

# Powdery mildew of hops

## **Podospaera macularis (= Sphaerotheca humuli)**

### **Synonyms**

None

### **Plant hosts**

*Humulus* species, including *H. lupulus* (commercially grown hop)

### **Symptoms**

In the spring, new shoots infected with *P. macularis* may appear entirely white. These shoots produce conidia (fungal spores) that initiate secondary infections on susceptible leaves. The secondary infections appear as whitish, powdery spots on either the upper or lower leaf surface. The spots appear within 5- to 10-days of initial infection when conidia begin to form and may cover the entire leaf surface. Young leaves are more susceptible to infection than mature leaves. Flowers and cones may also be infected; growth stops at the point of infection. Because of this, infected hop cones may appear stunted or malformed. These cones also tend to mature rapidly, eventually leading to uneven crop maturity and cone shatter.



Symptomatic hop leaf

### **Transmission**

Conidia are spread naturally by wind currents. The disease may also be spread through the movement of infected plant material.

### **Geographic distribution**

USA (California, Connecticut, Idaho, Minnesota, New Mexico, New York, Oregon, Washington, and Wisconsin), Canada (Ontario), Asia, Europe, South Africa, Argentina, and Brazil.

### **Applicable regulations**

[OAR 603-052-1020](#), Quarantine against powdery mildew of hops.