

adulteration more being 20 in 1918, 1875. We have more ability of having all spite of heavy fines, the practice still the average price of in the actual value most marked, and year, patrons will distribution of their provides, when it all use of the Babcock in case of discussion a fat basis, I had a of cheese-makers, ments, and a sum-cheese-makers have diplomas; 435 have e-year permits, and bation. The total ctories in Eastern suitable apparatus opinion that every actometer and Bab-qualify the use of ubs would find less question of paying

Northern Ontario, lows: 24 factories, ee-milk, 8,545,663 ctories and yielding lk to one pound of cow 2,454 pounds. ee factory patrons t milking machines ult in 1919. house, President of ry Scott, Ottawa, the Council, spoke and in the course of ion of the British al price of 25 cents a without consulta- "a most iniquitous ht out much dis- tion was evidenced. Dairy Commissioner, circumstances sur- 1919, and we quote ws:

INDUSTRY. convention a year ve that the trade in the pre-war status s the wish was father ur hopes, if you had fully realized. issues, or to direct t and gone when e as there was more or the British Ministry urchase of Canadian e desirable that a ction with this matter

on the imports into part of the season and for a time there at advancing prices, l selling price of 36 ices came from the and others who were of cheese, free im- if they had, to be ition, together with ss from cont'nental buying, forced prices ed be paid for cheese om at a profit under gular British import- en receiving a good orts, now found that neither commission ct had anything to do y of Food to again am unable to state it had. At any rate ondon one day that ee would be subject price of 28 cents, and to Canada to arrange ee. The result of that the continental as to stop buying in

ived in this country Montreal for 20,000 me to say there was e it was felt that 25 ices which had been which had been paid, ous and speculative, on the part of the e offer of the com- t the price of cheese t least, to about 23 ch as could have been England at 36 cents ndled it, after bearing xchange.

COST OF HANDLING CHEESE.

"That statement may seem incredible to those of you who have your minds fixed on the margin between primary prices in Canada and retail prices in England which prevailed in pre-war days, but the cost of handling dairy produce has advanced like everything else. I quote from a statement given out by the Department on July 30th last respecting the cheese purchase:

"The cost of handling the cheese from the time it is delivered by the Canadian producer at Montreal until it reaches the consumer in Great Britain at the present time amounts to 10.95 cents per pound, made up of the following items:

	Cents per lb.
British retailers' profit (which includes loss in weight in cutting up.....	5.
Commission paid to British wholesalers and British importers (average).....	1.5
Inland transport in Great Britain.....	.5
Storage and handling in Great Britain.....	.5
Interest in carrying stock.....	.5
Loss in weight.....	.33
Ocean freight and landing charges.....	1.75
Discount.....	.25
Commission paid Montreal exporters.....	.37
Montreal handling charges.....	.25
Total.....	10.95

"In addition to these charges the British committee will have to bear the loss on account of the low rate of exchange, which at the present time is equivalent to about 2 cents per pound.

"The British committee will lose on the Canadian cheese purchased at 25 cents, and this loss will have to be met from the profits on purchases in other countries, or become a charge on the British Treasury."

NO FIXING OF PRICES.

"The offer of the committee to purchase cheese at 25 cents was held by some at the time as equivalent to 'fixing' the price, and there was more or less resentment on that ground. That this was a mistaken view of the matter has been fully shown by the course of prices during the latter part of the season. The price would have been a 'fixed' one only if the cheese had been commandeered and export to other markets prohibited. The British authorities would have been glad to have had this done, but consent to such action was refused in Canada, and thus you were in a position to take advantage of the European demand which came back late in July, this time through our own Canadian exporters, and at a higher price than the Montreal committee was paying. It may be news to some of you that the committee has not yet secured the full 20,000 tons covered by their first offer, and that not a single box of cheese has been offered to it since October 1st.

"Now I do not want you to misinterpret this statement of fact as in any sense an attempt to justify the policy of the British authorities, or as an argument that the price of 25 cents was a fair one under the existing cost of production. That is another matter entirely. My object is simply to put the facts fairly and squarely before you in the hope that a full knowledge of the situation will tend to remove any misunderstanding or sense of unfair treatment. It is not in the interest of the dairying industry that you should be dissatisfied, or feel that you have not been getting a square deal. I might add that the Ministry of Food have stated definitely that rather than pay more than 25 cents they are prepared to do without the cheese, and we cannot question their right to this decision."

A WARM DISCUSSION.

Following Mr. Ruddick's paper the discussion again started and soon warmed up to an uncomfortable degree. The Commissioner, who was not at all well, lost his temper when some of those present who did not understand the situation as fully as he did, accused him of not looking out for the interests of the dairymen. For a time the meeting was mostly noise, but little of it is worth repeating because it was merely another instance of the fact that farmers engaged in a specialized business like cheese-making should know more about the marketing side of their own business than they usually do. Under such circumstances it may be quite natural, but it is not always fair to lay the blame for disappointments and lack of consideration upon Government officials.

DOMINION EDUCATIONAL BUTTER-SCORING CONTEST.

