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Early-season indication of how well ESN® has performed in 2013

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Hancock trials

Nitrogen fertilizer trials at Hancock indicate that ESN® has performed well as of 30 days after emergence (DAE). The main fertilizer treatments will be split into sub-treatments where some plots will receive additional N fertilizer applications (in 30 lb-N/ac intervals) based on rainfall events to assess how well ESN® compares to conventional fertilizer with supplemental N applied. The ESN® was applied 100% at emergence while the ammonium sulfate (AMS) and ammonium nitrate (AN) treatment were split applied (⅓ of N as AMS at emergence, ⅔ of N as AN at tuberization). At 30 DAE, the ESN® had greater average petiole nitrate concentrations across all N rates. All petiole nitrate-N concentrations are within the optimum range for Russet Burbank (2.0 to 2.3). The 45 DAE samples have been collected and are being analyzed.

Table 1. 2013 petiole nitrate-N concentrations from the Hancock nitrogen fertilizer trial.

Fertilizer	Rate	Petiole Nitrate-N Concentration (30 Days After Emergence)	
	lb-N/ac	%	
AMS & AN	200	2.47	
AMS & AN	250	2.01	
AMS & AN	300	1.93	
Ave.			2.13
ESN	200	2.29	
ESN	250	2.25	
ESN	300	2.20	
Ave.			2.25

On-farm trials

Based on results from an on-farm trial where half of a pivot received ESN® and the other half received conventional N fertilizer applications, the ESN® half has greater petiole nitrate-N concentrations (**1.34%**) compared to the conventionally fertilized half pivot (**0.98%**). The variety is Russet Burbank and the petiole samples were collected at approximately 50 DAE. The optimum range for Russet Burbank is 1.2 to 1.6% at this time point, so the conventionally fertilized has resulted in a less than optimum petiole nitrate concentration. This undoubtedly is the result of the large amount of rainfall that has occurred in this region. The grower has decided to apply additional N to the conventionally fertilized half. So, in this case, we can conclude that ESN® has performed very well during the first half of the 2013 growing season.