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THE FARMER'S ADVOCATE.

you can soon have a flock practically full-blooded, and yet with a valuable foundation of that old, common, hardy stock; or pursue a similar course and get a Plymouth Rock flock. The latter are certainly adapted to this climate; I can get their chickens ready for market ahead of all other kinds tried, and their very yellow skin is attractive to buyers. The fluffy breeds are good in their place for winter layers only, early mothers and broilers, but, take them all in all, hens that spend their strength making down and feathers cannot, in consequence, make as many eggs nor as much breast meat. A layer should be trim, active, redcombed and bright-eyed. That hen scratching around nights, after her companions are abed, or rather at roost, is the one which will drop an egg in the basket next day.

This winter I changed from bone meal to shell, and talked "oyster shells" with my friend ordering, but her supply came from "R. C. Leete, Shipper of Fine Sea Shells for Poultry, Leete's Island, Conn.," and I think is mainly beach shells, not differently constituted from oyster shells, I suppose, and, since crushed easier, less grit-like though cheaper, being now \$1.15 a cwt., delivered here. Lard scraps have risen to 2 cents a lb., while wheat is lower than ever—only 50 cents a bushel. At an Institute where inquiries were made about "germ meal," a chemist said it comes from grains with germinal parts left, when their gluten and starchy parts have been removed to make glucose, starch, or other preparation. We can imitate the original eastern "germ meal" for poultry, by grinding oats, corn, wheat and barley together, but will have more fat-forming material.

DAIRY.

Ontario Creameries Association.

The ninth annual meeting of the Creameries Association of Ontario was held in the City Hall, in the city of Belleville. Beginning on the l0th of January, the meetings were continued on through the two following days. Among the speakers were Prof. James, Deputy Minister of Agriculture; Prof. Robertson, Dominion Dairy Commissioner; Prof. Dean, O. A. C., Guelph; John Boyd, Chicago; John S. Pearce, London; A. A. Ayer, Montreal; J. W. Wheaton, Secretary Western Dairymen's Association, London; W. G. Walton, Hamilton; John H. Croil, Autsville, and others.

The sessions were well attended by dairymen from all over the province, and with farmers from the vicinity of Belleville.

The President, Mr. D. Derbyshire, in his opening address, thanked the citizens of Belleville for the hearty reception which they had accorded to the Creameries Association, and expressed the pleasure which he felt in being permitted to open the ninth annual convention. He commended the farmers of the vicinity of Belleville for their zeal in promoting this great national industry, until now Canadians had the reputation of being the leaders of the world in the manufacture of fancy butter and cheese. "We have," he said, "made rapid advancement since the formation of this association. The changes which have taken place in the condition and surroundings of the dairymen in Ontario during these nine years are, perhaps, greater than have attended any other industry, and I am sure that we can do even better work in the future. We have sixty-two regular creameries in this province and twelve winter creameries-a gain of over fifty per cent. We know that where dairying and stock raising are carried on intelligently, the farmers are progressive and well-to-do. This should stimulate us to greater activity in seeing that proper instructions are placed within the reach of our friends, so that the best possible work can be done in every section of this empire province." He then reviewed the work of the past year, which, he said, had been a most important one to dairymen, and one from which they could draw many important lessons.We had met our neighbors in friendly competition at the World's Columbian Exhibition, and while the results were not so gratifying to the buttermakers as they were to the cheesemakers, still we should not be discouraged, but should strive to find out in what respects we failed, and to profit by these lessons in the future. He then gave as reasons why Canadian butter did not score higher, the following :- The body of Canadian butter was on the whole rated very high, but it lost several points in flavor; this could be remedied by careful attention in the handling of the milk and the making of the butter. One reason of this loss was that a number of the exhibitors used poor, offflavored salt. The butter from the United States was put up in a more attractive package, and more taste was displayed in giving it a nice appearance. Another factor which weighed against the Canadian buttermaker was the distance from which most of the butter had to be sent, taking about ten days in transit, besides the restrictions of the United States customs regulations. It was im-

