



## 2014 Pennsylvania Soybean Performance Report

Soybean tests are conducted annually to provide information regarding the performance of soybeans grown in Pennsylvania. This report summarizes performance results for 2014. The shorter season varieties (Groups II and III) were tested at the Russell E. Larson Agricultural Research Center at Rock Springs in Centre County and on a private farm near Martinsburg in Blair County. The longer maturing varieties (Groups III and IV) were tested at the Southeast Agricultural Research and Extension Center located in Lancaster County. Both Glyphosate-resistant (Roundup Ready) varieties as well as non-Roundup Ready varieties were tested at the Centre and Lancaster County locations. At the Blair County location, only Roundup Ready varieties were tested. The following soybean variety trials were implemented for the 2014 season: Early (MG 3.3 and earlier) full-season Roundup Ready in Lancaster County; Late (MG 3.4 and later) full-season Roundup Ready in Lancaster County; full-season non-Roundup Ready in Lancaster County; Double-Crop in Lancaster County; Early (MG 3.0 and earlier) full-season Roundup Ready in Centre and Blair Counties; late (MG 3.1 and later) full-season Roundup Ready in Centre and Blair Counties; full-season non-Roundup Ready in Centre County. Both non-Roundup Ready trials had two commonly grown Roundup Ready entries which were used as a check for comparison against the other varieties. Individual trial results were measured separately and therefore it is highly recommended that comparisons among varieties be limited to within-trial comparisons and not across the different trials.

### Procedures

The private seed company entries in this test were those chosen by the companies for testing. The plots in all locations had 5 rows, each planted 20 feet long. Rows were spaced 15 inches apart. Each plot was trimmed to 18 feet and the 3 middle rows were harvested. The trials in Lancaster and Centre Counties were planted in tilled ground and the Blair County trial was no-tilled. The Lancaster County full-season Roundup Ready trials were planted on May 15<sup>th</sup> and the non-Roundup Ready trial was planted on May 28<sup>th</sup>. The Lancaster County double-crop trial was planted on June 24<sup>th</sup>. The Blair County trials were planted on May 23<sup>rd</sup> and the Centre County trials were planted on June 4<sup>th</sup>. The seeding rate for all the full-season trials was 170,000 seeds per acre and the double crop trial was planted at 220,000 seeds per acre. Varieties in each trial were replicated four times.

The following observations were made for some or all of the trials:

*Yield* was based on 60 lbs. per bushel and adjusted to 13 percent moisture.

*Maturity* is the date when approximately 95 percent of pods had reached their mature color.

*Height* is the average length of plants from the ground to the tip of the main stem.

*Lodging* was rated in all tests as follows:

- 1 = almost all plants erect.
- 2 = all plants leaning slightly or a few plants down.
- 3 = all plants leaning moderately, or 25-50 percent of the plants down.
- 4 = all plants leaning considerably, or 50-80 percent of the plants down.
- 5 = almost all plants down.

*Crude Protein (CP)* is expressed as a percent of the soybean at 13% moisture.

*Oil* is expressed as a percent of the soybean at 13% moisture.

## **Interpretation of results**

Variety performance differences are caused partially by genetic differences and partially by soil variation and other environmental variations which cannot be adequately controlled. Thus, small differences in performance may have no significance. Multiple-year averages are a more valid indication of the performance of a specific variety than are data for a single year. Statistical procedures have been used for the most important characteristics to allow meaningful comparisons of variety averages at a particular location. A standard least significant difference (LSD) value is provided for comparing varieties. Any difference between two variety averages that exceeds the LSD value is considered significant and not simply a result of uncontrolled environmental variation.

Traditionally, LSD values have been calculated at the 0.05 level of confidence, which means that when differences between varieties exceed the LSD, we can be 95% confident that the differences are not due to chance. The downside of this approach is that it leads to the conclusion that many varieties in the test have similar yield performance, when there really may be differences in the yield potential. Many universities have switched to a less conservative 0.25 level for the LSD, thus reducing the chance of concluding that varieties are not different, when a true difference exists among the lines. In this report, we present the LSD values at both the 0.05 level and the 0.25 level for your consideration.

The value of coefficient of variation (CV) is a measure of relative variation useful in evaluating the precision achieved in an experiment. In grain and forage trials, for example, the CV value for yield is often between 5 and 15 percent. Confidence in the reliability of the experimental results declines as the CV value increases. Uncontrollable or immeasurable variations in soil fertility, soil drainage, and other environmental factors contribute to increased CV values.

## **Results**

During the 2014 season, the average yield of the 31 entries in the Centre County Roundup Ready Late MG trial was 58.7 bushels per acre, which was nearly identical to the 2013 yields in the same trial. The Early MG trial consisted of 24 entries and averaged 53.9 bushels per acre, which was slightly higher than 2013. The non-Roundup Ready trial in Centre County averaged 55.8 bushels per acre which was slightly lower when compared to 2013.

In Blair County, the Roundup Ready Late MG trial, which consisted of 31 entries, averaged 59.9 bushels per acre. The Roundup Ready Early MG trial in Blair County had 23 entries and had an identical average yield compared to the Late MG trial, of 59.9 bushels per acre. These yields were up slightly from the 2013 yields in Blair County. Growing conditions at the Blair County trials were similar to the Centre County trials.

