

TREE DOCTOR TIPS

Pest Management | Stress Reduction

CAUSAL AGENTS OF STRESS TO TREES:

There are many abiotic and biotic stressors that can negatively impact tree health. Common stressors can include: air pollution, drought, flooding, improper planting and mechanical injury. Additionally, compacted soil, constricted root space, adverse soil conditions and extreme temperatures pose challenges to tree health. Two other major causes of stress to trees and ornamental plants are insects and pathogens. These biotic factors range in their ability to cause stress to the tree, from aesthetic issues to plant death. However, most insects and pathogens thrive on a plant that is already stressed due to existing abiotic issues.

SYMPTOMS OF STRESS:

Leaf chlorosis, wilting, necrosis, cankers, branch dieback, loss of canopy, decay of wood, tree death

HOW TO ALLEVIATE TREE AND SHRUB STRESS:

- Trees and shrubs need to be planted correctly at the right depth and in a space that is right for them. Trees need enough space to grow both vertically and horizontally.
- Dormant oils for insects, scales and mites at the correct time of year to mitigate pest pressure.
- Preventative “inspect and treat program.” Treat for insects and pathogens preventatively if they are a problem in the area.
- Prune deadwood and diseased branches as needed

MANAGEMENT:

Good arboricultural practices are the key to prevention because healthy trees are better able to fight off stressors. Avoid overwatering or underwatering. Apply a fertilizer with proper nitrogen levels. Mulch the root zone and avoid injury to base of trunk.



A



B



C

FIGURE A. YELLOWING LEAVES CAUSED BY CHLOROSIS, CHERRY TREE

FIGURE B. CHESTNUT TREE UNDER STRESS, BROWNING FOLIAGE

FIGURE C. GIRDLING ROOTS DUE TO POOR PLANTING

The scientists at **The Davey Institute Research and Diagnostic Laboratories** support our arborists and technicians in diagnosing and prescribing based on the latest arboricultural science. For specific treatment and application details, your arborist may consult The Davey Institute’s Plant Health Care Treatment Guide.

Scan the QR code to learn more about insects and diseases that may impact your property.