Chicago and brought to the judges as required, while the Americans could store their butter in the refrigerator until the judges were ready. Taking everything into consideration, Mr. Derbyshire thought that the Canadians did exceptionally well to win 27 awards for butter, and have such a large number of exhibits come within a point of the minimum fixed for this class. The past year should also teach us another lesson-to make provision for the hot, dry weather, which is sure to come. In 1893, only a limited number of the armers were prepared, and the cows decreased in milk nearly 50 per cent. in July and August. If cows are allowed to go down, it is impossible to make them increase the flow of milk again during the season. He showed what an enormous loss this meant to the province, and how it could have been prevented if all dairymen had been ready with clean, airy stables, with screens to keep the flies out, and plenty of silage or other green food, and had kept the cows in the stables in the day-time, turning them out at night when the flies would not bother them. If the dairymen had seen that their cows had plenty of the best food, pure water, salt every morning, and lastly, kind treatment, there would have been two millions more money distributed among the dairymen of the province, and this would mean prosperity to every other industry. In conclusion, he urged all dairy men to begin the new year with a full determination to keep only profitable cows, in the best way, and to give undivided attention to every detail in connection with the business. In this way our exports of butter and cheese could be increased from thirteen millions to twenty millions in 1894. This, he said could only be done by building silos and having plenty of good, nutritious food to keep up the flow of milk through the season.

CANADIAN BUTTER IN ENGLAND.

Mr. Graham, in moving the adoption of the ad-

dress, stated that he had shipped butter to the Old Country the past season, and that the best Canadian mild-cured butter brought as high a price on the English market as the best Danish product. We have, he said, just as good a country as Denmark, just as rich food, as good cattle, and as intelligent men. If Canadians took precautions to cure the butter to suit the English trade, and saw that it arrived there in good condition, it would find an unlimited market at paying prices.

CREAM GATHERING VS. SEPARATOR.

Professor Dean gave the advantages and disadvantages of the two systems in a very impartial manner, and as will be seen from the summary there is room in Ontario for buttermaking. In speaking of the dissatisfaction which prevailed in many creameries, he said that unless the management of a creamery has the confidence of the patrons it cannot succeed. In order to obtain this confidence, the patrons should know how the business was standing. A good way was to furnish them all with monthly statements ; although this plan would cause much extra labor, still it would pay well in the success of the institution. Another frequent cause of dissatisfaction is the variation in the tests from day to day. This was owing largely to different persons doing the skimming-or, where the drivers were doing it, to their not taking true samples-incomplete churning and inaccurate reading of the test. Where these points are proreading of the test. Where these points are pro-perly observed the reading will vary but very slightly. The advantages of the cream-gathering system were : Possibility of gathering from a large area, the cost of hauling is much less for cream than it is for whole milk, and the skim milk is left on the farm without the additional cost of the return haul from the creamery. For this reason the creamgathering plan would doubtless be the most profitable in a rough or mountainous country. The disadvantages were : Tainted or poor milk, especially where shallow pans were used, complaints of patrons as regards the reliability of the test, and loss of butterfat through incomplete creaming. The last is a most serious objection, as was proved from experiments which had been conducted at the college dairy. He showed by means of a chart that under the very best conditions, with the deep pail system the loss of fat was six times greater than with the separator, and with the shallow pan system that the loss was doubled. The averages of tests made daily for a period of six months showed that the percentage of butterfat left in the milk by the different methods was as follows:-Separator, .26; deep setting, 1.45, and shallow pan, 2.94. A factory handling 10,000 pounds of milk per day would lose \$600 in 200 days, butter being worth twenty cents per pound ; while with farmers the loss would be at least twice as great, owing to improper methods of setting. In giving advice to the patrons of a cream-gather ing factory, he advised them not to work for a high test. Cream should not be judged by its thickness as it actually grew thinner the longer it set. In proof of this he gave the average of nine trials, in which milk set twelve hours gave 3.22 inches of cream, at the end of twenty-four hours it had reduced to 2.98 inches, and in thirty-six hours it was down to 2.81 inches. The advantages of using the separator were shown to be: (1) That practically all the butterfat is obtained. (2) The milk may be tested with certainty and the proceeds divided equitably. (3) That better quality of butter would be manufactured. The disadvantages were: (1) The cost of hauling milk both ways. In this

possible to have Canadian butter stored in Chicago and brought to the judges as required, while the Americans could store their butter in the refrigerator until the judges were ready. Taking everything into consideration, Mr. Derbyshire thought that the Canadians did exceptionally well to win 27 awards for butter, and have such a large number of exhibits come within a point of the minimum fixed for this class. The past year should also teach us another lesson—to make provision for the hot, dry weather, which is sure to come. In 1893, only a limited number of the farmers were prepared, and the cows decreased in milk nearly 50 per cent. in July and August. If cows are allowed to go down, it is impossible to

