

dencies to gain flesh when not giving milk. The Ayrshire was often called the poor man's cow, being hardy, easily supported, and converting a large proportion of the food given it into milk. The general estimate of the dairy performances of the Ayrshire was as follows:—Milk, 600 to 800 gallons a year, affording 250 pounds of butter or 500 pounds of cheese. For all practical purposes the breed occupied the highest place among dairy breeds of cattle.

Mr. Weld said it would be well to ascertain something about other breeds. The Holsteins he understood would give a greater quantity of milk than any other, but of the poorest quality. The Jerseys gave a smaller quantity of milk, but of the richest quality. The butter from it was of a finer and richer flavor than that produced from any other class of animals.

Prof. Arnold thought an injustice was done to the Holstein in representing the milk to be so poor in quality. It is excellent for cheese and butter, yielding, on analysis, a fair per centage of fat.

Mr. A. A. Ayer spoke on the subject of marketing cheese. The market required a new cheeser that is: one that appeared to be new in other words, a mild cheese. A large proportion of the cheese from this district was sent to England on through bills of lading, and there was the loss of weight on their arrival. Some of the factories in Canada turned out cheese as fine as any in the world.

Mr. Allison moved that this meeting expresses its satisfaction with the action of the Ontario Government, in establishing a dairy, conducted on the factory system, in connection with the Model Farm, as it is believed that such dairy properly conducted will be of invaluable benefit to the dairy interests of the country, and this meeting has the utmost confidence in Prof. L. B. Arnold, as one whose great ability and practical knowledge on all matters connected with the manufacture of butter and cheese, qualify him to take charge of and make successful, the dairy part of the establishment, and we strongly recommend that his services be secured for the position.

The resolution was seconded by Mr. Lossee, and supported by other gentlemen.

Mr. Weld objected to the resolution and moved that it be laid on the table. He thought that due notice should have been given, and that the question should have been taken up before so many of the members had left. He spoke to the following effect: The Agricultural College was never brought forward for the interest of farmers, or by them, but to make a berth for a certain person who had worked for political purposes; also to check private enterprise and obtain more political prestige. The Bill was hurried through Parliament, and the land and building material hurriedly purchased. The overthrow of the late Government destroyed the first plans. The ground and property were disposed of, and the present site selected, no doubt for political ends, as this site is not as good as the one first purchased, the subsoil being so irregular and uncertain from clay ridges irregularly running through it and quicksand and gravel irregularly cropping out, that no fair test could be made on it without first making a foundation or lower strata, which would cost far more than all that has as yet been expended on it. Even for dairy purposes more satisfactory returns would follow by purchasing a suitable farm.

This institution, as far as the farm is concerned, should be and could be made self-supporting. A company of farmers could do much more good than such a scheme as this. Farmers are not beggars; they can pay for what they want. The complaints of hard times and high taxes need not be increased by this means. The dairymen are wealthy, and by uniting can have a Model Dairy where one acre is worth two at Guelph for dairy purposes. It is easy to recommend the expenditure of money. He was satisfied that a good dairy under the charge of Professor Arnold would pay; he (Mr. W.) would join the dairymen, and put down one-fourth of the money to purchase a suitable farm.

In reply to some remarks, Mr. Weld said that he had not acted for either political party; he had condemned the steps taken by both the existing and the late Governments. It was for the interest of farmers and the country that he wished to act.

Other topics were discussed, viz.:—The best salt for dairy purposes; Adaptation for the business; Returning the whey in cans; The establishing a dairy in connection with the Model Farm; The injury to the quality of cheese from feeding turnip-tops and turnips in the fall; and the hauling milk to the factory once or twice a day.

The Finance Committee reported that the receipts for the past year had been \$1,239.14, and the expenditures \$805.30, leaving a balance of \$348.84.

East Ontario Dairymen's Association.

The first annual Meeting of the East Ontario Dairymen's Association was held in Belleville, Feb. 21st and 22nd. After the adoption of the Report of the Business Committee, Mr. Graham, President of the Association, delivered a brief address on the history of dairying in Eastern Ontario.

Prof. Bell, then delivered an address on "The Past, Present and Future of the Dairy Interests of Canada." The trade during the past year had been satisfactory, though the quality, on the whole, was not up to the average. This was attributed by the buyers to the efforts of the dairymen to make a cheese which would cure more rapidly, owing to which a great deal of immature cheese was sent to England and arrived there in poor condition. The western section had been more fortunate during the past year than the eastern section, as the drought in the latter part of the country had affected the product materially, though prices had been fair. On the whole the present condition of the trade was good, and the future promising. The total cheese product of the Province, for the past year, he estimated at 44,000,000 pounds, and of butter, 13,745,000 pounds, there being a decrease in the quality of both articles as compared with the previous year. The butter was in condition; much the same as cheese was 16 or 18 years ago. He advocated the holding of Township Conventions for the information of the butter manufacturers; the establishment of butter factories; the making of butter in winter, and its shipment weekly, in small packages, and its careful inspection, and proper branding, so that it might not be mistaken for American.

The President expressed fear that the success attained at the Centennial was likely to prove detrimental, as cheese-makers and presidents of the factories seemed to think that there was nothing more to learn. He warned them, however, that the art was a progressive one.

