

Technical Bulletin

Effects of ESN[®] on Irrigated Soybean Yields in Mississippi



STUDY DESCRIPTION

A Mississippi study demonstrates how ESN can increase yields in irrigated soybean production. ESN can provide additional nitrogen to soybean plants during flowering and pod set, resulting in higher yields. 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 soybean yields and improved N-use efficiency.

Soybean plants need N throughout the growing season. Most N needed by the plant is produced through nodules on the roots, however, under high yield situations, this may not be sufficient N for optimum yields. By applying ESN just prior to bloom, additional N will be supplied during the peak demand period.

In this Mississippi study, ESN yielded higher than untreated plots by an average of 4 bushels/acre.

RESULTS SUMMARY

- Averaged four rates, ESN yielded four bu/acre more soybeans than the unfertilized check.
- Yield differences were greater than four bu/acre in five of eight ESN treatments.

TRIAL DETAIL

- *Conducted in Stoneville, MS by Dr. Bobby Golden, MS State Univ.*
- *Soil Type = Clay loam and Sandy loam*
- *Previous Crop = Cotton*
- *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

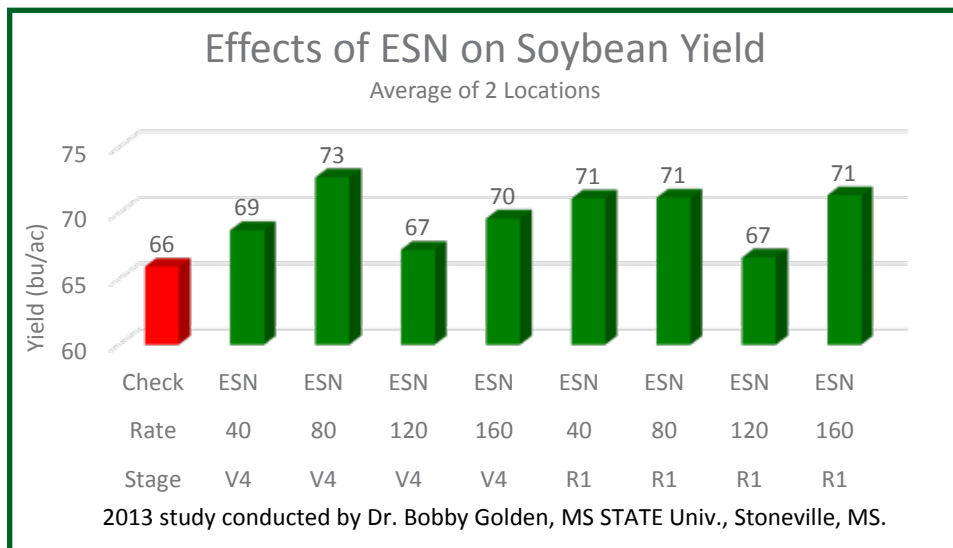
Nutrien[™]

FERTILIZER TREATMENTS

Fertilizer Treatment	Comments
Check	Untreated
ESN at 40# N/ac at V4	100% ESN
ESN at 80# N/ac at V4	100% ESN
ESN at 120# N/ac at V4	100% ESN
ESN at 1600# N/ac at V4	100% ESN
ESN at 40# N/ac at R1	100% ESN
ESN at 80# N/ac at R1	100% ESN
ESN at 120# N/ac at R1	100% ESN
ESN at 1600# N/ac at R1	100% ESN

ESN = Environmentally Smart Nitrogen (44-0-0)

SUPPORTING DATA



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.

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