancier of Jerseys, and by every farmer who wants to know which is the best cow to make the most money out of.

Mr. Fuller says in his book that Mr. Dauncey and Mr. Duncan, who were very successful English breeders of Jerseys, paid great attention to breeding size of body as well as that of the udder, and from those men the foundation of the Stephens' St. Lambert Jersey herd came, followed up in this country by the great ability and energy of the Stephens Brothers, of Quebec; V. E. Fuller, of Hamilton, now of New York; Capt. Wm. Rolph, of Markham, and Rock Bailey, of Chatham. My first purchase was one cow, three heifers and a bull from Mr. Rolph and Mr. Bailey's best blood, thus profiting by the ability and energy of those gentlemen with good results, with, I am safe in saying, double the returns we ever made from any other breed of cows, which is saying a lot, but it is true. We have had as good grade Durham cows as has been in the country, and if they averaged five pounds of butter per week for the year we thought it great, but our Jerseys will double that. No wonder farmers say there is no money in keeping cows for making butter, and true it is at least of the cow that only produces five pounds per week by the year; she only pays her board, and barely that. Now for comparison as to profits and loss of the two breeds. Take two herds of 12 cows, and every farmer on 100 acres should keep that many, and if they were Jersey cows would soon have more than that number, when they see for themselves the cream that would rise on the milk, and the persistence in filling the pail the whole year. I have a Jersey cow that gave five calves in five years, and was never dry during that time, and her milk was never off while that of the other great brutes will be thickening up before nine months of lactation; many of them sooner. If we allow five pounds of butter per week for the year for the Durham herd, 12 cows, 52 weeks=624 weeksx5 lbs.=3,120 lbs., at 19c. per lb., we have \$592.80 for the year. If we allow 8 lbs. of butter per week for a year for the Jerseys, 12 cows, 52 weeks=624 weeksx8 lbs.=4,992 lbs. at 20c. (worth 1c. more in market), \$998.40 for the Jerseys, leaving a balance in favor of the latter of \$405.60.

Thus we have with a herd of 12 Jerseys \$405.60 more than with the 12 grade Durhams. These figures are facts in my experience with the two breeds. Now for the reasons: First, the Jersey (I am writing now of the common Jersey) puts the feed into the cream can the whole year, while the other begins to store flesh upon her back after six months' milking, and very often sooner. The one is a whole-year milker, the other three-quarter-year milker; the one is bred for the one purpose, the other for two, and she is a failure, as she does not pay her board. Take those 12 Durham cows. No 10 acres of grass is going to keep them six months; not four months, a third of a year—one-third of \$600=\$200. Are not these ten acres able to produce \$200 worth or more with many crops, while the 12 Jerseys give \$400 above cost, a nice little income from even



Shorthorn Cow, Lady Stamford = 27770 =, at 11 Years Old.

And her triplet calves at five months old, average weight 430 pounds. Property of Edward H. Wise, Clinton, Ont. (See Gossip, page 1155.)