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## Pure Milk Problem

## Report of Annual Meeting of Pacific North-west Association of Dairy and Milk Inspectors.

The fourth annual meeting of the Pacific Northwest Association of Dairy and Milk Inspectors, one of the most important meetings of its kind ever held in British Columbit, took place in Vancouver on May 12 and 13 with prominent dairymen from all over the coast in attendance. Prof. W. T. McDonald, live stock commissioner of the Province, who assisted in the organization of the association at Seattle Lur years ago, Presided and the proceedings were most interesting and instructive.

The object of the association is to develop efficient and uniform inspection of dairy farms, milk establishments, milk and milk products and to place the inspection of the same in the hands of persons who have a thorough knowledge of the dairy industry.

The officials for the ensuing year are: President, Mr. G. S. Henderson, Everett; first vice-president, Dr. J. B. Anderson, Spokane; second vice-president, Professor W. T. McDonald, Victoria, and secretary-treasurer, Mr. A. N. Henderson, Seattle, Wash.

The next convention will be held in  $T_{acoma.}$ 

#### Testing for Tuberculosis.

Tuberculine tests of cattle, as a means of eradicating the dread disease from animals, was an important topic of discussion at the convention, and although all the delegates were imbued with the necessity of these tests, there were some who deemed that Dasteurization of milk was a safeguard to the consumer, and might be adopted until farmers willingly co-operated with health authorities in the improvement of their herds.

The subject was opened with a paper by Dr. Button, commissioner of health, Tacoma, who spoke of "The Eradication of Supply." He traced the steps that had been taken in recent years by the health officials, supported by enactments of the state and civic authorities. It was a matter that had to be handled with great diplomacy. People who telephoned the department were told where they could buy milk from tested cows and the malcontents would soon fall in line. It had been necessary to provide for compensation owing to the large number of animals that had been condemned. When retests were made the percentage of re-actors always showed a considerable reduction.

When asked if the tuberculine test was a more efficient safeguard to the consumer than the pasteurization of milk the speaker replied that that was a large question, but he believed that pasteurization would be solution of the problem.

In the course of his paper the speaker also asserted that two tests had been made,

one being the subcutaneous test and the other the interdermal, the latter being adopted because some farmers had hit on "plugging" their cows to prevent them reacting to the former method.

Dr. Henderson remarked that every health officer ought to have a private purgatory of his own in which to place all who would try to render cattle immune from the tuberculine test. Pasteurization of milk did not take the full place of eradication of the disease, which certainly would be eradicated if the proper methods were adopted. A cow should have plenty of fresh air, the sheds should be whitewashed and opened to the winds, and cows should be kept off low. damp ground, but many men, with a few dollars would come into the towns and would want the privileges of the country with the prerogatives of the city. Although there was not very much danger of adults being infected with tuberculosis through milk, there was a very potential danger to infant life. The problem was an economic as well as a disease one.

#### Supplying Pure Milk.

The problem of supplying milk that would meet the test of the low bacterial content of 4,000 to the cubic centimetre was discussed by Mr. Robb. A practical dairyman with a successful record, Mr. Robb had merely to cite the methods in vogue at his own establishment. These included a scrupulous observance of cleanliness at all Elaborate precautions were even taken in the grooming of the herd, and in this connection the speaker mentioned a wheeled apparatus, fitted with disinfectant spray, and tanks, for washing the udder of each animal before milking. Dusty fodder was not given and each dairy hand kept a special coverall suit and cap for milking The result was a minimum of baccontamination. Speaking on the question of milking machines, in place of Mr. Shannon who was unable to appear, Mr. Robb stated that his experience had shown no diminution in yield, or unfavorable outcome, but he had found handmilking in the tests carried out at his farm to yield a product with a slightly lower bacterial content. He had tried, however, only one make of machine.

Discussion arising as to the value of chlorine compounds, such as chloride of lime, for dairy purposes, Mr. Ayres of the United States department of Washington, D. C. advocated the use of steam for sterilizing utensils, and recommended a small portable stove that could be secured at a cost of about \$8, for the purpose.

Mr. G. S. Henderson, civic milk inspector for Everett, indicated the co-operation that had to be effected between dairymen and vendors and the inspector, in order to meet the serious question of how to arrest the noticeable falling off in the consumption of milk. The publicity given to the question of the milk supply had reacted unfavorably, as far as the dairymen were concerned for now the best possible care was exercised the consumption had fallen off. The inspector should be able to allay any apprehension in the public mind, and show the advantage of milk as food, while the dairymen had to give their loyal co-operation in carrying out the regulations laid down.

"The Value of the Milk Dealers' Bacteriological Laboratory in Improving Milk Quality and Economic Handling of Milk," the subject selected by Mr. Petticlerc of Seattle, who dealt with the importance of this work in educating the milk vendors' men as to the dire results that followed negligence in marketing milk. The laboratory might also be a centre of public interest demonstrating to the consumer the care that was exercised in safeguarding the public health.

Dr. Wesbrook, president of the British Columbia University, discussed the question of "Milk and its Relation to Public Health." Enumerating the special provinces of medical and veterinary science, biological research and chemical analysis, all contributory to the matter at issue, Dr. Wesbrook said that the main difficulty was to keep all these branches of specialization so far as they bore on the question at issue, coordinated and in working co-operation. Speaking as a practical investigator, he deprecated the commonly prevailing fear that disease could be carried to human beings through the system of the animal. It was true, that in the case of tuberculosis the views of Koch no longer held good, and that there was a distinct relation between human and bovine tubercular disease, but there could be no such conveying of the germs of typhoid and diphtheria. Such contagious and infectious diseases came through the individual handling of milk, there were sporadic cases of typhoid or diphtheria carriers being engaged in this work and so endangering the community or by means of the washing of utensils with tainted water. or by the adulteration of the milk itself by infected water. He had come across a rare case in which rabies virus could have been conveyed through systematic channels and there was the classic instance of the epidemic of Malta fever through the drinking of goat's milk from infected animals, but these were pathological curiosities.

It was advisable that milk should be scrupulously treated at every stage, instead of being pasteurized, for the present obscurity as to the function of the vitamines in the matter of growth and the part they played in the action of enzymemes made it impossible to forecast just what the result