

are not appropriated in their pure state by the animals. The oxygen is consumed in the form of air, while the carbon is consumed in vegetable food. The milch cow also requires a sufficient amount of nitrogenous food for the production of milk, which contains a large amount of nitrogenous food. Mr. Curtis gave a list of articles forming the best ensilage for the food of milch cows, which had been found most essential and nutritious by scientific men. In referring to cheese, he said that it was generally believed that owing to the amount of acid contained, cheese was a digestible food, but the contrary was the case. It had been shown by experiment that the presence of acid in cheese did not make it more digestible than the carbon in pork. The digestibility of cheese depended on the presence of phosphates. He paid a high compliment to the Canadian farmers by saying that for the past few years they had led the Americans in the price and quality of their dairy products, and he hoped they would maintain their good credit. He mentioned the fact that it was owing first to the Canadian farmers that the inferiority and uselessness of sweet curd had been found out.

THE USE OF SALT IN DAIRYING.

Mr. McAdam said another very particular season was just when the cows were going first to grass. He pointed out the value of uniformity in fine quality—not fine one week and poor the next. He laid peculiar stress upon the value of an amateur learning to make cheese with a maker who always produced a fine article. In reply to Mr. Leitch, he said the proper proportion of salt was about 1 oz to 3 lbs. of curd. In England 1 lb. of salt was used with 56 lbs. of curd. The proper method was to weigh the curd and salt. The finest cheese in Scotland were produced this way. There was no guess work about it.

Friday morning.—The Rev. W. F. Clarke delivered an address on "The Mistakes in Dairy Farming." He recommended a better class of animals, and attributed a great loss in this line to poor animals—scrubs. Twenty-three good cows were worth forty scrubs. Our dairymen should look to supply and demand: and if poor cows were kept, and sold, and thus were encouraged, people would not buy their stock. Cow-poor and poor cow means the same thing. The Hon. Harris Lewis found the worst kind of cows through the country in Herkimer Co., N. Y.; as old account as it was, it was found two out of three average cows did not pay for their board. It was no use keeping cows for the fun of the thing. The proper feeds were here recommended, and 12 lbs. of hay was equal to 150 lbs. of turnips. Bran, clover, etc., were especially recommended for milch cows. This was an illustration of its manurial value:—Clover was equal plowed down to twelve loads of barn yard manure per acre. Clover culture was the cheapest fodder and the best way of recuperating land; extravagance of manure making was commented upon. Lord Kinnard considered manure by being covered brought five or six tons of potatoes more to the acre than when exposed to the atmosphere. An open shed with only two ends was recommended as all that was necessary. This manure shed would be both beneficial in summer and winter. Manure should

only be handled twice: ammonia escapes by exposure, and every time manure is handled it loses this valuable property. Naked fallowing was a great mistake, as the ammonia escapes by the action of the sun. The crumbling of soil exhausted lands, and hence a covering of clover or any other plan would be better than fallowing. Why waste land when two years' clovering would do more good in purging land than continual summer fallowing would do?

Mr. William Weld, of the FARMER'S ADVOCATE, referred to Mr. W. F. Clarke's efforts in the way of trying to advance agriculture, at cheese meetings especially. Mr. Weld's cut was hardly received with much grace by the rev. gentleman. In reviewing the meeting Mr. Weld eulogized the efforts of Prof. Arnold in advancing the cheese interests of this country, and was happy to say that the people of Canada were the first to profit by Mr. Arnold's experience and advanced views, and also by other modern inventions in the way of cheese making.

At this stage several questions were put into the hands of the President, Mr. Richardson, and asked from the audience.

Mr. McAdam, of Rome, N. Y., explained the difference between the Dunlop and Cheddar systems of cheese making. The former rose the temperature to 98° before coagulating or applying the rennet; whilst the Cheddar plan was to coagulate at 84°, and then raise the curd to 96° or 98°. According to the best judges, both in New York, and those in the English market, the Cheddar make had the preference, and our business was to suit the taste of our customers.

A lengthy discussion took place on the deep and shallow setting of milk, some contending for the one, and more for the other.

Prof. Barnard, of Quebec, read a paper on "The Past, Present and Future of Canadian Dairying." Wherein he showed that while the cheese industry had improved and the exports had increased, the butter industry had gone behind. However, he instanced as one of the causes of this state of things, the improvement of Canadian cheese-making, and the profits arising therefrom. Although Canadian butter-making had remained at a standstill, other countries had advanced. Denmark, for instance, shows an increase in exports to the same markets as those of Canada of over 100 per cent. The same was true of other foreign countries. The true reason, however, is in the very poor quality of the butter manufactured in Canada. In the Montreal markets, while the speaker had found from 25 to 30 per cent. of good butter, 50 to 60 per cent. was poor. Montreal butter exporters are unable to get a suitable article for the English market. An improvement had been effected in Quebec by the spread of the creamery system, by circulating information on the subject, by the establishment of dairy schools, and by Government aid. He pointed out the many advantages to be derived from butter dairying, and urged a more thorough and systematic development of the system in all its branches.

Mr. J. B. Harris was recommended to the Dominion Government by the Association, when his mission in Scotland is concluded, (giving instruction in dairying) for the purpose

of gathering information for the benefit of Canadian dairymen.

The following officers were duly elected for the ensuing year:—

President—L. R. Richardson, Strathroy.

First-vice—H. Parker, Woodstock.

Second-vice—H. S. Losee.

Directors—John Steiner, Hamburg; Adam Speers, Caistorville; E. Coswell, Ingersoll; H. McCartney, Brucefield; Thos. Ballantyne, M. P. P., Stratford; W. Symington, Camlachie; J. H. Masters, Cookstown.

Auditors—John Craig, Woodstock, and John S. Pearce, London.

A Convenient Milking Pail.

At the Western Dairymen's Convention there was exhibited a very useful combined milk pail, strainer and stool. It was pronounced by



many of the dairymen to be the best, most convenient and cleanest milking pail they had yet seen. The accompanying illustrations show the bucket and how it is used. The receiver into which the milk is drawn contains a strainer, which prevents any impurities dropping into the bucket. The receiver and pail are connected by a flexible attachment, so that if the cow moves or kicks the pail need not be



overthrown. The pail is manufactured by the Ontario Milk Bucket Manufacturing Co., Toronto. Dairymen who have used them speak very highly of them.

HANDLING YOUNG HEIFERS.—It is a serious mistake to neglect handling young heifers until after they have dropped their first calf. At this time their bags are apt to be swollen and tender, and the task of accustoming them to be milked is more difficult. For some time before calving heifers will take kindly to having their udders handled. The operation tends to enlarge the bag and the teats, and with good milking stock may make it necessary to draw milk once or twice a day for a week or more before the calf is dropped. Do not begrudge the extra trouble that this makes. It is a sign that the heifer will prove to be a deep milker.