

two first named vary in their incidence according to seasonal climatic and pasture conditions, a mild wet winter with plenty of feed being the most dangerous, especially as regards extrusion of the vagina. Ante-partum paralysis may occur, however, under drier, colder, and more healthy winter conditions if the ewes are in plentiful feed and in a condition in which they have stored up an excess of internal fat.

The whole position as regards these troubles may be summed up by stating that the essential preventive measures consist of so managing the flock that the animals are not kept under conditions of grazing which are unsuitable for the maintenance of sound health and vigour, and that in-lamb ewes are compelled to take a sufficient amount of regular exercise to prevent them getting too lazy and too fat internally.

As regards extrusion of the vagina, there is still a belief in the minds of some sheep-farmers that it is infectious. Of late further observation and investigation has taken place in connection with this trouble, and has included additional experiments upon this particular point of infection. These have entirely failed to produce any evidence that the trouble is capable of being conveyed by infection from ewe to ewe. Pulpy kidney in lambs has been the subject of further research, and, though no new and better method of preventive treatment has been elucidated, our knowledge of the subject is gradually becoming clarified. As the Director of the Live-stock Division points out in his report, checking the development of the lambs would prove beneficial, but this, from an economic standpoint, cannot be looked upon as desirable. Further work, in Otago particularly, is being planned for the coming season, both from the research and the management points of view.

DAIRY-COW DISEASES.

It is satisfactory to note from the Divisional report that contagious abortion and mammitis have been less in evidence than in previous years. The study of these troublesome diseases, also of temporary sterility (which shows no decrease) has been continued side by side with the giving of advice to farmers as to practical management methods aimed at reducing their incidence. As has been the case for some years past, the investigation work has been carried out by the Wallaceville Laboratory staff in immediate association with two skilled field Veterinarians, selected for their special faculty for research work, the field staff of the Division also co-operating freely.

As regards contagious abortion, increased use is being made of the blood test, which enables disease-carriers to be identified. The Wallaceville Laboratory report (printed with that of the Live-stock Division) states that during the year 2,480 blood samples were tested, many of these being sent in by farmers themselves. Further trials were carried out with abortion vaccine of South African origin, about 800 animals being inoculated, and the latest reports regarding these are rather encouraging, though complete details are not yet available. More extended trials will be carried out during the coming season. The Wallaceville report gives details of the work done in connection with this disease, also regarding mastitis (mammitis), in connection with which our knowledge is increasing. It must here be reiterated that a good proportion of cases of mastitis could be prevented if more care were exercised in the maintenance of cleanliness in milking-sheds and milking-machines, also in the handling of milking-machines and in the general care of dairy cows. Tests were made with vaccines prepared at Wallaceville, but without satisfactory results; research work generally has been actively continued.

Rather serious losses were experienced among dairy cows in some districts last season through a condition known as parturient eclampsia, not entirely unlike milk-fever, but not responding to the usual treatment for milk-fever. It may be in some way related to feeding-conditions, but this is not yet clear. When the calving season arrives special attention will be devoted to this, and further investigation work carried out. The remarks of the Director of Live-stock in connection with this disease are worthy of note.

TEMPORARY STERILITY OF DAIRY COWS.

Temporary sterility of dairy cows is still very troublesome, and research into the problem it presents is being vigorously prosecuted on various lines. These include field observations on herds where the trouble is prevalent, bacteriological and pathological examinations, study of the effect of lime and of phosphatic top-dressing, pasture analyses, the effect of concentrate feeding, carbohydrate feeding, and dietetics generally, the direct administration of drugs, and management matters. A further line of experiment is in preparation, this consisting of adding to the diet a material rich in a vitamin the presence of which in the food is believed to be essential to successful breeding.