

PRODUCTION LOSS DUE TO *H. CONTORTUS* INFECTION IN MERINO
WEANERS - SOME PRELIMINARY RESULTS

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The problem of drug resistance in parasitic nematodes of sheep, together with the knowledge that substantial genetic variation in host resistance to parasites exists (Le Jambre 1978) provided an incentive to examine the feasibility of breeding sheep with high resistance or resilience to *Haemonchus contortus* infection.

Standardized experimental infections are being used to evaluate the effects of genetic and other host-related factors on resistance and resilience. Infected lambs are always grazed together with uninfected controls, so that production losses caused by *H. contortus* infection can be estimated.

Our studies concern Merino weaners over an age range of four to eight months. Approximately equal numbers of infected and control lambs are run together on pastures with low infestation levels. The standard infection consists of a single dose of 11,000 *H. contortus* larvae. Infections are terminated after 5 weeks. The results presented are based on preliminary analyses of data on more than 600 lambs collected in 1982 and 1983.

Infections caused variable but generally moderate clinical symptoms. Mortality due to acute haemonchosis was low and varied from 0.0 to 4.7% in the four groups of infected lambs.

Liveweight gains in infected groups of lambs were depressed by 24 to 65% as compared with their controls over an 8 to 9 weeks period. The effect of infection on wool growth was difficult to determine, as it was extended for weeks beyond the termination of the actual infection. At some stages reductions in wool growth of up to 15% were caused by infection. Infected animals also grew finer wool.

The effects of infection on production parameters were less in more resistant animals. Correlations between resistance parameters and liveweight gain during critical periods ranged from 0.27 to 0.49 (both $P < 0.001$). Similar, although somewhat lower correlations were found between resistance and wool growth.

Resistance varied significantly among sire groups, but also was affected by lamb age and the age of their mothers. Offspring from primiparous ewes were less resistant than lambs from older ewes. Neither the lamb's body weight nor its sex had a significant influence on resistance to the test infection.

It is concluded that production losses due to *H. contortus* infection can be substantial, and that increasing the resistance level of sheep would reduce these losses.

LE JAMBRE, L.F. (1978) In "The epidemiology and control of gastrointestinal parasites of sheep in Australia", p. 137, editors A.D. Donald, W.H. Southcott and J.K. Dineen. (CSIRO, Div. An. Health).

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