

Foot-rot in Pigs.—The disease occurs chiefly in pigs three to six months of age being raised for bacon and kept on concrete floors. The average incidence is about 25 per cent., but up to 50 per cent. of pigs on some farms are affected.

The lesion develops on a lateral digit and takes the form of a deep necrotic ulcer involving horn, laminae, and part of the coronary band of a sinus or sinuses which may reach as far as the joints, bones, and tendon sheaths.

The pathological process is similar to that in necrotic ulcers, necrotic jaws, and schirrhous cord in pigs, and the bacterial flora similarly are spirochaetes and gram-negative fusiform organisms.

The lesion develops rapidly and, though mortalities do not occur, a considerable loss on each pig results from light weights, prolonged fattening, or need to destroy pigs for humanitarian reasons.

Most cases have been observed in Northland, but the disease has been seen also in the Waikato, Wairarapa, and Westland.

At the present stage of knowledge the disease seems to be associated with the type of flooring used.

Treatment by intraperitoneal injection of sulpha drugs has so far proved unsuccessful.

Trace Elements

Cobalt-deficient Areas: New areas of cobalt deficiency have been found in the Wairarapa and Southland districts.

In parts of Southland there is some suggestion that seasonal deficiency of cobalt may contribute to or cause suboptimal growth in unweaned lambs.

Aerial Top-dressing: Analyses of pasture samples collected from the bush-sick farm at Waimiha aerially top-dressed during August, 1947, with cobalt sulphate at the rate of 20 oz. per acre show that top-dressing has so far remained effective for more than two years. This is confirmed by analyses of sheep livers for cobalt content.

Copper and Molybdenum.—New areas on new soil types in the Canterbury district have been found where enzootic ataxia occurs in lambs. On these areas pasture copper is not low during the late summer and molybdenum is not abnormally high. The variation with season has yet to be determined. A Merino flock was carried on one property and "straight steely" wool occurred in this flock.

Fairly considerable areas of sandhill country and peat sand country west of Palmerston North are deficient in copper, and corrective measures have materially improved production on dairy farms. Further information on appropriate top-dressing for sands is required.

A fourth crop of lambs has been taken from ewes dosed with molybdenum at Wallaceville. Lamb livers at birth contained about 6 parts per million of copper—*i.e.*, lower than in many cases of enzootic ataxia—but this disease did not occur. The liver copper of the lamb is lower than is to be expected from the copper content of the mother's liver, which indicates an effect of molybdenum in inhibiting placental transfer to the lamb.

A reciprocal inhibitory effect of copper and molybdenum on liver storage of these elements in cattle and sheep has been observed.

Parasitology

Sheep-louse Eradication.—An attempt to eradicate the sheep-louse (*Bovicola ovis*) in an isolated flock, using a single application of benzene hexachloride with a power spray unit, was unsuccessful. The louse population was very materially reduced, but in a small number of animals a low level of infestation has persisted. It is uncertain whether failure was due to excessive exhaustion of the insecticide, to incomplete wetting, or to a failure to kill the eggs or newly-hatched lice. The experiment has been repeated using a double application.