

don, England. Then, again, we should like to ask the writer if he does not think that the quality of butter will be considerably worse than "when it is made," after lying in a freight-shed for several hours, at a temperature of 72 to 84 degrees F., waiting for a freight train, and whether or not it is likely to have its "quality" virtually as good as when made "by being placed in a refrigerator car, where the temperature in the car runs 70 to 76 degrees, with only about 500 to 600 pounds of ice in the ice boxes to cool the butter? These are not fanciful, but actual, conditions, that have existed during the past season.

The writer has a good word to say regarding the compulsory grading of butter in New Zealand, where, he claims, "it has brought about a regular standard of quality."

Under "Cheese," the following significant statement is made: "The profitable import of cheese into this country has apparently reached a well-defined limit, which leaves little or no room for expansion. Notwithstanding the attraction of high prices, induced very largely by the scare last year in American tinned meats, the import of cheese for the year ended June 30th, was 1,006 tons below that of ten years ago. Contrast this with the import of butter, which increased in the same period 60,000 tons."

Under "Quality," he notes: "A steady improvement in quality for some years, both in Canadian and New Zealand cheese."

PROSPECTS FOR NEXT SEASON.

Among the comments under this heading, we find: "There is every indication of large supplies of butter being available for the coming winter. In the United Kingdom, the most favorable circumstances exist for an increase in the milking herds, and the consequent augmentation in the make of butter this winter."

"On the other hand, trade is everywhere so prosperous that the consumptive demand is certain to be well maintained, especially if lower prices prevail."

"There are no indications at present of any great shortage in the make of cheese for the current year. The Canadian season is late, but if there should be a deficiency at the end of the season, it will be more than made up by the very large increase in the United Kingdom and in Europe."

"To sum up, considerably lower prices are to be expected for both butter and cheese than have prevailed during the past year."

It is always dangerous to prophesy about butter and cheese markets. From a Canadian producer's viewpoint, we trust the foregoing prophecy may not come true, but if it does, we shall have to make the best of it. Things, at the present time, do not seem to support the tone of the prophet. However, who can tell what a year may bring forth? H. H. D.

SPECIAL SPEAKERS FOR ANNUAL MEETINGS OF CHEESE FACTORIES AND CREAMERIES.

The Department of Agriculture, in conjunction with the two Dairymen's Associations, is making a special effort to induce producers to furnish milk and cream of a uniformly high grade, in order that the cheese and butter manufactured may be improved in quality, and that this Province may maintain and strengthen its reputation as a dairy-producing country. Towards this end, the Department is making an effort to send speakers to the annual meetings of factories and creameries during the fall and winter months.

Speakers will be furnished upon the following conditions: That the secretary or other officers of the factory send out notice to all patrons and other farmers living in the immediate vicinity of the factory, stating clearly the place, date and hour of meeting, and announcing the programme. No charge will be made to the factory concerned. The officers will be expected to provide for the entertainment of the speaker while at the place of meeting, and will also be expected to assist in transportation of the speaker from one factory to the next, provided he does not travel by rail. Application for speakers should be sent to G. A. Putnam, Director of Dairy Instruction, before the end of September.

THE DAIRY HERD COMPETITION.

Patrons of cheese factories and creameries in Western Ontario will do well to note the announcement of a dairy-herd competition in 1907. Through the generosity of Ryrie Bros., Toronto, the Western Ontario Dairyman's Association is again able to offer two medals for competition by patrons of cheese factories and creameries—a silver one to the patron who delivers the most milk per cow to a cheese factory between April 1st and October 31st, and a bronze medal to the patron who delivers the most butter-fat per cow to a creamery within the same dates. No herd of fewer than eight cows is eligible in either case. Applications may be made any time before January 1st, 1908, and the statements of all competitors must be in the office of the Secretary of the Association, Frank Hens, London, Ont., before that date. It costs nothing to enter, and we trust there may be a large response.

