Disease Risks In Late Summer Seedings Of Alfalfa

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This article is just a reminder that later-summer plantings of alfalfa offer several agronomic advantages over spring seedings, particularly when soil moisture is adequate. However, these seedings are also much more susceptible to the fungus that causes Sclerotinia crown and stem rot. This fungus is called Sclerotinia trifoliorum, and it is distinct from the Sclerotinia white mold disease that attacks many crops, including tobacco and vegetables.

The Sclerotinia fungus that attacks alfalfa becomes active in mid- to late autumn, producing its spores in October-November (Figures 1-2). Young alfalfa seedings are often highly susceptible to the disease. The stand losses it can cause vary from minor to very severe (Figure 3).

There are a few alfalfa varieties that show partial resistance to this disease. Complete resistance is not available in commercial varieties, but partial resistance can reduce stand loss caused by this disease. Whenever alfalfa is planted in late summer in Kentucky, it is important to use a variety that has been shown to exhibit partial resistance under field conditions in Kentucky. This is important because some of the worst disease pressure from Sclerotinia crown and stem rot in the nation is in Kentucky. Variety evaluations conducted in other states are useful, but if a variety hasn't been tested for resistance under Kentucky, it hasn't been adequately tested for use in Kentucky.

The variety Phoenix has been shown to have a significant level of Sclerotinia resistance under Kentucky conditions, so that is certainly one to consider for late-summer plantings. Cimarron SR is also a good choice from the standpoint of Sclerotinia. Beyond that, I am unaware of other varieties that have held up against the severe disease pressure we sometimes get in Kentucky. Be aware that these varieties can still suffer stand loss from the disease, but they will suffer considerably less stand loss than the many susceptible varieties on the market.

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Figure 1. Light-brown spore-producing bodies of Sclerotinia trifoliorum in the field.
Figure 2. Spore release by Sclerotinia trifoliorum.
Figure 3. Ninety-nine percent stand loss in alfalfa due to Sclerotinia crown and stem rot.