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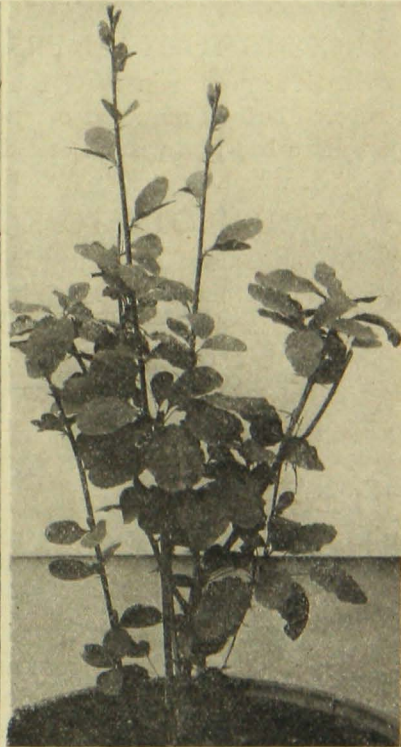
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THE COMMON BARBERRY AN ENEMY OF WHEAT

By E. M. Freeman, Division of Plant Pathology and Botany



Plant in Winter Condition



Plant in Summer Condition

THE COMMON BARBERRY

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COMMON BARBERRY -- AN ENEMY OF WHEAT

The common barberry is an "aid and comfort to the enemy."

The common barberry must be destroyed because it harbors and propagates the black stem rust of wheat and other grains, and the Minnesota Commission of Public Safety has ordered (Order No. 28) that "it shall be the duty of every person owning or having charge of any premises on which barberry bushes of the rust-producing varieties are grown, or are at any time found growing, to forthwith destroy such bushes."

WHAT IS BLACK STEM RUST OF GRAINS?

The black stem rust is a disease of cereals which destroys every year millions of bushels of wheat, oats, barley, and rye. The black stage on the wheat causes rust on the common barberry in the spring. From the barberry stage the disease spreads in May and June to the wheat or other grain plant where it causes the red stage which again spreads and increases throughout the summer. At about harvest time the black stage develops on wheat, causing immense loss.

COSTS THE FARMERS MILLIONS ANNUALLY

Black stem rust in 1916, a bad rust year, inflicted a loss of 30,000,000 bushels of wheat on the farmers of Minnesota alone. In 1917, not a bad rust year, it cost the farmers of the nation 45,000,000 bushels of wheat.

YOUR DUTY TO KNOW THE BARBERRY

Do you know the common barberry when you see it? Can you distinguish it from the Japanese barberry which is not "a rust-producing variety," and therefore need not be destroyed? Every citizen of the state ought to learn to know these bushes. You can learn to recognize both barberries without fail if you read carefully the following description and examine the pictures.

HOW TO KNOW THE BARBERRIES

Both the common barberry (*Berberis vulgaris*) and the Japanese barberry (*Berberis thunbergii*) are cultivated perennial shrubs grown as ornamental plants in gardens and lawns and in hedges. They do not grow wild in Minnesota. The common barberry is also called high, European, or erect barberry. The Japanese barberry is also called the Thunberg, low, or spreading barberry. Both have spiny stems and reddish berries that hang on the bushes over winter. There are two varieties of the common barberry; one green leaved and the other purple leaved—both must be destroyed. The Japanese barberry has green leaves.

The following figure shows the chief differences between these two barberries.

Common Barberry Japanese Barberry

It harbors and propagates black stem rust of grain

It does not harbor or propagate black stem rust of grain



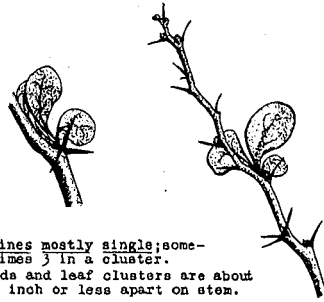
Plant large (4 to 8 ft. high), erect.
Stems gray or grayish green.



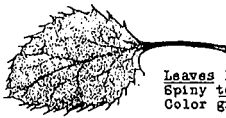
Plant smaller (2 to 4 ft. high) and spreading.
Stems reddish brown.



Spines mostly 3 in a group. Along the top of the stem spines are often single, at bottom of stem spines often in clusters of more than 3.



Spines mostly single; sometimes 3 in a cluster. Buds and leaf clusters are about $\frac{1}{2}$ inch or less apart on stem.



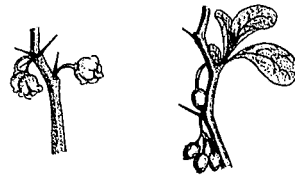
Leaves large and broad; spiny teeth on edge. Color green or purple.



Leaves smaller, spoon-shaped; edge smooth; color green.



Flowers and berries in a long cluster.



Flowers and berries single or in small groups of 2 or 3.

Destroy the common barberry. Help the wheat and other grains in their fight against rust. Dig it up immediately, if it belongs to you. If it does not, get the owner to dig it up. If he will not, report its location to the State Entomologist, University Farm, St. Paul.

Do not forget that the common barberry may begin to produce wheat rust early in May. Dig it now.

HOW TO DESTROY BARBERRY

Dig it up. Be sure to get the whole crown and the large roots so that it can not sprout again. If it starts to sprout, go after it again and be sure to get all of it.

Remember that if you have dug out the common barberry, you have made the wheat crop of Minnesota more nearly safe against the dreaded rust disease.

For further information address

Plant Pathologist, University Farm, St. Paul.

or

State Entomologist, University Farm, St. Paul.