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Spring alfalfa diseases in 2002

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Abstract
It is time to check for diseases in first crop alfalfa because cool temperatures and frequent spring rains are favorable for the development of leaf diseases in Iowa alfalfa. Knowing the level of leaf diseases in early May can help in making management decisions. Severe diseases can cause early defoliation, so scouts should watch for the following diseases that occur in spring.

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![Leaf symptoms of spring black stem.](http://www.ipm.iastate.edu/ipm/icm/node/1797/print)

**Leaf symptoms of spring black stem.**

![Stem symptoms of spring black stem.](http://www.ipm.iastate.edu/ipm/icm/node/1797/print)

**Stem symptoms of spring black stem.**

**Spring black stem** produces numerous small, dark brown-to-black spots that first occur on the lower leaves and petioles, and later on stems. Irregularly shaped lesions on leaves increase in size and coalesce. Lesions on stems and petioles enlarge and may blacken large areas near the base of the plant. The fungus that causes this disease is dispersed by splashing rain. This disease is very common in Iowa and severe infection can result in defoliation.

![Leaf symptoms of downy mildew.](http://www.ipm.iastate.edu/ipm/icm/node/1797/print)

**Leaf symptoms of downy mildew.**

**Downy mildew** is caused by the fungus *Peronospora trifoliorum*. This fungus infects alfalfa in spring when temperature is low and moisture is high. The weather conditions in some areas this spring are ideal for downy mildew. Severe disease was observed in 1993 when the spring was wet and cold. Symptoms of this disease are chlorotic blotches on the upper leaf surface and a white-to-gray mold on the lower leaf surface. Sometimes, the color may be
pale. The fungus survives in shoots over the summer and spreads in the fall. If the disease is a problem in your field, consider planting a resistant variety in your next planting.

Leaf symptoms of Leptosphaerulina leaf spot.

Leptosphaerulina leaf spot attacks mainly leaves. Both young and old leaves are susceptible to infection. Lesions often start as small black spots and remain as "pepper spots" or enlarge to "eyespots." The lesions have light brown-to-tan centers with darker brown borders and are often surrounded by a chlorotic area. The mechanism of spread of this disease is similar to spring black stem.

Because these diseases attack the lower leaves first, look for diseased leaves and stems in the lower portion of the canopy. The diseases will progress from the bottom up. Pay special attention to fields that had disease problems last year because they have greater risk than other fields for inoculum carryover through the winter.

Also, fields in third-year alfalfa have a greater disease risk than first- and second-year alfalfa fields because the pathogens build up over time. Keep in mind that there are differences in disease tolerance between varieties. If the disease level is high, early cutting generally is recommended so that defoliation can be avoided. Cutting as early as mid-bud stage may be necessary when the leaf diseases are severe.

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