Yields in the 2014 Lancaster County Roundup Ready Late MG trial, consisting of 45 entries, averaged 54.5 bushels per acre. The Early MG trial, which had 20 entries, averaged 49.3 bushels per acre. The non-Roundup Ready trial tested 13 varieties and averaged 52.0 bushels per acre. Yields in all three full-season trials at Lancaster, were down considerably when compared to 2013, particularly the Early MG and the non-RR trials, which were reduced by more than 20 percent. The double-crop trial, which consisted of 22 entries, averaged 54.8 bushels per acre.

Wetter than normal conditions were prevalent at all three trial locations through much of the 2014 season. This was especially true at the Blair and Centre County trials, where May and June produced almost 12 inches of rain and delayed planting until May 23<sup>rd</sup> and June 4<sup>th</sup> respectively. One exception to the wet conditions was at the Lancaster County site, where the month of August only brought 1.4 inches of rainfall. The month of October was wetter than normal and delayed harvests at all three trial locations.

## Source of Entries

Company	Brand	Company	Brand
Channel Bio Corp. <a href="https://www.channelbio.com">https://www.channelbio.com</a>	Channel Brand	Mid Atlantic Seeds, Inc. <a href="mailto:Mas-office@comcast.net">Mas-office@comcast.net</a>	Mid Atlantic
Chemgro Seeds <a href="http://chemgroseeds.com">http://chemgroseeds.com</a>	Chemgro	Mycogen Seeds <a href="http://mycogen.com">http://mycogen.com</a>	Mycogen
Doebler's PA Hybrids Inc. <a href="http://doeblers.com">http://doeblers.com</a>	Doebler's	New Covenant Farm LLC <a href="mailto:jdcriss@hotmail.com">jdcriss@hotmail.com</a> Seeds	Crissinger
Dyna-Gro Seed (CPS) <a href="http://dynagroseed.com">http://dynagroseed.com</a>	Dyna-Gro	Schillinger Genetics <a href="http://emergegenetics.com/">http://emergegenetics.com/</a>	eMerge
Growmark FS <a href="http://home.growmarkfs.com">http://home.growmarkfs.com</a>	Hisoy	Seedway LLC <a href="http://seedway.com/">http://seedway.com/</a>	Seedway
Hubner Seed <a href="https://www.hubnerseed.com">https://www.hubnerseed.com</a>	Hubner	Syngenta Seeds Inc. <a href="http://syngenta.com">http://syngenta.com</a>	NK Brand
		T.A. Seeds <a href="http://taseeds.com">http://taseeds.com</a>	T.A. Seeds

**Table 1. Late Roundup Ready Soybean Variety Performance in Centre County, 2014 (MG 3.1 and later)**

Source	Entry	Seed Treatment	Yield, bu/A	Height (in.)	Maturity Date	Lodging (1-5, 1=best)	Crude		2 Yr Avg. Yield, bu/A (2013-14)	3Yr Avg. Yield, bu/A (2012-14)
							Protein % @ 13% H2O	Oil % @ 13% H2O		
Mycogen Seeds	5N312R2	CruiserMaxx Soybeans	68.6	40	14-Oct	1.5	36.6	17.0	65.1	
NK Brand	NK S35-C3 Brand	CruiserMaxx	64.5	44	15-Oct	2.5	37.3	16.3	61.6	
Dyna-Gro Seed	S32RY95	CruiserMaxx + Vibrance	62.8	42	8-Oct	1.5	37.0	17.0		
Asgrow*	3832		62.6	40	13-Oct	2.0	37.9	16.5		
NK Brand	NK S35-A5 Brand	CruiserMaxx	62.2	43	15-Oct	3.0	38.4	16.7		
Hubner Seed	H34-15R2	Acceleron	62.1	36	9-Oct	2.0	37.5	16.6		
Mycogen Seeds	5N342R2	CruiserMaxx Soybeans	62.1	42	10-Oct	1.0	38.4	16.3	61.2	60.8
Mid-Atlantic Seed	MA3113nRR2		61.7	39	10-Oct	2.0	37.7	16.2		
Channel	3408R2	Acceleron/VOTIVO	61.6	35	10-Oct	2.0	37.8	16.7		
Hisoy	HS 31A03	Cruiser Maxx + Trident	61.6	41	13-Oct	2.5	38.6	16.5	60.1	62.7
Hisoy	HS 37A12	Cruiser Maxx + Trident	61.2	43	15-Oct	2.5	36.7	16.9	61.7	63.3
Hisoy	HS 33A44	Cruiser Maxx + Trident	61.1	40	12-Oct	1.5	37.5	17.1		
Hisoy	HS 35A12	Cruiser Maxx + Trident	60.9	43	10-Oct	2.0	37.9	16.6	59.7	62.9
Mycogen Seeds	5N385R2	CruiserMaxx Soybeans	60.7	38	17-Oct	2.5	37.0	16.4	58.5	
Hisoy	HS 34A16	Cruiser Maxx + Trident	60.7	41	7-Oct	1.0	37.5	16.1	61.5	
Dyna-Gro Seed	S36RY24	CruiserMaxx + Vibrance	60.3	40	12-Oct	3.0	36.8	16.6	59.3	
NK Brand*	S36-B6	untreated	60.2	42	14-Oct	2.5	36.7	17.0		
Chemgro Seeds	C3346R2	Encase	58.8	39	12-Oct	2.5	37.5	17.3	61.3	60.8
Dyna-Gro Seed	34RY36	CruiserMaxx + Vibrance	58.7	40	13-Oct	2.0	38.2	16.5	58.6	61.3
Channel	3607R2	Acceleron/VOTIVO	57.3	42	16-Oct	4.0	39.5	15.6		
T.A. Seeds	TS 3449R2	C250	57.1	41	10-Oct	1.0	37.4	16.1		
Hubner Seed	H32-13R2	Acceleron	57.0	39	13-Oct	2.5	37.6	17.0		
Seedway	SG 3322	CruiserMaxx	56.9	40	13-Oct	2.5	37.3	16.9		
Doebler's PA Hybrids Inc.	RPM® DB3815RR™	DPH Boost	55.5	41	18-Oct	3.0	37.7	17.0		
Chemgro Seeds	C3247R2	Encase	53.4	39	11-Oct	2.0	37.3	15.9	54.9	
Doebler's PA Hybrids Inc.	RPM® DB3315RR™	DPH Boost	52.9	38	12-Oct	1.5	38.6	16.1		
T.A. Seeds	TS 3159R2	C250	52.4	34	8-Oct	1.5	38.7	17.0		
Chemgro Seeds	C3546R2	Encase	52.1	40	8-Oct	2.0	37.4	16.2	52.1	53.9
Mid-Atlantic Seed	MA3689nRR2		51.5	39	15-Oct	3.5	37.3	17.1		
Hubner Seed	H34-11R2	Acceleron	50.6	41	10-Oct	3.0	38.4	15.3		
Chemgro Seeds	C3647R2	Encase	50.2	36	13-Oct	1.5	36.4	17.0	52.9	
<b>Mean</b>			<b>58.7</b>	<b>40</b>	<b>12-Oct</b>	<b>2.2</b>	<b>37.6</b>	<b>16.6</b>	<b>59.2</b>	<b>60.8</b>
<b>LSD (.05)</b>			<b>6.6</b>							
<b>LSD (.25)</b>			<b>3.8</b>							
<b>CV %</b>			<b>8.0</b>							

