

# BASF Fungicides – Growing Healthy Alfalfa for Increased Yields

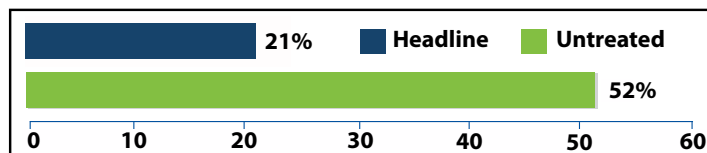
## BASF Crop Protection

**W**et conditions throughout the growing season can often be a double-edged sword for alfalfa growers. While a wetter growing season can help lead to increased yields, growers know it can also lead to a significant increase in disease pressure, which can threaten yield potential and overall forage quality.

Since 2011, BASF has provided Headline® fungicide to alfalfa growers, helping effectively control major diseases. Headline fungicide, one of the most recognizable fungicides on the market, is a key contributor in controlling alfalfa diseases, such as anthracnose, common leaf spot, leaf spot, spring black stem, powdery mildew, Rhizoctonia blight/black patch, rust and other foliar diseases. When pronounced alfalfa diseases like these go untreated, they can be very damaging to yield potential because of leaf drop, reduced palatability, and reduced nutritional value.

Alfalfa acres treated with Headline fungicide at 6 fl oz/ac experienced a 30% reduction in leaf spot incidence compared to untreated acres<sup>1</sup>. In this same trial, the yield of all three cuttings for the Headline fungicide treated alfalfa totaled 6.1 tons/ac compared to 5.2 tons/ac for the untreated check.

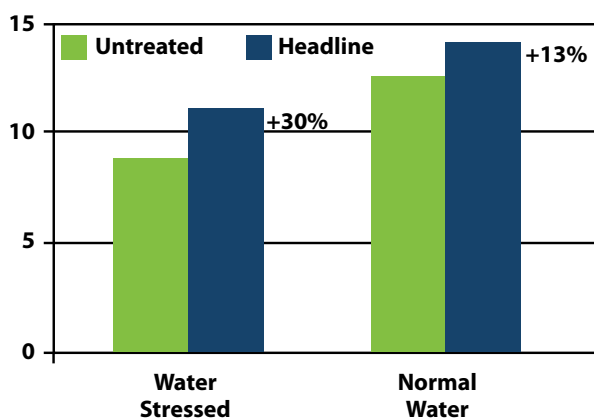
Figure 1. Percent leaf spot.



## Beyond Disease Control

Containing the active ingredient F-500® fungicide, Headline fungicide has proven it goes beyond disease control by offering crops like alfalfa distinct advantages throughout the growing season. These advantages include increased growth efficiency through heightened photosynthesis, and increased stress tolerance. Known to increase photosynthesis in crops by up to 30%, F-500

Figure 2. Increased net photosynthesis.

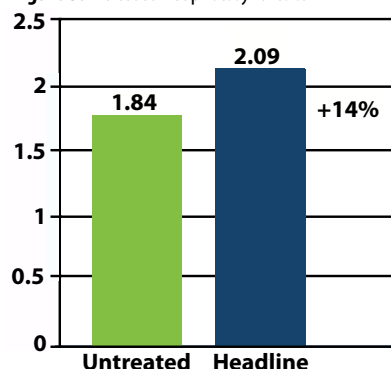


fungicide can provide alfalfa with more energy to fend off troublesome diseases.

With this rise in photosynthesis, crops can devote more energy to development, leading to higher leaf retention, quicker green-up after cutting, and improved forage quality. All of these benefits in turn lead to stronger, more durable crops with increased stress tolerance. In the often unpredictable growing conditions of areas like the Midwest, increased stress tolerance is crucial for alfalfa crops to remain healthy and produce high yields at cutting.

Paired with superior disease control, the crop advantages provided by Headline fungicide can have a direct, positive impact on yield potential. In on-farm trials<sup>2</sup>, alfalfa acres treated with Headline fungicide experienced a 14% increase in yield tons per acre.

Figure 3. Increased net photosynthesis.



## A Portfolio for Alfalfa Protection

In addition to offering Headline fungicide to alfalfa growers, BASF supplies Endura® fungicide, as well as proven herbicides, such as Prowl® H2O herbicide, Pursuit® herbicide, Raptor® herbicide, and Extreme® herbicide for Roundup Ready® alfalfa. These herbicides offer protection of a wide variety of grasses and broadleaf weeds in alfalfa. BASF also offers Fastac™ EC insecticide, which provides excellent knockdown, residual, and repellent action against a variety of pests.

To help alfalfa growers get their crops off to the right start, Stamina® fungicide seed treatment, from BASF, controls key seedling diseases to deliver healthier, stronger plants out of the ground.☘

<sup>1</sup>2011 replicated trial. University of Minnesota, Waseca, MN. Average disease ratings for cuttings 1, 2, 3.

<sup>2</sup>2011-2012 Average yield increase 129 on-farm trial cuttings in Wisconsin (80), Iowa (18), Michigan (15), Colorado (7), Idaho, (3), Kentucky (3), Pennsylvania (2), Oklahoma (1). Headline 6 fl oz/A

Always read and follow label directions.

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