

Feature Story



Making Hay the Grow Smart™ Way

The three main drivers for successful alfalfa fields

RESEARCH TRIANGLE PARK, NC, January 9, 2018 — As a perennial crop, alfalfa presents unique challenges for growers. No matter how many years alfalfa plants have been in a field, structural crop integrity is key with the multiple cuttings that take place each season. It's not always easy to grow, maintain and manage high-quality alfalfa crops. However, if growers are able to stay on top of growth efficiency, disease control and stress tolerance, the three main drivers of alfalfa quality, they can work toward finding yield success.

Growth Efficiency

Getting the plant off to a strong start is critical for a robust harvest. Applying a fungicide, such as Priaxor® fungicide, not only helps manage disease, but the fungicide also increases photosynthesis to produce a higher amount of carbohydrates available for taproot replenishment. Carbohydrates are important for alfalfa, as the crop uses the carbohydrate reserves for regrowth in spring and after each cutting. When a plant is approximately six to eight inches tall, it begins replacing carbohydrates in the taproot. This process improves structural integrity, leaf retention and forage quality. Therefore, the crop can withstand multiple cuttings while achieving maximum yield potential.

Disease Control

Alfalfa is not excluded from disease threats, such as spring black stem and common leaf spot, occurring when moisture and humidity get trapped in the crop canopy. Scouting for these diseases between cuttings can help direct fungicide applications for consistent performance throughout the growing season.

Spring black stem is found early in the season. This pesky disease comes from fungus that survives on crop residue, stems and crowns through the winter. In moderate to severely infected fields, the disease can reduce first cutting yields from 40 to 60 percent in the second and third year of growth. If the crop is infected, it's recommended to harvest early to prevent both yield and quality loss from leaf drop. After the first cutting, the disease is rarely as significant, although the crown rot phase of the disease may continue to develop.

In addition, scouting for common leaf spot early in the season can help detect additional diseases that may be impacting forages. Symptoms include small, circular, brown to black spots on the upper surface of leaves. As the disease progresses, infected leaves turn yellow and drop. In cool, moist weather, the fungus produces circular, raised, brown fruiting bodies within the spots and forcibly discharges spores into the air. Typically, the fungus survives in undecomposed leaves and leaf debris on the soil surface.

Infected alfalfa should be cut in a timely manner, as the severity of common leaf spot increases while the plant continues to grow. Although the disease does not kill plants, defoliation reduces plant health, quality and yield.

Stress Tolerance & Quality

Even without the presence of yield-robbing diseases, the structural integrity of alfalfa is continually stressed due to multiple cuttings throughout a season. One way alfalfa growers have improved their stands is through the application of fungicides, which ensures nitrogen uptake into the plant is used effectively.

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To proactively scout the stress of your stand, it is best to evaluate the entire structure of the plant by digging up plants in three to four locations in the field. Be sure to include the top six inches of the root. Then, cut the root lengthwise and check for rot or discoloration, while examining the crowns for size, symmetry and the number of shoots present.

By staying on top of field conditions and scouting for disease and plant quality, growers will be able to take the necessary measures to achieve yield success. For more information on how BASF can help create a plan tailored for your operation, visit agproducts.basf.us.

Always read and follow label directions.

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