

Hollyhock Rust

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Diagnosis

This disease of hollyhock is caused by the microorganism *Puccinia malvacearum*. This fungus belongs to a large and special group of fungi that may attack a wide range of blooming garden plants in the landscape. There are many rust diseases that may attack ornamentals, grasses, and vegetables. Many of the fungi classified as rusts may have a complex life cycle that requires two similar hosts to complete. That is, the fungus may spend part of its life on separate plants. The hollyhock rust fungus may also affect mallow (*Malva* sp), which is a common weed. The mallow weed can serve as a reservoir for the fungus and be responsible for new infections on hollyhock. The fungus produces microscopic spores that are responsible for spread of the disease. These spores can be dispersed by the fungus and carried on wind currents for several miles from the source. Damp and humid conditions in the spring contribute to disease onset and severity.

Symptoms

Initial infection usually occurs early in the spring as new leaves begin to expand. Infected plant debris is an important source for this spring infection. The fungus may over-winter on infected plant material. New spores are formed on this old material that can cause infection on the newly expanding leaves. The first symptom usually seen is yellow, circular leaf spots on the upper surface of the leaf. Raised, orange-brown colored “pimples,” called pustules, are formed on both surfaces of the leaf. Pustules may be formed also on stems and flower parts. These pustules produce additional spores that can incite new infections. Hollyhock rust tends to worsen as the summer progresses. Leaves may become desiccated and fall to the ground, giving the plant a ragged appearance. The rust is unable to survive on dead plants. It may survive harsh weather conditions on infected living plant tissues.

Prescription

Since the hollyhock rust fungus can also affect mallow weed, gardeners should be on the lookout for this plant and remove it if they see it in the vicinity of their plantings. Growers should also be aware of the fact that wet or damp plant surfaces will make the disease more severe. To minimize disease activity, hollyhock plants should be spaced in such a manner as to allow good air circulation for drying of the leaves. If plants are irrigated from above, it should be done early in the morning to facilitate rapid drying of plant surfaces. During the season, growers can pick off and destroy infected leaves when the plant is dry. Since the rust fungus can over-winter on infected plant parts, gardeners should collect and destroy all hollyhock leaves and above-ground plant parts during the fall or winter. A good fall cleanup is very helpful. This will help reduce sources for spring infections. In addition to good sanitation and irrigation management, several fungicides are useful in protecting healthy plant material from fungus infection. Those materials that contain the active ingredients myclobutanil, chlorothalonil, or mancozeb are most effective when applied prior to or at the first evidence of disease symptoms. Complete coverage and timing of an appropriate fungicide is essential to successful disease management, especially if the plantings have a history of this rust disease. Application information for these and other fungicides is provided on individual container labels.

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