

other respects they do not differ materially. They seem all to be very heavy milkers, and many were pointed out which had given exceptional yields, from 1,200 to 1,400 gallons of 3.5 per cent. fat being not uncommon. In one herd there were 26 cows which had an average of 1,044 gallons of 3.52 per cent. of fat, in 1906. The milk from ordinary cows, or ones which are in no way selected or connected with any milk-record societies, generally contains only 3.1 to 3.2 per cent. of fat, while those connected with the milk records go up to over 3.5 per cent.

DAIRY INSTRUCTORS MEET.

The dairy instructors and sanitary inspectors for Western Ontario met at Woodstock on Friday, June 12th. They visited the Innerkip and Bright factories during the afternoon. These factories make about 200 tons of cheese during the season. They are well equipped and well managed. Mr. E. M. Johnston has charge of the Innerkip factory, and R. Johnston has charge of Bright. Entering these factories, the first thing that attracts attention is their neat, clean, tidy appearance, and beautiful flowers blooming in all the windows. Everything is in its place, and there is a place for everything.

The scales, weigh cans, vats, agitators, pails, hoops and presses, and everything in and about the factory are shining like new. The walls and ceilings are nicely painted, and the makers say it is no trouble to keep things in good shape by giving everything the proper attention each day.

This is one of the best dairy sections in Western Ontario, and there are several other factories in the neighborhood well equipped and well managed. Practically all the factories in this section are pasteurizing the whey and sending it home sweet and clean to the patrons. Bright factory was one of the first to adopt this system of pasteurizing the whey, and the patrons were so well pleased that the system was quickly taken up by the other factories in the section. In conversation with several of the directors of these factories, they say they would not think of again returning the whey without pasteurizing. They consider they are well repaid for the cost in the increased value of the whey, in the fact that the cans are so much easier to wash, and that they receive the whey sweet and clean. The tanks of both factories are emptied each day of any whey which is left over, and cleaned. The acidity of the whey going into the patrons' cans in the morning is about .23 per cent to .25 per cent. No wash water is allowed to go into the whey tanks.

At Innerkip, the Ontario Department of Agriculture put in last year an experimental sewage plant, which is working well, and disposes of all the wash water. At Bright, the wash water is drained away through a closed drain to a sewage box a considerable distance from the factory. An interesting item in connection with Innerkip factory is that for a number of years they have been troubled almost constantly with a yeasty fermentation or bitter milk, which often gave the cheese a bitter and fruity flavor. This trouble was investigated some years ago by Prof. Harrison, and apparently everything done to overcome the difficulty, without success. Last year, however, as soon as the whey was heated up to a temperature of 160 degrees before being returned in the patrons' cans the flavor disappeared, and up to the present time has not occurred in one single instance. The organism which apparently was causing this flavor was being grown in the whey from day to day, and became widely distributed through the medium of the patrons' cans. This seems quite conclusive evidence that if the whey is heated to a temperature of 160 degrees, and the tanks kept clean, the chances of bitter or yeasty contamination of the milk are very slight. Prof. Harrison suggested this remedy at the time of his investigation, but it was not then acted upon.

The Bright factory spent, last year, about \$1,000 on the installation of a modern cool-curing room, and the patrons consider the money well spent, and the results very satisfactory. The outside changes of temperature have now no effect on the quality of the cheese. The Innerkip factory has not an ice cool-curing room, but their room is so well insulated (walls four feet thick) that the temperature never rises above 64 degrees in the hottest weather, but is usually kept from 58 to 60 degrees. Bright cool-curing room is also kept at 58 to 60 degrees. The cheese at both factories were of good flavor, close, uniform, of good texture, and well finished.

After an hour spent at each factory, the instructors left for Guelph, where, on Saturday forenoon, they had the opportunity of scoring the experimental cheese and butter made at the dairy school during May. This was good work, and some very interesting points were brought out. Thanks are due Prof. Dean and his staff for the way in which they tried to make the day one of interest and profit to the instructors.

