

Organic Soybean Variety Trial, Comstock—Clay County

Cooperator: Lynn Brakke
Nearest Town: Comstock
Soil Type: Fargo Clay
Tillage: Fall chiseled, spring cultivated
Previous Crop: Wheat
Planting Date: June 2, 2003
Seeding Rate: 237,600 seeds per acre
Row Width: 22 inches
Fertilizer: nothing applied
Weed Control: Soybean was row-crop cultivated June 20, July 3, and July 17 and hand weeded July 24.
Harvest Date: October 6, 2003
Experimental Design: Randomized complete block with 4 replications

Purpose of Study:

To evaluate yield, protein and oil content, test weight, crop height, population, maturity, and lodging responses of different organic soybean varieties.

Results:

There were significant yield differences. The specialty natto beans yielded lower than regular soybeans. Nornatto and Nannonatto had significantly higher lodging scores compared with other varieties. Some of the shorter varieties early in the season were less competitive with weeds and required more hand weeding.

Variety	Yield (bu/a)	Test Weight (lb/bu)	Protein ¹ (%)	Oil ¹ (%)	Height ² 17-Jul-03 (inches)	Height ³ 22-Sep-03 (inches)	Population ⁴ (plants/a)	Maturity ⁵ (1-5)	Lodging ⁶ (1-6)
Viper	32.5	58.8	34.9	18.8	10.3	25.4	214,000	1.3	1.0
Enterprise	32.5	58.1	33.3	19.1	9.8	24.8	199,000	2.8	1.0
OF41	32.0	57.3	32.3	19.9	10.0	24.0	213,000	1.0	1.0
Atwood	31.9	57.0	32.6	20.3	11.0	22.9	212,000	1.0	1.0
S 08-80	31.6	58.3	33.6	19.0	11.0	26.1	234,000	2.5	1.0
S12-C2	31.4	58.2	34.2	18.3	10.5	23.6	190,000	2.3	1.0
OF94	31.4	58.0	32.8	20.0	10.8	22.9	217,000	1.0	1.5
Surge	31.3	58.7	34.5	19.2	9.8	23.0	203,000	1.8	1.0
S14-P6	31.1	58.6	32.5	19.0	10.0	23.5	192,000	3.5	1.0
Emerson	30.9	57.7	32.3	20.8	12.3	24.4	237,000	1.0	1.0
Minori	30.4	58.2	34.7	18.2	10.8	24.1	218,000	4.0	1.5
Bygland	30.2	57.2	34.2	19.4	10.0	24.0	224,000	1.0	1.5
Panther	29.9	58.3	36.9	18.2	11.5	23.8	203,000	1.3	1.0
1A24	29.7	58.8	33.7	17.6	11.8	25.3	218,000	5.0	1.0
1F53	29.1	59.1	32.0	18.8	10.8	25.3	209,000	4.0	1.0
1F11	29.0	58.5	32.4	19.5	8.8	24.1	178,000	2.8	1.0
MN0301	27.8	57.4	31.6	20.4	9.8	23.5	159,000	1.5	1.0
Nornatto	27.6	58.0	32.6	17.2	11.8	25.8	175,000	1.0	4.0
MN0201	27.6	59.0	36.6	18.0	10.3	26.4	207,000	1.0	2.3
O332	26.0	57.9	34.3	19.1	8.3	24.3	226,000	1.3	1.5
Carlton	25.5	58.2	34.6	18.7	11.3	23.4	171,000	1.0	1.5
OF84	25.5	57.6	32.1	19.7	8.8	20.8	174,000	1.0	1.5
Bravado	23.8	58.0	32.8	19.2	9.3	23.4	184,000	1.0	2.0
Nannonatto	23.6	58.8	34.2	16.7	8.0	22.4	213,000	1.0	4.0
Colibri	22.7	58.7	32.6	17.7	7.0	22.4	223,000	1.0	2.0
LSD (0.05)	4.2	0.5	—	—	2.4	NS	30,000	0.5	1.5

¹ Protein and oil data from composite sample, no LSD available.

² Early season height provides a measure of competitiveness. ³ Height at end of the season.

⁴ Stand counts were taken June 18, 2003.

⁵ Maturity score taken September 22 provides an indication of relative maturity: 1= plants brown,

2 = still few leaves on the plant, stem and pods brown, 3 = yellow leaves on the plant, stem and pods start to brown,

4 = leaf color yellow, still attached to the plant, and 5 = leaf color green and yellow.

⁶ Lodging score taken September 22, 1 = no lodging, 3 = some lodging, and 6 = substantial lodging.