**Table 2. Early Roundup Ready Soybean Variety Performance in Centre County, 2014 (MG 3.0 and earlier)**

Source	Entry	Seed Treatment	Yield, bu/A	Height (in.)	Maturity Date	Lodging (1-5, 1=best)	Crude		2 Yr Avg. Yield, bu/A (2013-14)	3Yr Avg. Yield, bu/A (2012-14)
							Protein % @ 13% H2O	Oil % @ 13% H2O		
Seedway	SG 3011	CruiserMaxx	62.4	40	12-Oct	3.0	38.2	17.3	56.3	
T.A. Seeds	TS 2849R2S	C250	61.9	37	6-Oct	3.5	38.1	16.1		
Dyna-Gro Seed	S26RS75	CruiserMaxx + Vibrance	58.8	36	27-Sep	2.5	37.1	17.8		
NK Brand	NK S27-J7 Brand	CruiserMaxx	58.3	40	8-Oct	2.5	37.6	17.4		
Channel	2808R2	Accelaron/VOTIVO	57.8	36	3-Oct	1.5	37.0	17.4		
Hubner Seed	H28-15R2	Accelaron	56.2	36	4-Oct	1.0	37.3	17.4		
Hubner Seed	H30-13R2	Accelaron	55.7	37	10-Oct	3.5	36.5	17.0	53.0	
Mycogen Seeds	5N284R2	CruiserMaxx Soybeans	55.2	39	4-Oct	2.0	40.1	15.8	49.7	55.3
Channel	2908R2	Accelaron/VOTIVO	54.9	36	4-Oct	3.5	37.8	17.1		
Doebler's PA Hybrids Inc.	RPM® DB2812RR™	DPH Boost	54.6	33	2-Oct	1.0	34.6	19.3	53.3	
Dyna-Gro Seed	S29RY05	CruiserMaxx + Vibrance	54.5	37	30-Sep	2.5	37.4	17.0		
Dyna-Gro Seed	S29RY74	CruiserMaxx + Vibrance	53.4	41	5-Oct	2.0	37.5	17.1	49.8	
Hisoy	HS 30A44	Cruiser Maxx + Trident	53.3	33	5-Oct	1.5	37.5	17.4		
Channel	3008R2	Accelaron/VOTIVO	53.1	37	9-Oct	2.5	38.0	16.3		
Seedway	SG 2813	CruiserMaxx	53.0	35	29-Sep	3.5	36.3	17.7	53.0	
Doebler's PA Hybrids Inc.	RPM® DB2612RR™	DPH Boost	52.5	33	28-Sep	2.5	35.6	18.2	52.1	
NK Brand	NK S29-G4 Brand	CruiserMaxx	52.3	38	4-Oct	3.0	36.2	18.5		
T.A. Seeds	TS 2659R2S	C250	51.4	35	28-Sep	2.5	36.9	17.6		
Chemgro Seeds	C2747R2	Encase	50.9	33	27-Sep	2.5	36.6	17.3	48.8	
Hisoy	HS 24A44	CruiserMaxx + Trident	50.0	37	1-Oct	1.5	35.0	19.0		
Hisoy	HS 28A12	CruiserMaxx + Trident	49.4	36	30-Sep	3.5	37.0	17.7	50.3	54.3
NK Brand	NK S28-A2 Brand	CruiserMaxx	48.7	34	5-Oct	4.0	37.8	17.2		
Seedway	SG 3036	CruiserMaxx	48.7	32	7-Oct	2.5	37.4	17.1		
Mycogen Seeds	5N292R2	CruiserMaxx Soybeans	46.9	39	6-Oct	1.0	38.0	17.1	46.7	
<b>Mean</b>			<b>53.9</b>	<b>36</b>	<b>3-Oct</b>	<b>2.5</b>	<b>37.1</b>	<b>17.4</b>	<b>51.3</b>	<b>54.8</b>
<b>LSD (.05)</b>			<b>6.5</b>							
<b>LSD (.25)</b>			<b>3.8</b>							
<b>CV %</b>			<b>8.5</b>							

