

IV. That the disease is contagious and incurable.

V. That I believe that its continuance and spread are due, in a great measure, to the illegal practice of throwing carcasses on the shore or leaving them unburied on commons where other animals coming in contact with the animal fluids or tissues become infected, and thus the disease is spread.

VI. That animals placed in buildings formerly occupied by diseased animals will become infected.

I beg therefore to recommend :

a. That measures be taken to stamp out the disease—by killing the diseased animals and burning the bodies or burying them deeply with lime.

b. By isolation of those cattle which have been in contact with diseased animals or in infected places ; by declaring the district, or farm, as necessary, to be an infected place, and subject to necessary quarantine regulations.

c. That all animals actually sick of the disease be slaughtered—one-third of the value being paid for them ; that all suspected animals be killed, and that two-thirds of their value be paid to the owners.

d. That the quarantine be maintained until such time as the infected buildings be renovated and disinfected to the satisfaction of the Inspector appointed to carry out the quarantine, and all carcasses burned or buried, and all graves of cattle thoroughly covered, and that the law forbidding the exposure of carcasses on public places unburied, or throwing them into the sea or on to the shore, be enforced.

#### ESTIMATED COST.

I beg to submit the following estimate of costs, which is only proximate, as it is impossible to definitely compute the number which must be killed, either as diseased or suspected.

Estimating the number of animals in the exposed district at 1,000 head, should it be necessary to destroy all of them, and taking the value of the best matured animals at \$30—two and three year olds at \$15, and calves and yearlings at \$6 to \$10—we may place the average value at say \$22.50 per head. Allowing the owner compensation at a rate of two thirds value for those not actually diseased, but yet exposed to infection, it would represent

1000 animals at \$15 .....	\$15,000
Inspector's salary and expenses, } Constables (say ten men) }	2,500
Incidental expenses .....	500
	<hr/> \$18,000

#### MORTALITY AND LOSS.

The preceding statistics were compiled by William McEachran, M.D., V.S., who, by Departmental instructions, was sent to the infected districts for that purpose.

By a consideration of the table which I here prefix, it will be seen that since the first appearance of the disease a total number of 1,396 animals have been lost, or an average of 56 per annum. It must, however, be noted that at the time the number of healthy animals and those sick in the affected districts was only about 1,000 head, making the mortality a fraction over 5 per cent, which is by no means a very heavy mortality. Yet, when we consider that the stock on a farm in that county seldom exceeds six or eight head, and that in some cases the entire stock has been lost, and lost again on replenishing, so that the keeping of cattle had, on some farms, to be relinquished altogether, it entails not only loss but inconvenience and consequent depreciation of the farm. It is, therefore, no wonder that we find the people clamorous for something being done to rid the county of the plague.

I may explain that many of the animals thus condemned as having been exposed to the infection would probably not be diseased, and their carcasses could be sold for food, which would reduce the outlay somewhat, but I beg leave to suggest that the sum of eighteen thousand dollars (\$18,000) be appropriated for this purpose to be expended in such measures as are necessary to rid the Province of Nova Scotia of this disease, which is so injurious to the agricultural interests of that Province.

I have the honor to be, Sir,  
Your obedient servant,  
D. McEACHRAN, F.R.C.V.S.,  
Inspector of Stock.

The Honorable  
The Minister of Agriculture.

(To be continued in next number.)

THE *Pictou Standard* opportunely publishes engraved figures of the Colorado Potato Beetle in its various stages, together with the following clear and accurate account of this pest :

"As Pictou County has at last been invaded by this enemy, which no power has been able to arrest in its triumphant march from the canons of Colorado to the British Atlantic, our farmers must wheel into line and receive the invader in true fighting fashion. Henceforth eternal vigilance will be the price of potatoes.

In the cut we give a representation of the beetle in its various stages. The yellowish eggs are figured, the larvæ in different stages of growth and characterized by a pale yellow color with a reddish tinge and a row of black dots on the sides ; the pupa or chrysalis which transforms in the ground ; the perfect beetle striped with black and dull orange, the *elytra* or hard-winged covers, dull orange and black ; the legs, dull orange and black. It has been named by Say, *Doryphora decem-lineata*.

We have a number of the perfect beetles before us. If the weather remained warm, and the potato tops green, and our beetles were set at liberty, they would deposit on the back of the potato leaf their small yellowish eggs. In a few days, the weather being warm, these are hatched and out comes the creeping and voracious larva. Inside of a month it attains its full size, stops eating, and descends into the ground and changes into the pupa. In ten or twelve days afterwards the perfect beetle emerges to deposit its eggs. If the cold weather sets in, the pupa remains in the ground till next spring, when it emerges as the perfect beetle in time for the young potato leaf about the end of May or first of June. Nova Scotia will very likely produce two if not three broods during the year.

It is reported, as its popular name implies, to have come from the base of the Rocky mountains, where it originally fed on wild species of the potato family. Tasting the cultivated potato, it then left its native habitat, and spread rapidly eastward. Strange to say, the President of the Entomological Society of Canada, who visited Colorado in August of last year, could find no Colorado Beetle either on wild or cultivated plants of the potato family. Why? Have their parasites destroyed them, or has there been a migration? Under its *elytra* the beetle has good flying wings which it can use quite well. But it has also used other means of conveyance, among the most effective of which have been the railway, the canal-boat and the steamboat. In 1871 they visited Chicago, and pushed their front up to the Canadian lakes. In 1872 they crossed the St. Clair, and spread rapidly eastward by canal and rail and probably also by wing. In 1877 or '78 it was reported at St. John, New Brunswick. A year or two ago it was reported in a potato patch in Nova Scotia. But it appeared to have been killed out. This summer, in July, we received a perfect beetle from Amherst. Nearly simultaneously it was reported in P. E. Island, and late in August from several portions of Pictou County. It has many enemies, even in the beetle family itself. They may be known by seeing them attack and destroy the larvæ for food. It is possible that under favourable circumstances, these insects might in the course of time increase so rapidly from the abundance of their food as to annihilate the potato beetle. The weather undoubtedly has something to do with the repression of this scourge. But at present experience has shown that the farmer himself must lead in the attack.

First, in early spring he must narrowly watch the potato field and, on a sign of the beetle, send all the little boys he can