

# **Blodgett Farms 2018 Soybean Grain Yield Report**

Northwest New York Dairy, Livestock, and Field Crops Team (NWNYS), Cornell Cooperative Extension and Nutrient Management Spear Program (NMSPP), Cornell University

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## **Project Summary**

In the past year, work has focused on soybean yield data as part of a regional project to evaluate soil type-specific yield potentials on individual farms and to develop a yield potential database for soybeans, which currently does not exist. Yield monitor data allow for the evaluation of both spatial and temporal yield variability for all fields, soil types, and management zones within a specific farm. This information will help identify areas of high yield potential, areas of stable yield versus variable yield over time. The latter is useful for the development of management zones that can lead to increased yield and yield stability over time. When three years or more of data are available, the yield data can then be used to develop yield stability maps for farmers for improvements in nutrient management.

This report shows the yield for (1) the farm per year of data submitted, (2) each of the fields for which we received yield records in the current year, and (3) yields per soil type within a field (current year as well). Calculated acres per field were derived from actual cleaned data points and hence will not match with the overall field acres based on the boundary file. Yield data are then grouped by soil type to generate “frequency distributions or histograms” so averages per soil type can be determined.

We are grateful for your submission of farm yield data to us for the purpose of creating a yield potential database for soybean. Your data are added to a larger and growing database of yield values for specific soil types and once we have sufficient amounts of yield data, yield potentials per soil type can be derived. This project will be strengthened by large participation by farmers across the state and is expected to grow in size over time as funding is secured and more farms participate.

## 2018 Yield Data Summary

Yield monitor soybean data from 21 fields harvested in 2018 were analyzed. The tables and figures that follow present annual yield (bu/acre) at the whole farm level; yield at the field level and soil type within field level (presented in Appendix I and II); and yield at soil type level within the farm (presented in figure at the end). In Appendix II, predominant or major soil for a particular field is the one with the largest area shown in the last column.

In total, 496 acres were analyzed in 2018, based on the whole field dataset that we received. Once headlands were removed, 399 acres remained. Because fields vary greatly in size, an area weighted soybean grain yield was calculated to represent the whole farm yield value. Based on the whole field dataset for the farm, the area weighted average farm yield was 63.4 bu/acre (whole fields including headlands) and 65.6 bu/acre (whole field excluding headlands). Yield on a per field basis ranged from 41.8 to 74.8 bu/acre for WF and from 44.0 to 76.1 bu/acre for WFNH.

Table 1: 2018 Soybean grain yield (bu/acre) and area summary for the whole farm. Area weighted averages across 21 fields. WF=Whole field with headlands. WFNH=Whole field without headlands.

Year	Average yield WF	Area WF	Average yield WFNH	Area WFNH	Headland impact on WF average yield (WF-WFNH)	Area headland
	bu/acre	acres	bu/acre	acres	bu/acre	acres
2018	63.4	496	65.6	399	-2.2	97

Appendix I.

2018 Soybean grain yield (bu/acre) and area summary by field. WF=Whole field with headlands. WFNH=Whole field without headlands included.

Field	Area (as planted)	Yield WF	Area WF	Yield WFNH	Area WFNH	Yield Difference (WF minus WFNH)	Area Head- land
	acres	bu/acre	acres	bu/acre	acres	bu/acre	acres
Cancanan Farm_CF-1		70.2	71.7	73.2	61.6	-2.9	10.1
Blodgetts Clark 1 ALF		60.3	15.8	62.2	11.5	-1.9	4.3
Blodgetts Clark 2 ALF		66.5	8.7	67.7	7.1	-1.2	1.5
Blodgett Clark 3		59.9	8.6	61.3	6.0	-1.4	2.6
Blodgett 2018 soybean Clark 4 ALF		64.1	8.5	67.2	4.8	-3.1	3.6
Conn Rd. 6230_CR-1		69.9	16.7	71.0	12.2	-1.1	4.5
Conn Rd. 6230_CR-2		66.5	20.7	68.7	15.9	-2.2	4.7
Conn Rd. 6230_CR-3		62.7	14.7	66.3	11.0	-3.7	3.7
Dewitt Farm 6230_DE-5		64.3	28.0	66.4	22.3	-2.1	5.6
Dewitt Farm 6230_DE-6		63.3	56.6	64.5	49.8	-1.2	6.7
Dewitt Farm 6230_DE-6		64.9	57.0	65.9	52.4	-1.0	4.6
Blodgett Gardner GAR 1 2018 ALF		47.9	20.0	49.5	16.3	-1.5	3.7
Peck Farm 6230_PF-1		70.6	27.8	72.7	22.6	-2.2	5.2
Peck Farm 6230_PF-3		73.0	12.7	75.3	7.8	-2.3	4.9
Peck Farm 6230_PF-4		74.8	40.5	76.1	32.1	-1.4	8.4
Scott_SC-2		61.4	8.9	64.9	5.6	-3.6	3.2
Tenny Farm_TE-1		45.7	13.2	53.1	8.5	-7.5	4.7
Wiggins Farm WF-2a		50.8	9.7	52.3	6.9	-1.5	2.8
Wiggins Farm WF-2b		46.0	6.9	49.5	3.9	-3.5	2.9
Wiggins Farm WF-3		41.8	12.8	44.0	9.6	-2.1	3.2
Wiggins Farm WF-6		51.6	36.7	54.2	31.1	-2.6	5.6

Appendix II.