**Table 3. Late Roundup Ready Soybean Variety Performance in Blair County, 2014 (MG 3.1 and later)**

Source	Entry	Seed Treatment	Yield, bu/A	Height (in.)	Lodging (1-5, 1=best)	Crude		2 Yr Avg. Yield, bu/A (2013-14)	3 Yr Avg. Yield, bu/A (2012-14)
						Protein % @ 13% H2O	Oil % @ 13% H2O		
Hisoy	HS 35A12	Cruiser Maxx + Trident	66.0	41	1.5	36.3	17.7	62.0	64.5
NK Brand*	S36-B6	untreated	64.6	43	1.0	36.6	17.1		
Chemgro Seeds	C3346R2	Encase	64.3	40	1.5	36.0	17.9	58.3	61.6
Hisoy	HS 37A12	Cruiser Maxx + Trident	63.3	44	1.5	36.5	17.5	58.3	62.1
Hisoy	HS 33A44	Cruiser Maxx + Trident	63.0	42	2.0	36.4	17.8		
Seedway	SG 3322	CruiserMaxx	62.9	41	1.5	35.7	18.4		
Hisoy	HS 31A03	Cruiser Maxx + Trident	62.9	40	2.5	36.9	17.9	60.0	62.4
Hisoy	HS 34A16	Cruiser Maxx + Trident	62.6	41	1.5	37.0	16.8	57.9	60.3
Seedway	SG 3413	CruiserMaxx	62.4	42	1.5	36.6	17.3		
Mycogen Seeds	5N342R2	CruiserMaxx Soybeans	62.3	41	2.5	37.7	16.9	60.8	63.7
Dyna-Gro Seed	S32RY95	CruiserMaxx + Vibrance	62.1	38	1.0	36.3	18.1		
T.A. Seeds	TS 3449R2	C250	62.0	43	1.5	36.3	17.1		
T.A. Seeds	TS 3159R2	C250	61.7	33	1.0	37.7	17.7		
NK Brand	NK S35-A5 Brand	CruiserMaxx	60.5	46	1.5	38.1	16.7		
Channel	3408R2	Accelaron/VOTIVO	60.0	37	1.5	36.4	17.7		
Hubner Seed	H32-13R2	Accelaron	60.0	40	2.0	36.1	18.1		
Doebler's PA Hybrids Inc.	RPM® DB3815RR™	DPH	59.1	41	2.5	37.2	16.8		
Doebler's PA Hybrids Inc.	RPM® DB3315RR™	DPH	59.0	38	1.5	36.6	17.3		
Mid-Atlantic Seed	MA3113nRR2		59.0	39	2.5	36.4	17.0		
Mycogen Seeds	5N385R2	CruiserMaxx Soybeans	58.7	41	1.5	37.4	17.1	54.1	
Dyna-Gro Seed	S36RY24	CruiserMaxx + Vibrance	58.4	41	3.0	36.4	17.1	53.4	
Asgrow*	3832		58.3	36	1.5	36.2	17.5		
Hubner Seed	H34-15R2	Accelaron	58.0	37	2.5	36.9	17.0		
NK Brand	NK S34-N3 Brand	CruiserMaxx	58.0	41	1.0	38.2	16.7	56.9	58.9
Chemgro Seeds	C3247R2	Encase	57.7	38	2.5	36.0	17.0	55.2	
Dyna-Gro Seed	34RY36	CruiserMaxx + Vibrance	57.1	40	2.5	37.1	16.9	54.8	60.3
Hubner Seed	H34-11R2	Accelaron	55.8	42	2.5	38.1	15.7		
Chemgro Seeds	C3546R2	Encase	55.6	40	1.0	36.7	16.9	55.5	59.8
Mid-Atlantic Seed	MA3689nRR2		54.6	42	3.0	36.8	17.3		
Channel	3607R2	Accelaron/VOTIVO	54.1	43	1.5	38.2	16.3		
Chemgro Seeds	C3647R2	Encase	52.8	36	1.0	36.2	17.5	52.0	
<b>Mean</b>			<b>59.9</b>	<b>40</b>	<b>1.8</b>	<b>36.8</b>	<b>17.2</b>	<b>56.8</b>	<b>61.5</b>
<b>LSD (.05)</b>			<b>7.2</b>						
<b>LSD (.25)</b>			<b>4.2</b>						
<b>CV %</b>			<b>8.5</b>						

