

### Butter and Cheese Association of Eastern Ontario Meet.

The 22nd annual convention of Eastern Ontario dairymen was held at Kingston on Jan. 10th, 11th and 12th. After the Association had been warmly welcomed by Mayor Ryan and other representatives of the City Council, President Mr. D. Derbyshire, Brockville, delivered his annual address. He referred feelingly and regretfully to the loss by death of Mr. T. J. Madden, a former representative of the Board, and Prof. J. J. Ruddick, Principal of the Dairy School, by removal. The latter's place, he believed, is being creditably filled by Prof. J. W. Hart. Referring to the dairy trade, it was pointed out that future expansion must be along the line of butter production, since we are sending to England about as much cheese as the markets there can handle, while there is plenty of room for good creamery butter in the motherland. To show the rapidity of the development of our butter trade, it was pointed out that in 1894, 32,619 packages of creamery butter were exported, while in 1898, 280,000 packages were sent to England, and the reputation of "Canadian Creamery" is improving all the time. The President predicted that in four years more we would be sending 400,000 packages annually, besides just as much cheese as we are now exporting, viz., 1,900,000 boxes in 1898. The meeting was warned against making fodder cheese, or any other sort not first-class, as the British consumer is getting too much good cheese placed before him to accept second-grade stuff. A greater uniformity of fine quality is needed if we are to hold our present high position, and this cannot be done without an improvement being made in the general care of the milk, condition of the factories, especially the curing room. A better class of makers are needed, and a course at the Dairy School was recommended as the remedy for this last defect. Mr. Derbyshire urged the planting of shade trees around the factories, making everything inside and out of the factory as neat and clean as possible, and then have a first-class, well-informed fellow inside to look after the making business. He should be such a man as can instruct the patrons when milk is coming to the factory in wrong condition. He spoke of the need for more refrigerator cars to carry away the butter and cheese, which should be sold regularly as soon as it is ready to ship. Regarding the low price paid for cheese during the season of 1898, it was claimed to be due, to the extent of a cent per pound, to a certain large Canadian dealer, who, in his determination to undersell others in the British market, accepted a lower price all through the season than was necessary. This set the price for Canadian cheese, to the disadvantage of all Canadians concerned.

**Troubles of the Cheesemaker.**—Prof. H. H. Dean, of the Guelph Agricultural College, referred to many of the difficulties encountered by cheesemakers during the past season, and suggested remedies for the same. The milk supplied to too many factories is not as clean and in as good condition as it should be. A process of education, such as conventions, dairy literature, etc., were suggested as the remedies. It is Prof. Dean's impression that there are too many small factories for the good of the dairy industry. Larger and better equipped factories, with strict and careful management, was recommended as a cure for many of the present difficulties. During the past season cheesemakers have had to make good many losses for poor cheese, for which they were not altogether responsible. Poor condition of milk, bad factories, bad drainage, and faulty curing rooms are too often the causes of poor cheese. More true co-operation is needed, that the real causes of trouble will be sifted out and met. Makers have found difficulty to get milk to coagulate, even when large quantities of rennet were added. This was found, in some cases, to be due to patrons adding baking soda to milk to keep it sweet. The temperature in many curing rooms has been found difficult to control in hot and cold weather. Where the room is properly insulated, the use of ice and sub-earth ducts were recommended. From 60 to 65 degrees Fahr. is considered the most desirable temperature for curing cheese. A higher temperature spoils flavor, loses fat, and shrinks the cheese. For the sub-earth duct, a dry ditch 6 to 6½ feet deep was recommended. Six rows of six-inch tile, built in two tiers, forms a good conductor. One hundred and fifty to two hundred feet long was recommended. The outer end should have a pipe, 14 to 16 inches in diameter, extending 8 to 10 feet above ground, and fitted with a hood, with a tail, on a pivot, so as to face the wind at all times, insuring a draft. It should have a slide where it enters the curing room, so that it can be closed when desired. The use of ice gives good results, but it is rather expensive in the amount of labor it involves. Mold occurs more frequently with the sub-earth duct, but Prof. Dean

