

That deliberate non-notification should be punished cannot be doubted by any one. Objection, however, to legislation in this direction has been put forward on the same grounds as those upon which the prevention of breeding from diseased animals was contested. As, however, I consider that these objections have been already shown to have no weight, I recommend that both the forbiddal of breeding from diseased animals, and the notification of the disease, should be included in any legislation for tuberculosis.

REPORT by MR. J. F. McCLEAN *re* LUNGWORM at TUPURUPURU.

SIR,—

Stock Inspector's Office, Wellington, September 8th, 1890.

As instructed by you, I visited Mr. W. C. Buchanan's property, "Tupurupuru," on Monday, the 1st inst., and remained there and in the immediate neighbourhood for several days, examining the affected stock and country. I have the honour to report as follows:—

I found "lungworm" very prevalent among the hoggets at "Tupurupuru" where, judging by the appearance of the flocks, the losses from this cause must have been very serious. But until pastoralists acquaint themselves with what we know of the life-history of the "lungworm," and recognise that where this pest has once gained a footing on a run, or part of a run, it will increase its ravages year by year (according to the locality of the place and the suitability of the seasons), I can expect little benefit to accrue from any recommendations I may make.

As this can only be a condensed report, I would like to point out the lines sheepowners should take to keep this pest within bounds.

There is no doubt that where lungworm is prevalent the best remedy of all is to plough up and crop the infected area for one or two seasons; but, of course, this plan is inapplicable on the No. 3 sheep run. The substitution of cattle for sheep for a season will also go a very long way towards cleaning a country, as the lungworm of sheep does not affect cattle, and *vice versa*. Then again there is the Australian method of shutting up the infected area for some months, and then firing the growth that has taken place.

Where owners cannot or will not adopt any of the above methods, it only remains for them to take all care that their lambs are in good condition before and at the time of weaning, and thus render their systems less liable to fall an easy prey to the disease. This, I need hardly say, can only be attained by good feed and pure water in liberal quantity, and general good management.

In the country I have been examining during my visit to Tupurupuru, I cannot too strongly recommend the allowance of a free supply of salt, from the middle of summer right through the autumn.

For this purpose I would prefer to use inferior common salt, commonly known as "Liverpool salt," placed in troughs about the paddocks. Rock salt, though infinitely better than no salt at all, is too liable to injure the teeth of lambs and thus render them unfit for turnips later on in the season. Another advantage Liverpool salt possesses is that any other medicament may be incorporated with it, and for this purpose I know of nought better than the following mixture: Liverpool salt, 100 parts; chlorate of potash, 10 parts; sulphate of iron, 5 parts. Lambs provided with this mixture will readily lick it, and as near as possible render themselves worm-proof.

I am often asked if drenching lambs is any good, and am forced to reply in the negative; for I am of opinion that, unless in the hands of a competent and careful man, much unnecessary pain and serious damage is too often inflicted on an animal mostly in a delicate state of health, by the injudicious mixing and administration of the various drugs used.

If an owner is of opinion that he ought to drench his lambs, let it be done two or three times, early in the year, and advisedly with turpentine and milk thoroughly incorporated. It is worse than useless to wait till such time as the hoggets are coughing. The object of drenching should be to cause the expulsion of the worm before it has gained an entry into the lungs or blood stream. The lambs should be carefully handled, the mouth gently opened by an assistant, and the medicine slowly allowed to fall into the mouth, in order that the animal may have time to swallow it, and not, as one too often sees, the mouth roughly torn open, while another man as roughly squirts the medicine out of a syringe, the bulk of it not entering the gullet as intended but passing direct into the larynx and setting up a violent fit of coughing, and in the end causing severe bronchial disturbance.

If owners will attend to these few particulars, I think we may confidently expect to see our losses from lungworm reduced to a minimum.

The Hon. the Minister of Lands.

I have, &c.,

JOHN F. McCLEAN, M.R.C.V.S.

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