

mortality has, of course, been greatest where old sheep have been kept, as in the cases of the Mount Oxford Runs, where very probably a thousand out of three thousand sheep will have perished. Great subsequent loss during lambing and shearing must result from the weakened condition of sheep unless an exceptionally mild spring occurs; but, as regards present amount of loss upon the pastoral leaseholds held from the Crown in Canterbury from the Rakaia northwards, I consider that it may be estimated at about thirty thousand sheep.

F. WARD,
Crown Lands Ranger.

The Commissioner of Crown Lands, Christchurch.

REPORT ON SNOWFALL IN CANTERBURY.

Department of Lands and Survey, District Office, Christchurch,
17th September, 1903.

THE heavy fall that occurred on the 11th July last was general throughout the district, but the injury caused by it was limited to particular localities, and even then some parts were much more seriously affected than others. It is universally considered to be the worst fall since 1895, or even heavier in parts than the latter, and that had it occurred earlier in the winter, its effects would have been more disastrous. It was immediately followed by a succession of heavy frosts for several weeks, which intensified the trouble. In south Canterbury, at a distance from the coast, the real thaw did not occur until the 13th August, nearly five weeks after the fall. For weeks after that, large tracts of plain many miles in extent were covered with a mantle of frozen snow, though the northern faces of the hills had cleared very considerably. Under such a condition of things, it is not surprising that the mortality among the sheep has been so great. Things were beginning to right themselves when, to aggravate the position, at the end of August another fall took place. It, however, chiefly affected north Canterbury, and was accountable for most of the mortality there.

In compliance with your instructions, I, in company with two members of the Land Board (Messrs. Pringle and Sealy), visited the parts most seriously affected, which was in the southern portion of the district. We inspected the settlements at Chamberlain, Albury, Punaroa, and Ashwick Flat, and the runs from Clayton near the head of the Orari River, through the Mackenzie County to Rhoborough Downs and Ben Ohau, then on by way of Benmore and Omarama to Kurow, and from there to the runs in the Upper Waitaki and Hakataramea. The thaw referred to occurred immediately after we had started on our tour, and though it delayed us a day on account of the floods, the removal of much of the snow greatly facilitated our inspection of the country.

Speaking of the district as a whole, the most of the snow was along what might be termed the middle country, from the Waitaki to the northern end, more particularly so in north Canterbury, though it was by no means regular; adjacent runs were very often affected in a different degree. The heaviest fall seemed to cover a strip of country, twenty to thirty miles wide, from Waitaki, above Hakataramea, to Rangitata, and a smaller streak taking in the Ben Ohau, Rhoborough Downs, Simon's Pass, Wolds, and Balmoral Runs. The fall in this part of the country was irregular, varying from 2 ft. in parts to 3 ft 6 in. around Fairlie, where it was deepest. The July storm was not so severe in north Canterbury, and the mortality would have been but little above the average winter loss had it not been for the fall at the latter end of August, which swept off many thousands of sheep weakened by the previous one.

From reports sent you from time to time of the result of the investigations and inquiries by the Crown lands rangers, you will have seen that the loss of the settlers in the various settlements affected, even in the worst parts, is not, I am glad to say, nearly the percentage of the runholders. The reason is largely due to the limited areas held, the small flocks they have to handle, and the facilities for feeding the stock. A few of those in the settlements I have mentioned have lost heavily, but these are chiefly holders of small grazing-runs. The eventual losses on the bulk of the pastoral runs within the country affected are expected to run from 15 to 60 per cent., in one case as much as 75 per cent. The known losses are very great; but, until after shearing, no definite information can be got as to what will be the actual total loss, and much depends on what happens between now and then. Most of the sheep now on the runs affected are very weak through what they have undergone, and doubtless numbers will succumb before shearing, especially in the case of the ewes at lambing-time. In my travels lately in the affected districts, I learned that this mortality is now going on; but in many instances things have turned out better than was at first anticipated, though in some not so well.

Taking into account what we have seen for ourselves, together with the opinions of the Crown lands rangers, the information obtained from and opinions of the runholders or their managers, and other persons affected, we judge that the losses due to the two heavy falls of snow in July and August will be about 100,000 sheep in South Canterbury, and 30,000 in North Canterbury: together, say, 130,000 sheep.

The Surveyor-General, Wellington.

THOS. T. HUMPHRIES,
Commissioner of Crown Lands.

LOSSES BY SNOWFALL, SOUTHLAND.

Department of Lands and Survey, District Office, Invercargill,
21st September, 1903.

In reply to your memorandum of the 4th August, *re* the above subject, I have now to report as follows:—

From inquiries made from reliable sources I find there has been no loss of stock to speak of in this land district from the fall of snow which commenced on the 10th July last. There was no