

Forest Disease Management Notes

United States
Department of
Agriculture

Forest Service
Pacific Northwest
Region



Gray Mold

Gray mold of seedlings is caused by the fungus *Botrytis cinerea*. This disease is especially common in container nurseries and in dense 2-year-old and older beds in bareroot nurseries. Cool, wet conditions favor the fungus.

Hosts: All tree species, especially Douglas-fir.

Recognition: Brownish-gray mold (fungus mycelium) on infected portions of plants; microscopic fruit bodies that release puffs of spores when infected seedlings are agitated. Yellowing and browning of foliage of stored seedlings; top dieback, bark sloughing, girdling, root deterioration; seedling death, frequently involving groups of closely associated seedlings.

Disease Spread: *Botrytis cinerea* is a common saprophyte and soil inhabitant. Infection and disease spread are favored by high seedling densities, dead vegetation, and cool, moist conditions in the field and greenhouse. Spores are spread by wind currents, agitation, or water. In storage, warm temperatures, stagnant air, and moist conditions favor the spread of infection throughout boxes or bundles of stored trees. Wounding predisposes trees to infection; fully dormant seedlings are less susceptible than those that have not yet hardened off.

Management: Avoid conditions favorable for the pathogen; apply fungicides when the disease is noticed or anticipated. Keep storage areas clean and cool (preferably between 28° and 36°F), well ventilated, and as dry as possible without desiccating seedlings (avoid standing water); if molds do develop, remove infected material from storage areas and consider fungicide application such as Bravo or Botran.

May be Confused With: Other molds, environmental damage, brown felt blight.



Botrytis cinerea-infected seedling
on right, healthy
seedling on left