



2018 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 2018. 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 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. Glyphosate-resistant (Roundup Ready) varieties as well as all non-Roundup Ready varieties were tested together in the same trials based on maturity group. The following soybean variety trials were implemented for the 2018 season: Early (MG 3.3 and earlier) full-season in Lancaster County; Late (MG 3.4 and later) full-season in Lancaster County; Double-Crop in Lancaster County; Early (MG 3.0 and earlier) in Centre and Blair Counties; late (MG 3.1 and later) full-season in Centre and Blair Counties. 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.

Growing conditions in Centre County were extremely wet, with record-setting rainfall during the growing season. Similar conditions were present at the Blair County site, except for the month of August, which produced a more normal rainfall amount of approximately 4 inches. Lancaster County had an extremely wet 2nd half of the summer, with monthly rainfalls during July, August, and September of 9.7, 11.8, and 13.2 inches respectively. These wet conditions throughout the state created an environment conducive for plant disease development and in many cases taller than usual plant height was observed.

Procedures

The plots in the Centre and Lancaster County trials 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 full-season trials at these locations were planted in tilled ground and into fields where the previous crop was corn. The double-crop trial in Lancaster was no-tilled into an oats cover crop that was terminated prior to planting. The plots in the Blair County trials were planted 18 feet long and were no-tilled into a field that was previously planted in corn.

The full-season Lancaster County trials were planted on May 8th and 9th, the Blair County trials were planted on May 11th, and the Centre County trials were planted on May 25th. The double-crop trial in Lancaster County was planted on June 26th. The seeding rate for all the full-season trials was 175,000 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.

Quality was a visual inspection from 1 replication and was rated on a 1-5 scale, with 1 being the best and 5 the worst.

Lodging was rated in all tests as follows:

- 0 = no lodging
- 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 is 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 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 0.20 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 2018 season, the average yield of the 39 entries in the Centre County Late MG trial was 50.5 bushels per acre. The Early MG trial consisted of 31 entries and averaged 48.9 bushels per acre. Yields in both trials at Centre County were noticeably down compared to 2017, most likely due to excessive rainfall.

The Early MG trial in Blair County had 24 entries and averaged 54.3 bushels per acre. The Late MG trial had 23 entries averaging 59.3 bushels per acre.

Yields in the Lancaster County Late MG trial, consisting of 48 entries, averaged 62.8 bushels per acre. The Early MG trial, which had 20 entries, averaged 65.7 bushels per acre. The Lancaster County Late MG trial yielded noticeably lower compared to 2017, while the Early MG trial average yield was nearly identical to 2017. The 30-entry double-crop trial yielded extremely well, with an average yield of 54.7 bushels per acre.



Early Soybean Variety Performance in Blair County, 2018 (MG 3.0 and earlier)

Source	Entry	Maturity Group	Traits	Seed Treatment	Yield, bu/A	Height (in.)	Lodging (0-5, 0=best)
Doebler's	28X9	2.8	RR2, Xtend	DPH Boost	68.2	47	1.0
Dyna-Gro Seed	Dyna-Gro S28XT58	2.8	RR2, Xtend	Equity VIP	67.2	43	2.0
Chemgro	C3051BG	3.0	GT27		65.3	43	3.5
CHANNEL	2918R2X	2.9	RR2, Xtend	ACCLRN+PV+B200	64.8	42	1.5
Doebler's	DB2616R	2.6	RR	DPH Boost	60.9	44	1.0
Chemgro	C2851RX	2.8	RR2, Xtend	Encase Excalibre SA	60.5	41	1.5
Asgrow	AG30X6	3.0	RR2, Xtend	Acceleron	59.5	47	3.5
Seedway	SG2832XT	2.8	RR2, Xtend		58.1	43	2.0
HiSOY	HS 29X80	2.9	RR2, Xtend		54.8	41	2.5
Hubner	H24-38R2X	2.4	RR2, Xtend	Acceleron	54.4	38	1.5
CHANNEL	2719R2X	2.7	RR2, Xtend	ACCLRN+PV+B200	54.3	41	1.5
CHANNEL	2519R2X	2.5	RR2, Xtend	ACCLRN+PV+B200	53.9	44	3.0
Keystone Group Ag Seeds	DKG STREETER	3.0	Non-GMO	EclipseTrio IM	53.9	40	1.0
Dyna-Gro Seed	Dyna-Gro S30XT96	3.0	RR2, Xtend	Equity VIP	53.6	49	2.5
Doebler's	30R8	3.0	RR	DPH Boost	52.6	43	1.0
Hubner	H28-27R2X	2.8	RR2, Xtend	Acceleron	51.0	46	3.5
Keystone Group Ag Seeds	DKG SUMMIT	2.6	Non-GMO	EclipseTrio IM	50.7	39	3.0
Syngenta	S27-M8X Brand	2.7	RR2, Xtend	Clariva Complet + Mertect	49.8	35	1.5
Keystone Group Ag Seeds	CPM 2719	2.7	Non-GMO	Rancana/Metalaxyl	49.1	38	2.0
Doebler's	22R8	2.2	RR	DPH Boost	47.5	41	1.5
Seedway	SG3042XT	3.0	RR2, Xtend		47.4	41	2.5
Doebler's	23X9	2.3	RR2, Xtend	DPH Boost	44.7	37	1.0
Keystone Group Ag Seeds	CPM 2119	2.1	Non-GMO	Rancana/Metalaxyl	42.2	37	1.0
Local Seed	LS2847R2S	2.8	RR2Y, STS	Trius Elite	38.6	44	4.0
Mean					54.3	42	2.0
LSD(0.05)					9.5		
LSD(0.2)					6.2		
CV%					12.5		



