



CANADA.

DEPARTMENT OF AGRICULTURE
ENTOMOLOGICAL BRANCH.

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Crop Protection Leaflet No. 7

RATS AND MICE.*

DESTROYERS OF GRAIN AND FOOD.

The brown rat is the worst pest with which man is afflicted. Both this rat and the house mouse came to North America from abroad; possessing habits adaptable to almost any kind of environment, and feeding upon all kinds of animal and vegetable matter they have increased and spread over a vast area. In Canada they have not yet spread over the greater portion of the prairie provinces, but in their gradual migration from the east they have now spread over southern Manitoba, and as the west becomes more settled their destructive hordes will certainly extend further afield, menacing especially the grain interests.

Destruction of Food.—Their destructive powers are well known. No kind of grain is spared, whether growing or stacked in the field, stored in the granary or elevator, transported by rail or water; everywhere they take an enormous toll of this chief source of our food supplies, the conservation of which is a paramount necessity at the present time. Never have the destructive powers of mice been so strikingly demonstrated as in Australia during 1917. Owing to the lack of transportation, vast quantities of grain destined for export have accumulated in New South Wales and Victoria. A plague of mice developed, and the destruction of grain has been enormous. We are informed that in some places the ravages of the mice were so great that huge stacks of grain were reduced to what resembled mere heaps of debris in a few months. The Wheat Board of New South Wales organized a campaign of destruction; in one place the catch for two nights totalled seven tons of mice. While this outbreak was exceptional, it serves to show the destructive powers of these small creatures, in the mass.

The brown rat invades houses, stores, warehouses, and markets, and besides destroying fabrics of all kinds and leather goods, it attacks all kinds of food: meats, groceries, fruits, vegetables. In town and country it attacks poultry, destroying eggs and chickens. The foundations of buildings are damaged by their activities, and everywhere they destroy unceasingly, and yet we tolerate their presence.

In Europe it was estimated, after a full inquiry in 1907, that the average annual loss caused by each rat in Great Britain equalled \$1.80, in France \$1, and in Denmark \$1.20. The losses in rural districts in Great Britain and Ireland in the same year were computed to be seventy-three million dollars, and a capital of about ten million dollars was employed in the industry of supplying means for their destruction. In 1904 the losses in France were computed at forty million dollars. At the present time the English Board of Agriculture is making special efforts to combat the rat pest in England as a means of saving food supplies, and the Sanitary League in France is also carrying on a vigorous campaign against rats.

Recently, Mr. E. W. Nelson, Chief of the Biological Survey of the United States Department of Agriculture, has estimated that the annual losses in the United States

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