

WALLACEVILLE VETERINARY LABORATORY.

REPORT OF C. S. M. HOPKIRK, B.V.Sc., OFFICER IN CHARGE.

A review of the year's work in diagnosis and in research into animal-disease problems shows some progress, but such progress has not been spectacular. Undoubtedly greater knowledge of mastitis and grass tetany of dairy cows and insight into pig diseases has been obtained, but the work lags for want of senior officers. Too much lies on the shoulders of those at work, and it is recognized that no new investigational work can be performed under constant pressure, and that time for reading and reflection is needed by workers for the birth of new ideas.

The New Plymouth and Hamilton Laboratories have been busy with milk samples, Hamilton on an unprecedented scale, the bulk of this work having fallen on Mr. A. E. Kidd, who deserves credit for his handling of such numbers of samples with the assistance of a female temporary officer only. Mr. T. A. Blake has continued his work on semen samples from bulls with the practical idea of classifying bulls for use by means of sperm morphology. Mr. D. A. Gill, unfortunately for the main Laboratory, accepted a temporary position in the Veterinary School in Sydney to lecture in Pathology. He obtained leave of absence for this object. Consequently Mr. W. M. Webster had to be moved from New Plymouth to Wallaceville to undertake the diagnostic and investigational work usually performed by Mr. Gill. Mr. Webster had at the same time to supervise several mastitis experiments which he had in hand in New Plymouth, and therefore made several visits back to New Plymouth during the later part of the year. Dr. I. J. Cunningham is continuing and is of great assistance in work on diet in relation to disease. The Dairy Division, represented by Dr. G. M. Moir, still occupies a room at Wallaceville. A new departure has been made during the year also in providing accommodation for Dr. M. McOwan, M.A., B.Sc., Ph.D., a Carnegie Scholar who is working on the Vitamin A and D content of fish oils, and who is also helping with our own experimental work with pigs by performing the vitamin content of milk. Dr. McOwan had had experience in research work in the Rowett Research Institute (three years) and the Lister Institute of Preventive Medicine for one year, and is therefore competent to carry out the highly specialized vitamin-assay work upon which she is engaged.

Diagnostic and research work are so wrapped together that it is difficult to separate the two for purposes of tabulation, and therefore the following figures refer to all samples received at the Laboratory except several thousands of experimental milk samples examined in mastitis research.

Specimens and Samples received for Diagnosis during the Year.

	Wallaceville.	New Plymouth.	Hamilton.
Mastitis samples--			
Routine .. .. .	1,033	499	2,109
Mammitis control scheme .. ..	4,184	4,183	34,146
Bacteriological .. .. .	?	1,820	..
Experimental .. .. .	?	517	774
Quarters .. .. .	?	..	2,047
Can curd samples .. .. .	..	..	2,609
Composite milk samples for tuberculosis ..	601	..	..
Agglutination test: Blood samples contagious abortion	707	1,032	266
Whey samples contagious abortion .. ..	..	..	416
Tumours .. .. .	63	..	..
Cattle specimens .. .. .	230	..	..
Sheep specimens .. .. .	303	..	..
Pig specimens .. .. .	205	..	..
Poultry specimens .. .. .	78	..	..
Blackleg vaccine .. .. .	17,850 doses	..	25,000 doses.
Tuberculin issue .. .. .	1,900 c.c. crude	..	..

DAIRY-COW DISEASES.

The main advance in knowledge of the year in cattle diseases has been in mastitis, but phases of sterility, contagious abortion, and grass tetany, have been under close investigation.

STERILITY IN DAIRY COWS.

The Field Research Officer at Hamilton, Mr. T. A. Blake, was again able to examine a large number of bulls during the season in his study of sterility, temporary or otherwise. He found, as in past years, that wherever sterility was evident in a herd to an excessive extent examination should always be made of the bull's seminal fluid, and almost invariably the bull in such cases was found to be at fault, and by replacing with a bull of good sperm motility and morphology the cows held well.

Mr. Blake's work has passed the investigational stage and has now become diagnostic.

CLASSIFICATION OF BULLS ACCORDING TO SERVICE.

Classification.	Number of Bulls.	Average Percentage of Successful First Services.	Average Number of Cows served.
Good or fairly good .. .. .	64	68½	36
Fair .. .. .	51	51½	33
Poor .. .. .	50	36½	38
Bad .. .. .	49	30½	26
Sterile .. .. .	12	0·25 (One cow in calf)	20