DEPARTMENT OF
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PLANT·PATHOLOGY
PURDUE UNIVERSITY • WEST LAFAYETTE IN

Taxus (Yew) Dieback

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Ornamental Diseases

Purdue University
Cooperative Extension Service

One of the most popular evergreens in the home landscape is the yew (Taxus). It lends itself well to close clipping for formal type plants and hedges, but presents an attractive informal appearance as well. Unfortunately, all too often yews are afflicted by a dieback condition which damages the plant and often results in plant death. Consideration of those factors responsible for dieback will enable you to take proper preventive and/or corrective measures to avoid repeated plant failure.

Cause

Taxus grow best in soil that is well drained and which receives a moderate amount of moisture. When they are planted in soil that is heavy, poorly drained, very acid (between pH 4.5 and 5.5) or very alkaline (above pH 7.5), the plants do not usually survive. In addition, water mold root rot fungi thrive in wet site locations and can cause additional root injury. An insect pest, the black vine weevil, can also injure roots. Refer to Entomology publication E-41 for information on the black vine weevil.

Symptoms

Dieback symptoms begin with sparse yellowish foliage and poor growth. Leaves continue to yellow, turn brown, wilt and die. This is followed by stem desiccation and dieback. Initially only a small portion of the plant may show symptoms but eventually the entire plant is affected. Dieback generally progresses from the top of the plant downward. Several months may elapse from the time the first symptoms appear to the complete dieback and death of the plant.

If root damage is caused by excess soil moisture, look for blackened roots with a wet, slimy appearance. The bark will readily slough off exposing a mushy, brown, rot of internal tissues. Frequently roots will appear healthy in the upper 2 to 4 inches of soil where soil drainage is not a problem, while the deeper roots are rotted because of poor drainage in the lower soil profile. Root injury caused by root rot fungi will frequently show the same symptoms as described above. However, a key symptom to look for if

Figure 1. Sparse foliage and poor growth are indicative of Taxus dieback.

root rot fungi are the primary problem is a dark discoloration of the tissues under the bark, close to the ground level.

If dieback symptoms are accompanied by many rounded notches eaten out of leaf margins this could indicate the presence of the black vine weevil. Inspect further for small white-bodied larvae in soil at the base of the plant.

Management

Always consider drainage and soil type before planting. Future problems are best avoided before, not after planting. Improving drainage is the primary aim for controlling dieback, whether it is caused by excess soil moisture or root rot fungi. Surface drainage refers to the removal of free water from the soil surface to an adequate outlet. Outlets might include a street curb, natural drainage channel, or an underground drain. Soil surfaces should always slope away from buildings. Run-off water from roof gutters, paved surfaces, lawns, etc. should always be directed away from plants. Low areas sometimes cause problems because they cannot easily be graded to provide for adequate surface drainage and should therefore be avoided as planting sites.

If subsurface drainage is a problem the only remedy may be the installation of 3- or 4-inch drainage tile at depths of 30 to 36 inches through the area where yews are to be planted. Planting high on a mound rather than digging a hole and creating a cup in the soil is another method of avoiding subsurface drainage problems. If tilling or planting on a soil mound is not feasible or desirable, move plant to a more favorable growing site.

Heavy soils are those with a large proportion of clay. It is difficult to alter the soil type, but you can improve drainage by adding organic matter such as compost, manure, or leaf mold. Spread from 1 to 4 inches of organic matter on the surface and turn it under every time you work the soil. Over time this will result in better soil and better drainage.

The use of fungicide drenches for control of water mold root rot problems is not recommended for the home landscape. The fungi that cause root rot problems cannot be eradicated from the soil and are best managed through those water management practices described previously. However, commercial nurserymen may find it beneficial to use fungicides if root rot from water mold fungi *(Phytophthora and Pythium*) become a problem in their nursery operation. Metalaxyl (sold as Subdue and Ridomil) and fosetyl-Al (sold as Aliette) are very effective in helping to prevent disease spread in the nursery. Always follow label directions when using pesticides.

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