Technical Bulletin

Effects of ESN® on Cotton Yields, Average of 11 University Locations

STUDY DESCRIPTION

Eleven cotton trials were conducted across the United States evaluating ESN for cotton production in 2013. These studies demonstrate how ESN can increase yields in cotton production. ESN protects nitrogen (N) from loss inside its unique protective coating and supplies N to the crop when it is needed. The result is increased cotton yields and improved N-use efficiency.

Cotton plants need N throughout the growing season. Most N uptake by a cotton plant takes place in the period of about 40-80 days after planting and continues up to 140 days after planting. ESN may be used to meet this long season demand.

In these U.S. studies, ESN applied to cotton yielded higher than the grower standard practice in 10 of the 11 trials.

RESULTS SUMMARY

ESN when used in a cotton fertility program produced higher yields compared to the grower standard for the area in 10 of 11 trials. In the GA3 trial, ESN was applied as a single treatment at node 7 with no starter N fertilizer. When averaged across all locations, ESN produced 50 pounds more lint than the grower standard.

TRIAL DETAIL

- *Conducted in 11 locations across the US (VA, NC, GA-3, MS-2, AR, TX-2)*
- *Four-six Replications/treatment*

ESN® SmartNitrogen

Want To Know More?

To make ESN a part of your fertilization program, contact an authorized retailer or representative.

www.SmartNitrogen.com

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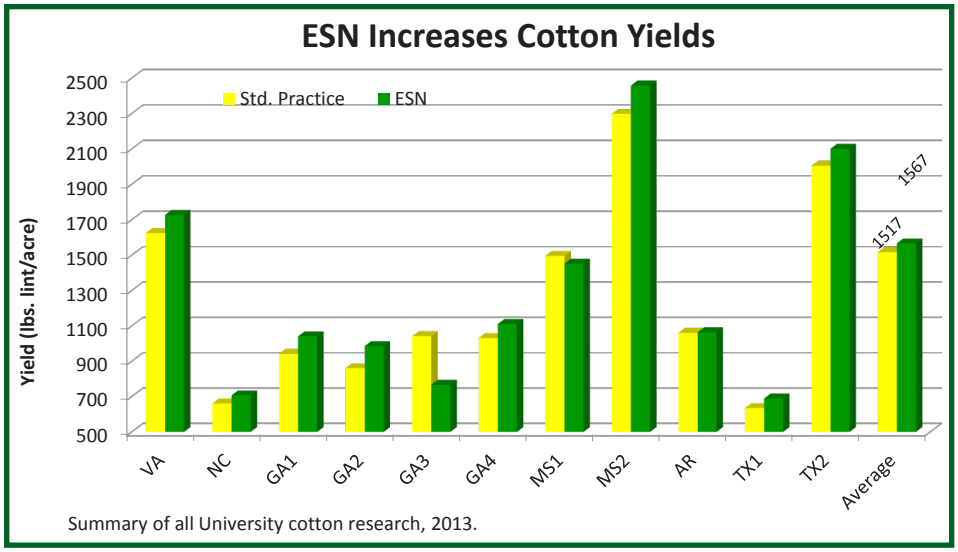
SUPPORTING DATA



Summary of all University cotton research, 2013.

ESN®

ESN Technology Goes Beyond Traditional Nitrogen

- *Enhances N use efficiency*
- *Improves crop yield and quality*
- *Provides convenience through ease of use*
- *Environmentally responsible*

How ESN Technology Works

ESN technology uses a flexible polymer coating to encapsulate a nitrogen (N) granule. The coating protects the N from loss mechanisms, releasing it when the crop needs it most.

Nitrogen release thru the polymer coating is controlled by two of the factors in crop growth: soil moisture and temperature. Moisture creates an N solution inside the coating, and the solution moves through the coating at a rate controlled by soil temperature. Nitrogen supply is, therefore, more closely matched with crop demand.

ESN is backed by over 600 crop years of testing by independent, third party researchers. The data is proof of performance for a unique product.

ESN®
SmartNitrogen

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