

Connecticut Commercial Pesticide Supervisor Category 3D: Arborist

Identification, Diagnosis and Tree Biology

The applicant should:

- a. be able to identify all common trees found in the region in their summer and winter condition, including but not limited to, those listed below;
- b. know the normal healthy form of the tree, and its appearance and rate of growth under normal and abnormal conditions;
- c. know the suitability of trees to different sites;
- d. know the factors involved in maintaining tree health and appearance and how to anticipate and control or prevent damage from various causes;
- e. understand the functions of the various parts of the tree, such as leaves, bark, wood, roots, etc. and be able to determine if these functions are being properly performed;
- f. recognize the symptoms and causal agents responsible for injuries, abnormalities and weaknesses, including, but not limited to, those listed below; and
- g. know the relative susceptibility of different tree species to injurious agents.

Trees

Common Trees Found in the Region: Variety

- Ash (Fraxinus)
- Birch (Betula): Black/Sweet, Gray, Paper/White, Yellow
- Cherry (Prunus): Flowering
- Dogwood (Cornus): Flowering, Kousa
- Elm (Ulmus): American
- Ginkgo (Ginko)
- Gum (Nyssa): Black/Sour
- Sweetgum (Liquidambar)
- Hawthorn (Crataegus)
- Hickory (Carya)
- Holly (Ilex): American
- Horsechestnut (Aesculus)
- Linden (Tilia)
- Locust (Robinia): Black
- Honeylocust (Gleditsia)
- Magnolia (Magnolia)
- Maple (Acer): Japanese, Norway, Red, Silver, Sugar
- Mountainash (Sorbus)
- Oak (Quercus): Black, Chestnut, Pin, Red, Scarlet, White
- Walnut (Juglans): Black, White/Butternut
- Zelkova (Zelkova)
- Arborvitae (Thuja)
- Juniper (Juniperus)
- Douglasfir (Pseudotsuga)
- Fir (Abies): Balsam, Concolor, Fraser, White
- Hemlock (Tsuga): Eastern/Canadian, Carolina
- Larch (Larix)
- Pine (Pinus): Austrian, Japanese Black, Eastern White, Mugo, Red, Scotch
- Spruce (Picea): Colorado Blue, Norway, White

Insects

Aphids and Adelgids

- Cooley spruce gall adelgid
- Eastern spruce gall adelgid
- Hemlock Woolly adelgid
- Pine bark aphid
- Woolly beech aphid

Bark Beetle and Borers

- Black vine weevil
- Bronze birch borer
- Dogwood borer
- Elm bark beetle
- European pine shoot moth
- Pine root collar weevil
- Two-lined chestnut borer
- White pine weevil

Caterpillars and Loopers

- Cankerworms
- Eastern tent caterpillar
- Fall webworm
- Forest Tent Caterpillar
- Spongy (gypsy) moth
- Oak leaf tier
- Oak leaf roller

Leaf Miners

- Arborvitae leaf miner
- Birch leaf miner
- Holly leaf miner

Mites

- Spruce spider mite
- Two-spotted spider mite

Sawflies

- European sawfly
- Mountain ash sawfly
- Pine false webworm
- Pine sawflies
- Redheaded sawfly

Scales

- Beech bark scale
- Euonymous scale
- European elm scale
- Elongate hemlock scale
- Magnolia scale
- Oystershell scale
- Pine needle scale
- Tulip tree scale
- White prunicola scale

Skeletonizers

- Birch skeletonizer
- Elm leaf beetle
- Oak leaf skeletonizer

Diseases

Branch and Stem Canker Diseases:

- Beech Bark Disease
- Black Knot
- Bleeding Canker
- Botryosphaeria Canker
- Chestnut Blight
- Cytospora Canker
- Hypoxylon Canker
- Nectria Canker
- White Pine Blister Rust

Foliage Diseases

- Anthracnose
- Apple Scab
- Cedar-Apple Rust
- Dogwood Anthracnose
- Hawthorn Leaf Blight
- Hawthorn Rust
- Horsechestnut Leaf Blotch
- Lophodermium Needlecast of Pine
- **Maple Leaf Spot**
- **Tar Spot**
- **Oak Leaf Blister**
- **Powdery Mildew**
- **Rhizosphaera Needlecast of Spruce (formerly Spruce Needle Blight)**
- **Spruce Needle Rusts**

Blight and Dieback Diseases

- Fire Blight
- Sphaeropsis Tip Blight (formerly Diplodia Tip Blight of pine)

Vascular Diseases

- Ash Yellows
- Dutch Elm Disease
- Elm Yellows (formerly Elm Phloem Necrosis)
- Verticillium Wilt

Root Diseases

- Armillaria Root Rot (formerly Shoestring Root Rot)
- Phytophthora Root Rot

Physiological Disorders, Nonparasitic and Miscellaneous Biotic Injuries

- Animal, Bird injuries
- Air pollutants
- De-icing salts
- Frost injury
- Girdling roots
- Herbicide damage
- Ice, snow, wind injury
- Lightning injury
- Misapplication of chemicals Moisture extremes
- Natural gas, soil pollutants
- Nutrient deficiencies & toxicities
- Soil compaction, grade changes
- Temperature extremes

New Exotic Pests Recently Introduced in the United States of America

- Asian Longhorned Beetle
- Emerald Ash Borer
- Sudden Oak Death
- Note: Although not found in Connecticut yet, the applicant should have a general awareness of these serious pests

Treatment

The applicant should be able to determine and perform the correct and proper treatment to improve the conditions of any tree. The applicant should know the currently accepted standard practices of arboriculture. This requires knowledge of:

- h. Tree surgery.** The applicant should know the currently accepted standard practices for pruning, bracing, cabling, treating cavities, treatment of girdling roots and other disorders. The applicant should know the tools used for treatment, as well as the strength of such materials as synthetic fiber ropes, steel cable, eyebolts and lag hooks.
- i. Tree nutrition.** The applicant should know the essential chemical elements for tree growth and survival, whether they are obtained from the air or soil, how the tree takes them up, those that are likely to be deficient and the factors affecting deficiencies. Knowledge of tree fertilization is also required, including how to determine deficiencies of essential elements and how, when, and in what amounts to apply treatments if needed. The applicant should know the significance of soil pH; how it affects nutrient availability and tree growth and how to modify pH in the soil if necessary. The applicant should have a basic understanding of the association of mycorrhizae fungi with tree roots.
- j. Control of insects, diseases and disorders.** The applicant should know precisely when and how to control and treat the insects, diseases and disorders listed in the above tables. When pesticides are to be applied, an applicant should know the proper use and type of material to use consistent with state and federal pesticide laws. An applicant must know the basic safety and handling rules for pesticide use contained in the [Pesticide Applicator Training Manual](#), as well as restrictions on pesticide use imposed by the Department of Energy and Environmental Protection (DEEP). The applicant should know the basic principles of [Integrated Pest Management](#) (IPM) and how to apply these principles to plant health care in arboriculture.