

2016 Organic Soybean Variety Trial



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2016 ORGANIC SOYBEAN VARIETY TRIAL
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In 2016

precision air planter (Edwardsville, KS). The plot design was a randomized complete block with three replications. The treatments were 10 varieties that ranged in maturity group from 0.8 to 1.8. The plots were weeded by hand, using hoes, and mechanical cultivation.

Table 3. Organic soybean variety trial specifics for Alburgh, VT, 2016.

	Borderview Research Farm Alburgh, VT
Soil types	Benson rocky silt loam, 3% slope
Previous crop	Corn
Tillage operations	Moldboard plowed and disked
Plot size (feet)	5 x 20
Row spacing (inches)	30
Replicates	3
Starter fertilizer (lbs ac ⁻¹)	200 lbs ac ⁻¹ 10-20-

RESULTS

Weather data was recorded with a Davis Instrument Vantage PRO2 weather station, equipped with a WeatherLink data logger at Borderview Research Farm in Alburgh, VT. Missing precipitation data from 17-Aug through 31-Oct was supplemented using data provided by the NOAA from Highgate, VT. May through September was unusually dry, accumulating 7.27 inches less rain than in a usual year (Table 4). Despite the lack of rain, June and July were close to the average temperature. However, late summer and early fall were hotter than the average. Overall, there were an accumulated 2708 Growing Degree Days (GDDs) this season, approximately 302 more than the historical 30-year average.

Table 4. 2016 weather data for Alburgh, VT.

Alburgh, VT	May
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Table 6. Harvest characteristics of organic soybean varieties – Alburgh, VT, 2016.

Variety	Company	Relative maturity	Harvest moisture %	Test Weight lbs bu⁻¹	Yield @
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DISCUSSION

It is important to remember that the results only represent one year of data. 2016 was a challenging growing season due to lack of rain. Soybeans require a lot of water to grow well, however these soybeans performed very well given the suboptimal growing conditions. The plants were very bushy and dense and did not appear to be largely affected by the lack of rain.

It is interesting to note the presence of downy mildew on these soybeans, which was confirmed by the UVM Plant Pathologist. The main transport mechanism of downy mildew is water; since there was very little rain this season, it seemed unlikely that this pathogen would be so widespread. While there was little rain, the plants may have been able to effectively trap moisture due to their bushy stature. The presence of downy mildew did not appear to affect harvest yield or quality, but in a year with more precipitation, its presence may have more severe consequences.

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