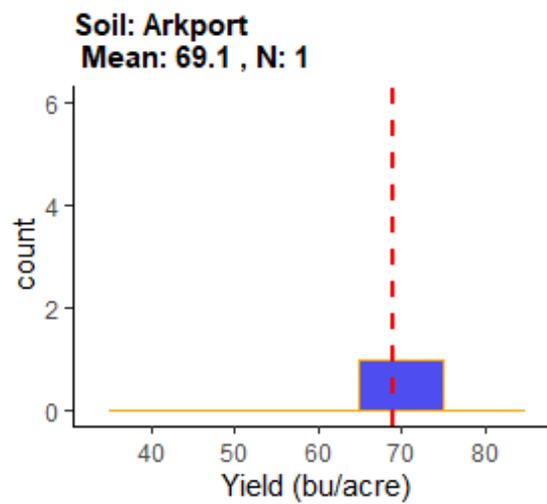
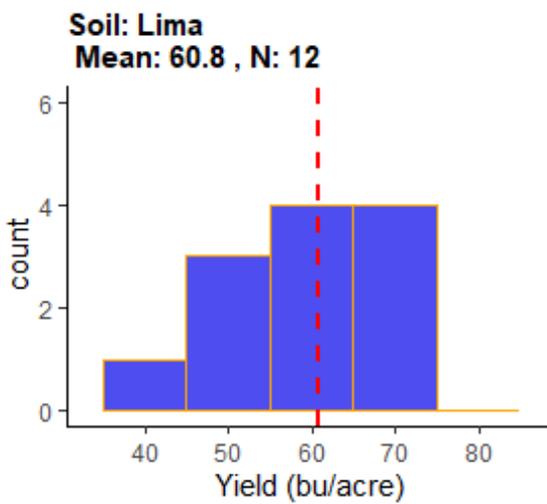
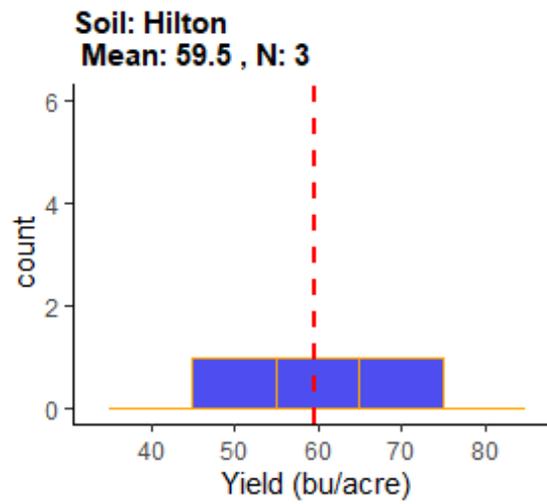
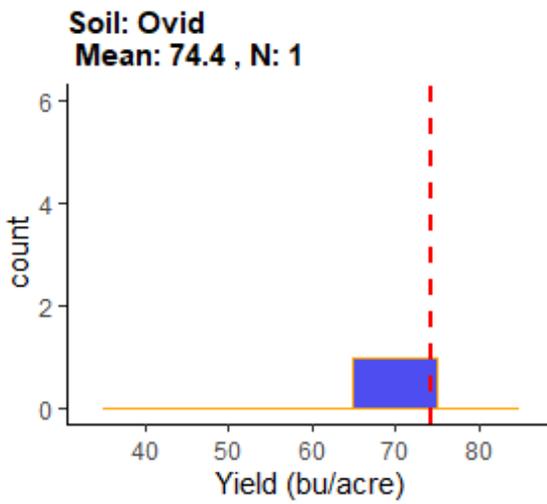
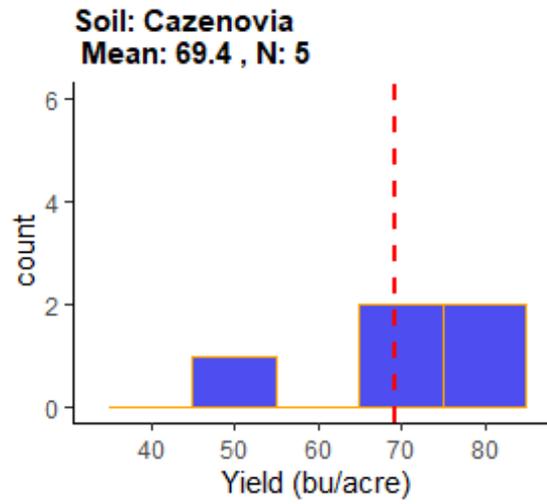
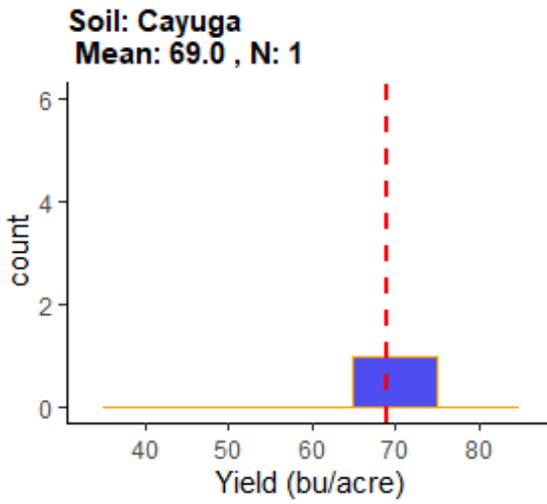
2018 Soybean grain yield (bu/acre) by soil type. Predominant soil type of each field is also listed in the table.

