

Geographical Distribution of Hæmonchus Contortus.—A series of specimens of lamb stomachs were obtained from selected meat-works to obtain more information on the geographical distribution of *Hæmonchus contortus* in the Dominion. The examinations are not yet complete, but in all cases either negative or light infestations only were encountered. Heavy infestations were not seen in this sample, which was collected between December and March, when one would have expected populations of *Hæmonchus* to be at or near their maxima.

Immunity and Resistance to Nematode Infestation in Sheep and Rabbits.—Unsuccessful attempts were made to stimulate an active immunity to *Hæmonchus* in sheep by the subcutaneous injection of ex-sheathed larvæ. Attempts were also made to transfer a passive immunity to lambs by the injection of large doses of serum from immune sheep. When challenged by a test infection, the lambs showed no evidence of immunity.

Attempts were also made, by repeated dosing with infective larvæ, to induce an acquired immunity in groups of lambs grazing on pasture and in groups maintained in pens under "worm-free" conditions. After treatment with phenothiazine the lambs were given a test infection. On slaughter, differences in the size of the worms and the numbers harboured by infected and control groups were not significant.

Observations have been made on the effect of age of the host on the course of an infection with *T. retortaformis* resulting from a single large dose of infective larvæ. Groups of rabbits aged three, six, and twelve months were infected and the resulting infestation assessed by faecal egg counts. Substantial infestations became established in all animals, but the number of eggs passed varied inversely with the age of the host. After the egg output of the rabbits in the age-resistance trial had subsided to a low figure, all animals were reinfected with a single dose of larvæ. A previously uninfected control group of rabbits three months old was also infected. The previously infected rabbits showed very small increases in egg count, while the controls showed the characteristic very much higher egg-count curve.

TECHNICAL ARTICLES SUBMITTED FOR PUBLICATION DURING THE YEAR ENDED 31ST MARCH, 1948

Machine Milking—

Whittleston, W. G. (1948): "Good and Bad Habits in the Milking Shed."

N.Z. J. Agri., 76, 369.

Whittleston, W. G., and Allen, A. J. (1948): "Mounting the Milking Machine Vacuum Pump." *N.Z. J. Agri.*, 76, 246.

——— (1948): "Milking Machine Technique." *N.Z. J. Agri.* (In press.)

Whittleston, W. G. (1948): "Efficient Machine Milking." *Aust. J. Dairy Tech.* (In press.)

Whittleston, W. G., and Verrall, S. (1947): "The Influence of certain Machine Adjustments on the Rate of Milking." *N.Z. J. Sci. & Tech.*, 28, 407.

Whittleston, W. G. (1947): "The Essential Factors involved in Machine Milking." *Proc. N.Z. Dy. Sci. Assn.*, 1947.

Whittleston, W. G., and Verrall, S. (1947): "The Measurement of Milk Volume." *N.Z. J. Sci. & Tech.* (In press.)

Animal Nutrition—

McMeekan, C. P. (1947): "New Zealand Pasture—Its Value for Milk and Meat Production." *Aust. Vet. J.*, 23, 105.

Wallace, L. R. (1947): "Influence of the Plane of Nutrition on the Reproductive Efficiency of Animals." *Proc. N.Z. Soc. An. Prod.*, 1947, 114.

Ewer, T. K., and Bartrum, P. (1948): "Rickets in Sheep." *Aust. Vet. J.*, 24, 73.