Scouting alfalfa diseases in spring

X. B. Yang

Iowa State University, xbyang@iastate.edu

Follow this and additional works at: http://lib.dr.iastate.edu/cropnews

Part of the Agricultural Science Commons, Agriculture Commons, and the Plant Pathology Commons

Recommended Citation
http://lib.dr.iastate.edu/cropnews/1614

The Iowa State University Digital Repository provides access to Integrated Crop Management News for historical purposes only. Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user. Users should make their own assessment of the information and whether it is suitable for their intended purpose. For current information on integrated crop management from Iowa State University Extension and Outreach, please visit https://crops.extension.iastate.edu/.
Scouting alfalfa diseases in spring

Abstract
So far this spring, we have received considerable precipitation. Frequent rainfalls in spring are favorable for the development of foliar diseases on alfalfa. It is time to check for these diseases, especially if more rain occurs over the next 2 weeks. Knowing the level of alfalfa disease in early May helps in making management decisions. High levels of foliar diseases in May can cause early defoliation before the first cutting. Poor growth in spring due to disease problems also may affect alfalfa growth in summer and fall.

Keywords
Plant Pathology

Disciplines
Agricultural Science | Agriculture | Plant Pathology
Scouting alfalfa diseases in spring

So far this spring, we have received considerable precipitation. Frequent rainfalls in spring are favorable for the development of foliar diseases on alfalfa. It is time to check for these diseases, especially if more rain occurs over the next 2 weeks. Knowing the level of alfalfa disease in early May helps in making management decisions. High levels of foliar diseases in May can cause early defoliation before the first cutting. Poor growth in spring due to disease problems also may affect alfalfa growth in summer and fall.

When scouting, make sure to include fields with first, second, and third year alfalfa after planting. Normally, the first year alfalfa would have more seedling disease problems. Fields in the third year of planting are more likely to develop root rot disease pressure if a disease occurred in previous years. Such buildup also is applicable to foliar diseases, which vary from region to region. In a region where weather was relatively dry last fall, disease pressure is unlikely to be high for spring black stem and Leptosphaerulina leaf spot. These diseases can be carried over from winter and build up in spring. In a cool and wet spring, spring black stem, Leptosphaerulina leaf spot, and downy mildew are most common in Iowa.

In spring, symptoms of foliar diseases occur first on lower leaves. Look for diseased leaves and stems in the lower portion of the canopy. Foliar diseases progress from the lower portion of plants to the top. Fungi that cause foliar diseases are dispersed by splashing rain, except for downy mildew. Pay special attention to fields that had disease problems last year. These fields have greater risk for disease from pathogens that survived the winter.

Alfalfa root and crown rot sometimes are found in fields in the second and third years after planting in spring. Some common soilborne fungi can be the cause of the problems, resulting in dead plants that are patchy or scattered in a field. Rarely, thin stands may result in replanting. Causal fungi of root diseases are *Phytophthora*, *Pythium*, *Aphanomyces*, *Fusarium*, and *Rhizoctonia*. Besides causing root rot, some of these fungi also cause seedling disease problems in newly planted fields. If seedling diseases or poor stand establishment were problems in the past, consider using seed treatment in your plantings.

For identification, this article focuses on common foliar diseases in Iowa. Photos are available online [1].

**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.

**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 into "eyespots." The lesions have light brown-to-tan centers with darker brown borders and are often surrounded by a chlorotic area.

**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 this spring are ideal for downy mildew. 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.

This article originally appeared on pages 65-66 of the IC-490 (8) -- May 12, 2003 issue.

**Source URL:**
http://www.ipm.iastate.edu/ipm/icm//ipm/icm/2003/5-12-2003/scoutspring.html

**Links:**