

2020 Soybean Variety Trials-Yields Summary
Dr. Joel Gruver and Andy Clayton

Conventional Farm Site Description and Research Methods

In 2020, a soybean variety trial consisting of 14 certified organic varieties, sourced from 3 companies, was conducted in block 2 (mapped as Osco silt loam, 2-5% slope) at the WIU Research Farm. The farm is located ~ 2 miles north of Macomb, IL in central McDonough County. In previous years, the trial was replicated at the WIU Allison organic research farm but only the conventional site was planted in 2018, 2019 and 2020.

Four-row wide plots were planted on 6/12 with a John Deere 4-row plot planter at a target rate of 160,000 seeds/a. The plots were arranged in a complete randomized block design with 4 replications. Weed control consisted of a standard non-GMO soybean herbicide program and some weeds were manually removed late in the season.

In addition to evaluating differences in variety yields, 2 of the varieties received a pelletized gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) product from Calcium Products (<https://www.calciumproducts.com/>) called mini SO4. The product was applied in-furrow metered through insecticide boxes (set for maximum rate) at an approximate rate of 20-25 lbs of product/acre.

The middle 2 rows of the 4-row plots (3305: 0'lp'ngpi vj +y gtg'j ctXgugf 'y kj 'c'I rcpgt'O qf gn'M'r mqv'eqo dkg'qp'3317420'

The soybeans harvested from each sub-

The 2nd overall top yielding variety in the trial was Blue River Organic Seed (BROS) 30C8, which yielded 61.8 bu/a (see table 1). According to Blue River Organic Seed, this variety has very good resistance to soybean cyst nematode and excellent standability.

The top yielding food-grade variety (7th in overall rank) was GHO 291GH, which yielded 57.6 bu/a. The 2nd highest yielding food-grade variety (8th in overall rank) was IA 3051, which yielded 56.9 bu/a (see table 1). It is a public variety and is offered by Clarkson Grain.

The gypsum product (mini SO₄) had mixed results. The 350GH control plots (w/o gypsum) averaged 2.1 bu/a higher than the 350GH gypsum plots. In contrast, the 389F.Y gypsum plots averaged 1.5 bu/a higher than the 389F.Y control plots (w/o gyps

