AdvanSix | Ammonium Sulfate

Sulf-N® News

As forage crops kick into gear, they deserve a boost of sulfur. Sulfur plays a vital role in the formation of nitrogen-fixing nodules on alfalfa roots, as well as in the healthy growth and productivity of grass forages.

What's more, hay crops in areas such as northeast Iowa, long considered an area with adequate sulfur reserves, are showing a dramatic response to sulfur applications.

Key Sulfur Facts:

- Iowa State University researchers[1] found a 40-pound-per-acre application of sulfur more than doubled alfalfa yields in 2005 and nearly doubled them in 2006 in a seminal study of sulfur fertilizers in northeast Iowa alfalfa
- Root nodulation in alfalfa is lower where sulfur levels are deficient, according to Brian Lang, Iowa State University extension agronomist
- Ammonium sulfate contributed to yield increases of 16 percent in ryegrass and 25 percent in bahiagrass when compared to ammonium nitrate by University of Florida agronomists
- In a three-year Agriculture and Agri-Food Canada study in Saskatchewan[2], timothy hay yields in plots treated with a combination of nitrogen and sulfur exceeded nitrogen-only yields by more than 50 percent. The researchers stated that the results point to a synergistic relationship between nitrogen and sulfur in timothy yields
- The Agriculture and Agri-Food Canada team also pointed out that the nitrogen/sulfur combination plots had the lowest levels of nitrate nitrogen accumulation in the soil profile when compared to nitrogen-only plots, noting that the increased biomass production in the nitrogen-plus-sulfur plots allowed the crop to utilize more of the nutrients available in the soil
- Research from Virginia and New York suggests that sulfur fertilizer in forage helps boost weight gain in beef cattle and milk production in dairy cows when compared to forage not fertilized with sulfur

Sulfur Application Tips:

- Iowa State University's Lang recommends tissue testing alfalfa to determine if sulfur levels are adequate. A level of 0.25 percent is considered adequate; at 0.14 percent, alfalfa in his studies displayed poor coloration and yield loss
- When products must be surface-applied in standing forage crops, it is important to choose a fertilizer that minimizes volatilization of nitrogen
- Ammonium sulfate is an excellent source of sulfur for alfalfa and other forage crops, delivering the nutrient in the plant-available sulfate form, while also supplying plant-available and loss-resistant ammonium nitrogen.

For more information on the use of Sulf-N® ammonium sulfate in forage crops, click here. Also feel free to contact Mercedes Gearhart, Senior Agronomist for AdvanSix.

1 Better Crops. Vol. 95. 2011, No. 2.
2 Agronomy Journal. Vol 101, 2009, Issue 5.

Contact AdvanSix
To learn more about the benefits
of Ammonium Sulfate, visit
Advan6.com or SulfN.com or call:
1-844-890-8949 (toll free, U.S./Can.)
+1-973-526-1800 (international)

AdvanSix