

Identifying Pine Diseases in Oklahoma

Pines are valuable assets in the home landscape. They provide texture and structure in a winter garden and a source of shade, habitat and food for wildlife year-round. Their purpose ranges broadly from the smallest specimen to the largest windbreak or privacy hedge.

As with all plant selections, first consider the intended use, the environmental conditions, maintenance requirements and resistance or susceptibility to disease prior to planting. Once established, proper disease identification and control practices should ensure your trees are given the best chance to thrive. It may be entirely possible that an evergreen, rather than a pine, is the best choice for you. Consult [OSU Extension fact sheet EPP-6463](#) for information on selecting the proper evergreen for your landscape.



File:Bursaphelenchus xylophilus on Pinus nigra (02).jpg by USDA Forest Service - North Central Research Station . USDA Forest Service, Bugwood.org is licensed under CC BY 3.0

Common Pine Diseases

Some of the most prevalent conditions affecting pines in Oklahoma are Pine Wilt, Dothistroma Needle Blight, Diplodia Tip Blight and Canker, and damage caused by the Nantucket Pine Tip Moth.

Observe your pines often for foliar and bark problems, disease progression and insect activity. Knowing which agents may be present will dictate the treatment program. In all cases, consult your OSU Extension office

for diagnostic guidance. More information and photographs for each of these diseases can be found at the [links at the end of this article](#).

Pine Wilt

- Affects mostly non-native pines 10 years or older, although unhealthy native pines may also be affected
- Disease spread by pinewood nematodes (*Bursaphelenchus xylophilus*) that are carried by pine sawyer beetles
- Causes needles to turn green gray and whole branches to wilt
- Trees decline rapidly and die, often within a single season
- Symptoms occur July through December
- Insecticidal prevention not always effective due to life cycle of pine sawyer beetles
- Pesticides ineffective once infected
- Once diagnosed, remove and destroy infected trees, ground stumps to prevent spread

Dothistroma Needle Blight

- Affects mostly austrian and ponderosa pines in landscape and windbreak plantings
- Disease caused by fungal infection of needles (*Dothistroma pini*)
- Browning and banding of needle tips at variable lengths, premature needle drop

- Trees are weakened slowly and will eventually die if left untreated
- Symptoms show in fall, life cycle of fungus is two seasons long
- Sanitation of dropped needles can lessen severity, copper fungicide required in early summer to treat new needles, continuous treatment may be necessary

Diplodia Tip Blight and Canker of Pine

- Affects mostly mature pines 15 years or older, especially those under environmental stress
- Disease caused by fungal infection of needles (*Diplodia pinea*), spores dispersed by wind and splashing water
- Causes new needles to stunt, turn yellow/brown and die, progressing to browning of large branches and eventually the entire tree
- Trees decline and will die over several years' time
- Symptoms of new infections occur in April when new needles emerge
- Sanitation of dropped needles and careful pruning of infected parts can lessen severity in newer infections.
- Copper hydroxide fungicide required in early spring and at growth intervals to treat new needles



"Red pine seedling(s) infected with Diplodia tip blight" by esagor is licensed under CC BY-NC 2.0

Pine Tip Moth

- Preferred Oklahoma hosts: Native species loblolly and shortleaf pines, landscape pines mugo and Japanese black pines, and Christmas pines Virginia and Scotch. Most economic impact sustained to Christmas tree growers.
- Damage caused by larvae and pupae of the Nantucket Pine Tip Moth (*Rhyacionia frustrana*)
- Causes browning and death of tip needles, subsequent death of twigs, branch and stem deformity and stunting, and overall loss of vigor
- Significant aesthetic impact and continual infestations may cause decline and death
- Symptoms occur spring through fall due to multiple generations
- Cultural controls include choosing non-susceptible species, proper site selection and irrigation methods to encourage health and vigor
- Survey methods required to confirm presence of moth prior to timing insecticidal treatment (contact Extension Office for recommendations).



"File:Rhyacionia frustrana – Nantucket Pine Tip Moth (14440844083).jpg" by Andy Reago & Chrissy McClaren is licensed under CC BY 2.0

Pines are an anchor in the home landscape but are not without issue. Through education, careful observation and a maintenance plan, pines can supply not only winter interest and wildlife benefit, but also the missing architectural interest your garden requires.

Resources:

[Selecting Evergreen Trees: HLA-6463](#)

[Pine Wilt Disease: EPP-7674](#)

[Sampling for Pinewood Nematodes: EPP-7675](#)

[Dothistroma Needle Blight of Pine: EPP-7331](#)

[Diplodia Tip Blight and Canker of Pine: EPP-7330](#)

[Nantucket Pine Tip Moth: EPP-7645](#)

[University of Illinois Extension: Pine Disease Chart](#)

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