

Dominion Grange would permit local Granges to amalgamate with the Council. In order to avoid future complications in the organization of Farmers' Clubs, a resolution was passed directing the Secretary of the Council to communicate with the Secretary of the Dominion Grange, at the same time forwarding him copies of the pamphlets containing the Constitution and By-laws, asking an expression of his opinion on the subject.

REGISTRATION OF NATIVES AND GRADES.

W. A. MACDONALD.—With reference to establishing a register for recording unpedigreed cows which come up to a certain standard of merit, Mr. Howell's plan resembles mine in some particulars, but I think his standards are rather low. It would be very cumbersome and expensive to make a record of even one-tenth of all the cows that came up to these standards. My proposition was to record meanwhile in one book all the cows that produced not less than four percent of butter fat; in another book all the cows that produced an average of 25 lbs. a day for nine months, or say 6,875 lbs. in a season, and in another book the cost of production would be kept. Since making this proposition, however, I tested a large number of cows in this vicinity, also President Leitch's herd of 20 cows, consisting of natives and Shorthorn grades, and a quantity of milk delivered at the President's factory. These investigations caused me to modify my standard somewhat. The average milk delivered at the President's factory contains $3\frac{1}{2}$ percent of butter fat, the variations in the patrons' cans being from 3 to $4\frac{1}{2}$ percent. The milk of Mr. Leitch's cows varied from $3\frac{1}{2}$ percent of butter fat to $5\frac{1}{2}$, the average being nearly $4\frac{1}{2}$. According to my proposed standard, Mr. Leitch could record, in the quality register, all his 20 cows excepting two. On examining his factory books, I found that the average yield per cow for the past six months was $31\frac{1}{2}$ lbs. per day. From these figures, Mr. Leitch and I came to the conclusion that $4\frac{1}{2}$ percent of butter fat and 6,800 lbs. per season would be a more desirable standard for registration, but I think it would be well to leave the matter over for further discussion. What I mean by the quality register is a record of the quality with an approximate estimate of the quantity entered in the first book until the quantity be accurately ascertained, the entry then being made in the second book, and finally into the third book, when the cost of production is tested. Mr. Howell signs himself a school teacher. I am convinced that, if teachers could be induced to take an interest in these matters, our cause would receive an immense impetus.

PRESIDENT LEITCH.—There is a very large number of cows whose milk would yield $4\frac{1}{2}$ percent of butter fat or over; fully one half of my herd would come up to this standard and I have four or five cows yielding five percent or over; but very few of those which produce such high standards of quality would give the required standard of quantity. I think it would not be advisable to register the quality until tests were made in different seasons, and an account also kept of the quantity. The quality as well as the quantity varies with the season. I have been experimenting with common stock and Shorthorn grades for over twenty years, and I have failed to find, except in very few instances, that the dairy properties of my herd have been improved by the introduction of Short-

horn blood. But you must bear in mind that I have been breeding up my common stock, and I feed them as well as I do the grades. I feed liberally in all cases. I help milk the cows myself, so that I always know my best cows, and I raise my bulls from the best cows. It is all nonsense to say that big grades are easier kept than smaller cows; animals in normal condition eat in proportion to their weight almost without exception, and the cost of production is very material to the issue. Of course a half starved scrub will consume more than a gorged grade, but these are not normal conditions. At this season of the year, when farmers are busy and the nights are beginning to turn cold, there is a great advantage in hardiness, and it does not pay to house high graded stock from every blast of October wind. The same advantage is found in spring, when light, hardy cows can be turned out to grass earlier than heavy grades. I accord with the plan of keeping a register based purely upon the merits of the stock.

W. A. MACDONALD.—Mr. Leitch's bull—a yearling—is certainly a credit to any herd, and proves what can be accomplished by the exercise of judgment in breeding. He possesses the attractive points of a pure bred animal, and there is only about one-tenth or one-twelfth part of Shorthorn blood in him, the balance being native. The immediate advantage of the proposed records would be the obtaining of valuable bulls from the registered cows. The advance in price of such stock should induce every farmer to exert himself in making tests of his herd. I should like to know what the President thinks about introducing other dairy breeds to improve our herds.

