

# Millet

## **Pyricularia Leaf Spot**

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### **Identification and Life Cycle**

Pyricularia leaf spot of millet is caused by the fungus *Pyricularia grisea* (syn.=*P. setariae*). The disease is favored by warm, wet or humid weather. The pathogen is disseminated by air-borne spores, splashing water, and movement of infested crop debris or seed. The pathogen survives between millet crops in and on infested crop debris and contaminated seed.

### **Plant Response and Damage**

Pyricularia leaf spot symptoms initially appear as numerous brown flecks that enlarge and become light to dark brown, spindle-shaped spots. As lesions age the margins become dark brown, but the lesion centers are a tan to light brown. Chlorosis (yellowing) often surrounds lesions. The number and size of lesions increase with time, and cause extensive necrosis of the foliage. Culm nodes blacken, become fragile, and often lodge. Lesions may develop at the base of panicles and girdle the neck below the panicle. Diseased necks are shriveled and covered with mycelium. Severely affected necks sometimes fail to produce panicles, but later infections can cause lodging and partially filled panicles.

Diseased seed is discolored (gray or black), and fails to germinate. The fungus sporulates profusely on seed and killed seedlings. Less severe seed contamination results in a rot of the coleoptile that slowly progresses upwards. Roots of diseased seedlings are discolored. Seedlings often have discolored, dull brown coleoptiles, and often die within 14 days from emergence.

Yield loss estimates are not available for the High Plains, but the disease can reduce yield 50% or more in the southeastern U.S. Pyricularia leaf spot is seldom important in the High Plains region.

### **Management Approaches**

#### **Biological Control**

No biological control strategies have been developed for Pyricularia leaf spot.

#### **Cultural Control**

Few cultural control practices have not been developed for Pyricularia leaf spot, but a three-year or longer crop rotation, incorporation of infested crop debris, and the planting of pathogen-free seed likely will reduce disease incidence and severity. Modifying planting dates to avoid the warm, wet weather reduces the disease in the southeastern U.S. Avoiding overhead irrigation likely will reduce the disease in the High Plains region.

## Chemical Control

Broad spectrum seed treatments should be used routinely.

### Product List for Pyricularia Leaf Spot:

Pesticide	Rate per 100 lb seed	Application Frequency (days)	Remarks
<b>Captan—various formulations available</b>			
Captan 75	6-9 oz	Seed treatment	Broad spectrum, but weak against <i>Pythium</i>
<b>Fludioxonil</b>			
Maxim 4FS	0.034-0.068 fl oz	Seed treatment	Suppression of <i>Fusarium</i> and <i>Rhizoctonia</i> spp.
<b>Thiram</b>			
42-S Thiram	8 fl oz	Seed treatment	Broad spectrum
Thiram 50WP	8 oz	Seed treatment	Broad spectrum

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