rendered cheese-making more difficult in autumn. The secret of the perfect assimilation of the cream and the casein was yet to be discovered. The loss of a notable quantity of butter in the whey was of constant occurrence; and if, through want of knowledge on the part of the maker, the fatty part be not well incorporated into the casein, the keeping quality of the cheese will be deteriorated. Hence, the partial skimming of the milk aims at remedying this danger.

Mr Jocelyn then entered upon the explanation of certain technicalities, observing, among other things, that the greatest possible pains should be taken to obtain good rennet. If the slightest bad smell should be found in it, it should be rejected: in itself rennet has no bad smell.

The Dairy-school at St. Denis, en bas, which is under Mr Jocelyn management, does not practise entire skimming, as some Ontario factories do, but only partial skimming. From 100 lbs of milk he removes 1¼ lb of butter, during June, July, and half August; and 1½ lbs, during the rest of the season.

In answer to Mr Barré, Mr Jocelyn said that he knew of no factories in the States, practising skimming, which took so little as 1½ lbs of butter per 100 lbs of milk; but he did know of some, the skim cheese from which was quoted at prices above those of the full milk cheese. When the St. Denis cheese was for sale, buyers calling at the factory offered 6c and 7c a pound for it; but at Montreal, after refusing 11c, it was sold for 10c in September. The meeting adjourned.

EVENING SESSION.

Two new directors, Messrs F. X. Paradis, M. P. P., for Iberville, and M. A. Mallette, for Beauharnois, were elected.

Mr Siméon Lesage, assistant commissioner of agriculture, representing the minister of that department, opened the session by an eloquent address: he reminded the meeting that the government had accorded special encouragement to the dairy-industry, 1st, by establishing the cheese- and butter-school at St. Denis, directed by Mr Jocelyn, a practitioner of 20 years experience; 2.—the butter-school at Beauce, under Mr Barré, who, thanks to government aid, had studied his subject in Denmark (each school is bound to furnish instruction to six pupils a year); by the grant of $1,000 to this society.

And the reason for all this was clear; the effect of these establishments would be to afford profitable employment to the offspring of our families, otherwise unattainable except abroad, and thereby to induce them to remain in their own country. If we succeed in this object, the colonisation of the glorious valleys of the Ottawa and of Lake St. John will surely be accomplished. Mr Lesage then entered into details about the dairy-industry of the province, showing that it already reconed 280 cheese-factories, 48 creameries, and 28 cheese- and butter-factories. Mr Barré spoke on the subject of making butter. The dairy-school at Beauce was the only one of the sort on this continent. The honour of introducing the *centrifugal creamer* into America belonged to the province of Quebec. The machine, founded on a well known principle of physics, is composed of drum fitted on a vertical axis, by which a very rapid motion is conveyed to it. In the one used at Beauce, the rotatory motion amounts to 2,000 revolutions a minute, but in Laval's creamer, even 6,000 revolutions. By the centrifugal force, a force by which all the molecules of a body in rotation tend to fly off from the centre, the milk which is poured into the machine is thrown towards the wall of the drum; and as milk is heavier than cream, the separation of the two is thus effected: the cream forms a ring in the middle of the drum, and the milk a ring on the outside of the cream; and, still more extraordinary, a third ring, composed of the impurities always present in even the most carefully strained milk, is also formed. The great advantage of the system is, that fresh milk is skimmed twenty minutes after its arrival at the cheese factory; an hour sufficing to skim 800 lbs of milk, and the skim-milk, perfectly sweet, can be carried back at once to the farm whence it comes, for household use, or for feeding calves or pigs. By means of the centrifugal machine, there is a gain of 10 0/0 of cream, and the butter made from it is superior in quality to that made on any other system.

Mr Barré mentioned the graduated jars for measuring the richness of the milk; they are attached to the centrifugal machine, and working with the utmost exactitude, will probably lead to the purchase of milk according to its quality, instead of by weight.

Interesting details were added by Mr Barré. The cream at Beauce is cooled down to 40° F., and allowed to sour a little, as our market demands an aromatic flavour in the butter. Churning, freeing from butter-milk, and the salting of butter were all treated.

Mr E. A. Barnard then addressed the meeting. He spoke of the necessity of engaging qualified teachers to improve the manufacture of cheese, and continued his speech by giving some practical advice on the subject of agriculture in general. He recommended: the establisument of agricultural clubs, which have done infinite good in the province; the experience of each member assists all the members of the club; improved treatment of cattle; our Canadian cows are excellent, and with proper care, are capable of yielding as much profit as any race of cattle; near the pastures should be sown corn, Hungarian grass, tares, to be mown and given to the stock when the meadows are parched with the heat of the summer. Clover should be grown for autumn keep, but red clover, it is to be noted, is not good for the butter-maker. Shade-trees should be left, or planted, for shelter in the pastures. Mr Barnard then spoke of the forestry movement which is interesting so many people to-day; pointing out the wisdom of replanting our barren lands with trees, for use whether as lumber, as fire-wood, or as sugar-bush. One thing, the growth of sugar beets, is particularly worthy of the attention of dairy-men; the pulp, which remains after the extraction of the sugar, is almost as good a food as the original root, and is especially suited to the production of milk and its products. Farmers should do their best to advance the culture of the beet. Mr Barnard trusted, in conclusion, that all the members of the association would make it their duty to communicate to the Journals of Agriculture any remarks their experience might suggest. The Journals having upwards of 24,000 subscribers, it was clear that an immense deal of good must be done by the publication of any practical advice through their means. The session was then adjourned to the next day.

November 29th, 1882.

Mr Misaël Archambeault, director for the district of St. Hyacinth, expressed his certainty of the good which the association would confer upon the province. We have much to learn on the subject of cheese-making, and it is probable, here as elsewhere, that science has not said its last word. Although a partisan of the full-milk cheese faction, Mr Archambeault thought there was room for a variety of cheeses on our markets.

"I have made experiments which convince me that a possibility exists of replacing foreign cheeses by Canadian makes: Gruyère, for example, I have made, by the aid of books; Gruyère cheese, which, with age and care, would have brought, if not 30c or 40c a pound, at least a remunerative price." Mr Archambault was in the habit of buying the milk of his patrons, paying them a cent a pound all the summer. He sold his cheese for 11¾ cents.

Several technical questions were put to Mr Jocelyn by the speaker, as to the manufacture of the cheeses he had shown. One of them, a family cheese made from skimmed milk, when eaten fresh, was pronounced excellent.

Hereupon, Mr Barnard expressed his opinion that the local market should increase considerably when cheese entered more generally into our system of alimentation. Skim-cheese, eaten when new, is healthy and economical food. He thought that we should not be in a hurry to settle the question of skim- or full-milk cheese. Here, again, we should guard against being prejudiced in favour of one idea, and unwilling to listen to the partisans of the opposite faction. And this is proved by what had happened at that very meeting. The sample n° 1, declared the best of the four samples by a competent jury, was made of milk from which the whole of the cream had been taken, and replaced by an animal oil—oleo-margarine!!! This shows, emphatically, that to the skill of the maker the quality of the cheese is mainly due. The house Burrell and Whitman, makers of oleo-margarine cheese, openly and without the slightest disguise, enjoys a European reputation.

Mr L. Laforce then spoke of the chemical and consumptional value of cheese. An average cheese contains as much fatty matter, weight for weight, as meat, and twice as much of the materials which enter into the composition of human flesh. And its value, as a food, is in that proportion the more valuable. As to its digestibility and flavour, Mr Laforce thought the whole-milk