

the trouble was invariably associated with an excess of white clover in the pasture and in a succulent, leafy stage. Access to water immediately after the paunch is filled with this soft clover seems to favour the occurrence of bloat. Probably for this reason bloating is frequently seen as often in the afternoon as in the early morning. The condition also received investigational inquiry at Wallaceville from an analytical viewpoint of the gas-formation in the paunch, and bacteriologically on the paunch-contents. The suggestion that the trouble might be associated with prussic-acid content of the clover does not appear to be established by investigation. Amongst preventive measures, the feeding of a small ration of dry hay in the morning, as a rule, is followed by good results. Acidulation of the drinking-water by the addition of a small quantity of dilute hydrochloric acid is spoken of as being effective, but this was not entirely borne out on inquiry.

Grass Staggers in Cows (Grass Tetany).—The occurrence of this disease in cows at varying periods following parturition is mainly confined to the Waikato District. Work on the relationship of the blood magnesium to the occurrence of the trouble is being continued at Wallaceville. The incidence of the disease during the critical period of the past year in the Waikato is stated to have been less than previous years. The use of subcutaneous injections of magnesium-sulphate solution is proving useful in the subacute cases. The work carried out by Messrs. Blake and Marshall in the Waikato in connection with the various aspects of this disease is worthy of mention.

Parasitic Disease in Young Cattle.—The prevalence of parasitic disease in calves is responsible for considerable loss. Much information on the prevention and treatment of the trouble has been disseminated by the Division, yet it is difficult to bring about a realization of the efficacy of good feeding and management. Referring to this point the District Superintendent, Auckland, remarks: "Parasitic diseases among young stock are far too common in spite of the information imparted to farmers on the prevention and treatment of these troubles. Owners are far too prone to rely on all kinds of medicines, but lose sight of the fact that good feeding and careful management, especially during the winter months, play a big part in assisting calves to overcome these troubles."

So-called "Eczema" in Cows (Photosensitization).—A number of cases of this condition were met with in herds in the Waikato and Bay of Plenty Districts during the autumn period. The skin of the udder is usually involved, and the animals lose condition rapidly, with cessation of milk-production. The trouble was evidently associated with flush-feed conditions. Whilst no serious mortality resulted, the condition is responsible for disorganization of supply in a herd. Extensive advice was given by divisional officers regarding suitable control of the trouble.

"Foul-foot" in Cattle.—Reports still indicate the presence of this condition in herds in the dairying districts. There is little doubt that the bacterial infection which gives rise to the condition is favoured by muddy and dirty conditions surrounding milking sheds and yards. The adoption of concrete "walk out" pathways, as exits from the yards, has been recommended by field officers, with very good preventive results.

Chronic Bovine Haematuria.—Cases of this disease were recorded on certain isolated areas of the poorer country in the Nelson and Marlborough Districts. It is evidently associated with continuous grazing on country of particularly poor type.

Nasal Catarrh of Cattle.—This condition was rather prevalent in Poverty Bay and Taranaki. An acute outbreak in the Stratford District was believed to be associated with pollinating grasses and dry, dusty conditions.

SHEEP.

The year was a fairly satisfactory one for the sheep-farmer. Although the price of wool was admittedly disappointing, this was to a great extent counterbalanced by the good prices maintained for sheep and lambs. Sheep came through the winter well, and the lambing percentage was good.

"Facial Eczema."—A serious outbreak of this disease occurred in many districts of the North Island during the autumn period. The name "facial eczema" is not a good one, and it is better called facial dermatitis, or photosensitization. The disease is characterized by a swollen or oedematous condition of the skin of the face, accompanied by severe itching, causing the sheep to scratch the head and thereby bring about infection of the parts, which usually ends in severe scab-formation and even sloughing of the skin. The severe swelling and inflamed condition of the skin around the eyes frequently leads to temporary blindness. Intense sensitivity to sunlight is present, and affected sheep will endeavour to seek shade. As in previous outbreaks of this trouble, its occurrence in the autumn was preceded by an exceptionally dry summer period. In the Gisborne District the long dry spell broke on 7th February, and frequent rain thereafter brought on a very rapid and luxuriant growth of feed, both on the flats and on the lower hills. By the end of the month serious reports were received of widespread trouble amongst sheep in the district. The disease was investigated on the spot by the Officer in Charge of the Wallaceville Laboratory and the District Superintendent of the Wellington District, who both spent some time going very fully into every aspect of the outbreak.

The disease is a form of skin photosensitization usually affecting the uncovered and unpigmented skin of the face, and is associated with blockage of the bile ducts of the liver with inspissated bile. The skin sensitivity to the sun's rays is produced by the accumulation in the blood of a substance known as phylloerythrin, derived from the chlorophyll or green colouring-matter of plants. The precipitating factor in the condition appears to be the sudden change from hard, dry feed conditions to luxurious, lush pasture.

In this disease there is an upset in the function of the liver. The liver itself in badly affected sheep becomes cirrhotic—hard and enlarged.

The disease was not confined to the Poverty Bay district, but was also much in evidence in the Manawatu, also the Marton and Wanganui areas, and Taranaki. It was also prevalent to some extent in Hawke's Bay and the Waikato.