

APPENDIX VII.—STATEMENT SUBMITTED TO THE MILK SUPPLY COMMISSION BY
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I WISH to submit the following statement on education and research in relation to the production, processing, and distribution of town milk-supplies.

1. EDUCATION

In my opinion, there is urgent need for the employment of the following types of trained men.

(a) *Milk-production Advisers.*—The production of milk for city supply requires the employment of dairy-husbandry methods that are somewhat different from those pursued on farms from which milk or cream is supplied to dairy factories. In general terms a greater supply of reserve feed has to be provided for the months of scarcity of pasture supply, more especially winter, and the type of feed must be suited to milk-production rather than merely the maintenance of dry stock. Considerable knowledge is therefore required of the adaptation of crops to different soils and climates, of their yields, and dietetic value and especially of their value for milk production. In addition, there are many occasions when farm-grown crops need to be supplemented by purchased foods, particularly meals, and, since these not only fluctuate in price from season to season but also differ materially in food value, it is necessary, in the interests of economy, for the farmer either himself to understand the principles of the choice, use, and mixing of such foods or to be given specialist advice thereon. Furthermore the whole question of the provision and selection of stock for city-milk farms and the management of such farms calls for specialist knowledge. Accordingly, I recommend that there should be employed two specialist milk-production advisers in the North Island and one in the South Island to assist farmers with the solution of problems associated with the production of town-milk supplies. These advisers should be graduates in agricultural science and preferably honours graduates in dairy husbandry. They could very conveniently be attached to the agricultural colleges in the respective Islands as extension lecturers, and would thereby enjoy not only the advantages of discussing problems with specialist colleagues, but also of arranging to get tried out on the college farms suggested crops, meal-mixtures, and the like. Every encouragement should also be given to the sons of city-milk-producing farmers to take the courses given at the colleges in farming, in which instruction is given in methods of farming peculiar to this type.

(b) *City Milk-trade Advisers.*—There is great need for employment in the Dominion of specialist advisory officers in the treatment and distribution of city milk. Men qualified to undertake this work should have both a sound practical and technical training in dairy science. Graduates holding the B.Agr.Sc. (dairy science option) degree of the University of New Zealand are equipped with the necessary training. I strongly recommend that there should be at least two of these officers employed in the Dominion. They could give milk companies and producer retailers advice on the selection and operation of milk-plant, the testing and grading of milk and cream, methods of assembling, transporting, and distribution of milk, and methods of overcoming technical difficulties that arise from time to time. The work of these officers would not conflict with that of Department of Health Inspectors. Rather would it be complementary to the latter. These men could to the greatest advantage be attached to Massey Agricultural College as extension lecturers. In this capacity, they could get full advantage of the assistance of the college and Dairy Research Institute staff, get access to the college library, and be kept in the closest touch with the milk plant at the college.

(c) *City-milk-plant Operators.*—The efficient handling of city milk and operation of modern plant call for a sound knowledge of the principles and practice of treating milk. In the interests of public health it is not sufficient for employees in key posts merely to have a working knowledge of the operation of machines. They should understand the purpose of the devices employed and of the principles affecting their use. Those who are managers or who hope to become managers should have a sound training in the science of milk and its products. Preferably they should be graduates in agricultural science (dairy science option) of the University of New Zealand or its equivalent in the same way as those referred to under (b). Such men are qualified, after a period of apprenticeship, to manage plants or take technical control of them and to carry out necessary routine laboratory work. Under existing conditions, the peculiarities, limitations, methods of carrying out and interpretation of the tests used in grading and testing milk are not sufficiently realized by those in the trade, and sometimes persons are appointed to carry out the work who are not really qualified to do so. It should not be the duty of the State Inspectors either to teach these persons their job or to draw attention to their deficiencies. In my opinion, all grading and testing work should be carried out by properly qualified persons, who hold the New Zealand University degree of B.Agr.Sc. (dairy science option) or an equivalent qualification.

In addition, the key personnel employed in the treatment of milk should be trained for their work. The Massey Agricultural College offers a course in the manufacture of dairy products that can readily be modified to suit these needs. The course extends over approximately thirty-three weeks, divided into three winter terms (May–August), each of eleven weeks. In the interval between successive terms students are required to engage in practical work in their specialist study. The first-terms course embraces instruction in elementary chemistry, elementary bacteriology, milk-production on the farm, milk-testing and farm-dairy machinery, book-keeping and machine drawing. The second and third terms would embrace, in the case of city-milk-plant operators, instruction in elementary dairy chemistry, elementary dairy bacteriology, the conduct and interpretation of milk-tests, the assembly, transport, processing, and treatment of city milk, city milk-trade accounting, dairy engineering and workshop practice, elementary course in dairy economics, and milk-plant construction and management. The college awards a diploma to students who fulfil all the practical work required and pass the necessary examinations. It charges £10 per term for tuition. In addition, students pay their own board and lodging, at present approximately 35s. per week. I strongly recommend that every encouragement should be given to milk-plant employees to take this course. Accordingly bursaries should be made available to enable worthy students to attend the Massey Agricultural College and adequate compensation by status and emoluments, should be provided to those who complete it.