

here be repealed. Dissolve one pound of powdered blue Vitriol in 26 quarts or 6¹/₂ gallons of water. 26 quarts is equal to 40 ordinary quart bottlesful. Dissolve the blue vitriol in boiling water, then add sufficient cold water to make up the requisite quantity. Of this solution give lambs four months old a full tablespoonful, to lambs five months and over, two tablespoonsful, to young sheep from twelve to fifteen months old, three tablespoonsful, and for full-grown sheep four tablespoonsful. As already stated, goats and kids stand a stronger dose with impunity, and even for sheep and lambs these doses are capable of being increased a little. This subject will receive my attention as soon as I can return to such work. Meantime Veterinary Surgeons Borthwick and Sogaare giving their attention to the subject.

Preparation for dosing sheep and goats for worms.—Fast the flock at least 18 hours—24 hours are better—so that the stomach may be as empty as possible when the medicine is administered. Should any of the sheep show signs of having had too strong a dose, by looking dull, not feeding, and walking with a stiff and painful gait, with purging, the discharge being a dirty brownish colour. Get such to a quiet comfortable shady place at once and give them a dose of milk and laudanum. To a four or six months old lamb give one teaspoonful of laudanum, for a sheep from a year old two teaspoonfuls in about a tumblerful of milk. This dose may be repeated in ten hours if necessary.

Prevention of these worms.—It is very evident that the pasture of the Colony is becoming annually more and more saturated with the embryos of these worms, and that when favourable conditions for their development arise such as the present wet season, they become a regular plague. What is to be done? We cannot afford in this Colony to apply such substances as lime and salt to our pastures sufficient to destroy these worms. I can only suggest two feasible plans which appear to be at all practicable either the division of farms, and alternate grazing with different kinds of stock, or the burning of a certain portion of the pasture every year for the grazing of the young stock.

With respect to alternate grazing with different kinds of stock, these wire-worms do not affect horses, cattle, or ostriches; the so-called wire-worm of ostriches is a different worm altogether. If a farmer could, therefore, graze a portion of his farm with horses, cattle, or ostriches solely every year, he could reserve the portion thus grazed for his lambs the following year.

With respect to burning there are many kinds of veld where both tape and wire-worms are abundant which it is impracticable to burn. I merely suggest, therefore, that the plan is worth considering where such a course is practicable, as the burning must destroy the young embryos of these and other parasites.

D. HUTCHEON, C.Y.S.

Wire-worm in Sheep. REPORT
FROM VETERINARY SURGEON SOGA.

Having been engaged at Waterford from the 6th till the 24th March dosing sheep for wire-worm, I am now in a position to testify to the advantages of sulphate of copper as a remedy for wire-worm. In all, "at a rough estimate," nine thousand sheep and lambs were dosed satisfactorily. On the 21st inst. I had an opportunity of inspecting these flocks which are dosed, and certainly a great improvement in condition is noticed.

Whilst dosing at Waterford several strengths were given to sheep, with the result that some noticeable features were the outcome. Sheep in *good condition* were severely affected by the dose. Thin, poor sheep could stand a very large dose; thin lambs also.

The dose administered was that recommended to me by wire from the Colonial Veterinary Surgeon. We eventually

modified the dose to 17¹/₂ ounces of sulphate of copper to 24 quarts of water, this being the standard dose used at Waterford, lambs receiving half the dose of large sheep, sheep 4 ozs., lambs 2 ozs. Mr. Bodden, of Waterford, "the stockman," is so pleased with the results of dosing, and the condition of the sheep, that he has commenced dosing the rest of Waterford sheep.

Kei Eoad, 25th March, 1891.

Vomeer Ziekte in 1886.

This is a peculiar disease which affects sheep in certain localities in the districts of Hope Town, Prieska, Carnarvon, Victoria West, Kenhardt, &c. I saw some cases of this disease at Mr. Louw's farm, Mark's Drift, in the Hope Town Division, in 1886. Mr. Louw and the farmers in that neighbourhood entertain the opinion that this peculiar disease or functional derangement is due to the sheep eating a certain bush called the vomeer boschje, *Geigeria passer idoides*. The same opinion was expressed to me by the farmers in Griqualand West in 1884. At that time I made some experiments upon sheep with this bush with entirely negative results. The disease was not prevalent at that time, however, and I thought it quite possible that the bush might produce the physiological derangement of vomiting at a different stage of its growth.

The disease was, however, prevalent amongst Mr Louw's sheep at the time of my visit, so I arranged to have one sheep brought up to the homestead, and dosed with a quantity of this bush. Mr. Louw kindly sent his boy to collect a quantity of the bush, had it cut and bruised fine, and we fed the sheep with a large quantity of it. The sheep ate it very readily when it was placed in its mouth, and to assist in rapid swallowing we gave it a little water at short intervals. We allowed this sheep to go with the general flock during the day so that it might be under the ordinary conditions in which they contract the disease. The only error likely to arise from this arrangement was that the same sheep might have contracted vomeer-ziekte from something else on the veld. This could have been corrected afterwards, however, by a cross experiment.

The following morning we examined this sheep, but we could not detect any symptoms of constitutional disturbance of any kind. We then resolved to give the same sheep a second and even larger dose, if possible, the following morning. Mr. Louw dosed her, and I returned and examined her on the morning after, but could not see anything amiss with her. The bush grows abundantly on that part of his farm where they contract this disease. The sheep eat the bush readily, as when examining the veld I could see that the majority of the bushes were eaten down as close as any other.

I have, therefore, grave doubts that this particular bush is the guilty one.

There was a general opinion expressed by the farmers in the Victoria West Division, respecting its cause when it prevailed there very seriously in 1877. "That the vomit sickness was caused by the sheep eating fine or very young grass, which when scarce they are seen scratching the ground away with their feet so as to get at the roots, eating which they also eat sand, which causes stoppage in the bowels." The disease is most prevalent during the summer months, and has appeared with more or less severity for a number of years back.

Sand is, however, not the cause of this disease, nor was there any obstruction of any part of the stomachs or bowels of the two that I opened. The one that died during the first night of my arrival at Mr. Louw's farm, and which I examined the following morning, had no appearance of any obstruction of any part of the digestive organs. The immediate cause of death was acute broncho-pneumonia, or inflammation of the lungs and bronchial tubes. This is, however, an effect of the primary cause of the nervous irritation or derangement.