Managing Dutch Elm Disease in Resistant American and Hybrid Elms
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Introduction
Elm trees are more popular now than ever. Since Dutch elm disease (DED) was introduced to the United States, new selections of American elm and hybrid Asian elms have been selected and released. Now, improved commercial availability of disease-tolerant selections have put them on streets, in parks and backyards across the country.

Although often labelled “DED-Resistant”, these elm trees are still susceptible to the disease and in some cases are killed by it. More often, though, their resistance, or more accurately, tolerance of the disease allows them to survive an infection in most cases while their wild siblings succumb.

Management
Scouting for Dutch Elm Disease
- Scan the canopy for signs of wilting, yellow or brown foliage or even leafless branches
- Use tools to get a closer look: binoculars, zoom lens, camera, etc.
- Know how to differentiate mechanical damage and breakage from wilting
- If transmitted by root grafts, symptoms may be seen in main stem and on lower branches

Foliar symptoms of DED in Accolade (left) and Valley Forge (right)

Safely Obtaining a Sample
- Collection from the ground – easiest and safest – use pole saw or pole pruners
- Collection from a ladder – use required PPE – and always tie in to the tree
- Other means - bucket truck, professional arborist

Processing the Sample and Diagnosis
- Peel bark or scrape with knife and look for vascular staining under the bark
- Cross section to determine when infected
Peel bark or scrape with knife and look for vascular staining under the bark

Scraped samples of healthy Valley Forge elm (left) and stained, diseased Valley Forge (right)

Cross sections of diseased Accolade elm showing staining in branch (left) and main stem (right)

Submitting a Sample for Lab Confirmation
- Plant Disease Clinic – Department of Plant Pathology, University of Minnesota
- (612) 625-1275 and pdc@umn.edu
- DED Diagnosis and Culture - $59

Sanitation Pruning
- Prune off infected branches, preferably before or at main stem
- Sterilize tools after pruning and between trees with bleach solution or alcohol

Fungicide Treatment
- Depends on size and value of tree
- Severe infections in small trees might warrant replacement rather than treatment
Follow-Up

- Continue scouting and perform vigilant sanitation pruning

Long-Term

- Avoid monoculture, diversify elm plantings with multiple varieties and species
- Water weekly
- Avoid stress and construction damage by protecting root zones.

Waterbags offer a convenient and reliable supply of water to newly planted trees