

Allium Rust (*Puccinia porri*)



Figure 1 rust on garlic leaves



Figure 2 rust on onion leaves

Damage

Early symptoms occur on the foliage and stem as small, white flecks that develop into bright orange spots (spores) or pustules on both sides of infected leaves. Leaves on severely affected plants turn yellow, wilt, dry up, and die prematurely. Garlic bulbs on such plants can be shrunken and of poor quality.

When It Is Active

Conditions favorable for the development of rust disease include high humidity and low rainfall and a temperature between 45 degrees and 55 degrees Fahrenheit. Stressed plants are particularly affected.

Susceptible Plants

Rust in North America is primarily a disease of garlic, and other alliums may only be affected when growing near garlic with rust. Leek, shallot, and elephant garlic have not been found to be susceptible to rust strains in North America.

Prevention Methods

Prevention is not easy, because the rust may be introduced in infected planting material or by spores dispersed potentially long distances by wind from infected garlic in another planting. To reduce the possibility of infection, use healthy seed in well-drained soil. Infection is worse on nitrogen-rich soils with low potassium, so take care with fertilizer applications. Do not crowd plants, as this raises humidity and increases the likelihood of infection.

Treatment Methods

Snip infected leaves as they appear. Disinfect tools and shears, and wash hands frequently. Once introduced to an area, rust infections can overwinter in crop residue and in volunteer plants and weeds. Dispose of all plant debris in the trash, not the compost. Rotate away from allium crops for 2 to 3 years and destroy volunteer allium plants during this period.

Additional Information/Resources

- University of Minnesota Extension [Growing Garlic in Minnesota](#)
- Cornell University CALS Vegetable Pathology, Long Island Horticultural Research and Extension Center [Garlic Rust](#)
- UW Extension Bulletin [A3785 Growing Onions, Garlic, Leeks, and Other Alliums in Wisconsin](#)
- Dane County UW Extension Horticulture Hotline [608-224-3721](tel:608-224-3721) (M-F, 9 am-12 noon, April 15 – October 31) or horticulture@countyofdane.com