

Rust¹

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Pathogen: *Puccinia* spp.

Turfgrasses Affected: St. Augustinegrass and zoysiagrass; it may also be observed on perennial ryegrass used to overseed lawns in the winter months.

Occurrence: This disease can occur from late fall to early spring when the turfgrass growth is slowed as a result of cool weather. It is more severe on turfgrass areas that are stressed from nutrient deficiencies or shade (e.g., under trees or on the north side of a building). The leaves must be wet for infection to occur. This wetness may be from dew, high humidity, rain, or irrigation.

Symptoms/Signs: Initially, light yellow flecks appear on the leaves. If the disease progresses, these flecks enlarge into spots that are parallel to the leaf vein. Eventually, orange pustules (spots) containing spores form (Figure 1). These pustules are parallel to the leaf vein. The spores rub off when touched (Figure 2). Heavily infected areas appear thin and chlorotic (yellow to light brown).

Cultural Controls: Maintain an adequate, balanced fertility program using slow-release nutrient sources. In shady areas, monitor irrigation closely to keep the leaves as dry as possible. It is best to water



Figure 1. Rust symptoms on zoysiagrass. Credits: G. W. Simone



Figure 2. Rust symptoms on ryegrass. Orange spores rub off when touched. Credits: G. W. Simone

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in the early morning hours to allow leaves to dry from the sun. In most situations, the disease disappears as soon as the weather warms and the turfgrass starts to grow vigorously again. The disease may give the turfgrass an ugly appearance, but it will not kill the turfgrass.

Chemical Controls: Azoxystrobin, mancozeb, mancozeb plus copper hydroxide (formulated as a mixture), metconazole, myclobutanil, propiconazole, pyraclostrobin, triadimefon, trifloxystrobin, and triticonazole

For a homeowner's guide to turfgrass fungicides, see http://edis.ifas.ufl.edu/document_pp154. Check fungicide labels for site application restrictions, as some fungicides cannot be used on residential lawns. Follow label directions and restrictions for all pesticides. The presence of a fungicide on this list does not constitute a recommendation.

Refer to the "Turfgrass Disease Management" section of the *Florida Lawn Handbook* (<http://edis.ifas.ufl.edu/lh040>) for explanations of cultural and chemical controls.