Late Soybean Variety Performance in Blair County, 2018 (MG 3.1 and later)

Source	Entry	Maturity Group	Traits	Seed Treatment	Yield, bu/A	Height (in.)	Lodging (0-5, 0=best)
Syngenta	S35-K9X Brand	3.5	RR2, Xtend	Clariva Complet + Mertect	75.1	47	2.0
Doebler's	32L9	3.2	LL	DPH Boost	73.3	42	1.0
Doebler's	39X9	3.9	RR2, Xtend	DPH Boost	66.7	49	3.0
Dyna-Gro Seed	Dyna-Gro S33RY76	3.3	RR2Y	Equity VIP	66.5	45	2.5
Dyna-Gro Seed	Dyna-Gro S31XT59	3.1	RR2, Xtend	Equity VIP	65.8	43	2.0
Chemgro	C3551BG	3.5	GT27		64.3	43	3.5
Pioneer	P36T36X	3.6	RR2, Xtend		63.7	51	2.0
Hisoy	HS 34X80	3.4	RR2, Xtend		61.6	46	2.5
Hubner	H33-37R2X	3.3	RR2, Xtend	Acceleron	61.2	45	2.5
Chemgro	C3152RX	3.1	RR2, Xtend		61.0	44	2.0
Keystone Group Ag Seeds	CPM 3418 STS	3.4	STS	Rancana/Metalaxyl	59.5	48	2.5
Doebler's	DB3517R	3.5	RR	DPH Boost	59.2	45	1.0
Chemgro	C3451RX	3.4	RR2, Xtend	Encase Excalibre SA	57.9	46	2.0
Local Seed	LS3665S	3.6	STS	Trius Elite	57.5	46	2.5
Doebler's	DB3617X	3.6	RR2, Xtend	DPH Boost	56.5	46	1.5
Dyna-Gro Seed	Dyna-Gro S33XT79	3.3	RR2, Xtend	Equity VIP	54.3	40	3.0
CHANNEL	3318R2X	3.3	RR2, Xtend	ACCLRN+PV+B200	54.1	43	2.5
CHANNEL	3519R2X	3.5	RR2, Xtend	ACCLRN+PV+B200	53.6	45	2.0
CHANNEL	3119R2X	3.1	RR2, Xtend	ACCLRN+PV+B200	53.4	44	3.0
Dyna-Gro Seed	Dyna-Gro S34XT69	3.4	RR2, Xtend	Equity VIP	53.4	47	3.0
CHANNEL	3718R2X	3.7	RR2, Xtend	ACCLRN+PV+B200	50.1	44	2.5
Hisoy	HS 37X70	3.7	RR2, Xtend		50.0	47	1.5
Hubner	H34-37R2X	3.4	RR2, Xtend	Acceleron	41.7	40	2.5
Mean					59.3	45	2.3
LSD(0.05)					8.8		
LSD(0.2)					5.7		
CV%					10.5		

Early maturity Group Soybean Variety Performance in Lancaster County, 2018 (MG 3.3 and earlier)

