

INSTRUCTION IN FACTORY-DAIRYING AND DEVELOPMENT.

The benefits derived from the strong element of co-operation which exists between the directors of dairy companies, their managers, and the Instructors of the Division are far-reaching, and this united effort enables these latter officers to render the maximum amount of help in carrying on the industry to the advantage of all who are connected therewith. During the year the Instructors engaged in this class of work have been successful in helping factory-owners to a very great extent, and their efforts in this direction have been appreciated.

Outside of the disposal and marketing of the finished products the help thus afforded embraces practically every section of the work which comes under the heading of dairy-factory interest and control. Beginning with the formation of the dairy company, the Instructor's advice is usually followed at each stage of the procedure, and includes the selection of site, size and nature of the buildings, and equipment of machinery and accessories.

An equally important feature of the work at all times under supervision is the maintenance of factory buildings and surroundings in a sanitary state. Where alterations or extensions to factories are contemplated, and additional machinery is required to cope with an increase in production, such work is now rarely undertaken without consultation with the Instructor for the district, whose advice is almost invariably accepted. Co-operation of this kind makes it possible to keep the factories up to a more uniform standard of efficiency, and greatly aids in the manufacture of products which are similar in quality and general appearance. Furthermore, the actual process of making cheese and butter comes in for a large share of the Instructors' attention, and where the methods followed are not in keeping with an approved principle the former are corrected as far as possible and suggestions made for carrying on the work to better advantage.

INSTRUCTION TO RETURNED SOLDIERS.

An officer of the Division has frequently attended classes at the Trentham Military Hospital for the purpose of giving lectures and demonstrations in the testing of milk and cream by the Babcock method. At these lectures the subject of herd-testing was also discussed. The Instructors of the Division have also visited a number of the returned soldiers who were about to commence dairy-farming. Plans for milking-sheds were supplied to them, and advice given as to the construction of the buildings, &c. At two of the soldier settlements in the Wairarapa district, where it was decided to form co-operative companies and provide buildings and machinery to manufacture cheese, one of the Instructors was deputed to go fully into the matter with the parties concerned, when it was agreed that the Instructor should make all arrangements for the preparation of plans for the buildings, attend to lists of machinery, and generally supervise the work up to the time both factories are ready to commence operations. The necessary capital required has been provided by the Repatriation Department.

CONDITION OF MILK AND CREAM SUPPLIED TO DAIRY FACTORIES.

It has again been forcibly demonstrated during the year that many herds of cows are being milked under conditions which should not be allowed to continue. Numerous instances could be quoted where the Instructors in the course of their duties have found milking-sheds, yards, milk-stands, milking-machines, and dairy utensils in a most insanitary state, due to either neglect or lack of knowledge on the part of the owner or employees. That many of the dairy premises as well as the apparatus and utensils used therein are kept in a clean and satisfactory condition goes without saying. At the same time a really large proportion are in need of immediate improvement in this respect.

The most serious phase of the question, however, is in relation to milking-machines, which are frequently allowed to become so foul through want of a thorough daily cleaning that the milk passing through them is contaminated to such an extent as to render it wholly unfit for the manufacture of any food-product. It is to be regretted that no provision has been made on many of the farms for a supply of boiling water and the necessary set of tube-brushes, which are indispensable for the proper cleaning of these machines. Every dairy-farmer should be compelled not only to provide such facilities, but also to use them in his own interest as well as that of the consuming public. It would seem advisable to consider the question of issuing a license to all users of milking-machines, which could be cancelled if the appliances were not maintained in good order. If the registration of dairies be essential to attain a desired standard in the case of milk required for city supply, it is surely as important to in some way protect the purity of milk which is used for the manufacture of butter and cheese or any other milk product.

A measure of protection against this evil is already provided for in the districts where Instructors have been appointed by special arrangement with the dairy companies, as these officers are continually visiting the farms belonging to the suppliers of the companies with which they are associated, for the purpose of advising the owners thereof and, where necessary, insisting upon an improvement in the methods employed in handling the milk and cream, including the cleaning of the appliances referred to. Twelve Instructors are now engaged in this special work, and at least two others will be appointed in the immediate future by arrangement with two of the dairy companies operating in districts covering a wide area from which cream-supplies are drawn. In addition to this effort, which has been attended with much success as far as it has gone, the Instructors in cheese and butter making, who are regularly visiting the factories, have devoted as much time as possible to instruction on the farms from which inferior milk or cream is being received. The number of farms where instruction is urgently needed is so large, however, that all cannot be attended to with the limited help available from this source. It is therefore quite evident that the early appointment of additional Instructors who can be deputed to specially confine their duties to this work alone is highly desirable for the welfare of the industry as a whole.

MILK AND CREAM TESTING.

Following the practice of former years, the Divisional Instructors have given attention to the testing of milk and cream samples at the factories when requested to do so by the directors or manager of a dairy company. These requests have generally been made as the result of some dissatisfaction having arisen with the factory tests amongst the suppliers. As a rule, such action on the part of the