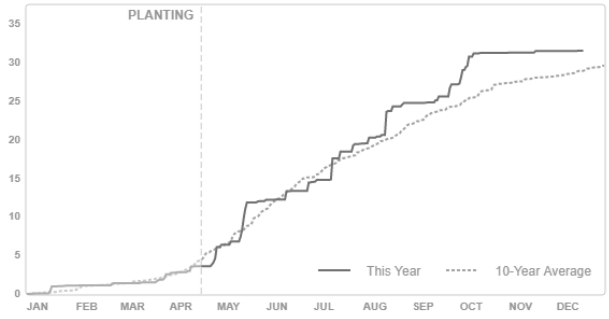
N-Serve® on Spring Applied Anhydrous Ammonia

Study ID: 718185201701
County: York
Soil Type: Hastings silt loam
Planting Date: 4/21/17
Harvest Date: 10/30/17
Population: 33,000
Row Spacing (in): 30
Hybrid: Pioneer 1311AM
Reps: 7
Previous Crop: Soybean
Tillage: Ridge-Till
Herbicides: ***Pre:*** 1 pt/ac Brash® on 2/17/17; 2 qt/ac Lexar® on 4/21/17 ***Post:*** 32 oz/ac glyphosate and 2 oz/ac Status® on 6/6/17
Seed Treatment: None
Foliar Insecticides: 1 oz/ac PermUp® on 4/21/17; 6 oz/ac Discipline® 2EC on 8/3/17
Foliar Fungicides: 5 ox/ac Absolute® Maxx on 8/3/17
Fertilizer: 170 lb/ac N as Anhydrous Ammonia on 3/9/17
Note: Wind caused lodging and ear loss
Irrigation: Pivot, Total: 3"
Rainfall (in):



Soil Sample (October 2016):

Soil pH 1:1	WDRF Buffer pH	Soluble Salts 1:1 mmho/cm	Excess Lime Rating	Organic Matter LOI %	Nitrate – N ppm N	Nitrate lb N/A (0-10 in)	Mehlich P-III ppm P	Sulfate-S ppm S	Zn (ppm)	Ammonium Acetate (ppm)				CEC me/100g	% Base Saturation				
										K	Ca	Mg	Na		H	K	Ca	Mg	Na
6.8		0.16	NONE	3.3	5.0	15	18	13	1.77	429	2409	474	85	17.5	0	6	69	23	2

Introduction: This study is evaluating N-Serve® nitrification inhibitor (product information at right). Nitrification inhibitors reduce the rate at which ammonium is converted to nitrate. This can help reduce N losses through denitrification and leaching. Nitrogen was applied at a rate of 170 lb/N ac as anhydrous ammonia on March 9, 2017.

Use to delay nitrification of ammoniacal and urea nitrogen fertilizer compositions in the soil by controlling the nitrification process.

Active Ingredients:
nitrapyrin: 2-chloro-6-(trichloromethyl) pyridine..... 22.2%
Other Ingredients..... 77.8%
Total..... 100.0%

Contains petroleum distillates
Contains 2 lb of active ingredients per gallon.

Product information from: https://assets.greenbook.net/16-11-54-12-10-2017-D02-011-020_N-Serve_24_Specimen_Label.pdf

Results:

	Harvest Stand Count	Stalk Rot (%)	Moisture (%)	Yield (bu/acre)†	Marginal Net Return‡ ($/ac)
Anhydrous Ammonia without N-Serve	31,286 A*	31.29 A	15.39 B	210 A	662.49 A
Anhydrous Ammonia with N-Serve	32,214 A	28.29 A	15.44 A	212 A	655.41 A
P-Value	0.289	0.671	0.03	0.808	0.663

*Values with the same letter are not significantly different at a 90% confidence level.
†Bushels per acre corrected to 15.5% moisture.
‡Marginal net return based on $3.15/bu corn and $11/ac N-Serve cost.

Summary:

- Moisture was significantly higher where N-Serve was used.
- There was no difference in stand count, stalk rot, yield, or marginal net return between the treatments with N-Serve and without N-Serve.

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