Mr. Ashley remarked that better cheese is made in the West than in the East, quality rather than quantity being the desideratum in the former section.

Prof. Wetherall, of the *Live Stock Journal*, delivered an address on the breeding and feeding of dairy stock. In order to have a good breed it was necessary to secure a bull of a good milking family, and by raising the heifer calves, a superior breed would be secured. In the course of a few years the most profitable dairy cows had been bred from shorthorns, and from shorthorns and Holsteins. A cross breed would produce more milk than a thoroughbred. Heifers should be bred when two years or two and a half years, as they made better milkers than those bred later. After giving some instructions as to the treatment of cows during and after calving, he proceeded to notice the characteristics of the various breeds of cows as milkers, concluding that the larger breeds gave more milk in proportion to the amount of food they consume, that do the smaller breeds. He advocates feeding cows in the stable instead of pasturing in the fields, and also the weeding out of the herds of all unprofitable cows, which form one-third of the total number.

Hon. X. A. Willard regarded the future of the trade as promising, as good cheese sells readily in the English market. Therefore, he advocated the making of the best qualities of cheese in which improvement could be made. Oleomargarine butter was proving a strong competitor for inferior butter, but could never compete with fine butter; and he advocated the making of butter in winter, as the work can be easily performed, and the product will realize the best price. He advocated the holding of dairy fairs in connection with the convention, where the merits of exhibits could be discussed. In discussing the quality of cheese he advocated the making of a fine cheddar to suit the English market, and attributed the inferiority of American cheese to the defective curing rooms.

Hon. Mr. Lewis said the West had the advantage of the East in winter dairying, having cheap grain. He did not think winter dairying could be made to pay in the East, and believed that winter dairying could be adapted in the West, he advocated the continuance of the present system in the East, so that the dairymen of both sections would put their product in the market when it was most valuable.

Prof. Stewart, of Buffalo, took the opposite view, holding that he could produce butter more cheaply in winter than in summer.

On the second day Mr. Hoxie, of Wilksboro', New York, read a paper on Holstein cattle as dairy cows, the characteristics of which he described at considerable length, claiming for them superior milk production to any other breed. The milk of Jerseys and Devons was superior to that of Holsteins for butter making, but that of the latter was superior for cheese making. They were also good beef cattle maturing earlier than any other breed except the Shorthorns, and considering all their qualities they are the best cattle for farmers' use.

Prof. Arnold delivered an address on "Acid and other Processes of Cheese Making from Practical Experience."

Prof. Stewart, of Chicago, delivered an address on "Milk Production and How to Obtain the Best Results from the Dairy." He recommended the mixing of straw with clover hay for food, and the feeding of oil cake and straw, and bran and straw, which mixtures were as good as hay and cheaper. Oats and peas mixed formed one of their best soiling crops, and he found an advantage in using fodder corn in conjunction. He recommended corn meal as being cheaper than hay, as also was oil meal to feed to a certain extent, one quart of oil meal per day being enough.

The officers of the Association for the ensuing year are as follows:—President R. Graham, Belleville; first Vice-President Daniel Vandewater; Directors, M. McPherson, Ira Morgan, Charles Grass, Henry Ostom, Platt Hinman, R. Craig; Secretary, Harford Ashley; Treasurer, H. A. Daly.

Nut-Bearing Trees.

The Committee appointed by the Fruit Growers Association of Ontario for the purpose of examining the various nut bearing trees growing on the property of G. H. M. Johnson, Esq., Chief of the Six Nation Indians, report:—That this lovely natural park is situated on the east branch of the Grand River, in the township of Onondaga. The land rises from the river to the Chief's house in three broad and natural terraces of seventy feet or more in height. The various kinds of nut-bearing trees were growing and bearing in equal luxuriance on each of the terraces. There were growing on the estate some 800 walnut, 300 butternut, and about 200 hickory trees of various kinds. Many of them are noble specimens—especially the walnuts. One upon the terrace below was really a majestic tree, with a large, massive, globular head of 120 feet in circumference; the lower branches nearly touching the ground and head rising to at least 40 feet in height, and every branch drooping with its load of large fruit, some specimens measuring eight inches in circumference.

There are various opinions as to the market value of these nuts as we now see them in their purely wild indigenous state. But when we consider that all of these nuts, viz., walnuts, butternuts and hickory nuts, show a disposition to vary, so much so that scarcely two trees bore fruit exactly like their fellows of the same species; and when we remember, also, that the English walnut grows and bears fruit in a few favorite localities in Ontario, surely no one will doubt the value of a walnut that should be equal in size and thinness of shell to the English walnut, and as hardy and productive as our native black walnut. With such materials to work upon, who can doubt that in the hands of our skillful hybridists this desideratum will be achieved. When we consider the rapidly increasing value of the timber of these trees, if for nothing else, we have no doubt that it would be a good investment for many a young man to plant walnut trees on their sloping river banks that are too steep for cultivation. There are tens of thousands of farms in Ontario that would be very much improved, both in real value and appearance, by the planting of the various kinds of nut-bearing trees we have mentioned. The size and situation of the house, the position of the land and various tastes of the droprieters will easily decide as to where to plant.

The *Massachusetts Plowman* says:—"Oxen should be carded and cleaned every day, especially while shedding their coats; increase their allowance of grain as their labor increases, and remember that they are slow feeders and require long noonings."