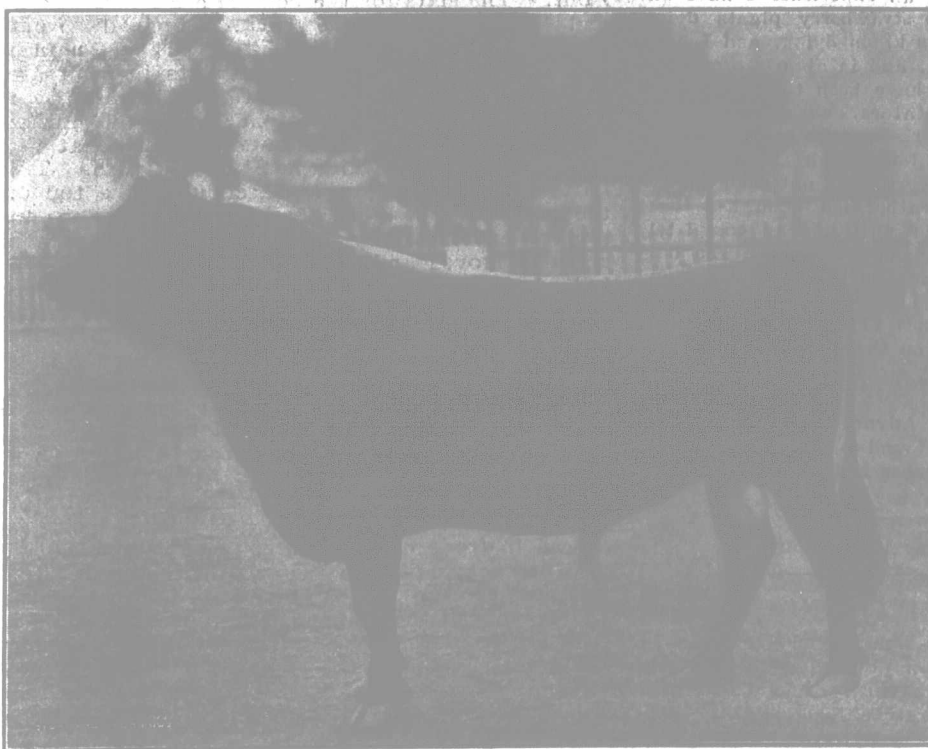
MILKING MACHINES TRIED IN CONNECTICUT.

Bulletin number 47, from Storrs Station, Connecticut, U. S. A., deals with these very live topics:

"The labor connected with the routine work of milking is one of the most exacting operations on the ordinary dairy farm." "Manual labor is one of the most expensive things which the farmer has to buy, and wherever possible, he makes use of machinery in doing his work." With these two statements the author of the bulletin proceeds to discuss the question of milking machines. The machine experimented with was the same as that used in the dairy stable of the Ontario Agricultural College during 1906. The writer realizes the difficulty of a practical and successful milking machine by saying, the nervous, sensitive disposition of the individual cows, together with the lack of uniformity in the form and size of the udder and teats, has made it very difficult to invent a machine which would milk different cows satisfactorily.

The first part of the bulletin deals with the effects on the bacterial content of the milk by using the machine. To compare hand and machine milking experiments were made with nine different methods of treating the parts of the machine in order to keep them clean. The machine and its parts were first washed in the ordinary way, and "in every experiment the germ content of the machine-drawn milk is higher than in the corresponding hand-drawn milk." The relative numbers of bacteria were an average of 15,524 for the machine work, and 3,144 for the hand-drawn. The other methods of treating the parts of the machine were: gold-dust bath; sterilizing pail and cover in steam and placing rubbers in a 2½-per-cent. solution of formalin; sterilizing all parts in steam, which spoiled the rubbers; placing parts in a 10-per-cent. salt solution; immersing in borax solution; washing in a 3½-per-cent. solution of formalin; and treating the tubes, teat cups, etc., with a lime-water solution.

None of these were effective in sterilizing the parts of the machine, except sterilizing with steam and treating with formalin. The authors conclude that, so far as these experiments go, the formalin treatment is the only one which seems to be efficient in sterilizing the tubes and which does not at the same time injure the rubber. By thoroughly rinsing the tubes just before use the formalin is so completely removed that no trace of it could be found in the milk, even by the most sensitive chemical test.



Pearl of Kirkfield (imp.) 8087.

Jersey bull; calved May, 1903. First at the Royal Show, England, 1906; first and grand champion at the Canadian National Exhibition, Toronto, 1907. Imported and owned by Mr. Wm. McKenzie, Kirkfield, Ont.

