

# RESEARCH FOR RESULTS



## WIU Field 4-4 Dry Humate Trial 2020

- OVERVIEW:** This trial compares yields on corn planted with SoilBiotics PH K versus a control.
- LOCATION:** Allison Organic Research Farm, 7 miles north of Sciota, IL in southwest Warren County.
- HYBRIDS:** **63T1GH and AM2785**
- PLANTING DATE:** June 3, 2020
- HARVEST DATE:** October 30, 2020
- POPULATION:** **35,500/acre** (except Rep. 5 at 39,000/a).
- FIELD OPERATIONS**
- TIMETABLE:**
- 2019 -**
- 7/30:** Oat/pea crop harvested for grain followed by strong stand of volunteer oats and peas.
  - 8/2:** Oat/pea residue was incorporated and weeds were terminated using a 10' Howard Rotavator with L blades.
  - 9/6:** Goat manure was broadcast at 7.4 tons/a.
- 2020 -**
- 5/8:** Herbruck's pelleted chicken litter (4-3-2) + 7% Ca broadcast @ 2,179 lbs/a.
  - 5/8:** Litter incorporated and weeds were terminated using a 10' wide Howard Rotavator with L blades.
  - 6/2:** Fields were prepped for planting w/a 31' JD field cultivator followed by very shallow tillage w/a 14' McFarlane Incite vertical tillage tool.
  - 6/3:** Hybrids (63T1GH and AM2785) were planted with a 12-row JD air/vac planter (~ 2.5" deep at a population of ~ 35,500 seeds/a, except rep 5 was planted at ~39,000 seeds/a)
  - 6/3:** Reps 2 & 4 received an in-furrow application of SoilBiotics PH K 100 dry humate metered through insecticide boxes (~ 10 lbs/a) @ planting.
  - 6/7:** All plots received blind cultivation with an M&W rotary hoe.
  - 6/17:** All plots received blind cultivation an M&W rotary hoe.
  - 6/25:** All plots received row-crop cultivation @ V3-V4 stage using a modified IH 153 cultivator.
  - 10/30:** All plots were harvested using a JD S660 combine and 6-row head.

2020 Field 4-4: Corn hybrid trial with side-by-side evaluation of PH K 100 dry humate.				
Paired comparisons of corn yields with and without "PH K 100" dry humate in-furrow				
PH K 100 Treatments (All Reps)		Yield (bu/a)*		
Corn Hybrid	Rep	w/ PH K 100	Control	Trt. Yld Increase (bu/a)
63T1GH	2	197.1		
63T1GH	1		187	10.1
AM2785	2	220.2		
AM2785	1		212.1	8.1
63T1GH	4	195.4		
63T1GH	3		197.2	-1.8
AM2785	4	205.5		
AM2785	5		197.8	7.7
Average Yield Increase =				6.0

\*John Deere Operations Center was used to identify and exclude outlier yield points (plot ends and other areas with unusually low yields) resulting in more representative sub-plot data.

**SUMMARY:**

1. Three out of four paired comparisons had higher corn yields where the PH K 100 humate product was applied in-furrow at ~ 10 lbs/a.
2. The second comparison with the treatment yield increase of 8.1 bu/a. contains the most reliable data, due to the uniformity of soil (side-by-side plots away from drainage issues) and uniformity of management (same population).
3. The data from reps 4 and 5 (east side of field) is least reliable due to a higher than optimal population planted in rep 5 and drainage issues affecting both reps 4 and 5.
4. Standard statistical analysis could not be performed due to insufficient randomization and replication of the PH K 100 and control plots, but paired comparisons suggest that PH K 100 had a positive effect on yield.