**Table 4. Early Roundup Ready Soybean Variety Performance in Blair County, 2014 (MG 3.0 and earlier)**

Source	Entry	Seed Treatment	Yield, bu/A	Height (in.)	Lodging (1-5, 1=best)	Crude		2 Yr Avg. Yield, bu/A (2013-14)	3 Yr Avg. Yield, bu/A (2012-14)
						Protein % @ 13% H2O	Oil % @ 13% H2O		
T.A. Seeds	TS 2849R2S	C250	67.3	35	2.0	36.8	17.2		
Channel	2808R2	Acceleron/VOTIVO	63.8	37	1.0	35.8	18.2		
Hubner Seed	H28-15R2	Acceleron	63.4	36	1.0	36.4	18.0		
Seedway	SG 3011	CruiserMaxx	62.9	40	2.0	36.1	18.2		
NK Brand	NK S28-A2 Brand	CruiserMaxx	62.7	36	2.5	36.6	18.4		
Hisoy	HS 28A12	Cruiser Maxx + Trident	62.1	37	1.5	35.6	19.0	58.0	58.8
Dyna-Gro Seed	S26RS75	CruiserMaxx + Vibrance	61.7	36	2.0	36.5	18.3		
NK Brand	NK S27-J7 Brand	CruiserMaxx	61.6	39	1.5	36.3	18.5		
Mycogen Seeds	5N284R2	CruiserMaxx Soybeans	61.3	40	1.0	37.8	17.0	56.0	59.5
Hubner Seed	H30-13R2	Acceleron	61.2	31	1.0	35.7	17.6		
Seedway	SG 3036	CruiserMaxx	60.4	33	1.5	36.5	18.2		
Dyna-Gro Seed	S29RY05	CruiserMaxx + Vibrance	59.5	38	2.5	36.8	17.4		
Dyna-Gro Seed	S29RY74	CruiserMaxx + Vibrance	59.4	36	1.0	36.6	17.8	56.4	
Doebler's PA Hybrids Inc.	RPM® DB2812RR™	DPH BOOST	59.3	34	1.0	34.8	19.8	60.5	59.5
Channel	3008R2	Acceleron/VOTIVO	58.2	37	2.5	37.1	16.9		
Doebler's PA Hybrids Inc.	RPM® DB2612RR™	DPH BOOST	57.6	35	1.0	36.1	18.4	57.6	57.3
Channel	2908R2	Acceleron/VOTIVO	57.5	38	2.5	38.7	17.1		
Hisoy	HS 24A44	Cruiser Maxx + Trident	57.4	34	1.0	33.9	19.7		
Mycogen Seeds	5N292R2	CruiserMaxx Soybeans	57.0	35	1.0	36.7	17.8	55.9	
Hisoy	HS 30A44	Cruiser Maxx + Trident	56.7	32	1.5	37.2	18.1		
T.A. Seeds	TS 2659R25	C250	56.5	33	2.0	35.8	18.2		
NK Brand	NK S29-G4 Brand	CruiserMaxx	56.1	37	2.0	35.7	18.8		
Chemgro Seeds	C2747R2	Encase	54.6	32	1.5	36.9	17.5	51.0	
<b>Mean</b>			<b>59.9</b>	<b>36</b>	<b>1.6</b>	<b>36.4</b>	<b>18.1</b>	<b>56.4</b>	<b>58.8</b>
<b>LSD (.05)</b>			<b>5.8</b>						
<b>LSD (.25)</b>			<b>3.4</b>						
<b>CV %</b>			<b>6.9</b>						

**Table 5. Early Roundup Ready Soybean Variety Performance in Lancaster County, 2014 (MG 3.3 and earlier)**

Source	Entry	Seed Treatment	Yield, bu/A	Height (in.)	Maturity Date	Lodging (1-5, 1=best)	Crude		2 Yr Avg. Yield, bu/A (2013-14)	3Yr Avg. Yield, bu/A (2012-14)
							Protein % @ 13% H2O	Oil % @ 13% H2O		
Hubner Seed	H32-13R2	Acceleron	56.9	34	21-Sep	3.0	35.4	19.5	60.7	
Hubner Seed	H28-15R2	Acceleron	55.2	31	16-Sep	2.0	37.1	18.6		
Seedway	SG 3322	CruiserMaxx	54.8	34	19-Sep	2.5	35.1	19.6		
Hubner Seed	H33-15R2	Acceleron	54.5	35	24-Sep	2.0	36.1	18.4		
Dyna-Gro Seed	37RY33	CruiserMaxx + Vibrance	51.7	34	22-Sep	2.0	37.5	18.2	60.4	57.3
Hisoy	HS 33A44	Cruiser Maxx + Trident	51.7	32	18-Sep	2.0	35.6	19.7		
Hisoy	HS 28A12	Cruiser Maxx + Trident	51.6	32	20-Sep	3.0	35.8	19.7	58.1	59.3
Channel	3308R2	Acceleron/VOTIVO	50.1	35	24-Sep	1.5	35.7	18.7		
Mid-Atlantic Seed	MA3113nRR2		49.8	30	18-Sep	1.5	36.2	18.4		
Chemgro Seeds	C3346R2	Encase	49.7	32	21-Sep	2.0	35.9	19.5	58.8	56.3
Doebler's PA Hybrids Inc.	RPM® DB3315RR™	DPH Boost	49.6	29	27-Sep	1.0	35.8	19.3		
Dyna-Gro Seed	S29RY05	CruiserMaxx + Vibrance	49.2	33	16-Sep	2.0	36.5	18.4		
Dyna-Gro Seed	S29RY74	CruiserMaxx + Vibrance	49.2	29	21-Sep	1.0	36.3	18.9	56.9	
Chemgro Seeds	C3247R2	Encase	48.2	31	24-Sep	2.5	36.2	18.7	56.2	
T.A. Seeds	TS 2849R2S	Cruiser	48.0	28	23-Sep	2.0	37.6	17.6	55.8	
Hisoy	HS 30A44	Cruiser Maxx + Trident	45.1	29	20-Sep	1.5	37.2	18.7		
Dyna-Gro Seed	S31RY93	CruiserMaxx + Vibrance	44.9	26	29-Sep	1.0	38.0	17.8	56.9	57.3
Mycogen Seeds	5N292R2	CruiserMaxx Soybeans	44.1	30	17-Sep	1.0	36.2	19.2		
Doebler's PA Hybrids Inc.	RPM® DB2812RR™	DPH Boost	43.8	28	22-Sep	1.0	35.3	20.6	54.5	
Hisoy	HS 31A03	Cruiser Maxx + Trident	36.9	33	20-Sep	1.5	35.3	20.0	52.6	52.0
<b>Mean</b>			<b>49.3</b>	<b>31</b>	<b>21-Sep</b>	<b>1.8</b>	<b>36.2</b>	<b>19.0</b>	<b>57.1</b>	<b>56.4</b>
<b>LSD (.05)</b>			<b>8.5</b>							
<b>LSD (.25)</b>			<b>4.9</b>							
<b>CV %</b>			<b>12.1</b>							

