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Abstract
New alfalfa seedlings are reported to be in good shape throughout the state, but the recent wet weather may result in some seedling disease problems. The most important fungi attacking alfalfa seedlings are *Aphanomyces euteiches*, *Phytophthora medicaginis*, and several species of *Pythium*. Other seedling pathogens include *Fusarium* and *Rhizoctonia*. According to a survey we did in 1994, *Aphanomyces* is more common than *Phytophthora* in Iowa soils, and these two fungi should be considered equal threats to seedlings. Seedling diseases should be suspected when emergence is poor or when there are obviously stunted, discolored, or dead seedlings.

Keywords
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New alfalfa seedings are reported to be in good shape throughout the state, but the recent wet weather may result in some seedling disease problems. The most important fungi attacking alfalfa seedlings are *Aphanomyces euteiches*, *Phytophthora medicaginis*, and several species of *Pythium*. Other seedling pathogens include *Fusarium* and *Rhizoctonia*. According to a survey we did in 1994, *Aphanomyces* is more common than *Phytophthora* in Iowa soils, and these two fungi should be considered equal threats to seedlings. Seedling diseases should be suspected when emergence is poor or when there are obviously stunted, discolored, or dead seedlings. Like other crops, alfalfa seedling diseases are more severe in wet conditions. Unlike other crops, alfalfa seedlings are very cold-tolerant. It's likely that the early seedings will survive our recent cold snap without much damage due to cold or seedling disease, unless conditions were also very wet in the field.

The best way to avoid seedling diseases is to plant varieties with an R or HR resistance rating to both *Phytophthora* and *Aphanomyces*. Recently, some seed companies have begun to market varieties with resistance to Races 1 and 2 of *Aphanomyces euteiches*. This is a fairly new development based on the fact that some strains of Aphanomyces are virulent (can cause significant losses) on varieties resistant to Race 1. Prior to the identification of Race 2, no race numbers were assigned to *Aphanomyces* resistance, but in the future all *Aphanomyces*-resistant varieties probably will be identified according to race. If a resistant variety does not have a race designation, it is safe to assume it has only Race 1 resistance. Both races occur in Iowa, and based on our 1994 survey, Race 2 is common. So for the best genetic resistance against seedling disease, it is probably best to use a variety resistant to both races.

To protect against *Pythium*, a fungicidal seed treatment is needed. Apron or Apron XL seed treatments are effective against *Pythium* and *Phytophthora*, but there are no registered seed treatments that have been shown to be effective against *Aphanomyces*. Ridomil and Ridomil Gold are soil fungicides registered for use in establishing alfalfa. Ridomil contains metalaxyl, the same active ingredient as Apron, and Ridomil Gold contains mfenoxam, the same active ingredient as Apron XL. Some studies have shown that a soil fungicide applied at seeding can be beneficial, but seed treatment appears to be a more cost-effective way to control *Pythium* and *Phytophthora*. A soil fungicide is more likely to pay off if soil conditions are extremely wet during or shortly after planting.
If an alfalfa seeding fails, it is usually safe to replant alfalfa because compounds suggested to cause autotoxicity do not accumulate in seedlings. A *Phytophthora* and *Aphanomyces*-resistant variety (treated with Apron) is recommended for replanting failed seedlings. However, the timing is a factor because alfalfa seedings that are done too late in the spring may fail because of inadequate moisture.

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