Field	Soil type	Predominant soil type	Yield soil type bu/acre	Area soil type acres
Cancanan Farm_CF-1	Cayuga	Cayuga	69.0	37.4
Cancanan Farm_CF-1	Cazenovia	Cayuga	73.8	15.4
Cancanan Farm_CF-1	Ovid	Cayuga	74.4	8.8
Blodgetts Clark 1 ALF	Hilton	Lima	56.4	0.6
Blodgetts Clark 1 ALF	Lima	Lima	62.5	10.9
Blodgetts Clark 2 ALF	Lima	Lima	67.7	7.1
Blodgett Clark 3	Lima	Lima	61.3	6.0
Blodgett 2018 soybean Clark 4 ALF	Lima	Lima	67.2	4.8
Conn Rd. 6230_CR-1	Arkport	Schoharie	69.1	1.9
Conn Rd. 6230_CR-1	Schoharie	Schoharie	71.4	9.7
Conn Rd. 6230_CR-2	Collamer	Collamer	67.3	6.8
Conn Rd. 6230_CR-2	Elnora	Collamer	70.3	4.4
Conn Rd. 6230_CR-2	Schoharie	Collamer	72.5	4.7
Conn Rd. 6230_CR-3	Odessa	Dunkirk	58.7	2.7
Conn Rd. 6230_CR-3	Dunkirk	Dunkirk	68.6	6.4
Conn Rd. 6230_CR-3	Honeoye	Dunkirk	71.6	1.7
Dewitt Farm 6230_DE-5	Lima	Lima	67.5	21.3
Dewitt Farm 6230_DE-5	Ontario	Lima	64.6	0.9
Dewitt Farm 6230_DE-6	Odessa	Lima	60.6	11.3
Dewitt Farm 6230_DE-6	Hilton	Lima	67.8	7.3
Dewitt Farm 6230_DE-6	Lima	Lima	64.1	80.1
Dewitt Farm 6230_DE-6	Ontario	Lima	61.3	3.6
Blodgett Gardner GAR 1 2018 ALF	Cazenovia	Cazenovia	48.4	12.2
Blodgett Gardner GAR 1 2018 ALF	Hilton	Cazenovia	54.4	2.0
Blodgett Gardner GAR 1 2018 ALF	Eel	Cazenovia	49.1	1.5
Blodgett Gardner GAR 1 2018 ALF	Palmyra	Cazenovia	43.3	0.5
Peck Farm 6230_PF-1	Cazenovia	Cazenovia	72.8	22.3
Peck Farm 6230_PF-3	Cazenovia	Cazenovia	75.6	6.2
Peck Farm 6230_PF-3	Lima	Cazenovia	74.7	1.2

