

HOUSE OF COMMONS,

COMMITTEE ROOM 424,

WEDNESDAY, June 18, 1924.

The Select Standing Committee on Agriculture and Colonization met at 11 o'clock a.m., Mr. W. F. Kay, the Chairman, presiding.

Mr. H. T. Güssow, Dominion Botanist, called and examined.

WITNESS: Mr. Chairman, Mr. Motherwell, and gentlemen, it affords me great pleasure in addressing you to-day on the wheat rust question. This is one of the most important questions to Canada, and in order to deal with the problem satisfactorily I have put on paper certain observations, which I might be allowed to read to you. (Reads):

"Wheat Rust, by which, as far as we are concerned, is meant Black Stem Rust, is and has been for the past century, the most important world problem in plant pathology, as well as in agriculture. Its economic importance within the Dominion of Canada is best illustrated by the following comparisons. In 1904, wheat rust reduced the wealth of Western Canada by not less than twenty million dollars. In 1916 the losses due to rust were in excess of \$150,000,000. In 1923, which gave us the highest wheat crop in the history of Canada, nevertheless an amount of \$50,000,000 was lost in the Red River Valley, Southern Manitoba, alone.

It may not be known that this is the eighth consecutive year for the farmers of that district to suffer such severe loss; when this is apparent it will be admitted that the solution of the grain rust problem is one of the most desperate needs of Western agriculture to-day.

The seriousness of the problem will be realized even better from the statement that in some years the losses from wheat rust amounted to treble the amount which Canada derives from its fisheries. In 1916, one of the worst years of rust epidemics, the losses were equal to the entire mineral production of Canada, viz. \$183,000,000 in 1922.

The rust problem is, without a doubt, one of the most difficult problems to solve. It has been known from biblical times and a large library may be filled with treatises on rust, but only during the past few years our knowledge has made considerable advance, promising results which command attention.

Grain Rust is of evergrowing importance in Canada, but it is by no means only of national, but decidedly of international importance. There is no doubt that the depreciation of the wheat crop of America in 1916 was one of the chief causes of the world shortage of food. With the elimination of this scourge from the grain crops of the world, the solution of a great many economic problems confronting the world to-day—and indeed the world's general unrest—will be largely effected. Shortage of food, the steady increase in the cost of the world's most essential and fundamental food supply will be greatly reduced by the solution of the problem. Canada is looked upon as the granary of the Empire. It is indeed the granary of the world, and while the effects of an abundant harvest may not be immediate, yet political economists assure us that they are decidedly cumulative.

In referring to these aspects of wheat rust, I do so intentionally to impress upon you that we are confronted by a problem to the solution of which the most liberal and generous support should be given.

Scientific research, a term which is nowadays frequently used and more frequently abused, is the only satisfactory and fundamental basis for progress in agriculture. It is immaterial to which phase of agriculture research is