**Table 6. Late Roundup Ready Soybean Variety Performance in Lancaster County, 2014 (MG 3.4 and later)**

Source	Entry	Seed Treatment	Yield, bu/A	Height (in.)	Maturity Date	Lodging (1-5, 1=best)	Crude Protein % @ 13% H2O	Oil % @ 13% H2O	2 Yr Avg. Yield, bu/A (2013-14)	3 Yr Avg. Yield, bu/A (2012-14)
Mid-Atlantic Seed	MA3815nRR2		67.7	37	3-Oct	1.5	34.3	19.8		
Hubner Seed	H37-14R2SR	Acceleron	63.2	41	2-Oct	2.0	34.4	19.6	61.5	
Mid-Atlantic Seed	MA3889nRR2/STS		62.3	38	4-Oct	2.0	33.4	21.0	62.5	
NK Brand	NK S35-A5 Brand	CruiserMaxx	60.5	37	28-Sep	2.0	34.7	19.5		
NK Brand*	36-B6	untreated	60.1	36	2-Oct	2.0	32.3	20.7		
Channel	4206R2	Acceleron/VOTIVO	59.5	34	10-Oct	1.5	34.1	19.0		
Hisoy	HS 39A22	Cruiser Maxx + Trident	59.5	36	6-Oct	1.0	33.8	19.9	63.8	
T.A. Seeds	TS 3959R2S	C250	59.4	33	21-Sep	1.5	35.5	19.2		
NK Brand	NK S40-N2 Brand	CruiserMaxx	59.1	33	5-Oct	1.5	33.1	20.6		
Mycogen Seeds	5N373R2	CruiserMaxx Soybeans	58.6	35	30-Sep	3.5	33.8	19.4		
Channel	3806R2/STS	Acceleron/VOTIVO	57.8	34	30-Sep	1.5	33.2	20.4	61.4	59.0
Dyna-Gro Seed	S40RY25	CruiserMaxx + Vibrance	57.7	33	8-Oct	1.0	35.5	19.2		
Mid-Atlantic Seed	MA3689nRR2		57.7	35	27-Sep	2.5	34.7	19.7	62.7	
Channel	3408R2	Acceleron/VOTIVO	57.4	32	25-Sep	1.5	34.9	19.4		
Hubner Seed	H42-13R2	Acceleron	57.1	32	2-Oct	2.0	34.0	19.1		
Hubner Seed	H34-15R2	Acceleron	56.9	33	23-Sep	1.5	35.5	19.3		
Mycogen Seeds	5N386R2	CruiserMaxx Soybeans	56.4	36	4-Oct	2.0	35.1	19.4	61.1	60.4
Hisoy	HS 37A12	Cruiser Maxx + Trident	56.0	35	29-Sep	1.0	33.7	19.7	61.2	59.8
Dyna-Gro Seed	S39RY65	CruiserMaxx + Vibrance	55.7	36	3-Oct	1.5	33.8	20.0		
NK Brand	NK S38-W4 Brand	CruiserMaxx	55.0	37	1-Oct	2.0	34.3	19.9	60.6	
Seedway	SG 3413		54.9	36	25-Sep	2.5	34.9	18.9	61.0	60.2
Hisoy	HS 35A12	Cruiser Maxx + Trident	54.2	34	23-Sep	2.5	35.6	18.7	58.7	57.2
Mycogen Seeds	5N393R2	CruiserMaxx Soybeans	53.9	35	30-Sep	1.5	36.2	19.0	60.0	59.5
Seedway	SG 3963		53.6	33	4-Oct	1.0	33.9	20.0	57.1	
Hisoy	HS 34A16	Cruiser Maxx + Trident	53.6	33	22-Sep	1.0	34.2	18.9	59.0	
Doebler's PA Hybrids Inc.	RPM® DB4013RR™	DPH Boost	53.2	38	6-Oct	1.5	34.5	20.2	58.4	
Mycogen Seeds	5N385R2	CruiserMaxx Soybeans	53.0	31	4-Oct	1.5	35.6	19.0	61.2	62.9
Hubner Seed	H34-11R2		52.9	33	30-Sep	1.5	unavailable		54.4	54.7
NK Brand	NK S34-N3 Brand	CruiserMaxx	52.9	35	23-Sep	2.0	36.5	18.3	58.1	55.6
NK Brand	NK S39-T3 Brand	CruiserMaxx	52.7	29	4-Oct	1.5	33.6	19.6		
Channel	3707R2/SR	Acceleron/VOTIVO	52.4	39	1-Oct	2.5	34.3	19.8		
Chemgro Seeds	C3948R2		52.4	30	7-Oct	1.0	34.0	20.3		
Doebler's PA Hybrids Inc.	RPM® DB3815RR™	DPH Boost	52.3	32	5-Oct	1.5	33.5	20.3		
Dyna-Gro Seed	S36RY24	CruiserMaxx + Vibrance	52.1	33	25-Sep	3.0	35.8	18.2	56.7	
Channel	3607R2	Acceleron/VOTIVO	51.0	34	29-Sep	2.5	36.4	18.7		
Asgrow*	3832		51.0	35	20-Sep	2.5	35.9	18.2	57.5	
NK Brand	NK S35-C3 Brand	CruiserMaxx	50.4	35	26-Sep	2.5	34.6	19.3	58.3	
Chemgro Seeds	C3647R2	Encase	49.9	31	30-Sep	2.0	35.0	19.2	56.5	
Hisoy	HS 39T44	Cruiser Maxx + Trident	49.5	37	4-Oct	2.5	33.6	20.7		
Dyna-Gro Seed	34RY36	CruiserMaxx + Vibrance	49.0	30	21-Sep	1.0	35.0	19.4	57.2	57.6
Seedway	SG 3813		48.8	36	27-Sep	1.0	33.9	19.7	58.4	56.9
Dyna-Gro Seed	S35RY83	CruiserMaxx + Vibrance	48.1	30	25-Sep	1.5	33.8	19.3	57.9	57.2
Mycogen Seeds	5N342R2	CruiserMaxx Soybeans	48.0	32	19-Sep	2.0	37.6	18.0	57.5	58.1
Seedway	SG 3612		44.4	32	23-Sep	2.5	35.8	18.8	53.1	55.5
Chemgro Seeds	C3546R2	Encase	39.9	28	20-Sep	1.5	35.4	18.2	52.4	53.0
<b>Mean</b>			<b>54.5</b>	<b>34</b>	<b>29-Sep</b>	<b>1.8</b>	<b>34.6</b>	<b>19.4</b>	<b>58.8</b>	<b>57.8</b>
<b>LSD (.05)</b>			<b>10.3</b>							
<b>LSD (.25)</b>			<b>6.0</b>							
<b>CV %</b>			<b>11.6</b>							

