

Forest Disease Management Notes

United States
Department of
Agriculture

Forest Service
Pacific Northwest
Region



Rhizina Root Rot

Rhizina root rot is caused by *Rhizina undulata*, sometimes called the teapot fungus. Seedlings affected by this disease usually die. It does not cause serious large-scale losses. Small groups of seedlings may be killed. Damage is most common in the northern Washington Cascades.

Hosts: Young conifer seedlings (Douglas-fir, pines, spruces, hemlocks, true fir).

Recognition: Similar to those caused by drought or other root diseases; foliage becomes yellow, seedlings decline rapidly and die.

Brown to black, fleshy fruit bodies (apothecia) resembling liver grow on duff or mineral soil around infected seedlings; when fresh, fruit bodies have a whitish-yellow margin and a yellow-gray undersurface. Fruit bodies are attached to host roots or other organic material in the soil by root-like structures called rhizoids.

Disease Spread: Infects only seedlings established on recently burned areas and is usually damaging in such areas for only 2 years after burning; wind carried spores settle in soil and are activated by high temperatures created when slash is burned; the mycelium either directly attacks seedling roots or colonizes old roots and burned wood from which it infects newly established seedlings; mortality occurs during the growing season; fungus most prevalent on moist but not wet sites. Damage is most severe in northwest Washington.

Management: In most cases, no special management is necessary because damage is negligible; in localized areas where past damage has been severe, future damage can be avoided by piling and burning slash and not planting in the burned areas, or by delaying planting for 1 1/2 to 2 years after broadcast burning.

May be Confused With: Other root diseases, drought

Rhizina undulata ascocarp and
dead infected seedling

