

ARTHRITIS IN LAMBS.

Thirteen lambs were used to show that by placing material on the cut end of the tail at docking time lambs could be given arthritis. The infective materials used were (1) culture of organism in broth of the arthritis organism *Erysipelothrix rhusiopathiae* (sheep strain); (2) pus from joints of a lamb affected with the above organism and obtained from the South Island.

Four ewes and two wethers were given culture, and three ewes and four wethers were given pus. The wethers were operated upon with a Daroux crusher. Pus developed on the end of the tail under the scab to an abnormal amount in six cases, and in three of these lameness developed. Subsequently arthritis was shown, and in one which became seriously affected, the organism was recovered. The other two are still alive but have enlarged hock joints.

ANTE PARTUM PARALYSIS.

An experiment was commenced at tupping time, 17th March, 1935, with eighty-two ewes. All ewes were hand served with either a Southdown or a Romney ram, and were run together until the 17th July. They were then split into two groups, "A" group with forty ewes on poor pasture, and "B" group with thirty-nine ewes on rich pasture. Until the 18th September, when the groups were interchanged and most of the lambing was over, a date too, when all pastures were showing decided improvement, three ewes died in A group and four were sick or aborted dead twin-lambs, while B group ewes remained quite healthy and had no trouble lambing.

Average weights, in pounds, of sheep in each group were as follows:—

—	17/3.	13/6.	19/7.	29/7.	12/8.	19/8.	26/8.	2/9.	9/9.	18/9.
Group A	130½	144½	142½	141	140½	138	134½	135	128	150
Number of ewes ..	39	39	39	39	39	38	35	32	30	26
Group B	130	142½	141½	141½	141½	149½	149	162	163	148½
Number of ewes ..	39	39	39	39	39	36	33	32	29	17

With the serious loss of weight of the ewes a ketosis occurred which resulted in a mortality in ewes and lambs and also resulted in a more weakly group of lambs than in B group. Pulpy kidney (*enterotoxaemia*) did not occur in lambs from either group. Before death in one of the ewes intravenous injection of asparagin was made, but without any benefit occurring. Meat-meal appeared to assist a sick ewe, which recovered and lambed a fortnight later; but given to a second had no beneficial effect. Liver fat in the sheep which died was shown on analysis to have increased, and had a lower iodine value, while glycogen was exceptionally low.

TONGUE ULCERATION OF HOGGETS.

Tongue ulceration was observed in a number of young sheep slaughtered in meat works during the autumn. The ulceration was unaccompanied by ulceration of the lips as is usual in contagious ecthyma due to virus.

Scrapings from the tongue ulcers placed on scarified areas of the tongue or inner cheek of experimental healthy sheep produced lesions. Later, further ulceration occurred, commencing first on the dorsum of the tongue as raised areas, which later sloughed out or developed as vesicles in the softer tissue of the mouth, and later became ulcerative. No lip ulceration occurred. Apparently the condition is infectious and contagious.

STOMATITIS.

A dried scab vaccine produced at Wallaceville was tried in Otago by Messrs. Dayus and Thompson, apparently successfully.

PULPY KIDNEY.

Vaccination was carried out in Otago by Messrs. Dayus and Thompson with a formalized culture of *Cl. ovis* grown at Wallaceville. Results have been good and encourage further trials.

PNEUMONIA IN SHEEP.

A greater number of cases of pneumonia in sheep was observed this summer. Although one hæmolytic organism was recovered almost in every case, no cases of experimental pneumonia were produced by insufflation, drenching, or intratracheal inoculation, but by intravenous inoculation a sheep was killed in fifteen hours with very serious pleural effusion and congestion of lungs. Organisms have not yet been identified.

CIRCLING DISEASE.

A further trial of drenching sheep with a freshly isolated organism from the brain of a sheep which died from circling disease was made. This organism is probably a strain of the new genus *Listerella*.

Three sheep were fed with 20 c.c. 24-hour broth culture. Temperatures rose to 106–107 on the second day. Serious scouring occurred on the third day, and one sheep was found dead on the fifth day. The organism had caused serious ulceration and hæmorrhages of the mucosa of the abomasum and much of the intestine. Small hæmorrhages were found in brain sections from capillaries, but there had been no mononuclear reaction as is seen in naturally occurring and less acute cases.

PIG DISEASES.

ARTHRITIS IN PIGS.

Whole joints and pipettes of synovial fluid have been examined to find the causative organism of this lesion. In synovial fluid from the Waikato pigs the predominant organism has been a streptococcus, while in joints from Ngahauranga, there has been a mixture of *S. suis*, *pasteurella*, *Streptococcus* and *B. pyogenes*. In no case has the organism of swine erysipelas been recovered by culture or inoculation of mice.