is of opinion that since the cloth bandage is always stripped off the cheese before it is placed in the retail market the presence of a little mold is not so objectionable as we are sometimes led to suppose. A reference was made to mottles in cheese, which has been clearly proved to be of bacterial origin. It is usually accompanied by bad flavors, and is confined to colored cheese. No reports of mottled cheese have been heard of the past season. The Professor is of the opinion that the coloring of cheese will soon go out of date, as it adds no improvement to the cheese. Whenever mottled cheese is found in a curing room, it was recommended to remove it at once and disinfect the room thoroughly.

**Feed and Management of the Dairy Cow.**—Mr. J. H. Grisdale, of Iowa Agricultural College, read an elaborate and practical paper upon the rearing and management of a dairy herd. He advised that cows calve in the fall, because they will give 25 per cent. more milk in the year than if they calve in spring, and because more attention can be given the young stock during the choring season. He recommended the use of the hand separator in a small dairy, and a power separator run by a bull where a larger number of cows are kept. It was recommended to feed cows supplementary feed during drouth, that her milk yield may not decrease, which will increase their present and future productiveness. In winter dairying sufficient quiet daily exercise to keep up muscular vigor was claimed to have been found more profitable than constant housing from fall to spring. Prof. Roberts found 8 per cent. increase of milk by allowing cows to run loose in a roomy, comfortable shed, over those tied constantly. Inside watering with water at about the same temperature as the stable was highly spoken of. An inside tank was recommended.

**Weeds.**—Prof. Jas. Fletcher, LL.D., of the Central Experimental Farm, Ottawa, gave an instructive address on weeds, which was listened to with rapt attention. The study of weeds is an extensive one, but not difficult to master, as it can be brought down to principles. They take posses-

sion, rob and crowd our crops, and therefore should be combated. Dirty seed, especially clover and grass, introduce weeds that will cost hundreds of dollars to get rid of. Among the new weeds that are giving trouble, dodder in clover was referred to as becoming prevalent in some sections. It is usually introduced in clover seed. It is a parasitic plant, and when once it gets a start in a clover field it sends suckers into the clover stalks, and feeds from that source independent of its own roots, and spreads in all directions. All boughten clover seed should be carefully examined before sowing. Samples sent to any of the experimental stations will be examined free of charge. Twitch or couch grass, as well as thistles, are best combated by shallow cultivation. Deep plowing serves to re-plant and increase those weeds, especially the former. To kill mustard the seed in the land should be germinated and the plants not allowed to produce seed. This is the treatment for all annual plants. The use of the modern weeder was strongly recommended on grain fields after the crop is four or five inches high. This is being followed with particular advantage in Manitoba. It not only kills weeds, but conserves moisture, and therefore stimulates the crops.

**Bacterial Infection of Cheese.**—Dr. Connell, of Queen's University, has during the last few years been instrumental in locating the bacterial origin of peculiar troubles in certain cheese factories. Mottled cheese was found to be caused by a certain species of bacteria found in a slimy drain opening into the factory. Referring to susceptibility of milk to bacterial infestation it was pointed out that milk is a suitable media for all bacterial development. When surroundings are kept clean and wholesome, and no putrifying substances are allowed to contaminate the atmosphere in which milk is kept, desirable sorts of germ life will be found, but when the opposite is true there may be no end of trouble to the cheesemaker. Bacteria causes all kinds of changes in milk, and is born in the atmos-

phere. A common source of trouble is bacteria which comes from the excreta of animals, such as cows, chickens, etc. These are borne in dust particles and in other ways which may escape notice. Road dust is a common vehicle of these germs. This peculiar sort is claimed to be the cause of gassy milk, pinhole curd, etc. Often these bad sorts are propagated from day to day in the "starter" used. Early in September, a maker found difficulty in his work, inasmuch as his cheese were open in body and developed a bad flavor. Dr. Connell visited his factory and found a new floor had been put over an old one some years ago, and between them was a considerable depth of putrifying slime, while the factory was peculiarly infested with flies. These the Doctor believed were instrumental in carrying the infection from the slime to the vats.