Mr. Fulmer, of the Chemical Department, which kindly tested and corrected the glassware which the instructors use in their work. The work of

instruction was thoroughly discussed and further lines of work mapped out, and all felt that the two days spent together was a source of help and profit.

FRANK HERNS.

Chief Dairy Instructor, Western Ont.

COW-TESTING ASSOCIATIONS.

Some recent results of monthly tests in associations organized by the staff of the Dairy and Cold-storage Commissioner are:

May 10th, Victoria, B. C., 43 cows averaged 708 lbs. milk, 4.2 test, 80.2 lbs. fat.

May 12th, Milton, Ont., 97 cows averaged 548 lbs. milk, 3.6 test, 19.9 lbs. fat.

May 15th, Dixville, Que., 40 cows averaged 451 lbs. milk, 4.2 test, 19.2 lbs. fat.

One of the best individual yields yet to hand throws these "average yields" very much in the shade. A seven-year-old cow in the association at Innerkip, Ont., that calved 25th March, gave, in the thirty days of April, no less than 1,910 lbs. milk, testing 3.3, or 63 lbs. of butter-fat. If only one cow has to be housed, fed and milked, in place of three, there is an immense saving of labor and material. Look to the individual, not the average yield. The work of these cow-testing associations is helping farmers to detect the poor cows; it is also proving useful in securing better treatment for good cows, so that more milk from fewer animals can be obtained. There are now over seventy associations in Canada. C. F. W. Ottawa.

Shiftless dairying may not pay very much better than shiftless beef-raising. More labor is involved, and more skill and intelligence necessary in the former line, and there is a correspondingly wider latitude for loss if the management be bad. But where land is of any value worth mentioning, average dairying can more than hold its own with average beef-raising, in point of profit, and it certainly offers far greater scope for development of the individual animals employed.

GARDEN ORCHARD.

THE FRUIT TRADE AND THE FRUIT MARKS ACT

The Co-operative Committee of the Ontario Fruit-growers' Association met on June 10th, and discussed ways and means of assisting the local co-operative associations in disposing of their fruit. It was decided to issue a circular, as was done last year, giving the list of the associations, and, as far as possible, information regarding the amount of fruit available. This circular will be mailed to the trade.

There are about forty co-operative fruit-growers' associations in Ontario. This number could be greatly increased were provision made for selling the fruit. As a rule, the pack of the co-operative societies has been honest. In many cases the quality is above what is required to fulfill the conditions of the Fruit Marks Act. In a few cases defective packing was reported. These occurred more through ignorance of the law than from any desire to defraud. It speaks well for the co-operative societies that, out of some 190 convictions under the Fruit Marks Act last season, there are only a couple with which they were connected, and these were somewhat minor offences. Were the co-operative movement thoroughly organized, and proper instruction given in packing the fruit, the cases of fraud traceable to these societies would be very few indeed.

The Fruit Division, Ottawa, has had the busiest season on record in connection with the administration of the Fruit Marks Act. As shown above, the convictions totalled nearly two hundred. There was a great deal of inferior fruit last year, and the temptation to pass a large share of it as first-quality was great. Many dealers bought up early in the fall, at high prices, and stood to lose unless the quality was such as to command the top price in the market. Then, the act was more strictly enforced than heretofore, and a strong effort made to compel the packer to live up to the Act. This would mean more convictions in any ordinary season. But when stricter enforcement was applied in an unfavorable year, the list of convictions was bound to run up to a large figure. Everyone will agree, however, that the Act must be strictly enforced. A permanent export trade in Canadian fruit cannot be built up unless it is.