Granting that the foregoing is correct, and we have no reason to doubt the conclusion of the authors, is it advisable to recommend formalin for the sterilizing of the tubes, teat cups, etc., of the milking machine, and place such a dangerous chemical in the hands of ordinary dairymen? We should hesitate very much before doing so in Canada, and the Canadian dairy farmer is fully as competent to handle dangerous chemicals as is the American farmer. We are strongly of the opinion that some other method of cleansing milking machines is necessary before they become practicable on the ordinary farm.

EFFECT ON MILK YIELD.

The second part of the bulletin reminds us of a cartoon which appeared recently in a Canadian daily paper. The subject of the cartoon was

political, hence we "dassn't" more than mention it.

The opening paragraph gives the yield of 33 cows in seven days when milked with the machine, as 2814.7 lbs., while they gave 2993.5 lbs. milk in the same time, milked by hand. "The yield from machine-milking was 178.8 lbs. less in the seven days than from hand-milking, or about three-fourths pound less per cow per day."

In succeeding tables and paragraphs the shrinkage for various periods are given, but we have no means of knowing whether these shrinkages are normal or abnormal. The percentage of shrinkage per month varied from about 6 to over 19.

The writer seems to recognize that the report is not altogether satisfactory, and accounts for it by the fact that he withdrew from the station staff while the experiments were in progress. Uncle Sam appears to have difficulty in keeping his boys on the job long enough to demonstrate what they can do. H. H. D.

TORONTO MILK PRODUCERS' ASSOCIATION.

The annual meeting of the Toronto Milk Producers' Association was held in Toronto, at the Labor Temple, on Saturday, Sept. 14th. The following were elected as trustees: J. G. Cornell (President); Scarborough: W. O. Grubbe (Vice-President); Thistletown: D. E. Annis; Toronto: A. Forster; Markham: A. J. Reynolds; Scarborough Jct. (Secretary).

As announced in last week's "Farmer's Advocate," the prices to be paid for milk were: \$1.00 per eight-gallon can for six months—November 1st, 1907, to May 1st, 1908—and \$1.30 per can for five months—May 1st to October 1st—delivered in Toronto. This covers eleven months only, leaving October, 1908, to start the winter term instead of November, as at present.

GARDEN & ORCHARD.

HORTICULTURAL PROGRESS.

Prepared for "The Farmer's Advocate" by W. T. Macoun, Horticulturist, Central Experimental Farm, Ottawa.

FRUITS OF ONTARIO.

A valuable addition to Canadian horticultural literature is the handbook entitled "Fruits of Ontario," recently published by the Ontario Department of Agriculture, Toronto. The information contained in this book of 275 pages is of the greatest value to Canadian fruit growers, and is presented in a most attractive form in which it is presented to the public is a credit to the Department and its staff.

to make the work popular. The matter is printed on excellent paper, and the illustrations, 225 in number, are very good indeed, being from photos of typical specimens of the fruit recommended. After the establishment of the Ontario Fruit Experiment Stations in 1894, it was felt that in order that fruit-growers should get the greatest benefits from them, a handbook giving descriptions of the varieties tested should be eventually published. Mr. Linus Woolverton, Secretary of the Board of Control of the Fruit Experiment Stations, was entrusted with this work and for ten years he was engaged on it. During this time he made many descriptions of varieties and a very large number of fine photographs of fruit, most of which are life size. These descriptions and photographs were from time to time

examined by the Board of Control of the Fruit Experiment Stations and passed upon, suggestions for improvement being made when necessary. The descriptions were also verified by referring to standard pomological works, and by a number of fruit specialists in Ontario. Having concluded his labors, Mr. Woolverton handed over the material to the Ontario Department of Agriculture. It was felt by the Department that in order to make the handbook of the greatest practical value, cultural directions for each kind of fruit, and lists of varieties recommended, should be given. This matter was prepared by the Department and incorporated with the descriptions, making a handbook which every Ontario fruit-grower should have if possible. The fruits are classified into four groups: 1. The tree fruits, including the apple, cherry, peach, pear, plum, and quince. 2. The grape. 3. The bush fruits, in-