

been obtained, and vaccine is being prepared at the Veterinary Laboratory with a view to giving the treatment a practical trial under New Zealand dairy-farm conditions. In its present form it is not a treatment which can be satisfactorily applied by farmers themselves, and it is evident that more research and experimental work is necessary before effective and practicable means of coping with the disease, better than those in use of late, can be recommended for general application by dairy-farmers themselves.

Contagious Mammitis.—Reports and correspondence dealing with this disease continue to reach the Department, and, whilst a large number of milk specimens forwarded to the Veterinary Laboratory for examination have proved to be of a non-contagious nature, sufficient evidence is forthcoming to warrant a continuation of strenuous efforts to combat the disease.

Blackleg.—In the Taranaki District 60,440 calves were vaccinated during the past year as a preventive measure against this disease, the work having been successfully carried out by the Inspectors of Stock in the different districts; 133 calves were reported as having died of the disease during the same period. In the Auckland District 51,828 calves were vaccinated, and 293 deaths were reported, making a combined total of 112,268 successfully vaccinated and 426 deaths before and after vaccination. There are no special suggestions to offer regarding the position in Taranaki, the disease there being well in hand, whilst the quarantine boundaries and the system of vaccination are working satisfactorily. In the Auckland District the position is somewhat different, and calls for comment. The dairy industry in this province has so greatly advanced during the past few years as to considerably increase the number of calves reared, and with the advent of more susceptible animals the disease, having favourable opportunities for spreading, has made its appearance in unexpected places. The declaration of infected areas could only be tentative until information was forthcoming indicating with some degree of finality the extent of ground likely to be infected, whilst meantime the Inspectors were doing their very best to meet the requirements of the case. The position has now assumed a definite aspect, and blackleg must be recognized as established firmly in the province. Additional steps must be taken to prevent its further spreading, and recommendations are under consideration.

Sheep.

Parasitic Gastritis has been somewhat more than usual in evidence, a considerable mortality having been reported, and, owing to the prevalence of autumn rains, the present indications are not favourable for the coming winter. This trouble, however, is so well known to stockowners that, no doubt, they will use every precaution to prevent its onset. A supply of dry, nutritious feed is of great assistance in sustaining the condition of affected animals and in enabling their system to better cope with the attacks of the parasites.

Facial Eczema continues to be reported from various centres, but the direct losses have been small. Prompt change to suitable short pasture immediately, the first cases of the disease are noted is of the greatest value in restricting the trouble arising from it.

Tuberculosis.

While New Zealand is in a very favourable position compared with most other stock-breeding countries in the matter of the extent of the prevalence of tubercular disease, it is a matter for regret that a slight increase has been noted during the year in the percentage of affected cattle and pigs found among those coming under the observation of Inspectors at meat-export slaughterhouses and public abattoirs. The increase is not great, amounting to 0·48 per cent. in cattle and 0·47 per cent. in pigs as compared with last year.

It is possible that one factor in this position may lie in the additional work which has been thrown upon Veterinarians and Inspectors of Stock in connection with the various additional activities of the Government consequent upon operations connected with the war, combined with the reduction in the available staff brought about by several skilled officers being absent on active service. During a portion of the year a good deal of the time of the officers was taken up in connection with the purchase of horses for the use of the troops, and in addition the services of some Inspectors have been utilized to a certain extent in connection with the requisition of wool, sheep-skins, &c. It is very certain that in the time at their disposal for their regular duties no relaxation of energy or vigilance has taken place. It is evidence, however, that the campaign waged against this troublesome and costly disease must be vigorously continued, and in this the co-operation and assistance of stockowners—which has not been lacking in the past—is necessary in order to assist the Government to reduce the annual loss suffered on account of it.

Bush-sickness Investigation.

Further progress has been made in this investigation on the lines noted in last year's report, and in addition new work has been done. The result of the year's operations is satisfactory, seeing that valuable further knowledge has been gained concerning the practical methods to be adopted in coping with the trouble. Also, grazing operations from a profit-making point of view have been conducted with good financial results. Mr. B. C. Aston, Chemist to the Department, has continued to co-operate in the investigation. Following are particulars concerning the work carried out:—

Experimental Work.—1. Chemically treated drinking-water experiments: These were concluded, the amount of success which resulted not being sufficient to warrant continuance along the lines on which the experiments were laid down, viz.: (a) Treatment of cattle on undressed pasture with a fixed portion of superphosphate dissolved in the drinking-water supplied in a trough; (b) treatment of cattle on phosphate-dressed pasture with a fixed quantity of superphosphate in the drinking-water; and (c) treatment of cattle on phosphate-dressed pasture with a fixed quantity of phosphate of iron in the drinking-water. It was evident in experiment (a) that while the