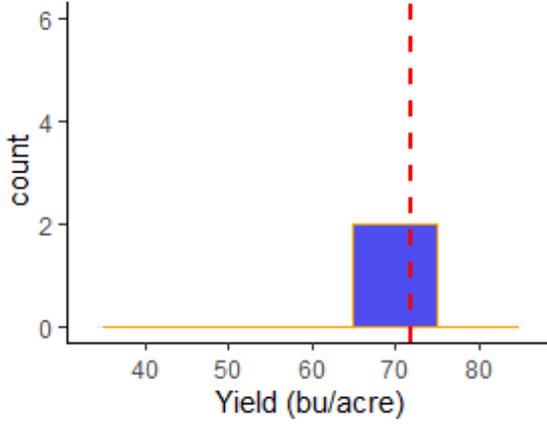
Field	Soil type	Predominant soil type	Yield soil type	Area soil type
			bu/acre	acres
Peck Farm 6230_PF-3	Ontario	Cazenovia	72.9	0.4
Peck Farm 6230_PF-4	Cazenovia	Cazenovia	76.2	32.0
Scott_SC-2	Lima	Lima	64.9	5.6
Tenny Farm_TE-1	Odessa	Odessa	53.1	8.3
Wiggins Farm WF-2a	Lima	Lima	52.3	6.7
Wiggins Farm WF-2b	Lima	Lima	49.5	3.9
Wiggins Farm WF-3	Lima	Lima	44.0	9.6
Wiggins Farm WF-6	Lima	Lima	54.0	23.7
Wiggins Farm WF-6	Honeoye	Lima	54.7	7.4

Appendix III.

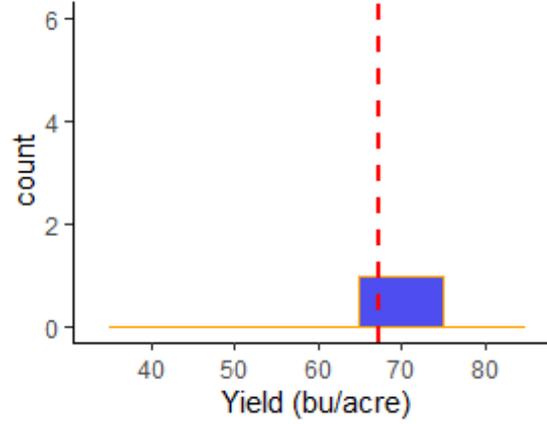
Multi-year histograms of yield for each soil type represented on the farm.



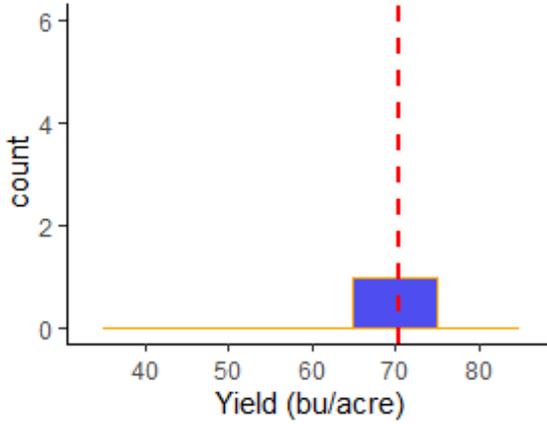
**Soil: Schoharie**  
Mean: 72.0 , N: 2



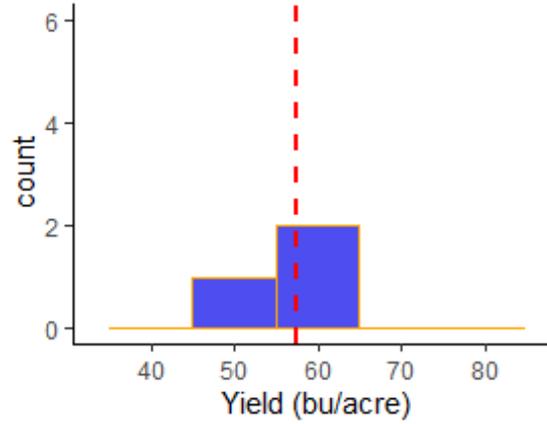
**Soil: Collamer**  
Mean: 67.3 , N: 1



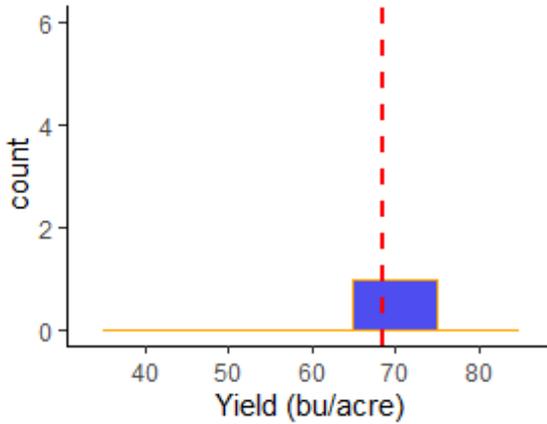
**Soil: Elnora**  
Mean: 70.3 , N: 1



**Soil: Odessa**  
Mean: 57.5 , N: 3



**Soil: Dunkirk**  
Mean: 68.6 , N: 1



**Soil: Honeoye**  
Mean: 63.2 , N: 2

