On the completion of the experiment a full report by Mr. Foy of the investigations was published in the Department's *Journal of Agriculture*, and also in bulletin form, a copy of the bulletin being forwarded to all dairy companies in the Dominion manufacturing cheese.

The following extract is taken from the report:—

> "Taking the whole experiment generally the greatest trouble experienced was slit openness, and apart from this no difficulty in producing a sound commercial-quality cheese was experienced. Neither sound manufacturing methods nor various modifications, as detailed previously, appeared to have any permanent diminishing effect on slittiness. None of the many starters, although active, and according to bacteriological examination comparatively pure, had the effect of producing consistently close cheese. . . .
>
> "A survey of the experiment leads to the conviction that some unknown factors had a marked bearing on slit-openness and other problems, and emphasizes the necessity for further research in an endeavour to throw more light upon milk and its constituents and products."

Veterinary Laboratory, Wallaceville.

During the past year Dr. Moir, who is located at this laboratory, has continued to assist the instructional staff of the Dairy Division in connection with the examination and supply of starters for use in cheese-factories. Owing to other work in hand, fewer samples of starters have been collected from factories to be tested for contamination, only about 120, as against well over 300 the previous season. Although the interest taken by the Instructors has effected improvement in the method of treating starters, the proportion of contaminated cultures is still too high, and indicates the need for more frequent examinations. The increased use of starters for butter-making renders it desirable also to make tests of butter cultures, but this has not so far been possible.

In view of the fact that in the autumn of 1934 starters supplied from this Laboratory to several factories enabled them to win about 50 per cent. of the principal prizes at the four chief North and South Island 1934 Winter Shows, there has been an increased demand for cultures to be supplied. Although very satisfactory results have been obtained with a fair proportion of these, in other cases failures have occurred, often for no apparent reason. It has been observed that in many cases, though not all, starters returned as "dead" have been found to be unduly contaminated, but by reculturing them under good conditions they have revived and the contamination has disappeared. This would suggest that contamination is a factor associated with starter failures. Although a number of reports are to hand indicating that better facilities, together with the exercise of greater care, have reduced starter troubles, yet in some cases the use of more sensitive cultures seems to have given rise to troubles.

During the year the question of the suitability of various tests for selecting clean milk has been kept in view, and opportunities have been taken of making comparative tests. Further evidence has been collected which indicates that as a basis for judging clean milk a low proportion of coliform types is of much greater importance than a small number of germs.

In order to avoid the penalties introduced with milk and cream grading there have been some attempts to use preservatives. Attention has therefore been given to the use of suitable tests to enable such preservatives to be readily detected when the milk or cream is delivered at the factory. This can be done with some preservatives, but with others sure results are possible only when laboratory facilities are available.

During the past season some time has been devoted to perfecting a simplified colour test to assist the Dairy-produce Graders in observations upon the alkalinity of butter, especially to check over-neutralizing. The preparation of permanent standards for comparison has proved more difficult than was expected, but results so far obtained in collaboration with the Graders' testing officers indicate that some progress has been made. Before the commencement of next season it is hoped to have the test placed upon a more satisfactory basis, which will enable it to be frequently used by the Graders with the object of checking excessive or irregular neutralizing of cream.

As in previous years, there have been a considerable number of waters submitted to the Laboratory for examination, especially waters used for butter-washing. In many cases the bacteriological condition of these waters leaves room for improvement, and by means of chemical tests it is possible to form a better idea of the treatment required. Chemical tests are also of value to indicate the suitability of the water for cleansing operations in the factory and for boiler-feed purposes. Apart from economies which this knowledge makes possible, it is evident that in a proportion of butter-factories improvements could be made in the quality of butter manufactured if routine tests were regularly made of the water used. The limited facilities available in this Laboratory have prevented this very necessary work receiving adequate attention.

Apart from the particular types of testing referred to above, a variety of other samples have been submitted for examination. There is no doubt that if additional assistance were available for routine testing purposes this Laboratory could give a great deal more similar valuable assistance to Graders, Instructors, and factory-managers.

Dairy-factory Managers Regulations, 1934.

The regulations governing the registration of factory-managers, and persons other than managers, who by virtue of their qualifications are deemed competent to perform the duties of managers, came into force as from 1st April, 1934. The Dairy-factory Managers Registration Board of eight members