

BARBERRY ERADICATION IN ILLINOIS

BY

ROBERT W. BILLS

U. S. Department of Agriculture, Bureau of Plant Industry

ABSTRACT

The common barberry, originally from the Himalaya Mountains of Asia, was carried into eastern Europe and from there to America by early colonists. The fight against the rust-spreading plant was begun locally in grain producing regions in France about 1660. The program was soon taken up in Germany and England and in the American colonies as early as 1726. A nation wide campaign was carried on in Denmark in 1903 after a law was passed against this bush. In 1918, the United States Department of Agriculture cooperating with state agencies, started a campaign to eradicate common barberry from thirteen north central grain producing states.

The ability of this plant to multiply and be distributed and to adapt itself to growing under various conditions of soil and moisture has complicated the fight to exterminate it.

One barberry location was referred to near Southborough, Massachusetts, where a spread of rust was reported in 1795 by Timothy Dwight, President of Yale. One bush was accused of causing serious rust damage to a wheat field. Pictures were shown to illustrate how the barberry has multiplied until now there is a wilderness of barberries growing in some of the fields of that region. In this section the bush has become a pasture weed.

A location in Lake County, Illinois, was described as having spread from a planting in Gurnee. Woodlands, fence lines, and roadsides covering about 35 square miles have been infested by the progeny of that one planting. Bushes were most numerous on the H. C. Lake farm about one mile from the original planting. On that farm 48,425 bushes, many of them large, fruiting bushes, were killed from 1923 to 1925. A careful search of the farm netted 5,860 small to medium sized bushes in 1930, and an equally diligent search in 1933 resulted in the destruction of only 435 small bushes. Thus the barberry bushes are being brought under control.

A total of 2,669,411 common barberry bushes and seedlings has been found and destroyed in Illinois from 1918 to 1933. These plants, if they had been equally distributed, would have covered this State at the rate of one to each 13 acres. In the 13 States of the barberry eradication area, 12,107,232 barberry plants have been destroyed. Definite reduction of rust losses has followed the removal of these sources of infection.

The figures compiled by the Plant Disease Survey of the United States Department of Agriculture show that for the thirteen states of the Barberry Eradication area the average annual loss of wheat due to black stem rust during the six years 1916-1921 was 51,279,000 bushels; during the following six year period the average annual loss was reduced to 17,845,000 bushels; and during the last six year period 1928-1933 the average annual loss was brought down to only 3,471,000.

Barberries are known to be growing in many locations where the seeds have been scattered by birds and other agencies from old plantings. Practically all of the planted bushes have been destroyed. Records indicate the existence or probable presence of remaining bushes near locations where old bushes had grown. These records simplify the future search for bushes.