PRESIDENT LEITCH.—If Jerseys be introduced, the owners of them or their grades would cheat themselves at the cheese factory, while the owner of Holsteins or Holstein grades would cheat the rest of the patrons. This arises from the fact that Jersey milk is richer and more valuable than average milk, while Holstein milk is poorer and less valuable. However, the Ayrshires, I think, could be introduced with advantage.

REPORT ON MILK TESTS.

JOHN WHEATON, chairman of the Committee appointed at the last meeting to report on milk tests, presented the Committee's report. The report recommended that no more lactoscopes be sold at present, that each member of the Council who is engaged in dairying receive a lactoscope free on condition that he exercises due diligence in finding out the best cows in his locality and make reports thereof to the Council, and that each Farmer's Club receive a lactoscope free on the same conditions. The report was adopted.

MUNICIPAL LITIGATION.

In selecting the programme for next meeting, it was decided that the Vice-President, Mr. Henry Anderson (who was absent), be requested to read a paper on "Municipal Litigation."

The municipality which Mr. Anderson has represented for a long series of years is noted for the number and variety of its law suits in which he has taken an active part. Such a paper should not fail to be read with interest on the eve of the municipal elections throughout the country. Mr. Anderson is one of our leading authorities on municipal matters.

The Council adjourned until the third Saturday in November (20th inst.)

The Dairy.

Testing Milk at the Cheese Factories.

A leading dairyman in Eastern Ontario recently informed us that there was some ado in his neighborhood about the introduction of a herd of Holstein cattle, it being contended that the milk from Holstein cows was much poorer than average milk, so that the owner of the herd was virtually cheating the other patrons in the factory at which the milk was delivered. The only remedy was supposed to be the total exclusion of this breed and their grades. In the same connection, we noted the remarks made by President Leitch, at the last meeting of the Dominion Farmers' Council, to the effect that Jerseys should not be introduced because the owner would be cheating himself, and Holsteins should not be tolerated because the owner would cheat the other patrons out of a portion of their legitimate profits.

Now, this has become a live issue and one of great practical importance. We take the liberty of joining issue with the authorities above quoted. The difficulty can be overcome in a more intelligent and business-like manner. The first question to be settled is this: What difference in the total solids of the milk will compensate for the expense in making tests? If one herd, for example—no matter what breeding—gives milk containing say 12 percent of solids, and another herd say 12 $\frac{1}{2}$ percent, will this difference justify the making of tests?

No standard can be laid down which would be applicable to every factory, but every cheese-maker can make his own calculations. A set of testing instruments will cost about \$5 or \$6, but all this amount should not be charged to the new system, for under the present system instruments should be kept to detect adulterations. The next question to be decided is, How often should the milk be tested? If the tests are made once a week, the time lost may be calculated as follows: Count the services of an extra man during the time the milk delivered is being weighed. Where great accuracy is required, one man cannot make the tests as fast as the milk is weighed—about double this time will be required. The tester must be a painstaking man or boy and accurate with figures. Two systems may now be adopted: (1) Divide the milk into say three classes, good, medium and poor (two classes would do where great accuracy is not desired, and where the milk from the different cows is tolerably uniform in quality). (2) Credit each patron with the exact quality of his milk without classification. This system would give greater justice, but would make more labor.

The advantages of making tests would be manifold. Holsteins or Jerseys or any other breed may then be introduced without injustice to the owners or the other patrons. Patrons who water their milk receive no pay for the water, and would therefore abandon the practice as a fruitless undertaking. Farmers who paid attention to breeding and feeding would be remunerated for their intelligence and industry, and farmers who have a strong, rich soil, or those who feed their land liberally, would be justly compensated, while those who are negligent in these respects would suffer