

PLANT HEALTH CARE REPORT



Hemlock

Hemlocks are widely used in the landscape because they retain attractive foliage year-round and are shade tolerant. As hedges, they withstand heavy shearing (in late winter-early spring). In their native habitat, hemlocks are found close to streams and rivers.

Hemlocks commonly found in the landscape include:

Eastern (Canadian) Hemlock (*Tsuga canadensis*):

planted most commonly, this species is excellent for screening, groupings, accent plantings, and foundation plantings.

Carolina Hemlock (*Tsuga caroliniana*):

recommended by some experts as more adaptable than Eastern hemlock for use in urban sites. Its appearance and uses are similar to Eastern hemlock.

Western Hemlock (*Tsuga heterophylla*):

adapted to areas with a high-moisture atmosphere and cool summer temperatures.

Hemlocks require well-drained, cool, acidic soils; they do not thrive in hot, dry conditions. Uniformly moist soil conditions are important. This is best achieved with mulches in most landscape situations. They grow well in partial shade and will tolerate full shade. Hemlocks also grow well in full sun if their soil requirements are met.



Tsuga canadensis 'Sargentii'



Tsuga heterophylla hedge

They are susceptible to air pollution and salt damage.

The most damaging pests of hemlocks are summarized below:

- 1. Root rot:** Many soil fungi attack stressed hemlocks, particularly on poorly drained sites. Soil treatments can suppress *Phytophthora* root rot.
- 2. Hemlock woolly adelgid:** Accidentally introduced into North America in the early 1950s, this sucking insect is highly damaging to most hemlocks. Adelgids are capable of killing Canadian hemlocks within 3 to 5 years.
- 3. Scales:** Elongate hemlock scale and hemlock scale feed on the needles by removing cell fluids through piercing and sucking mouthparts, causing foliage to discolor and drop prematurely and branches to die. Heavy infestations may kill hemlocks if not managed.
- 4. Mites:** Several species, including the spruce spider mite and the hemlock rust mite, damage hemlocks.
- 5. Phomopsis tip blight:** A fungal disease of stressed plants, causing dieback of new shoots and cankers. It is beneficial to avoid sprinkler irrigation and prune to allow greater airflow.
- 6. Hemlock looper and spongy moth:** These chewing pests defoliate hemlocks and are serious pests when outbreaks occur.

Monitoring and Treatment Considerations for Hemlock

Early spring

Apply dormant treatment to suppress overwintering insects. Expose and inspect root collar for problems. Add mulch as necessary. Sample soil for nutrient and pH levels. Fertilize, adjust pH, and amend soil according to soil analysis. If plants exhibit decline, sample roots for *Phytophthora* root rot.

Mid-spring

Monitor for hemlock woolly adelgids, scales, caterpillars, and mites; treat as needed.

Late spring through summer

Monitor for hemlock woolly adelgids, scales, caterpillars, and mites; treat as needed. Monitor irrigation and soil moisture to minimize water stress and prevent root disease. Inspect mulch levels and adjust as needed.

Fall

If sucking insects were problematic this past growing season, consider treating with an appropriately timed systemic product. Monitor for hemlock woolly adelgids, scales, caterpillars, and mites; treat as needed. Inspect plants for deer browse; apply repellent treatment as needed. Monitor irrigation and soil moisture to minimize winter injury. Remove mulch from stems to reduce risk of disease and rodent injury. Remove injured or cankered branches.
