

Host Specificity of Ecto-parasites of Sheep and Goats.—A common belief among farmers is that goats may act as a reservoir for the lice that affect sheep. Specimens from both hosts were examined and were identified as *Bovicola ovis*, *Linognathus pedalis*, and *Haematopinus ovillus* from sheep, and *Bovicola caprae* and *Linognathus stenopsis* from goats. A heavily louse-infested goat was kept in the same pen as a sheep, but the sheep did not become infested. Goat-lice transferred manually to the sheep persisted only a few days and had completely disappeared after a week. Keds from the sheep, however, became established on the goat.

Coenurus Cerebralis.—*C. cerebralis* has again been diagnosed in sheep and the adult cestode has been recovered from dogs on the same property. The disease occurred on two neighbouring properties in Mid-Canterbury. On one of these farms the history suggested that the infection had been present for about ten years. In recent years the parasite has been reported from isolated farms in North Canterbury and South Canterbury, but this is the only recent record from Mid-Canterbury.

Toxicology

Phosphorus Poisoning.—Limited data obtained on the lethal dose of phosphorus for sheep show that this is very low, being approximately 1 mg. phosphorus per kilo live weight. Since phosphorized pollard pellets are resistant to weathering, there is considerable risk of mortality if great care is not taken.

The effects of ingestion of phosphorus vary with the amount eaten. Large doses cause sudden death with minimal lesions and phosphorus or its oxidation products can be identified chemically. With lower doses, and especially those near the minimum lethal dose, animals live longer and the phosphorus is metabolized so that it cannot be detected chemically after death. However, typical liver lesions develop and these may be employed in diagnosis. Progressive cirrhosis of the liver, leading to mortalities six or more months later, has been reported from Australia, but New Zealand experience has not confirmed this.

A transient photosensitivity developed four days after dosing a 28-kilo sheep with 0.43 g. phosphorus per kilo body weight. This symptom has not previously been recorded in phosphorus poisoning.

Deterioration of Phosphorized Pollard Pellets.—Pellets deteriorate to half initial potency in about eighteen days under winter conditions and in nine days under summer conditions. Since a pellet may commence with a content of 25 mg. phosphorus, it is apparent that long periods must elapse before danger to sheep is past. Even after three weeks' exposure five pellets could be toxic to ewes and smaller numbers to hoggets.

Phenol Poisoning in Sheep.—Experimental poisoning of sheep with phenol showed that if animals survive for twenty-four hours chemical examination of blood or liver for phenol is negative. In acute cases which survive less than twenty-four hours phenol can be detected in the liver, even if the lapse of time before chemical examination is as great as forty-five days.

Rabbit-destruction Methods.—Field trials are being carried out on sodium arsenite to test its suitability as a rabbit poison.

Zinc phosphide is also being examined for the same purpose and its lethal dose for the rabbit has been found similar to that of arsenic. There are certain difficulties surrounding its use in baits due to its instability, and these are being investigated. The most important aspect is to ensure palatability to rabbits.

B.A.L. Intoxication in Sheep.—The maximum safe single intramuscular dose of B.A.L. in the adult sheep was found to be close to 75 mgm. per kilo body weight. A large variation in sensitivity was shown by animals receiving higher doses, but almost without exception death occurred within eleven days.