Septoria spp. are mostly parasitic leaf-spotting fungi that attack and damage more than 100 species of small grains and other grasses. The actual damage to wheat caused by Septoria leaf blotch is difficult to measure under field conditions, because more than one organism is nearly always involved in foliar infections.

The first symptom of leaf blotch is the appearance of small light green or yellow areas between the veins of the lower leaves. These areas elongate rapidly to form light brown to reddish-brown irregular lesions, often partly surrounded by a yellowish band (Figure 1). As the lesions age, they turn light brown to ash-white, with dark brown specks forming in the centers. These specks are pycnidia (spore-producing bodies), and their presence is the most reliable criterion for identifying the disease (Figure 2). As the lesions increase in size and number, they interrupt the water supply to the leaf tips, and progressive dying of leaf tissue occurs. Septoria leaf blotch infections also may occur on the leaf sheaths and stems of wheat.

The fungus overwinters either as mycelium in living wheat plants or as pycnidia on dead plant refuse.

The overwintering fungus produces an abundance of spores during the early spring. Fall-sown wheat usually is infected during the late fall in cool, wet weather. If extended cool, wet weather occurs, the fungus spreads rapidly by rain-splashed spores that germinate and infect the upper leaves.

The optimum temperatures for *S. tritici* spore germination and infection are 59 to 68 degrees F. Only a six-hour period of foliar wetness is needed for infection. Occasionally, all the leaves on a plant are infected, causing premature ripening and defoliation. The fungus survives the summer on infected plant refuse and in volunteer wheat. This serves as initial inoculum for new winter wheat seedlings after they emerge in the fall. Infections continue to increase and spread until stopped when temperatures are consistently below 40 degrees F.

*Septoria nodorum* is a fungus that attacks the glumes, stems, leaf sheaths and leaves of the wheat plant. On the glumes, the lesions appear as irregular, chocolate-brown
spots sprinkled with tiny specks (Figure 3). The specks are very similar to those described for leaf blotch.

Unlike leaf blotch, glume blotch is more adapted to warm temperatures. The optimum temperatures for *S. nodorum* spore germination and infection are between 68 and 80 degrees F. Heavy infections of glume blotch occur on wheat when there is excessive rainfall between flowering and harvest. The glume blotch fungus survives in wheat straw and chaff and as spores on seed surfaces, which may be an important source of primary infections since infected seed often produce infected seedlings.

Cultural control of Septoria leaf blotch can be obtained by deep plowing infected wheat stubble as soon as possible after harvesting, by destroying all volunteer wheat and wild grasses before seeding and by planting disease-free seed that has been thoroughly cleaned. Foliar fungicides also may be applied. The same cultural practices listed for leaf blotch will help prevent glume blotch. In addition, with the probability of glume blotch spores being carried on the seed, planting disease-free seed that has been thoroughly cleaned and treated with a fungicide will prevent spread of this disease.

For the latest fungicide recommendations, contact an agent in your nearest LSU AgCenter Cooperative Extension Service office.

Authors:

**Don Groth, Ph.D., Professor**
Rice Research Station

**Clayton A. Hollier, Ph.D., Professor**
Department of Plant Pathology and Crop Physiology

**Guy B. Padgett, Ph.D., Professor**
Macon Ridge Research Station

Visit our website:  www.LSUAgCenter.com

*Louisiana State University Agricultural Center*
William B. Richardson, Chancellor

*Louisiana Agricultural Experiment Station*
John S. Russin, Vice Chancellor and Director

*Louisiana Cooperative Extension Service*
Paul D. Coreil, Vice Chancellor and Director

Pub. 3249 (online only) 1/13

The LSU AgCenter is a statewide campus of the LSU System and provides equal opportunities in programs and employment.