Source	Entry	Maturity Group	Traits	Seed Treatment	Yield, bu/A	Height (in.)	Lodging (0-5, 0=best)	*Seed Quality (1-5, 1=best)	% Protein @ 13.5% H2O	% Oil @ 13.5% H2O	2 Yr Avg. Yield, bu/A (2017-18)	3Yr Avg. Yield, bu/A (2016-18)
Dyna-Gro Seed	Dyna-Gro S33XT79	3.3	RR2, Xtend	Equity VIP	78.3	37	2.0	2.0	35.6	19.9		
HiSOY	HS 29X80	2.9	RR2, Xtend		71.2	32	1.0	2.0	36.8	18.6		
Dyna-Gro Seed	Dyna-Gro S31XT59	3.1	RR2, Xtend	Equity VIP	69.7	39	3.0	2.0	35.9	19.3		
Credenz	CZ 3118 LL	3.1	LL	PVI	69.5	32	0.5	1.0	37.7	19.8	68.6	
Mid-Atlantic Seeds	MAS3311RR2/X	3.3	RR2, Xtend		68.6	31	0.0	2.0	36.7	18.5		
Hubner	H33-37R2X	3.3	RR2, Xtend	Acceleron	68.4	37	1.5	2.0	39.0	17.0	65.2	
Chemgro	C3051BG	3.0	GT27		68.3	34	2.0	1.0	35.4	19.0		
Credenz	CZ 2928 LL	2.9	LL	PVI	68.3	40	3.0	3.0	38.3	18.8		
Credenz	CZ 3233 LL	3.2	LL	PVI	68.3	31	2.5	2.0	36.0	19.1	70.3	68.8
Chemgro	C3152RX	3.1	RR2, Xtend		65.6	36	2.0	2.0	36.9	18.8		
CHANNEL	3119R2X	3.1	RR2, Xtend	ACCLRN+PV+B200	65.3	36	1.5	2.0	38.0	18.5		
Doebler's	28X9	2.8	RR2, Xtend	DPH Boost	65.3	33	1.0	3.0	36.5	19.4		
Doebler's	32L9	3.2	LL	DPH Boost	65.2	35	1.0	1.0	36.5	19.4		
Asgrow	AG30X6	3.0	RR2, Xtend	Acceleron	64.1	39	2.0	3.0	38.2	18.0		
CHANNEL	3318R2X	3.3	RR2, Xtend	ACCLRN+PV+B200	64.0	30	0.0	2.0	37.5	18.0	65.4	
Hubner	H28-27R2X	2.8	RR2, Xtend	Acceleron	63.4	31	1.5	4.0	38.0	18.6		
Credenz	CZ 2601 LL	2.6	LL	PVI	61.5	35	2.5	3.0	36.8	19.8	61.8	
Hubner	H24-38R2X	2.4	RR2, Xtend	Acceleron	57.9	30	1.0	2.0	37.1	18.8		
Doebler's	30R8	3.0	RR	DPH Boost	56.4	29	0.0	4.0	36.5	20.1	59.9	
Doebler's	DB2616R	2.6	RR	DPH Boost	54.7	31	0.5	4.0	38.7	19.3		
Mean					65.7	34	1.4	2.4	37.1	18.9	65.2	
LSD(0.05)					7.2							
LSD(0.2)					4.7							
CV%					7.8							

