

Daylily Rust

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In mid-August 2001, a new rust disease was confirmed on daylilies (*Heemerocallis*) growing in Arkansas. To date, the rust has been reported in 30 states and is currently confined to the daylily. The disease, which is caused by the fungus *Puccinia hemerocallidis*, was first identified in Florida in the fall of 1999. The rust is native to Asia and may have been introduced into the U.S. from Central America. Daylily varieties differ in their disease susceptibility.

Typical Symptoms

Initial symptoms on the foliage include water-soaked spots that may appear 3 to 5 days after infection. These initial spots are typically circular to elongated and appear on either the upper or lower leaf surface. As infection progresses, **raised** yellow-orange to rust-brown colored pustules develop. Pustules are most prominent on the underside of the leaf but can develop on the upper leaf surface. On more resistant cultivars, the lesion may only be a yellow fleck. The rust pustules appear to develop rapidly, and spores of the fungus are easily spread by wind and splashing water. Pustules are most common on the leaves; however, they have been observed on the flower stalk (scape).

The daylily rust can easily be viewed in the field with a simple 10X hand lens. Suspected pustules can be wiped with an ordinary white facial

tissue. An orange-yellow stain on the tissue will result if the rust is present on the leaves.

Daylily rust can be easily confused with other leaf problems such as insect damage (e.g., mites) and leaf streak disease, which is caused by another fungus. Spots associated with leaf streak diseases are not raised and do not yield the orange-yellow stain on white facial tissue.

Controls

1. Affected plant tissue should be removed and properly disposed of.
2. After cut-back, apply one of the following chemicals according to label directions:
 - a. Propiconazole (Banner Maxx™, Fertilome Liquid Systemic Fungicide)
 - b. Azoxystrobin (Heritage™)
 - c. Myclobutanil (Eagle™, Spectracide Immunox)Alternate between two of the above fungicides at the label rate to protect new foliage that is forming on the plant.

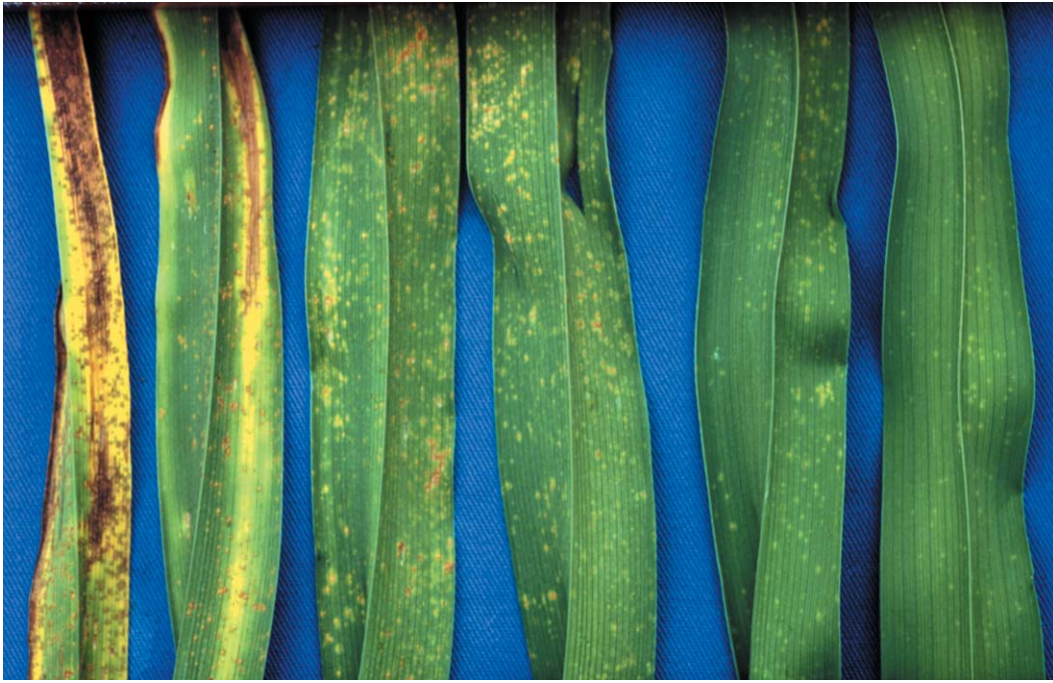
Resources

Arkansas Rust Ratings:
<http://daylilies.uaex.uada.edu/>
http://www.daylilies.org/ahs_dictionary/daylily_rust.html
<http://web.ncf.ca/ah748/rust.html>
<http://plantclinic.cornell.edu/factsheets/daylilyrust.pdf>

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Stages of daylily rust development (underside of leaves): Left: later stages Right: initial



Daylily rust symptoms (2 left leaves)

Leaf streak disease (5 right leaves)

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