



Our business is people and their love for trees®

Scab and rust diseases can affect your ornamental trees

Scab and rust diseases are caused by fungi that invade crabapple, apple, hawthorn, common pear, and other ornamental plants in the rose family. Fungi are organisms that do not produce chlorophyll and therefore cannot produce their own food. They survive by invading and taking nutrition from green plants or other food sources. When a living system such as a plant is invaded, tissue damage or death may result.

Scab and rust diseases rarely kill their hosts. If ornamental trees such as crabapples or hawthorns are severely infected by these diseases, however, the ornamental value of the plants may be lost. With average weather conditions, properly timed applications of fungicides and proper cultural procedures, we can achieve acceptable control.

Life Cycles

The fungi that cause scab and rust diseases attack new growth on the host plants, especially in early spring. Foliage, twigs, flowers, and fruit are susceptible to attack. Scab fungi overwinter on fallen leaves, fruit, and in infected twigs. Their spores are released on cool, moist days in early spring when the host plants are beginning to leaf out. Rust fungi overwinter on alternate hosts such as junipers. Spore release coincides with early growth of the host plants. Cool, moist conditions favor heavy infections. Warm, dry conditions will reduce the extent of infections.

Host susceptibility also determines the extent of infection and damage. There is a wide variability in host resistance to both scab and rust diseases.

As infected leaves grow, lesions or rust spots form on the surface. These lesions grow on the leaves causing leaf curl and distortion. If the lesions grow enough to merge together, early defoliation may occur. Such early defoliation results in plant stress and can reduce the stored energy reserves of the host. Lesions also may form on the fruits, but these have little impact on the host.

Our management strategy for these diseases involves cultural practices and plant protectant applications. Proper pruning of ornamental crabapples and hawthorns will thin the crowns of the trees to provide improved air circulation. This creates a less favorable environment for the fungi. Healthy well-maintained trees are better able to withstand any stress caused by these leaf fungi.

Management

Susceptible varieties of ornamental trees should have their foliage protected with fungicides during the early growing season. We have found that three fungicidal applications in the spring season provide adequate protection during years with normal rainfall amounts. During unusually wet years, an additional application may be needed.



Left and Center: Infected leaves show signs of rust spots and lesions. Right: Rust and lesions can also form on the fruit of infected plants.

Left and Center photo credit: Joseph O'Brien, USDA Forest Service, Bugwood.org; Right photo credit: University of Georgia Plant Pathology Archive

Treatments should be applied on a preventative basis. If disease symptoms are apparent before fungicides are applied, control is more difficult to achieve.

We must emphasize that fungicide applications will not keep trees completely free from scab and rust. During seasons with normal rainfall, three applications will provide reasonable disease control. During years with frequent showers and/or high humidity, scab and rust injury will probably be apparent, even on resistant cultivars. Under such conditions, weekly treatments from bud break to the onset of dry weather would be necessary to keep the trees disease free. Unless applied by the homeowner, such frequent treatments would be impractical.

Call your certified arborist at The Care of Trees today to help your ornamental trees and shrubs against scab and rust diseases.



Our Services Include:

- Tree & Shrub Pruning
- Insect and Disease Management
- SoilCareSM - our organic soil and root management program
- Fertilization and Nutrient Management Programs
- Cabling and Bracing
- Planting and Tree Replacement
- Lightning Protection
- Tree Preservation & Land Restoration
- Tree and Stump Removal
- Tree Risk Assessment
- Tree Protection during Construction
- Mulching
- Speakers for Garden Clubs or Group Meetings
- 24-Hour Emergency Service

If you have any additional questions or concerns, please do not hesitate to contact your local office for further details.



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