But, all said and done, the deliberate infringements of the law simmer down to a group of unscrupulous packers, who seek to make money by breaking the law. That is, they endeavor, by false packing, to so increase the selling price of their stock as to pay the fine imposed, and still make money out of the transaction. This is true largely for the first and second offences, for which the fines imposed are not commensurate with the crime. Under last year's amendments to the Act, a third offence is punishable by a fine of \$100, and so much per barrel above fifty, at the option of the magistrate. Many of these parties are eligible, or soon will be, for the third degree, and may be compelled to be honest for the reason that it will not pay them to be dishonest. If the

limit of the law in fines will not prove a sufficient deterrent, then the law should be so amended as to make imprisonment compulsory for repeated breaking of the law. The importance of the trade is too great to have it brought into disrepute by a lot of unscrupulous individuals who care neither for their own nor their country's reputation, so long as they profit by dishonest dealing. In their case, familiarity with the law appears to breed contempt, and they should be made to feel its full force. To bring such to their senses, and to see things in their true perspective, the law should be made as stringent as possible. Every honest grower, packer and shipper will back the Government in so amending and enforcing the Fruit Marks Act as to make dishonest fruit-packing so unprofitable that no one will venture to break the law.

CHRONICLE.

A BACKWARD MOVE.

In the House of Commons, the other day, according to recent advices, Hon. Mr. Fisher, upon the suggestion of several members that the penalties for violation of the Fruit Marks Act were too severe, said that he was prepared to reduce them, so that for the first offence the penalty would not exceed \$25 nor be less than \$10; for the second offence, not more than \$50 nor less than \$25; and, for the third offence, not exceeding \$200 nor less than \$50. With these alterations, the bill was reported and passed.

Is this wise? Not since this Act came into force has there been more flagrant dishonesty in fruit-packing than during the past year. So frequent and so glaring have been these infringements of the Act that the Canadian fruit trade has to some extent been brought into disrepute both at home and abroad. As shown by "Chronicle," nearly 200 cases of false branding of apples have been proven in the court the past season, and these, for the most part, by parties who deliberately make a practice of breaking the law. In the face of this experience, it would appear that a lessening of the penalty is not what is needed, but more severe punishment, and, if need be, imprisonment, in place of a fine, for repeated breaking of the law.

The Fruit Marks Act has now been in force long enough for every shipper and person engaged in the fruit business to know the standards required for the different grades. With the exception, perhaps, of some of the more recently-organized co-operative associations, there is little excuse for false branding of apples. Even these co-operative societies should not engage in the business until they know what the different grades are, and the quality of fruit required to fill them. People in the fruit trade know the law, and should be made to respect it, and they will have much more respect for it if the penalties imposed are large, rather than small. It would have been in the best interests of the fruit industry had the Minister of Agriculture stood his ground and not accepted the suggestions of members by lessening the fines imposed. Any weakening of those in authority in regard to the Act is sure to be taken advantage of by dishonest fruit-packers.

FRUIT-GROWING AT RED DEER, ALBERTA.

An item appeared in one of the Edmonton papers a few weeks ago which was widely copied by the press of Western Canada, to the effect that a gentleman at Red Deer had an apple orchard of ten thousand trees in full bloom, with splendid prospects for an apple crop in the fall. The report, unfortunately, was only partially true. Mr. Humboldt Sharp, the gentleman in question, has ten thousand apple trees, all right, some of them in bloom, but the plantation is as yet far from being an apple orchard. It is a nursery. Mr. Sharp went to the Red Deer district a year ago from the northern part of New Brunswick, taking with him to the Northwest about ten thousand apple trees of the varieties found to be hardiest in the northern part of the Maritime Provinces. He purchased a ten-acre garden plot on the north side of the town, set out his nursery stock, and was engaged in the market-garden business last summer, though, if any success is attained with the apple trees, he intends ultimately to go into nursery work. The varieties that stood the winter with the least injury were the Wealthies, Yellow Transparent and Duchess. Many of the trees of these varieties were hardly affected by the frost at all; they are coming on strong and vigorous, many of them being in bloom. A number of the other varieties tested, however, have been unable to withstand the climate. The Snows, Ben Davis, Spy and St. Lawrence were rather badly frozen back, some of them right to the ground.

Mr. Sharp intends setting out an orchard this spring of several hundred trees of the three first-named varieties. His soil and situation are particularly adapted for tree-growing. The field is sheltered on three sides by dense poplar scrub, and the soil itself is deep and fertile. He is putting out quite a patch of strawberries this spring, currants and other small fruits.