Peach leaf curl disease is caused by the fungus *Taphrina deformans*. The fungus is specific to peaches and nectarines and can infect expanding leaves and immature fruit. The fungus is found anywhere peaches are grown but usually goes unnoticed during years in which it is dry and warm during bud swell and leaf expansion. The disease occurs when the weather is wet and cool at the time of leaf emergence and expansion. As long as growers keep up with proper management of the disease every year, it is usually not a problem. However, in the arid Intermountain West where spring conditions are often warm and dry, growers frequently relax their management of the disease.

*T. deformans* induces cells of infected leaves to multiply rapidly and randomly and enlarge, resulting in deformation and curling. The infected distorted leaf parts are often yellow or red colored. Infected leaves eventually turn brown and fall off. Young infected fruit may also drop prematurely or fruit will show wart-like symptoms when mature. The tree will leaf out again to replace the fallen leaves which can result in significant yield reduction.

**What you should know**

- The disease is caused by the fungus *Taphrina deformans*
- Disease is most severe during cool wet conditions
- Foliage is susceptible until it is fully expanded
- Infected leaves are distorted and discolored (yellow, red or sometimes purple)
- Single fungicide treatment in the fall can prevent the disease

**INTRODUCTION**

Peach leaf curl disease is caused by the fungus *Taphrina deformans*. The fungus is specific to peaches and nectarines and can infect expanding leaves and immature fruit. The fungus is found anywhere peaches are grown but usually goes unnoticed during years in which it is dry and warm during bud swell and leaf expansion. The disease occurs when the weather is wet and cool at the time of leaf emergence and expansion. As long as growers keep up with proper management of the disease every year, it is usually not a problem. However, in the arid Intermountain West where spring conditions are often warm and dry, growers frequently relax their management of the disease.

**SYMPTOMS**

*T. deformans* induces cells of infected leaves to multiply rapidly and randomly and enlarge, resulting in deformation and curling. The infected distorted leaf parts are often yellow or red colored. Infected leaves eventually turn brown and fall off. Young infected fruit may also drop prematurely or fruit will show wart-like symptoms when mature. The tree will leaf out again to replace the fallen leaves which can result in significant yield reduction.

**DISEASE CYCLE**

Infections occur when temperatures are between 50°F and 70°F. Disease incidence is highest and most noticeable during wet conditions (Steiner and Biggs, 2010). During cool temperatures, expansion of young leaves is slower, allowing for a longer infection period. At higher temperatures, infection may occur but symptoms will not develop due to faster expansion of the leaves. Once leaves have fully expanded, they become resistant to the pathogen.
**MANAGEMENT**

There are no management options after infection has occurred. Control can be achieved by a single application of fungicides in the fall after 90% of leaves have fallen to the ground (Steiner and Biggs, 2010). Thorough coverage of the trees is easier to achieve when most leaves are on the ground and excellent coverage is needed for good control. Chemicals that can be used for control are copper products or chlorothalonil (Bravo®, Syngenta). Fall fungicide applications should be used in orchards with a history of leaf curl to reduce inoculum.

Cultural practices that can be used by homeowners are removal of infected leaves that have fallen to the ground to remove as much inoculum as possible. Resistant varieties are another option for cultural control. According to a Pest Note from the University of California varieties including Muir and Q-1-8 are resistant to Taphrina deformans. The variety Redhaven and varieties related to it are tolerant to the disease and the variety Frost is very tolerant but requires fungicide applications in the first three years after planting. Susceptible to highly susceptible varieties include Redskin and its derivatives (Broome and Ingels, 2011).

**REFERENCES**


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