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Dutch elm disease

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Quick Facts

- Dutch elm disease is caused by a fungus that clogs an elm's water-conducting vessels causing it to die.
- Wilting branches, premature leaf fall and brown streaking in the sapwood are symptoms of Dutch elm disease. Streaking is in the spring wood.
- American elms are most susceptible to Dutch elm disease.
- Dutch elm disease usually reaches a destructive peak about five years after it is first discovered in an area.
- Since there is no known cure for the disease, control lies in prevention.
- Preventive measures include tree sanitation, maintenance of tree health and chemical control of elm bark beetles.

Other symptoms are premature falling of leaves and brown streaking in the sapwood. This streaking may be seen in the spring wood of the current growth season.

However, positive identification of Dutch elm disease cannot be made until after an accurate laboratory diagnosis, even during June when symptoms are most evident. This is because several other fungi cause similar outward symptoms.

Spread of Dutch Elm Disease

Dutch elm disease, first discovered in the Netherlands (hence the name), is believed to have originated in Asia. The first case of the disease in North America was discovered in Ohio in 1930.

By 1967 Dutch elm disease had moved westward across Nebraska and most of Kansas. In that year the disease was found in Chase County, Neb., which borders on eastern Colorado.

In October, 1968, the Dutch elm disease pathogen was first isolated from a diseased and bark beetle-infested tree in Fort Morgan, Colo. The pathogen rapidly invaded American elms in Denver and is widespread throughout Colorado.

The disease will continue to be destructive where there are high concentrations of American elms, since they are most susceptible to the disease. Chinese and Siberian elms are least likely to get the disease. All other elms are between these extremes. Research is being conducted to develop resistant varieties.

For further information on Dutch elm disease, see Service in Action sheets 2.901, 5.506 and 5.521.

Dutch elm disease is caused by a fungus that kills an elm by clogging its water-conducting vessels causing it to wilt and eventually die.

Elm bark beetles are the primary carriers of the pathogen, *Ceratocystis ulmi* (Buism). This fungus is carried to elm trees mainly on the beetles' bodies.

Typically the disease is first found in a few scattered trees. The number of infected trees increases each year thereafter until Dutch elm disease reaches a destructive peak in about five years.

There is no known cure for the disease. Control lies in prevention and includes tree sanitation, maintenance of tree health and chemical control of elm bark beetles.

Symptoms of Dutch Elm Disease

One symptom of Dutch elm disease is wilting or flagging on one or more branches high in the crown of the tree. Flagging is the rapid wilting of a small branch. The leaves curl and may turn yellow or brown, but usually remain attached. The affected branch sticks out like a "flag" from the surrounding greenery.

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