IMPROVING THE QUALITY OF BUTTER.

Mr. John Croil read a paper on "How to improve the quality of our creamery butter." This was a practical treatise by a practical creamery man. He declared that the main object of the association should be to teach the members how to obtain the highest price for their butter. This can only be done by improving the quality and enlarging the market. The only successful way of carrying on the butter industry is by the co-operation of all those engaged in it. To improve the quality of our creamery butter, it would be necessary, in the first place, to exercise more care in the handling of the milk by the farmers, and also more care in the manufacturing and storing of the finished article; and secondly, by placing the butter in the hands of the consumer while it is fresh and in its finest condition. The speaker emphasized this point very strongly. He said that it was fresh butter that was needed for the export trade, and that it would be ruined if we did not give the Englishman what he wanted. He advised creameries to sell their butter quickly and get it off their hands.

CARE OF THE DAIRY COW.

Mr. W. G. Walton, of Hamilton, then read a paper on the selection and care of the dairy cow. "It was right here" he said, "that the success or downfall of the dairy farmer depended, and if he did well the creamery men, business men and manufacturers will all do well.

"The selection of a cow would depend upon whether she was wanted for a large milker for the city trade, for cheese factory purposes or for a butter cow. There is not much trouble in selecting a large milker, but the time has come when the quantity of butterfat will be the basis of future dairying. A dairyman will not sell his best cow, but on the contrary will keep them and breed them to the progeny of great butter cows; so if the farmer wants to get the best butter cows he must breed them for himself. He believed that a firmer grain of butter could be produced from the Jersey than any other breed, and that it would stand a greater degree of heat. This was a very important matter to the dairymen of Ontario to know and practise, for our butter would then reach the English market with a much better grain. The testing of individual cows in the herd should be practised by every farmer, so that he could distinguish between those which were paying and those that were losing him money."

From his experience in buying cows, he said that not one cow in every hundred was up to a standard of perfection that all our cows could be easily brought up to.

It was quite possible, with a united determination in the line of breeding, to produce three times as much butter and cheese from the same number of cows as was being done at present, which meant that instead of \$13,000,000, which we now realize

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that instead of \$13,000,000, which we now realize from the dairying industry, we would then make \$40,000,000 annually.

After you get a good cow, the next thing is to take care of her. The stable should be kept at a temperature of from fifty to sixty degrees; it should be well ventilated and have plenty of light. She should be kept clean and dry, and have plenty of good food and water before her in the stable instead of being turned out in all weathers to drink.

He advised giving the cows half an hour's exercise on the tread power two or three times a week.

At the close of this paper an animated discussion took place, chiefly upon the value of the Jersey as a cheese cow and whether all the fat in rich milk could be incorporated in the cheese. Mr. Graham thought that it was a mistake to encourage a larger percentage of fat than three and a-half for cheesemaking.

Prof. Dean stated that his experiments had shown that they could incorporate all the fat up to four and a-half per cent., while other experiments showed that in six per cent. milk there was no loss of butterfat. Mr. Boyd, of Chicago, said that there was no such thing as a cheese cow : that the cow that would make the most butter was the best cow for the cheese factory : and that if one thing had been more thoroughly proved at the World's Fair than another, it was that the Jersey cow produced more butter, more cheese, and also more milk than any of the other breeds.

BANQUET IN THE EVENING.

The usual evening session of the association gave place to a grand banquet, which was tendered to the visitors by the citizens of Belleville. About two hundred guests sat down to the repast, and a very enjoyable time was spent in speech-making and singing.

TO BE CONTINUED.

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