

Experiment Info:

Planted:	5/2
Variety:	Phy565WRF
Population:	40,000
Row Spacing:	38"
Previous Crop:	Soybeans
Plot Size:	4 rows x 30'
Replications:	4
PPI:	5/21
Sidedress:	6/28
Foliar:	8/15
Harvest:	10/10

Soil Test Values (ppm):

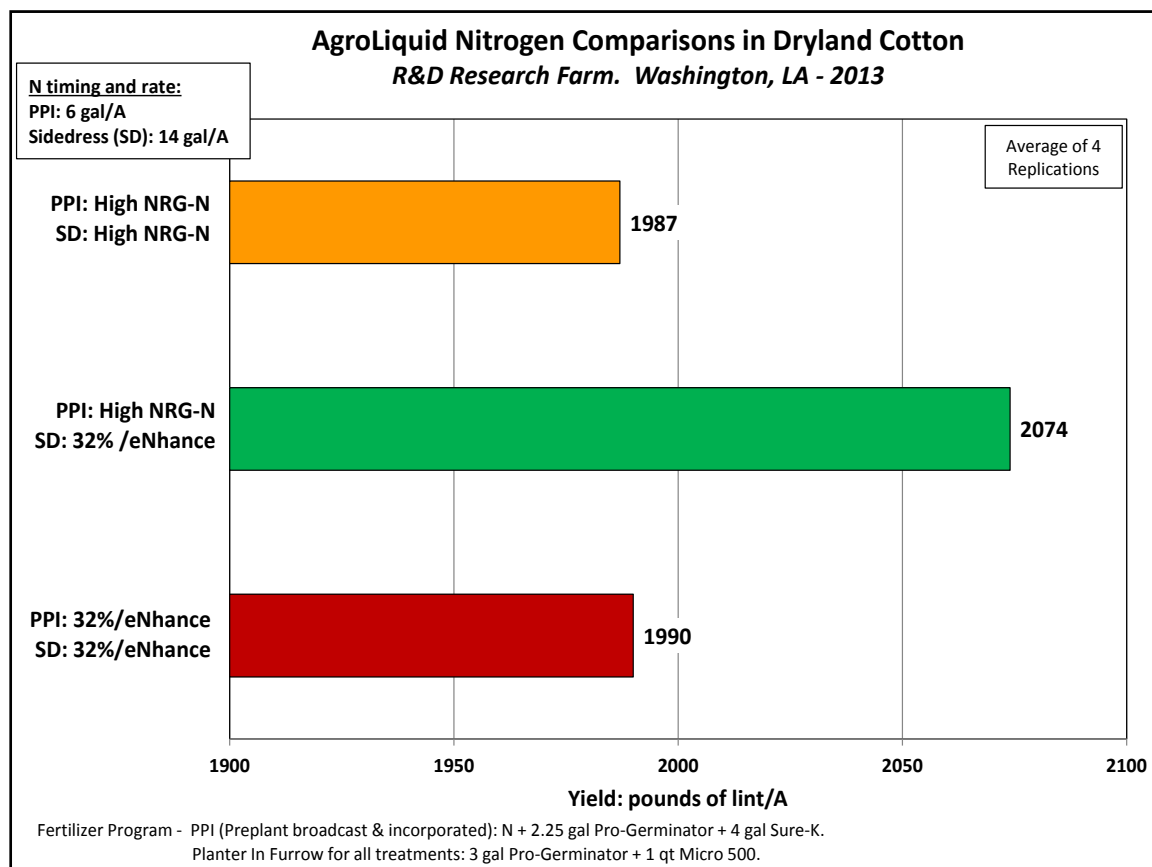
pH:	6.6
CEC:	10.4
% OM:	1.7
Bray P1:	37
K:	92
S:	7
% K:	2.1
% Mg:	29.3
% Ca:	60.9
% H:	6
% Na:	1.8
Zn:	1.1
Mn:	30
B:	1

Yield Goal:	3 bale
Target Fertilizer Rate:	84-65-65

Objective:

Evaluate different N applications to determine the best product combination for best yield.

It may be possible to influence crop yield by application of different nitrogen sources at different times to take advantage of different N source characteristics. High NRG-N is formulated to reduce N losses by reducing volatility and leaching. It is also formulated to release usable nitrogen over an extended period of time compared to other N sources. Thus, it may be a good source of N early in the season to feed over a longer time, but maybe not so much when applied later in the season when crop N demand is more for fast acting nitrogen. The N additive eNhanse is formulated to enhance nitrogen uptake and translocation while offering some protection from losses, but does not enable controlled release. This experiment evaluated N applications for cotton using High NRG-N and 32% UAN with eNhanse. Treatments were split where 6 gal/A was applied pre-plant broadcast and incorporated. Another 14 gallons was knifed into the soil at sidedress 37 days after planting when the cotton was 4 inches tall. So one treatment had High NRG-N at both applications, a second had High NRG-N at the first application and 32%/eNhanse at the second application, and the third had 32%/eNhanse at both applications. Both High NRG-N and 32%/eNhanse have similar use rates based on equivalency. Yield results appear in the following chart.



Conclusions:

- The highest lint yield was where High NRG-N was applied in the first application and 32%/eNhanse was applied at the second application. This trend has also been observed in corn at the NCRS, suggesting that proper timing of the correct N source may have an advantage. Although admittedly, it may be an inconvenience handling two N sources, it interesting from a research standpoint.