

officers confirmed the correctness of testing as carried out by the factory employees, but in some instances it was found necessary to recommend an alteration in the method which had been previously followed.

The arrangement entered into between one of the largest co-operative dairy companies in the Dominion, whereby the whole of the milk-samples are regularly tested for butterfat by an officer of the Division, has proved satisfactory both to the directors and milk-suppliers of the company, and the fairness and accuracy of the work has not been questioned by either party.

The central testing-room at Wellington, to which samples of milk and cream can be forwarded from any part of the Dominion for attention, has been utilized to a considerable extent during the year. In all cases where the samples are taken in the presence of the milk or cream supplier and a representative of the factory the tests are completed as a check against the factory result, and in this way many misunderstandings are cleared up with evident acceptableness to the farmers concerned.

It would seem advisable that the Department should again provide for the official testing of all calibrated glassware used at factories in making the Babcock test, and that such glassware be specially marked when found correct, as was done during certain periods in the past. At the present time the greater portion of this glassware is checked for accuracy by a private firm, and while there is no reason for believing that this is improperly attended to it would certainly be preferable to have it carried out under official control. The Department should go further and make provision whereby no dairy company or dairy-factory proprietor should be allowed to use glassware which has not been correctly calibrated and duly certified on each part thereof. It should also be made an offence against a law or regulation for any one to knowingly underread the percentage of fat as shown in the milk- or cream-test bottle.

#### TESTING OF DAIRY HERDS FOR BUTTERFAT-PRODUCTION.

The testing of dairy herds under the association system has shown a greater extension during the last twelve months than in any equal period since its commencement. In the first place this extension can be attributed to the keener interest taken by dairy farmers in the need for herd-improvement, with its consequent increase in production and higher monetary returns from the individual cows of which their herds are composed. It can also be stated that the continuous advocacy of the Division by means of lectures, distribution of pamphlets, and articles written and published per medium of the Department's *Journal*, together with personal interviews with farmers by the responsible officers in support of this all-important work, has done much to further the progress which can be recorded for the year. The method of utilizing as far as possible the services of those officers who have been specially appointed in connection with the certificate-of-record testing of purebred dairy-stock has proved successful in coping with extra duties entailed in the testing of ordinary dairy herds.

The number of associations in active work under the control of the Division for the season has been twenty-seven, representing 422 herds comprising a total of 10,460 cows, the records of which have been regularly prepared in accordance with the milking-period, which, of course, has varied in length in the case of some herds and individual members thereof. This shows an increase of 219 per cent. in the number of herds and 202 per cent. in the number of cows tested as against the figures tabulated for the previous year. Over and above the number of cows dealt with by the Division on behalf of their owners, it is estimated that 14,740 cows have been tested for the whole or part of the season by private arrangement.

The year's work as regards the organization of associations, the monthly testing of milk-samples, and the compiling of individual returns on behalf of herd-owners has taken up much time and occasionally overloaded the available staff, but the results obtained have fully warranted the effort made to create a wider interest in herd-testing. The advancement made and the results achieved, as indicated by the greater production on farms where herd-testing has been intelligently practised for a number of years, in building up a herd of high-producing cows by careful selection and approved breeding, is stimulating groups of farmers to commence the same practice in other districts. On this account the formation of an additional number of associations is already assured for the coming season, provided the requisites can be secured.

#### CERTIFICATE-OF-RECORD TESTING OF PUREBRED DAIRY COWS.

The certificate-of-record testing of cows registered by different breeders' associations, which is under the independent control and direction of the Dairy Division, constitutes a work of the first importance by reason of its far-reaching effect not only on the owners of the cows under test, but other breeders, and also on all dairy-farmers who desire to improve their ordinary crossbred herds by introducing purebred strains from foundation stock the productive capacity of which has been duly authenticated. This branch of the Division's work was commenced a little over seven years ago, and has shown steady advance and the greatest increase during the past year, with every prospect of further extension in the immediate future. A full account of the results being obtained in respect to certificate-of-record testing, together with valuable articles on the subject covering the year's operations, have appeared in the *Journal of Agriculture*, from the pen of Mr. W. M. Singleton, who is in charge of this branch of the work. The various breeders' associations, and also many of their members who have taken advantage of the facilities provided for by the certificate-of-record testing-system, have shown the fullest satisfaction with the methods employed. It is therefore quite evident that this work has the confidence, as well as the appreciation, of those who are directly concerned.

#### STAFF.

It is desired to mention that the Instructors, Dairy-produce Graders, and Milk-testers of the Division have carried out their various duties in a competent manner during the year. One and all have undoubtedly rendered valuable assistance to the industry in their respective spheres, with evident satisfaction to the producers as well as to the Department. The clerical staff have also performed their duties with care and exactness, thereby materially contributing to the general success of the work undertaken by this branch of the Public Service.