

The 2015 University of Delaware Variety Trial Notes

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Methodology

The seeding rate was 5 seeds/ft row (174,200 seeds/A) on 15" row spacing. Each entry consisted of four replications planted in a randomized complete block.

Reported moisture column is moisture at harvest. All yields were converted and reported at 13% moisture. Reported test weight, lodging, plant height and maturity date is the average of four reps.

Lodging was scored on a scale of 1-5:

- 1.0= almost all plants erect
- 2.0= either all plants leaning slightly, or a few plants down
- 3.0= either all plants leaning moderately (45 degree angle), or 25-50% down.
- 4.0= either all plants leaning considerably, or 50-80% down
- 5.0= all plants down

Maturity rating was based on 50% pod color change (R7-R8 growth stage).

Varieties used as check comparisons were Asgrow 3533, 4633 and Pioneer P39T67R, P48T53R, for group III and IV respectively.

Rainfall and Average monthly temperature

	Georgetown		Dagsboro*		Marydel**		Middletown***	
	Rainfall	Avg temp	Rainfall	Avg temp	Rainfall	Avg temp	Rainfall	Avg temp
May	2.47	67.4	1.24	66.5	2.56	66.3	1.59	67.4
June	5.9	73.5	6.58	73.1	4.45	72.8	12.24	72
July	2.95	76.2	4.46	75.8	2.95	75.4	2.06	75.4
Aug	3.25	73.9	4.12	73.7	1.81	73.6	2.27	72.9
Sept	3.37	71.2	4.05	70.9	1.5	70.4	2.92	70.1

*Data is from DEOS site, nearest station Selbyville

** Data is from nearest station, Sandtown.

***Data taken from nearest station, Townsend.

http://www.deos.udel.edu/data/agirrigation_retrieval.php

Middletown location (Dryland)
New Castle County

Special thanks and appreciation is extended to Baker Farms for their helpful assistance and accommodation to our research requirements at this location.

The Middletown plot was located at the Marl Pit road research area just north of Middletown.

Latitude: 39°28'50.41"N
Longitude: 75°42'29.33"W

Soil: Silt loam. RdA, Reybold-Queponco complex, 0-2 percent slopes. A detailed description may be found in the NRCS web soil survey.

Planted	5/22/2015
Harvested	10/21/2015

Herbicides:

Preemergence; Zidua and Sencor @ 2 oz./A.
Postemergence: Roundup 1 qt./A

Summary: Yields were variable due to heavy rainfall in June (12+ inches) and a hot, dry August and September. With the exception of June, rainfall was below average. The range in yield was too variable to report for the Group IV and double cropped varieties. Average yield for group III trial was 65 bu/a. Average yield for the group IV's by variety ranged from a high of 79 bushels/acre to a low of 39 bushels/acre with a plot average of 60.4 bushels/acre. There were no significant problems with lodging at this location.

Double crop soybeans (Group III) at Middletown averaged 25 bushels/acre. This plot was impacted by heavy rain immediately after planting resulting in soil crusting and poor emergence. Due to hot and dry August and September, yield ranges for the Middletown double crop test were too variable to report with confidence. Double cropped soybeans (Group IV) averaged 36.7 bushels/acre. Average yield ranged from 44-28 bushels/acre. All lodging ratings for the double crop (IV and III) were a score of 1 (almost all plants erect).

Marydel Location (Dryland)
Kent County

Gratitude and appreciation is extended to Thomas Family Farms for their assistance.

Latitude: 39° 5'30.71"N

Longitude: 75°43'36.95"W

Soil: Mullica sandy loam, MmA. A detailed soil description may be found at the NRCS Web soil survey.

Planted 5/18/15
Harvested 10/20/15

Herbicides:

preemergence Zidua @ 2 oz./A + Valor @ 1 oz./A.
postemergence Roundup 1 qt./A + Reflex (fomesafen) @ 1 pt./A + Mn foliar 1 Qt./A + Wx choice 1 qt./100 gallons 6/17/15.

The trial received heavy rainfall immediately after planting resulting in some soil crusting and surface compaction. Rainfall was below average except for June. There were no statistical differences for yield in the Group III trial which averaged 56 bu./a. The Group IV trial averaged 63 bu./a.

Dagsboro Location (High Organic Matter Soil), Dryland
Sussex County

Special thanks to Murray Farms for their cooperation and assistance.

This plot was located a few miles west of Dagsboro.

Latitude: 38°32'12.00"N
Longitude: 75°17'17.68"W

Soil: mucky sandy loam. Mullica-Berryland complex. MuA. A detailed soil description may be found at the NRCS Web soil survey.

Planted- 5/27/15
Harvested 10/22/15

Herbicides: preemergence, Zidua + Sencor @ 2 oz./A.
Postemergence, Roundup @ 1 qt./A + Warrior @ 2 ounces/A 7/10/15

This plot had excellent growing conditions and high yields. Rainfall was uniform throughout the summer in contrast to both Middletown and Marydel locations. There were no statistical differences for the Group III test which averaged 89 bu/a. The group IV trial averaged 87 bu/a.

Georgetown Location (Irrigated)
Sussex County

Special thanks to farm manager, Brian Hearn, and farm staff; Ward Harris, William Hawkins, George Willey, and Kyle Mitchell for their assistance and helpful cooperation.

The Georgetown location was conducted on the University of Delaware Thurman Adams research farm located on County Seat Hwy five miles west of town. There were five irrigated trials consisting of:

Liberty Link variety trial
Group III, IV full season variety trial (glyphosate resistant)
Group III and IV late season variety trial (glyphosate resistant)

Latitude: 38°37'59.76"N
Longitude: 75°27'25.77"W

Soil: loamy sand. RoA, Rosedale loamy sand. A detailed soil description may be found at the NRCS Web soil survey.

Full season plots (Group III, IV and Liberty Link) were supplemented with 8" total over the entire growing season. The plots averaged 68 bu/a for group III maturity, 65 bu/A for group IV maturity, and 74 bu/a for the Liberty Link trial which consisted of groups III, IV and V. Due to the small amount of varieties entered for maturity group III and V they are presented in the report as one combined trial. Some decates stem borer resulted premature stem breakage and field loss with wide variability among plots. Heavy rains in early October just prior to harvest caused field loss and contributed to the variability.

Full Season and LL trials planted 5/14/15

Group III harvested 10/12/15

Group IV harvested 10/24/15

Liberty Link trial was harvested 11/5/15 group III maturity, and 11/14/15 for group IV and V.

Double crop soybean notes

Planted 7/1/15

Harvested 11/14/15

Herbicides: preemergence - Zidua and Sencor both @ 2 ounces/A

Postemergence: Roundup 1 qt/A, Besige insecticide @ 10 oz./A, + Mn foliar (7%) @ 2 qt/100 gallons
8/18/15

The double crop trial was impacted by heavy rains immediately after planting resulting in soil crusting and uneven emergence. Group III maturity averaged 35 bu/A. Group IV maturity averaged 40 bu/A.