

## On-farm Soil Amendment Trials

### RFR-A1308

#### Methods

Six trials were conducted in 2013 comparing plots treated with “Generate” with untreated plots (Table 1). Generate is marketed by AgNition and promoted as a product that generates beneficial microbial activity in the soil and liberates micro and macro nutrients. In Trials 1 and 4, it was foliar applied on corn at V6. In Trial 6, it was foliar applied on soybeans at V6. In Trials 2 and 3, it was applied in-furrow with 32 percent UAN fertilizer. In Trial 5, it was applied in-furrow with starter fertilizer and compared with a starter fertilizer treatment without the Generate and an untreated control.

#### Results

None of the foliar applications of Generate had an effect on the crop yield (Table 2). There was a corn yield decrease of about seven bushels/acre with the preplant application of Generate compared with the untreated control that approached statistical significance in Trial 2 ( $P=0.10$ ). There was a significant yield increase with the starter fertilizer plus Generate compared with the untreated control in Trial 5, but there was not a significant difference in yield between the starter fertilizer treatment with Generate compared with the starter fertilizer treatment without Generate at  $P=0.05$ .

**Table 1. Hybrid, row spacing, planting date, planting population, and previous crop for Generate soil amendment trials in corn and soybeans.**

Exp. No.	Trial	County	Hybrid	Row spacing (in.)	Planting date	Planting population (seeds/A)	Previous crop
130106	1	Sioux	Pioneer P0448	30	5/13/13	32,900	Soybean
130116	2	Lyon	Wensman 9288	30	5/13/13	34,700VR	Soybean
130117	3	Lyon	DKC 5376	30	5/13/13	34,000VR	Soybean
130135	4	Osceola	DKC 4994	30	5/13/13	36,000	Soybean
130127	5	Osceola	Pioneer P0216HR	30	5/13/13	Variable	Soybean
130111	6	Sioux	Pioneer 91Y90	30	5/13/13	150,000	Corn

**Table 2. Yield from microbial Generate trials.**

Exp. No.	Trial	Treatment	Crop	Yield (bu/A)*	P-value
130106	1	Generate @ 1 qt/A @ V6	Corn	227.4 a	0.70
		Control		226.8 a	
130116	2	Generate @ 1 qt/A + 5.1 GPA 32% N preplant	Corn	247.9 a	0.10
		5.1 GPA 32% N preplant		254.5 a	
		Control		255.3 a	
130117	3	Generate @ 1 qt/A + 5.1 GPA 32% N preplant	Corn	232.7 a	0.71
		5.1 GPA 32% N preplant		229.4 a	
		Control		230.7 a	
130135	4	Generate @ 1 qt/A @ V6	Corn	192.5 a	0.36
		Control		190.0 a	
130127	5	Generate @ 1 qt/A +4.75 GPA starter (2.8+6.5+2.1) in furrow	Corn	178.9 a	0.03
		4.75 GPA starter (2.8+6.5+2.1) in furrow		172.9 ab	
		Control		171.7 b	
130111	6	Generate @ 1 qt/A @ V6	Soybean	64.3 a	0.50
		Control		65.9 a	

\*Values denoted with the same letter within a trial are not statistically different at the significance level 0.05.