

stage, in which condition the rust lives over winter. Without the barberry the rust is practically unimportant. In Denmark, barberry eradication was years ago made compulsory by law. Previous to the wholesale eradication practiced, black stem rust was a disease of great economic importance, but since the eradication of the barberry there has not occurred any outbreak of stem rust of any importance.

By Mr. Pritchard:

Q. Have they been trying to prevent the rust on the barberry bushes?—
A. It is impracticable to do it.

Q. In your experiments you were not able to defeat it?—A. No. Spraying nor any other treatment has the slightest effect on the control of rust on the barberry bushes or on wheat.

By Mr. Sales:

Q. When does it leave the wheat plant to get to the barberry?—A. In the fall the "black stage" of the stem rust develops. In this form the rust hibernates on the stubble, or on wheat stem generally. Early in the spring the spores adhering to the stem of the wheat germinate and return to the barberry. At the present time you will find the barberry everywhere covered with orange-red spots; these orange-red spots contain and discharge millions of spores which infect a number of grasses, including wheat. It has been claimed by one of the investigators in Minnesota that the infection on wheat was traced directly for more than ten miles to a single barberry hedge. How much farther the wind may carry the rust spores from this area no one can tell, but it has been determined that from a single infected barberry the rust has spread for some five miles and more.

By Mr. Lovie:

Q. What other plant acts as a host?—A. Only the barberry. As a matter of fact, black stem rust has only one alternate host and that is the barberry; from the barberry however, it may go to a large number of wild and cultivated grasses. One of the typical offenders in that respect is wild barley, one of the commonest weeds throughout the West.

By Mr. Sales:

Q. If you destroy the barberry, does that destroy the link that is necessary for stem rust to reproduce itself?—A. Yes. I will come to that point right away. It has been so claimed by the pathologists of Denmark. Afterwards, Dr. Stakman of Minnesota was instructed by the United States Department of Agriculture to visit all European countries and to investigate the barberry situation in Europe. On his return he reports that Denmark is practically free from black stem rust of wheat. Other countries still have their share according to the amount of barberry that is left.

By Mr. Sales:

Q. They have adopted compulsory methods there?—A. They have, and have finally succeeded in eradicating the entire barberries throughout their country.

The United States are now eradicating their barberries, especially in the Western States. In Canada we do our share and look forward with great interest to the accomplishment of so vast an undertaking in the States, from which we all hope to reap great benefit. We hope to complete our barberry eradication in Saskatchewan this year. We hope the same for Manitoba, although it is most difficult to deal with cities like Winnipeg.

The barberry is of European origin and was brought to the Continent of America many years ago. The sooner we are able to rid the Continent of