

Sulfur may boost livestock output

HOPEWELL, VA. — Sulfur fertilization of forage crops may lead to improved nitrogen utilization by ruminants, according to research conducted at Virginia Polytechnic Institute and State University.

In a two-year study co-sponsored by Allied Corporation in Hopewell, VA, and The Sulphur Institute in Washington, D.C., sheep fed corn silage fertilized with ammonium sulfate (21-0-0-24S) "showed a dramatic improvement in N utilization," reports Dr. Vivien Allen, a researcher with VPI and coordinator of the study. Additionally, fertilization with ammonium sulfate increased corn yields by seven percent.

Allen explains that adding sulfur fertilizer to forage crops can increase protein and may improve dry matter digestibility, which helps animals digest feed and utilize nitrogen.

"Even if a farmer doesn't get yield increases, it may be worthwhile for him to add sulfur to his crops if it improves protein content and digestibility," she comments.

Metabolism trials with sheep revealed that animals used nitrogen more effectively when their feed supplied the dietary sulfur compared to direct sulfur supplementation as sodium sulfate.

According to Allen, feeding livestock a sulfur supplement may not produce the same benefit as feeding livestock forage fertilized with sulfur.

The Virginia Tech research group also found that making split applications of sulfur did not increase protein content or digestibility any more than single applications.

A large number of the corn

silage samples from throughout the state of Virginia have been found to be low in sulfur, indicating a widespread sulfur deficiency, according to research previously conducted in Virginia.

"We can create a deficiency with high intensity farming," says Allen, explaining that higher crop yields remove more of all nutrients from the soil. But while many farmers replenish their land with nitrogen, phosphate, and potash, many unintentionally neglect sulfur.

This may be due in large part to the replacement of traditional plant-food sources like single superphosphate (0-20-0-12S) with high-analysis sources such as triple superphosphate (0-46-0) that contain little or no S and to less use of sulfur-containing insecticides and fungicides.

To counteract sulfur shortages, Allen recommends determining sulfur levels in the soil through soil testing and augmenting with plant analyses.

This year, the Virginia Tech group is testing the effects of sulfur fertilization and supplementation on growing beef steers. They plan to give the steers both supplements and corn forage fertilized with sulfur.

"The dairy industry, as well as beef and sheep producers, should be quite interested in improved digestibility and N utilization because it can have important effects on milk production and feed efficiency," comments Allen.

When choosing a sulfur fertilizer, growers should first consider other nutrient needs. Many sulfur sources available today also contain nitrogen or potassium. Examples are ammonium sulfate (21-0-0-24S) and potassium-magnesium sulfate (0-0-22-22S-11Mg).

"If you need both nitrogen and sulfur, a fertilizer like ammonium sulfate would probably be your best buy," says Tom Hemphill, agronomist with Allied Corporation. Ammonium sulfate can be used in either dry or liquid fertilizer programs.

Hemphill points out that ammonium sulfate contains sulfur in the sulfate form, the only form that crop roots can take up and utilize. As a result, the sulfur found in ammonium sulfate can be taken up by the crop more quickly than the elemental form, which needs up to several weeks—or even months—to convert into the sulfate form for uptake.

ASCS to send deficiency checks

WASHINGTON — Under Secretary of Agriculture Daniel Amstutz announced that he had instructed the Agricultural Stabilization and Conservation Service to inform their county offices to release deficiency payment checks for wheat, barley and oats immediately.

Amstutz said the checks had been held up in ASCS county offices until Congress completed

action on legislation making continuing appropriations through September 30, 1986, which contained funds for the deficiency payments.

Congress recently passed a continuing resolution making funds available for a number of federal agencies, including USDA. President Reagan signed it immediately making almost \$1 billion in payments available to farmers.

Shaver wins merit award

CHICAGO — J. Lyle Shaver, manager, Engineering, Deutz-Allis Corporation, was named 1985 winner of the Farm and Industrial Equipment Institute (FIEI) Engineering Merit Award, FIEI President Emmett Barker announced today.

Shaver received a plaque symbolizing the prestigious award, presented annually since 1957, in an awards luncheon at the Hyatt Regency Illinois Center in Chicago. The award, presented by Robert B. Skromme, vice president of engineering, New Idea Farm Equipment Corp. for FIEI, was announced at the American Society of Agricultural Engineers' (ASAE) winter meeting held here December 17-20.

The FIEI award recognizes a company's engineer's contributions and dedication to the Institute and the industry it represents. Selection, by a committee of the engineer's peers, is based on leadership, involvement

and achievements in the industry, according to Barker.

Shaver has been active in FIEI engineering activities for more than a decade. Currently, he serves as chairman of the Institute's Farm Equipment Division's engineering committee and participates as a member of the Institute's Engineering Policy Advisory Committee. In addition, he has taken an active role in ASAE administrative and standards committees, winning the 1974 Missouri ASAE Young Engineer of the Year Award.

Since joining Allis-Chalmers Corporation, Deutz-Allis' precursor, in 1967, Shaver has been closely involved with the company's product engineering. Initially, a project engineer responsible for developing the company's first rotary combines, Shaver was promoted to chief engineer, combine development, in 1967. He attained his current position in 1967.

Upjohn taps exec for animal health

KALAMAZOO, Mi. — John A. Studebaker, has been appointed Executive Director and Division Manager of the Animal Health Division, Upjohn International, Inc., in Kalamazoo.

Formerly Executive Director, Asgrow Marketing and Production in The Upjohn Company Agricultural Division, Studebaker served nearly 15 years in animal health marketing, including five years with the international division, prior to the Asgrow appointment. He now reports to Dr. Thomas G. Schalk, who is in charge of Worldwide Animal Health.

The International Animal Health Division handles sales, marketing, production and distribution of a

comprehensive line of veterinary pharmaceuticals and over-the-counter products. The product line includes injectable antibiotics, antibiotic feed additives, water soluble products, prostaglandins, steroids and other specialty products. Such Upjohn-developed antibiotics as lincomycin, spectinomycin, neomycin and novobiocin are offered worldwide in different formulations in these products.

A native of Miami County, Ohio, Studebaker received his bachelor's and master's degrees in agriculture from Ohio State University, in 1953 and 1956, respectively. He joined The Upjohn Company in 1958 as Manager of The Upjohn Research Farm.

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