

## PASTURES, HAY FIELDS, AND CORN MAY NEED SULFUR

Bill Yarborough, NCDA&CS Agronomist



Finalizing plans for the upcoming growing season? If you are growing grass or corn, you may want to consider adding sulfur to your routine fertilizer application. Excessive amounts of rainfall this winter may have washed sulfur out of the topsoil. I have found sulfur-deficient crops in several counties in my region – northwestern North Carolina – over the last several years even with the drought conditions we experienced.

Today's cleaner burning fuels mean lower amounts of sulfur occurring in rainfall. Also, most common fertilizers contain little or no sulfur. This makes optimal conditions for sulfur deficiency.

Sulfur is essential for converting plant nitrogen to proteins. If sulfur is low, plant growth and yield will be significantly reduced. Think "sulfur" if your crop doesn't green up when nitrogen is applied. The visual symptoms of sulfur and nitrogen deficiencies are similar, including yellowed and stunted plants.

Symptoms of sulfur deficiency generally appear in the upper part of the plant in newly developing leaves. If the deficiency is severe, the entire plant will turn yellow. Sulfur-deficient corn leaves have yellow stripes running parallel to the leaf blade.

Several fertilizers do supply sulfur. Suitable materials include sulfur-containing nitrogen solutions (% S varies), ammonium sulfate (24% S), sulfate of potash-magnesium (22% S), potassium sulfate (18% S), gypsum (19% S), and elemental sulfur (~90% S). Application rates of 20 to 25 pounds of sulfur per acre are usually recommended.

One recommendation is to blend 50 pounds per acre of ammonium sulfate (21-0-0) with your fertilizer. This mixture will supply adequate sulfur for areas in western North Carolina. Sulfur applications may be needed every year, depending on weather and soil type.

If you suspect a sulfur deficiency, act immediately. The earlier problems are diagnosed, the quicker they can be corrected. For soil and plant tissue analysis, send matching soil and plant

tissue samples to:

N.C. Department of Agriculture and  
Consumer Services' Agronomic Division  
Plant/Waste/Solution Laboratory  
4300 Reedy Creek Road  
Raleigh, NC 27607-6465

Growers in Buncombe, Cherokee, Clay, Graham, Haywood, Jackson, Macon, Madison, Swain and Yancey counties can contact me – Bill Yarborough – for sampling supplies or information on sampling procedures.

My contact information:

Phone: 828-456-3943  
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Growers can also contact their local agricultural advisor, fertilizer dealer, or county Cooperative Extension agent, or visit the Agronomic Division's web page at [www.ncagr.com/agronomi/rahome.htm](http://www.ncagr.com/agronomi/rahome.htm) to find the name and number of their area's NCDA&CS regional agronomist.

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