G. H. Barr, Chief of the Dairy Division, Ottawa, discussed on Friday afternoon the results of the first year's experience with the Dominion Educational Butter-Scoring Contest. A total of 181 samples were received during the year for scoring, from each of the nine Provinces of Canada. The following table, especially the first two columns were considered by the speaker to be a close indication of dairy education in butter carried on by the different provinces.

Province	Number Samples Received	Number Graded as Specials	Highest Score
British Columbia.....	18	6	97.1
Alberta.....	22	15	98.0
Saskatchewan.....	22	8	98.5
Manitoba.....	20	14	98.0
Ontario.....	19	2	96.5
Quebec.....	23	17	98.5
New Brunswick.....	20	5	96.8
Nova Scotia.....	20	8	98.0
P. E. Island.....	20	6	98.0

The speaker emphasized the value of using pasteurized cream as shown by the contest and said that as a general rule the unpasteurized cream butter deteriorated three times as much as did pasteurized cream butter. The value of the Storch test was also pointed out clearly in connection with determining the ability of a sample to retain its grade after storage. The type of butter we want will be firm, close and will pull out on the tryer like a piece of wax.

CREAMERY BUTTER IN EASTERN ONTARIO.

L. A. Zufelt, Superintendent of the Kingston Dairy School, made favorable references to the improvement in the quality of creamery butter from Eastern Ontario as shown by winnings at the larger Provincial exhibitions in 1919. Out of 54 prizes Eastern Ontario secured 9, Western Ontario 7, Alberta 21, Manitoba 7, Quebec 6, and Nova Scotia 4. The following is quoted from Mr. Zufelt's address:

"Conditions this season were rather unfavorable for making a high-grade butter. June was exceptionally hot. The ice harvest of last winter was of poor keeping quality, which, coupled with the fact that few of our creameries have an adequate water supply, pasteurization of the cream had to be discontinued in the majority of cases. Moulds developing on the butter of a few creameries caused us a great deal of anxiety, but owing to the assistance rendered by the bacteriological laboratory of Queen's University we were able to locate the source and finally to overcome the trouble. While we have made some real progress this season and have every reason to feel proud of what has been accomplished by a few of our creameries, yet we realize we have only just made a start and that much more must be accomplished before we can feel any real assurance of success.

"If I were asked for the one big reason why Ontario creamery butter has such a low standard of quality I would answer: 'Because of the vicious method practiced in placing it on the market.' Up to the present, with the exception of a few isolated cases during the past season, no pretence has been made to discriminate for quality. One price only has been paid for good, bad and indifferent qualities. Is it any wonder, therefore, that we have so much butter of inferior quality? The wonder is that we have any good butter at all. So long as we have butter merchants willing to pay as much money for inferior goods as they do for fancy, just so long will the inferior grades predominate. In order to make any lasting improvement in the quality of Ontario creamery butter the butter must be graded and sold on its merits. It costs money to make a good quality of butter and unless our creamerymen can be assured of getting more money for a higher quality we will be a long, long time persuading them to make the better article which costs them more money to manufacture. We simply get what we pay for. If we are not willing to pay a higher price for the better grades we will never get them, at least not in such quantities as to make us feel proud of the achievement."

THE CREAMERY AND THE FARM.

Professor H. H. Dean, O. A. C., discussed the creamery butter industry of Ontario in its relation to farms and farming, to other branches of dairying, to the Dairy Department of the O. A. C., and the Province as a whole. Regarding the relation of the creamery to farms and farming, the speaker said:

"Each and every branch of the dairy industry of Ontario bears a close and vital relation to the farms and farmers of this Province. Each also has some special or peculiar points in its relation to farming, which is not characteristic of other branches. For instance, the creamery has a special bearing on soil fertility and live-stock in that no other branch or line of dairying is so well adapted for maintaining and increasing the fertility of soils, which is granted to be the most vital problem in farming. No other kind of dairying is so well suited for raising good live stock, because skim-milk seems necessary for the young and growing animal, though men are now looking for a substitute, claiming that skim-milk and buttermilk are too valuable as human foods, to allow of their being fed economically to the lower animals.

"The use of artificial fertilizers is being advocated as a substitute for animal fertilizers, but experiments indicate that these are able to supplement only, not substitute for, the old reliable farmyard manure. It is altogether likely that farmers in Ontario will use more artificial fertilizers than has been the custom in the past, but no man can afford to do this who allows barnyard manure to waste, as is too frequently the case on Ontario farms.

"In its relation to the farmer the creamery has several points of special interest, among which may be mentioned that of knowing the cows in each herd individually by weighing and testing the milk, so that the owner may know how much fat or butter each cow is producing. The farmer is paid for fat only by the cream buyer, hence it is doubly necessary that the patron of a creamery should know how each cow's milk tests for milk-fat. The farmer in Ontario, as a rule, sells cream only to the creameryman, hence he must be familiar with cream separators and the necessity of keeping these clean; also he must know the importance of cooling cream immediately after separating, which involves the questions of ice-supply and cooling tanks—and there is no more important question in the whole creamery situation than at this point. We need a campaign for more ice and better cooling facilities on dairy farms where cream is sold for butter-making purposes. Cream grading and discrimination in prices favoring good cream by three to five cents a pound fat, naturally follow.

