

Pear Trellis Rust

This is a fairly recent disease in Western Washington, but recently has been showing up with increasing frequency.

As with most rust diseases, this disease has two host plants, fruiting pear trees and some kinds of juniper (*Juniperus sp.*). Both must be present for the disease to complete its life cycle. If this disease shows up in your orchard, you should first remove junipers within 300 feet of your pear trees. Unfortunately, this is not always an option, especially if you live on a city lot, and the junipers are not on your property. The first signs on pear are bright orange spots on the leaves most years in late May (some years in late April). The spots enlarge during the summer reaching a diameter of one to two cm. By late June, the centers of the spots (on the upper leaf surface) exhibit numerous black dots. In July and early August, the infected area of the leaf becomes thickened as spore-producing structures push out from the lower surface.



The orange spot is the early stage of pear trellis rust (picture also shows a sawfly larvae known as pear slug which has been rasping the leaf surfaces)

From late August through to leaf drop in October or November, grey hair-like projections resembling trellises emerge from the lower surface and release spores. These spores are capable of infecting junipers. The only time that infections are obvious on junipers is during wet weather in April and early May. At that time, swellings on the juniper branches release an orange jelly-like mass of spores. These spores are capable of infecting nearby pear leaves which are just starting to grow. After the spores are released, the infection on juniper remains dormant until the next spring. Infected junipers may also have branch die back as a result of the galls.



Later stages of trellis rust.

Steps you can take:

Remove junipers within 300-500 feet of your pear trees (some sources say 1000 feet) if possible

Remove swellings and galls from junipers when found - usually visible in late winter to early spring

Hand pick pear leaves with rust as soon as you see them, and dispose of them (not in the compost!)

Remove and destroy infected material from pear trees (fallen leaves, mummified fruit, heavily infected twigs, etc.) to help minimize disease spread.

Avoid planting ornamental pears. They are also susceptible to the disease.

If selecting junipers for a landscape containing pears, select resistant juniper species, including *Juniperus horizontalis*, *J. communis* and *J. squamata*, or choose a different type of conifer.

Apply copper at leaf drop in the fall and again as pears break dormancy in spring. As a last resort, use a fungicide labelled to treat rust, such as Serenade or Monterey Complete Disease Control (both bacterial based OMRI listed fungicides), when you see the spots appear in early summer.

Pear Slug

This sawfly larvae appears usually in late summer and rasps its way across the leaves. It is most common on young and stressed trees and will also appear on cherry trees. If you see it late in summer or early fall when leaves are getting ready to drop, ignore it unless it is totally defoliating your tree. If it appears early in summer, it can be hand-picked, or sprayed with horticultural soap, neem oil, or dusted with diatomaceous earth.