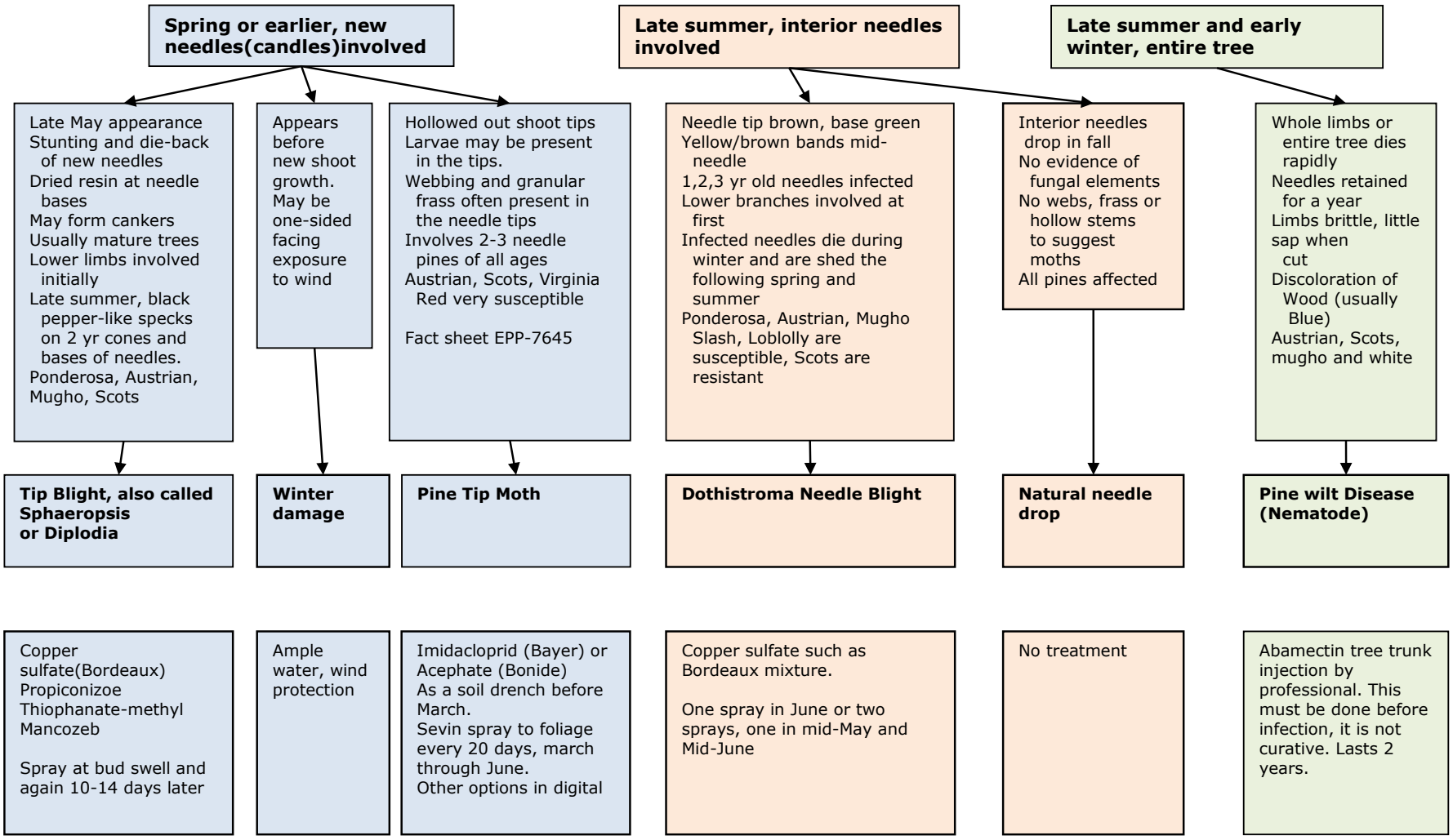
Diagnosis of Yellow Needles in Pines



For additional information regarding pesticide recommendations for the above problems contact the MG office or consult OSU EAH (Extension Agents Handbook)

Summary of Common Pine problems

1. **Tip Blight**—(Sphaeropsis or Diplodia). A spring-time fungus causing stunting and die-back of new needles (candles) in lower limbs of mature trees. Dried resin is often found on browned needles. In late summer black fruiting bodies looking like black pepper are found on cones and needle bases. Affects Austrian, ponderosa, Scots and mugo.
2. **Dothistroma Needle Blight**-A late summer fungus involving interior (1,2,3 year needles) of the lower limbs. Yellow/brown spots develop in the middle of needles and progress to brown or reddish bands. Needles die from the bands outward, while the base remains green until winter. The whole needle dies in winter and are shed the next spring and summer, causing it to be confused with stress or natural needle drop. Affects several species of pines, especially Austrian, ponderosa, mugo, slash and loblolly. Scots are resistant.
3. **Pine Tip Moth**—In spring new growth (candles) show dieback due to invasion of larvae. Tips of stems are hollowed out and often webbing and frass are found in area of dead tips. May be confused with Tip Blight, however, hollow stems and frass point to an insect cause. Most 2-3 needle pines can be affected. Austrian, Scots, Virginia and red are very susceptible. OSU fact sheet EPP-7645.
4. **Pine Wilt**—The Pine Sawyer Beetle infects pines in spring and summer with a microscopic worm, a nematode. The nematode rapidly spreads and blocks the tree's circulation. In late summer or winter pines die and turn brown over a period of weeks to months. Due to blocked circulation, little sap is present when cut. Limbs are brittle. Needles are retained for up to a year. Cut surfaces of affected limbs or trunk may be stained blue-black due to an associated fungus. Trees are infectious and should be removed before March of the following year. Austrian, Scots, mugho and white are most susceptible.
5. **Bark Boring Beetles**—Several types of pine bark beetles and their larvae may invade and feed on pines. They more commonly attack pines stressed with drought or other diseases. They create galleries under the bark and when they exit, form small round holes. The pattern of holes is random, compared to similar holes produced by a Yellow-Bellied Sapsucker which are in linear patterns, often horizontal.
   All pines susceptible, especially if stressed..
6. **Environmental Damage**—Browning of needles may occur with severe drought, especially when windy. Needle damage may only be on the most exposed side of the tree. In winter months freeze damage may cause partial or complete dieback of new needles and also may be asymmetrical, worse where most exposed.

Other diseases of pines exist. **Phomopsis** is a fungal disease of pines and several other evergreens which has some overlapping features with the above diseases. It is primarily a disease of young trees. **Fusiform Rust** forms galls with orange blistering in several pines. Another gall forming fungus, **Western Gall Rust** may infect pines in our area.

All of these diseases and pests are best controlled by selecting disease resistant plants. When a problem does arise, sanitation, while not curative, will reduce the disease load for the next season. Infected needles should be pruned from the tree as is practical and all diseased material on the ground removed. Chemicals are available for most of the diseases, but strict attention to optimal application times should be given. Always read and follow the labels. To prevent resistance, fungicides should be rotated, if multi-year applications are required.

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