"The farmer is also interested in the transportation of his cream to market. How often should it be de-

livered, what should it cost, what is the best method—train, radial, truck, motor car, horse, or what? This leads us into the bigger questions of improved train service and better roads, which would take us too far afield to discuss at this time, but they are very important problems for dairy farmers to consider.

"In a word, the creamery industry at it affects farmers depends for its continued prosperity upon good farms and farming, good sweet cream, cheaply and efficiently transported from the farm to the creamery, a first-class quality of butter marketed in the best possible way, and upon good prices and fair dealing between the co-operative creamery and the dairy farmer. Without these, co-operative buttermaking will not make the progress it ought in a progressive country. Now is a good time to take stock of the good and also of the inefficient branches of the business."

AN \$80,000,000 DAIRY BUSINESS.

G. A. Putnam, Superintendent of Dairying, Toronto, estimated that Ontario's dairy production in 1919 was \$80,000,000. The speaker called attention to a statement made on reliable authority that the average milk going to cheese factories would not pass city milk inspection. His estimate of Ontario's business in dairying was as follows: 31,900,000 pounds of butter at 54 cents was worth \$17,250,000; 102,700,000 pounds cheese at 27 cents was worth \$27,750,000 (total factory production \$45,000,000); fresh milk and dairy butter, \$25,000,000; condensed and powdered milk, \$10,000,000; total, \$80,000,000. Mr. Putnam emphasized the need for an effective National Dairy Council not controlled by centralizers and distributors. He also urged the necessity of a "clean-milk" campaign, and stated that 6,000,000 children in the United States now need treatment because of poor nourishment. He also brought a request from Hon. Manning W. Doherty, Minister of Agriculture, that the Association make known its wishes regarding the Dairy Standards Act, which has been in cold storage for some time now.

A. A. Ayer, Montreal, representing the Montreal Produce Merchants, read a long paper dealing with business conditions. The speaker argued against shorter hours of labor, and for concentrated efforts toward thrift and increased production. Space does not permit us to go more fully into this address, which had been thoughtfully prepared.

At the evening session on Thursday, Dr. Mary Patterson, Toronto, spoke very entertainingly to a crowded mixed audience on the subject of "Milk and Health of the Nation." Milk in sufficient quantities said the speaker and quoted authority for her statement, will add 15 years to the life of the individual. Life she said is made up of three periods, preparation, usefulness and old age. The 15 years referred to would undoubtedly be added to the period of usefulness. Milk is at the same time the greatest source of infectious diseases, chief among which is tuberculosis which caused, during the war, more deaths than the war itself and the total deaths ascribed to the latter cause amount to fifteen million. All this wastage of life from tuberculosis is quite unnecessary but the essential for the control is proper feeding and among human foods milk comes first.

Dr. J. W. Robertson, for so long acquainted with various aspects of Canadian Agriculture followed Dr. Patterson on the program, and discussed the European situation as regards the dairy industry. He was overseas three times during the war, twice asked to go by the Government to observe conditions and interpret them to Canadians. The address of the speaker was one to demand attention. He dwelt on the great sacrifices of the war and emphasized the great name that Canada has made for herself during the struggle. He denied rumors that the United States took advantage of Canada in the matter of European markets for food supplies and stated emphatically that Herbert Hoover, U. S. Food Administrator, was always ready to yield Canada her fair place as a member of the British Empire, and therefore entitled to the utmost consideration. Now, said the speaker the British milk producer is guaranteed 68 cents per quart or \$6.80 per 100 lbs. for milk because Great Britain needs fresh milk for her people. The Canadian Government had nothing to do with fixing the price of any product of Canada in 1919 except to hold up the price of wheat. Britain lost 2 1/2 to 4 1/2 cents on every pound of Canadian cheese she bought in 1919 due to exchange rates and may have to lose still more. The burden of Dr. Robertson's address can be summed up in his own words, "We have got to buckle up in peace as in war, work harder, spend less, waste nothing, and find the food to feed the world in order to be worthy of the heritage we hold."

Dairymen reap their own reward when they keep a good herd properly cared for, and produce clean milk. Cities now have a fairly safe milk supply, but throughout the country congratulations are not always in order with respect to much of the milk that goes to our cheese factories. Milk is the very best food not only for human beings, but for all animal life. It is a splendid culture medium for bacteria. Many barns are not as clean as it is quite practical to keep them. Flies swarm in stables and lay their eggs in manure. These require 14 days to hatch so that if manure were spread once a week a serious danger to the milk supply would be practically removed. A great recent convention expressed its opinion that the most important thing in the world now is to conserve child life. Children should receive at least two, and the speaker thought three pints of milk per day. Every child naturally likes good milk. If they do not it is a lack of proper education. Milk is the cheapest product on the market to-day.

A NEW NATIONAL POLICY FOR AGRICULTURE.

The evening session on Friday was addressed by