

PHOTOSENSITIVITY.

Breeding experiments are being carried out with a Southdown ram and a few Ruakura Southdown ewes to find whether it can be proved that there is transmission of photosensitivity in certain Southdown strains. The ram has been reared from birth and is highly sun sensitive, so much so that he is blind as a result of rubbing his face on fences, &c., in sunlight. The Rose Bengal test shows that the liver of this ram is markedly inefficient in elimination of deleterious matters in the blood. The ewes are clean and normal. The results will be available in September next.

FACIAL ECZEMA.

So-called facial eczema is also a form of light-sensitivity. During the year following the dry season and with the flush of growth many sheep all over the North Island became light-sensitive. Considerable investigation into the reason showed that the condition was similar to sensitization of skin from absorption of phylloerythrin, a fluorescent breakdown product of chlorophyll, as seen in South Africa. The part of most interest in the outbreak was not the actual photosensitivity but the previous liver damage which caused bile to appear in the blood stream. The cause of the damage requires considerable further work, but a theory has been put forward that constipation in dry weather has brought about bacterial invasion of the bile-ducts causing thickening of the walls and damming back of bile, particularly in the left lobe of the liver. Increase of bile-ducts has taken place and cirrhosis has occurred. Jaundice also became a feature of this phase as the blockage of bile-ducts increased. Blood tests showed that the bile in the blood was due to damming back of bile in the liver and not to other causes.

Preventive treatment and treatment of the actual photosensitized sheep was suggested, but there will be considerable trouble throughout the following year in those flocks where facial eczema was prevalent.

An article on this condition will shortly be prepared for publication.

MYCOTIC DERMATITIS.

Mycotic dermatitis is slowly becoming more evident in the South Island flocks of Corriedales and Merinos. The number of sheep affected is not alarming, but more station-owners are noting affected sheep at shearing-time. In connection with this also is the diseased condition known as "Devil's Grip," a persistent diseased condition of the skin of the back which causes trouble through blowing by fly larvæ.

RICKETS.

Several cases of bandiness in sheep have come under notice. The bones have been collected for analysis and for histological examination by Sir Arnold Theiler. In one case of a flock of ram lambs which had been left several months on green oats the analysis of the oats showed an excess of calcium and too little phosphate, suggesting that the bandiness resulted from excess osteoid growths and too little mineral deposit, the latter being due to lack of lime rather than to lack of phosphate, which is considered to be, and probably is, the chief cause in New Zealand of the condition.

CONTAGIOUS OPHTHALMIA.

Cases of ophthalmia were very common this season following the dry spell and during the facial eczema outbreak. No connection, however, could be noted between the two diseases.

MORTON MAINS DISEASE: SO-CALLED.

For some reason the Morton Mains area has been classed as iron-deficient and therefore bush sick mainly on unsound clinical grounds. Chemical work has been carried out on this premise. The veterinary opinion is that the area requires a special type of farming practice, and the lambs suffer from parasitic gastro-enteritis. To clear up the point, Mr. W. M. Webster and Mr. S. W. Josland were sent to the district to investigate, and Mr. Webster has reported that in his opinion the mortality in lambs is due to parasites following unsuitable husbandry. One of the unusual features was the large number of coccidial lesions found present. As, however, a survey of other parts of New Zealand has not been made for these parasites, it is yet too early to say definitely that they are actually causative. The large and varied numbers of nematodes found present, however, in affected lambs may be noted in the table prepared by Mr. Webster:—

Sheep No.	Ostertagia.	Hemonchus.	Nematodirus.	Tricho-strongyle.	Cooperia.	Bunostomum.	Chabertia.	Trichuris.	Cesophagostomum.	Dictyocaulus.	Coccidiosis.
1	9,040	27	1,970	370	..	..	..	31	..	..	+++
2	2,850	..	1,320	8,170	250	..	..	19	..	..	+++
3	4,234	..	3,510	220	17	..	..	26	..	..	—
4	Very numerous	..	11,740	7,560	..	..	..	25	..	3	—
5	5,710	161	6,880	13,070	520	..	..	11	..	29	+
6	1,889	9	1,889	2,113	360	..	63	37	..	..	+
7	4,410	..	4,320	870	..	..	..	34	..	..	+
8	3,290	..	7,820	640	..	..	..	27	..	..	+
9	1,760	..	..	2,550	..	..	..	26	..	..	+++
10	4,420	1	11,530	7,840	30	..	..	44	..	7	+
11	140	..	7,590	10,270	..	..	13	67	..	..	++
12	3,780	..	2,680	11	..	..	..	23	..	..	+++
13	22	..	160	..	..	..	1	7	..	..	++++
14	1,998	..	10,890	..	..	..	..	38	..	..	—
15	29	..	370	..	..	..	..	11	..	..	++++
16	610	..	..	108	273	2	31	19	..	3	++++
17	1,120	..	41	950	420	..	..	..	..	..	++++
18	379	3	29	710	230	..	..	1	..	..	++++
19	540	21	760	630	810	..	5	181	14	17	++++