**Table 7. Non-RR Soybean Variety Performance in Centre County, 2014**

Source	Entry	Seed Treatment	Yield, bu/A	Height (in.)	Maturity Date	Lodging (1-5, 1=best)	Crude Protein % @ 13% H2O	Oil % @ 13% H2O	2 Yr Avg. Yield, bu/A (2013-14)	3 Yr Avg. Yield, bu/A (2012-14)
Hisoy*	HS 35A12	CruiserMaxx + Trident	61.7	39	14-Oct	2.0	37.4	16.2		
NK Brand*	S36-B6 Brand	untreated	59.2	42	13-Oct	2.5	35.5	17.5		
Schillinger Genetics	348.TSC	CruiserMaxx + Vibrance	59.1	38	10-Oct	2.5	36.9	17.2		
Crissinger Seeds	360SB		58.9	39	10-Oct	2.5	37.5	16.5	60.5	60.5
Schillinger Genetics	e3494	CruiserMaxx + Vibrance	57.5	41	15-Oct	1.5	37.2	16.2		
Crissinger Seeds	Streeter		56.7	38	1-Oct	1.0	37.0	17.6		
Schillinger Genetics	e2993	CruiserMaxx + Vibrance	54.0	36	8-Oct	1.5	36.5	16.8		
Schillinger Genetics	e3192	CruiserMaxx + Vibrance	52.1	40	9-Oct	1.0	38.9	16.7		
Schillinger Genetics	e3553	CruiserMaxx + Vibrance	50.2	38	16-Oct	2.5	41.0	15.2		
Schillinger Genetics	e2854	CruiserMaxx + Vibrance	48.7	39	10-Oct	1.0	43.2	15.9		
<b>Mean</b>			<b>55.8</b>	<b>39</b>	<b>10-Oct</b>	<b>1.8</b>	<b>38.1</b>	<b>16.6</b>	<b>60.5</b>	<b>60.5</b>
<b>LSD (.05)</b>			<b>5.9</b>							
<b>LSD (.25)</b>			<b>3.5</b>							
<b>CV %</b>			<b>7.8</b>							

