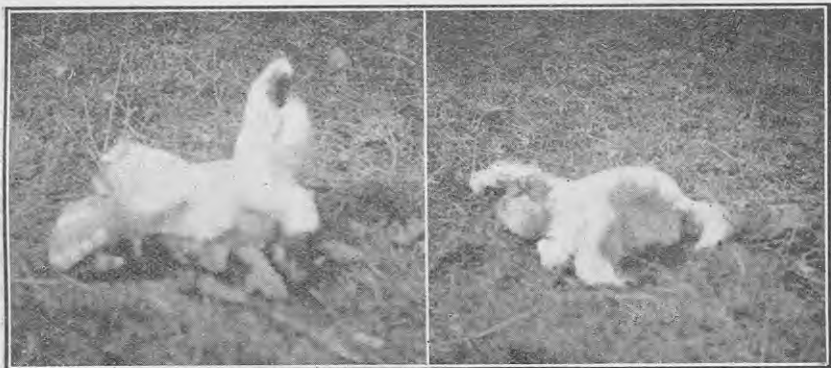


thickened and œdematous. The glandular epithelium was normal, but the lumen of glands contained many polymorphs and a few lymphocytes, the cells having worked through the glandular epithelium from the connective tissue. No organisms nor metritis were in evidence. Cotyledons : Œdema beneath body of cotyledon and to some extent on free surface. Villi of cotyledons becoming detached. Normal but for œdema. Kidney : Slight congestion of glomeruli. Very slight excess of fluid in connective tissue. Otherwise normal.

It has been observed on some of the affected farms that the lambs from the affected flock which live are inclined to be more susceptible to death from so-called pulpy kidney at from two to four weeks of age, and one such case may be given. One hundred and three half-bred ewes mainly, with a few crossbred Romneys, two-tooth to eight-tooth, were bought on 26th April, 1929, and Romney rams were used



DEFORMED LAMBS ON ONE OF THE AFFECTED FARMS.

The monstrosity on left has a seagull-shaped head. In both cases the lower jaw is missing and legs are short. Photos taken 14/10/29.

on them. In October and November seventy-five lambs were born deformed or paralysed. There were also seventeen lambs lost from pulpy kidney.

There seem to be four possible reasons for the production of deformed fœtuses : (1) A lethal factor in the Romney rams, (2) ergotism, (3) iodine deficiency, (4) faulty sheep husbandry and type of pasture.

(1) *Breeding Factor*. — Notes of cases given later will show that genetics are not likely to be a factor. The condition appears in Romney, Corriedale, or half-bred ewes, and from Romney, half-bred, Corriedale or English Leicester rams, irrespective of the part of the country from which they originated. It so happens that Corriedales, half-breds, and Romneys are the chief breeds of the district in question. In the neighbouring district where losses occur Romney only have shown the fault, but the Romneys are greatly predominant in numbers.

In one season the same rams on the same lot of ewes have produced monstrosities, while the year before or the year after on a different class of country the lambs born have been normal. Ewes which have had deformed lambs one season have had normal lambs the following season, even to the same ram. The percentage of deformities, too, is