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# TREE FACTS

## DUTCH ELM DISEASE

Prevention is the best way of combating Dutch elm disease. Preventive measures are most effective if organized on a community wide basis with the involvement and cooperation of homeowners. Recommended disease management practices include: sanitation, root graft disruption, therapeutic pruning,, fungistat injection.

### SANITATION

Sanitation—the removal and proper disposal of all dead or dying elms—is the key to successfully managing DED. It involves the following:

#### *Early Identification*

During the growing season, frequent inspections are needed to detect diseased elms early enough to retard further disease spread. Inspections throughout the year help locate elm firewood, elm stumps, and dead elm trees that may harbor bark beetles. Homeowners can aid their community DED program by identifying diseased elms or dead elm wood and relaying this information to their community forester. Field diagnosis is usually adequate. If necessary, laboratory confirmation can be obtained by submitting samples to the Minnesota Dept. of Agriculture.

#### *Prompt Removal*

Immediate removal of infected elms throughout the growing season greatly reduces the spread of the disease. Immediate removal of dying and dead elm wood with bark attached, grinding out of elm stumps with bark, and pruning of dead elm branches will eliminate potential breeding sites and significantly reduce numbers of beetles.

#### *Proper Disposal*

All Elm wood must be rendered safe from bark beetles if DED management is to be successful. Prompt debarking, chipping, burning or burying elm wood make the wood unsuitable for beetles. Chipping or debarking allows the wood to be used for mulch, animal bedding, trails, and firewood.

### ROOT GRAFT DISRUPTION

Root graft disruption is the breaking of root connections between diseased and healthy trees to prevent the fungus from spreading from tree to tree in this way through the roots. It must be done before the fungus moves into the roots of adjacent healthy trees. Root grafts can be disrupted by mechanically trenching or vibratory plowing to a depth of 4-5 feet around the infected trees. The infected tree is removed after the root grafts have been disrupted.

### SYSTEMIC FUNGISTATS

Systemic fungistat treatments are infused into the root flare of the tree where it enters the vascular system and is distributed evenly throughout the tree. The fungistat protects the tree from infection for a period of two growing seasons, at which point treatment is required again to continue protection. This type of fungistat treatment is one of the main reasons we still have so many healthy elms on our boulevards and in our yards in our region. It is important to note that this treatment is a preventative treatment, and is vastly more successful if administered to a healthy tree which is not symptomatic. In rare cases, if the infection occurs in an area of the tree conducive to therapeutic pruning, good success has been had with a combination of fungistat treatment and therapeutic pruning to remove the infected tissue.

### THERAPEUTIC PRUNING

Therapeutic pruning is the removal of infected portions of an elm. This type of pruning combined with injection should only be done in high value trees and is experimental. If the fungus is in the main stem, as evidenced by vascular discoloration under the bark or by wilting branches on the main stem, or if the fungus has come into the tree through grafted roots, pruning will not be successful. It is necessary to remove at least 6-8 feet of non-stained wood to be certain of removing the infection.

### Quick Facts

- ❖ Dutch elm disease is a fungus, which primarily infects American Elms.
- ❖ It is spread primarily by feeding beetles carrying spores.
- ❖ Sanitation is the best control measure.
- ❖ Preventative treatments are available.