**Table 8. Non-RR Soybean Variety Performance in Lancaster County, 2014**

Source	Entry	Seed Treatment	Yield, bu/A	Height (in.)	Lodging (1-5, 1=best)	Maturity Date	Crude Protein % @ 13% H2O	Oil % @ 13% H2O	2 Yr Avg. Yield, bu/A (2013-14)	3Yr Avg. Yield, bu/A (2012-14)
Hisoy*	HS 39A22	Cruiser Maxx + Trident	56.9	36	2.0	9-Oct	35.2	18.8		
Schillinger Genetics	e3782S	CruiserMaxx + Vibrance	55.9	37	2.5	6-Oct	39.7	17.9	63.1	61.8
Dyna-Gro Seed	S38LL54	CruiserMaxx + Vibrance	54.7	35	2.0	2-Oct	35.1	19.3	60.9	
Dyna-Gro Seed	S40LL35	CruiserMaxx + Vibrance	54.6	34	1.0	1-Oct	34.9	19.5		
NK Brand*	S36-B6	untreated	53.8	37	1.5	5-Oct	34.7	19.4		
Schillinger Genetics	348.TSC	CruiserMaxx + Vibrance	52.0	31	2.0	1-Oct	35.8	19.3		
Schillinger Genetics	e3494	CruiserMaxx + Vibrance	51.6	29	1.0	5-Oct	36.0	18.7		
Schillinger Genetics	e3692S	CruiserMaxx + Vibrance	50.9	31	1.5	3-Oct	37.9	17.5	62.1	62.5
Crissinger Seeds	Streeter		50.2	33	1.5	24-Sep	37.2	18.6		
Crissinger Seeds	360SB		50.0	33	2.0	28-Sep	35.8	19.0		
Dyna-Gro Seed	S35LS15	CruiserMaxx + Vibrance	49.1	31	1.5	29-Sep	35.3	19.4		
Schillinger Genetics	e3553	CruiserMaxx + Vibrance	48.9	34	1.0	8-Oct	41.0	16.7	58.9	
Dyna-Gro Seed	S3305N	CruiserMaxx + Vibrance	47.7	32	2.0	26-Sep	36.3	19.3		
<b>Mean</b>			<b>52.0</b>	<b>33</b>	<b>1.7</b>	<b>2-Oct</b>	<b>36.5</b>	<b>18.7</b>	<b>61.3</b>	<b>62.2</b>
<b>LSD (.05)</b>			<b>8.0</b>							
<b>LSD (.25)</b>			<b>4.6</b>							
<b>CV %</b>			<b>11.3</b>							

**Table 9. Double Crop Roundup Ready Soybean Variety Performance in Lancaster County, 2014**

Source	Entry	Seed Treatment	Yield, bu/A	Height (in.)	Lodging (1-5, 1=best)	Maturity Date	Crude Protein % @ 13% H2O	Oil % @ 13% H2O
T.A. Seeds	TS 3959R2S	C250	62.4	35	2.0	23-Oct	38.2	16.7
Dyna-Gro Seed	S39RY65	CruiserMaxx + Vibrance	61.6	32	1.0	25-Oct	35.5	17.6
Mid-Atlantic Seed	MA3889nRR2/STS		59.2	33	1.0	26-Oct	36.1	17.2
Hubner Seed	H42-13R2	Accelaron	58.5	33	1.0	23-Oct	35.6	16.4
Mid-Atlantic Seed	MA4222nRR2		58.5	36	1.0	25-Oct	36.4	17.4
Mycogen Seeds	5N413R2	CruiserMaxx Soybeans	58.0	32	2.0	21-Oct	35.2	17.7
NK Brand	NK S35-A5 Brand	CruiserMaxx	56.7	34	1.0	22-Oct	36.2	17.2
Mid-Atlantic Seed	MA3113nRR2		56.4	34	1.0	18-Oct	36.2	16.7
Doebler's PA Hybrids Inc.	RPM® DB3815RR™	DPH Boost	55.5	37	2.0	27-Oct	36.6	16.5
Dyna-Gro Seed	34RY36	CruiserMaxx + Vibrance	55.1	37	2.0	22-Oct	36.8	17.0
Mid-Atlantic Seed	MA3815nRR2		55.1	38	3.0	24-Oct	35.4	17.7
Mid-Atlantic Seed	MA3689nRR2		55.0	36	2.0	22-Oct	36.1	17.4
Mycogen Seeds	5N385R2	CruiserMaxx Soybeans	54.8	34	1.0	24-Oct	36.8	16.5
Hubner Seed	H37-14R2SR	Accelaron	53.1	33	1.0	25-Oct	37.0	16.4
T.A. Seeds	TS 3759R2	C250	53.1	31	1.0	24-Oct	37.3	16.3
Mycogen Seeds	5N386R2	CruiserMaxx Soybeans	51.5	32	1.0	27-Oct	37.8	16.3
Dyna-Gro Seed	S40RY25	CruiserMaxx + Vibrance	51.4	32	2.0	26-Oct	37.5	16.8
NK Brand	NK S35-C3 Brand	CruiserMaxx	51.4	32	1.0	22-Oct	36.0	17.1
Hubner Seed	H34-15R2	Accelaron	51.2	35	3.0	20-Oct	36.6	17.2
Doebler's PA Hybrids Inc.	RPM® DB4013RR™	DPH Boost	50.4	37	2.0	27-Oct	36.1	17.5
Hubner Seed	H34-11R2	Accelaron	50.3	35	1.0	21-Oct	37.7	15.7
Mycogen Seeds	5N423R2	CruiserMaxx Soybeans	47.3	34	1.0	16-Oct	36.3	17.3
<b>Mean</b>			<b>54.8</b>	<b>34</b>	<b>1.5</b>	<b>23-Oct</b>	<b>36.5</b>	<b>16.9</b>
<b>LSD (.05)</b>			<b>7.0</b>					
<b>LSD (.25)</b>			<b>4.0</b>					
<b>CV %</b>			<b>7.8</b>					

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Issued in furtherance of Cooperative Extension work, Acts of Congress May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture and The Pennsylvania Legislature. T.R. Alter, Director of the Cooperative Extension Service, The Pennsylvania State University.

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This research was supported in part by funds supplied by The Pennsylvania Soybean Promotion Board.