**Shrinkage of Cheese.**—Mr. Aderhold, a Wisconsin dairy instructor, claimed much for the sub-earth duct in preventing undue drying and shrinkage of cheese in the curing room. He believed a decrease of 3½ per cent. of shrinkage might be prevented in the average factory by having the curing room controllable and cooled with sub-earth duct. He also advised upper ventilation. In referring to the sediment found in the bottom of cans sent to the factory, he claimed that unclean milking was largely to blame. He made the estimate that sufficient sediment was consumed with the milk in Berlin, Germany, annually to manure 40 acres of land. He considered it a piece of bad business on the part of patrons to allow good milk to go into an imperfect factory, having a defective curing room, to be made into cheese.

**Rearing and Fattening Hogs.**—Prof. Robertson, in an address, claimed that all breeds can be kept at a profit by wise management. Success lies more on the man's side than that of the hog. Owing to the bareness of the pig's skin and his aversion to drafts, he should have a comfortable, dry shelter if he is to do well for his owner. Drafts will cause a pig to become constipated, which is the source of many pig ailments. Dry earth makes the best floor and bare cement the worst. A board sleeping platform is needed on a concrete floor. Allow plenty of sunlight, that the pig may be happy and healthy. Slope floors to the front of pen and have dry bed at back. When a pig is young it should be fed liberally with bulky, succulent food until past 100 pounds. After that a more concentrated ration should be given, on which he should be finished. When thus fed he is not liable to produce soft bacon. Continuous grain feeding from the first is expensive in food and in the growth produced by it. Aim to grow all feed fed. It is better usually to keep less hogs than to have to buy feed. The present-day markets require pigs about 200 pounds at 8 to 9 months rather than at 6 months. Have hogs to sell all the year round. A dairy farmer can raise a considerable revenue this way.

**Cheesemaking.**—Mr. J. T. Dillon, formerly superintendent of cheese factories in Prince Edward Island, gave a paper on practical cheesemaking, in which all the steps in the process were dwelt upon. Among other things, he emphasized the importance of using clean-cutting curd knives that will not crush the curd. To guard against over-cooking is also important. Fast-working curds should be dipped early and washed to get rid of the acid. Do not stir curds on rack too dry. Endeavor to secure an even temperature through the entire curds while cooking, also break all lumps that are liable to roll away to the end of the rack. Pile curds up if working slowly. Cut the curd evenly so that salting will be uniform. In cutting, cooking, and salting, etc., everything should be done with uniformity and care. Always weigh the curd into the hoops. Make cheese that will fill the boxes neatly. Allow free circulation of air in the making room, and have cover for the vats to prevent cold drafts striking the setting curds. Use three pounds of salt for 100 pounds of curd ordinarily, and 2½ pounds for slow-curing cheese. Cure cheese at 60 degrees, and open the curing room windows in mornings and evenings. Keep cheese out of drafts or they will crack, and out of the sun or fat will run out and flavor will suffer.

**Stability of our Cheese Trade.**—Prof. J. W. Robertson, Dominion Dairy Commissioner, was able to speak with authority on our cheese trade with Great Britain. Canadians gained the present high reputation for their cheese at a time when there was comparatively little competition in first-class Cheddars in the Old Country. Now Canadian methods of manufacture are being introduced into Great Britain and other countries, enabling them to furnish a high-class article. The demand is now for a soft, mild-flavored cheese, which is best produced in a cool climate. It is therefore very important that curing rooms be kept cool during hot weather, and warm during cold weather. By the ice and salt cylinders, properly insulated butter storages are being kept down to 35 to 38 degrees all summer, so



MEMBERS OF THE CHEESE AND BUTTER ASSOCIATION OF EASTERN ONTARIO.  
ATTENDING THE ANNUAL CONVENTION HELD IN KINGSTON, JANUARY 10TH, 11TH AND 12TH.