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Powdery Mildew of Wheat

Purdue University Cooperative Extension Service

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PLANT DISEASES

Mimeo BP 5-3
Revised



on the farm

Powdery Mildew of Wheat

Most Indiana farmers now accept the necessity of high nitrogen fertility for maximum yields from small grain crops. But along with high nitrogen levels has come a greater incidence of powdery mildew in soft red winter wheat.

Powdery mildew causes stunting and lowers vigor of wheat plants because the disease-inducing fungus robs the leaves of food manufactured for the plants and because the amount of leaf area available for food manufacture is reduced. In severe cases, affected plants will lodge and produce shrivelled grain.

The fungus, Erysiphe graminis tritici, attacks not only small grains, but also native grasses, such as Canada and Kentucky bluegrass, redtop, wild rye and reedgrass.

SYMPTOMS AND CAUSE

Powdery mildew is usually found on the leaves, but it may attack any above-ground part of the plant, such as stems and heads.

When new early-seeded wheat varieties are introduced, mildew first appears in the fall and early spring as small, irregular or circular, light gray spots on

the upper leaf surface. These spots enlarge until the entire leaf is covered with the typical white, powdery mildew growth.

Old mildew spots turn brown with small black specks scattered over the affected leaf area. These specks are fruiting bodies in which the fungus overwinters to produce new crops of mildew-causing spores in the spring. Severely infected wheat plants turn prematurely yellow, are weak and unthrifty with crinkled and brittle leaves.

Sometimes mildew becomes widespread in late May and early June, if the weather is wet.

CONTROL

The only practical control for powdery mildew is use of resistant varieties. These include Redcoat, LaPorte and Knox. Vermillion is highly susceptible. Rotating crops and avoiding heavy lush stands will minimize chances of severe infections.

Usually, even though powdery mildew may appear serious in the fall and early spring, satisfactory yields will result if good wheat-growing weather occurs during May or June.

Historic Document

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