

Connecticut Agricultural Experiment Station

New Haven

EUROPEAN BLACK CURRANTS OUTLAWED

J. E. RILEY, JR.

CHAPTER 172 OF THE PUBLIC ACTS OF 1929

Section 1. Any person who shall grow, plant, propagate, cultivate, sell, transport or possess any plant, root or cutting of the European black currant, or *Ribes nigrum*, shall be fined not less than five dollars nor more than twenty-five dollars.

Sec. 2. The director of the Connecticut Agricultural Experiment Station is authorized to seize and destroy any plants, roots or cuttings of said European black currant found in the state.

The foregoing law became effective July 1, 1929. It was enacted for the purpose of protecting the white pines of Connecticut from the white pine blister rust, a fungous disease parasitic on white pines and all species of currants and gooseberries.

The European black currants, *Ribes nigrum* L., are especially susceptible to blister rust infection. They have been known to take infection at distances up to 100 miles or more from diseased pines. When infected, these currants can transmit the rust to trees a mile away. They act as the chief agent in the long distance spread and local establishment of the rust and are, therefore, a special menace to the white pines.

DESTRUCTIVENESS OF THE BLISTER RUST

The white pine blister rust has all the destructiveness of the chestnut blight, which has destroyed the chestnut. The rust accomplishes its results more slowly and is consequently less spectacular. Young white pine trees are quickly killed and soon disappear from the forest, thus preventing a natural perpetuation of the white pine as a forest crop. This destruction of white pine reproduction constitutes the most serious aspect of the blister rust menace and is the one least likely to be observed. Older trees when infected may live from five to twenty years or longer depending upon the number and location of the infections, but ultimately they are killed.

NATURE OF THE FUNGUS

The blister rust is not an insect nor a worm. It is one of the lowest forms of plant life and belongs to a group called fungi. Some fungi, like the molds found on jelly or bread, live on dead plant material. Other fungi, like the chestnut blight, exist on live plants and are called parasites. Certain parasites, such as the wheat rust and the white pine blister rust, require two host plants upon which to complete their life cycle. They belong to a group of parasitic fungi called rusts.

HOW THE DISEASE SPREADS

The rust spreads between white pines and currants and gooseberries by means of seed-like-bodies called spores. Three years or more after the rust attacks the white pine, it produces orange-yellow blisters on the infected bark, which, when broken, liberate the spores. These are carried by the wind long distances and on coming in contact with the under side of currant and gooseberry leaves under favorable atmospheric conditions they germinate. The rust then grows into the leaf and soon produces the typical rust spots on its under side. These spots produce the spores that spread the disease during the summer on currants and gooseberries. Later in the summer, this same fungous growth forms brown horn-like projections, visible on the underside of the leaves. These horn-like projections produce the spores that infect white pine in the fall.

The disease cannot spread directly from pine to pine. The fact that it must spend part of its life on currant or gooseberry plants makes it possible to control the disease by eradicating these plants in the vicinity of white pine.

HOW TO CONTROL THE RUST

As previously stated, spores from the European black currant may spread the rust to white pine a mile distant. Spores from other currants and gooseberries do not ordinarily spread the rust to pine more than 900 feet from the diseased bush. Therefore practical protection is given a stand of white pine by destroying all currants and gooseberries, both wild and cultivated, within 900 feet of the trees and the European black currants within one mile.

HOW TO TELL THE EUROPEAN BLACK CURRANT

The European and American black currants may be distinguished from all other cultivated currants by the amber-colored resin dots on the under side of the leaves. No other cultivated currant leaf

has them. The two cultivated black currants may be distinguished from each other as follows:

European Black Currant <i>Ribes nigrum</i>	American Black Currant <i>Ribes americanum</i>
1. Resin dots on under side of leaves only.	1. Resin dots on both sides of leaves. A magnifying glass may sometimes be necessary to see them on the under surface.
2. Branches and twigs are round.	2. Branches and twigs are angular or ridged.
3. Leaves and stems have a strong, disagreeable, spicy odor when crushed.	3. Leaves and stems do not have strong, disagreeable odor when crushed.
4. Fruit smooth, black, pungent, somewhat musky.	4. Fruit smooth and black but not pungent or musky.
5. Flowers, greenish or whitish, saucer-shaped or open bell-shaped; racemes nodding, short, 5 to 10 flowers.	5. Flowers, greenish-white or yellowish, cylindrical-bell-shaped; racemes pendulous, many flowered.

REMEMBER

The cultivation of the European black currant within the State is prohibited by law and it is a misdemeanor to have it in your possession.

The State is now carrying on blister rust control through the removal of all currant and gooseberry plants within infecting distance of white pine. Your willing coöperation in the elimination of the European black currant will greatly assist in this work.

For further information on the white pine blister rust and its control, write the Forestry Department, Connecticut Agricultural Experiment Station, New Haven.