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Plant oats early to avoid diseases

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Plant oats early to avoid diseases

Abstract

Oats in Iowa suffer from two major diseases, crown rust and barley yellow dwarf virus. Crown rust appears as orange leaf pustules and also causes yellowing and death of the leaves. Severely affected plants are stunted and produce little grain. The disease usually first appears in late May and can remain active throughout the rest of the season. Spores can be windblown long distances, but in Iowa some initial infections are the result of spread from local buckthorn shrubs. Buckthorn is the alternate host of the crown rust fungus, *Puccinia coronata*.

Keywords

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INTEGRATED CROP MANAGEMENT

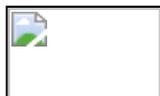
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[1] **Yellow dwarf virus of oats.**

Barley yellow dwarf virus causes extreme stunting and discoloration of the leaves. Leaf blotches that are yellow, orange, or red will develop until entire leaves are involved. Plants along the edges of fields are usually affected first. Severely affected plants produce little or no grain. The virus can infect all cereal grains, corn, and grass weeds. This disease is spread by several species of aphids, which are more active under warm conditions in the late spring and summer. Plants infected in the seedling stage are the most severely damaged. Early-planted oats typically suffer less yield loss because they are older during the period of the greatest aphid activity.



[2] **Crown Rust.**

Average planting date for oats in Iowa is April 20. If oats are planted in a cold, wet soil, they will be affected by seedling blights, but if the soil is dry enough, earlier planting will help

reduce losses to crown rust and barley yellow dwarf. Some oat cultivars also have resistance to these diseases, and it is advisable to plant these cultivars in Iowa, because both diseases are potentially severe each year. For rust, some previously resistant cultivars are now susceptible, but there are still some that are considered resistant (AC Stewart, Blaze, Jerry, Jud, Belle, Paul, Gem, Valley) or moderately resistant. For barley yellow dwarf, no cultivars are highly resistant, but several have adequate resistance--in the Iowa State University 1997 Oat Performance Test, the variety Classic demonstrated the best resistance. See the *Iowa Crop Performance Test - Oats* for further information on resistance ratings to both diseases.

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