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EFFICIENCY OF INSECTICIDES AGAINST THE SHEEP BODY LOUSE

(*DAMALINIA OVIS*)

The Editor,
THE AUSTRALIAN VETERINARY JOURNAL,
Dear Sir,

I wish to report some experimental results which have important implications in the design of dipping and spraying experiments to test the efficiency of insecticides against the sheep body louse *Damalinia ovis* (L.).

It has been found that the nymphal and adult stages of *D. ovis* are killed by immersion in water for 4-6 hours, or by immersion for only 2-4 hours if they are exposed subsequently to 90% relative humidity for a minimum of 6 hours. These conditions are frequently encountered in the fleeces of sheep when drying has been delayed after dipping or spraying due to rain or humid atmospheric conditions, or to the fleeces being long. Thus the mortality of lice, observed after treatment by dipping or spraying with an insecticide solution, in some instances could be due solely to soaking with water. This factor is particularly important if the minimal efficient concentration of an insecticide is to be determined.

Furthermore, as the number and density of lice which survive is directly proportional to the density of the initial louse population, it is possible for a population of low density to be eradicated by saturating the fleece

with water. This effect has been observed in the field when a fleece has become soaked during a thunderstorm. Thus, only heavily infested animals should be used in dipping and spraying trials and the weather should be recorded for the duration of the trials. Soaking of the fleece by one thunderstorm could cause the eradication of a population which had previously only been reduced to a low density by the insecticide.

To enable the results of different workers to be collated therefore, it appears desirable that the following additional data be given when the results of dipping or spraying trials are reported.

1. The density of the louse population at the time of dipping or spraying.
2. The length of the fleece and whether it is greasy or non-greasy.
3. The prevailing weather conditions at the time of treatment, and the length of time required for the fleece to dry.
4. The weather during the duration of the trial.

Yours, etc.,

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