Double Crop Soybean Variety Performance in Lancaster County, 2018

Source	Entry	Maturity Group	Traits	Seed Treatment	Yield, bu/A	Height (in.)	Lodging (0-5, 0=best)	*Seed Quality (1-5, 1=best)	% Protein @ 13.5% H2O	% Oil @ 13.5% H2O	2 Yr Avg. Yield, bu/A (2017-18)
Seedway	SG3783XT	3.7	RR2, Xtend		59.5	35	1.0	2.0	40.4	17.7	
CHANNEL	3919R2X	3.9	RR2, Xtend	ACCLRN+PV+B200	59.3	35	0.5	1.0	37.5	18.4	
Doebler's	39X9	3.9	RR2, Xtend	DPH Boost	58.8	34	1.5	2.0	39.2	17.2	
Dyna-Gro Seed	Dyna-Gro S37XS89	3.7	RR2, Xtend, STS	Equity VIP	58.4	37	1.0	2.0	38.3	18.0	
Hubner	H36-28R2X	3.6	RR2, Xtend	Acceleron	58.2	33	1.0	1.0	38.8	18.0	
Pioneer	P36T36X	3.6	RR2, Xtend		57.9	35	0.0				
CHANNEL	4119R2X	4.1	RR2, Xtend	ACCLRN+PV+B200	57.0	37	1.0	1.0	38.4	17.7	
Hubner	H35-27R2X	3.5	RR2, Xtend	Acceleron	56.7	32	0.5	2.0	39.6	17.7	48.9
CHANNEL	4018R2X	4.0	RR2, Xtend	ACCLRN+PV+B200	56.5	36	0.0	1.0	35.7	19.0	50.1
Hubner	H34-37R2X	3.4	RR2, Xtend	Acceleron	56.5	32	0.0	2.0	38.4	16.9	47.7
Mid-Atlantic Seeds	MAS3611RR2/STS/X	3.6	RR2, Xtend, STS		55.7	34	0.5	1.0	38.3	17.8	
Mid-Atlantic Seeds	MAS4355NRR2/STS	4.3	RR2, STS		55.6	39	1.5	1.0	38.5	18.6	
Hubner	H38-27R2X	3.8	RR2, Xtend	Acceleron	55.4	36	1.5	1.0	38.4	17.3	47.9
CHANNEL	3318R2X	3.3	RR2, Xtend	ACCLRN+PV+B200	55.3	34	0.0	2.0	38.8	17.3	
Syngenta	S42-B9XS Brand	4.2	RR2, Xtend, STS	Clariva Complet + Mertect	55.0	35	1.0	1.0	36.5	18.7	
CHANNEL	3519R2X	3.5	RR2, Xtend	ACCLRN+PV+B200	54.8	33	0.5	2.0	38.7	17.4	
Local Seed	LS3956R2S	3.9	RR2Y, STS	Trius Elite	54.7	33	0.0	1.0	38.7	17.3	49.1
Mid-Atlantic Seeds	MAS3311RR2/X	3.3	RR2, Xtend		54.6	32	0.0	3.0	38.9	18.0	
Doebler's	DB3617X	3.6	RR2, Xtend	DPH Boost	54.0	35	0.5	1.0	37.3	17.7	
CHANNEL	3119R2X	3.1	RR2, Xtend	ACCLRN+PV+B200	53.9	31	0.0	3.0	38.3	18.2	
Local Seed	LS3976X	3.9	RR2, Xtend	Trius Elite	53.5	31	1.0	1.0	36.7	18.2	
Mid-Atlantic Seeds	MAS3718RR2/X	3.7	RR2, Xtend		53.3	32	0.5	1.0	36.3	18.9	
Seedway	SG3494XT	3.4	RR2, Xtend		52.9	34	1.5	2.0	38.8	17.4	
Doebler's	DB3517R	3.5	RR	DPH Boost	52.2	35	0.5	2.0	38.1	17.5	
Local Seed	LS3665S	3.6	STS	Trius Elite	52.0	33	2.0	3.0	41.0	16.5	
Mid-Atlantic Seeds	MAS3516RR2	3.5	RR2		51.8	35	1.5	2.0	38.0	17.0	
Hubner	H33-37R2X	3.3	RR2, Xtend	Acceleron	50.7	34	0.5	2.0	39.9	16.3	44.5
Dyna-Gro Seed	Dyna-Gro S39XT68	3.9	RR2, Xtend	Equity VIP	50.0	34	1.0	2.0	38.5	17.4	
Syngenta	S39-P5X Brand	3.9	RR2, Xtend	Clariva Complet + Mertect	48.8	33	1.0	1.0	36.9	18.4	
Mid-Atlantic Seeds	MAS3681RR2/X	3.6	RR2, Xtend		46.6	33	1.5	2.0	38.7	17.5	
Mean					54.7	34	0.8	1.7			48.0
LSD (.05)					6.4						
LSD (.20)					4.2						
CV %					8.4						



Late Maturity Group Soybean Variety Performance in Lancaster County, 2018 (MG 3.4 and later)

Source	Entry	Maturity Group	Traits	Seed Treatment	Yield, bu/A	Height (in.)	Lodging		% Protein @ 13.5% H2O	% Oil @ 13.5% H2O	2 Yr Avg. Yield, bu/A (2017-18)	3Yr Avg. Yield, bu/A (2016-18)
							(0-5, 0=best)	*Seed Quality (1-5, 1=best)				
Mid-Atlantic Seeds	MAS4355NRR2/STS	4.3	RR2, STS		75.9	45	3.5	1.0	34.6	19.1		
Mid-Atlantic Seeds	MAS3718RR2/X	3.7	RR2, Xtend		72.7	37	2.5	1.0	34.6	19.4		
Credenz	CZ 3841 LL	3.8	LL	PVI	71.5	37	2.0	1.0	36.3	18.9	73.1	71.7
Syngenta	S42-B9XS Brand	4.2	RR2, Xtend, STS	Clariva Complet + Mertect	69.5	39	2.0	2.0	35.3	18.9		
CHANNEL	4018R2X	4.0	RR2, Xtend	ACCLRN+PV+B200	69.3	38	2.0	1.0	34.8	19.1	74.7	
CHANNEL	4119R2X	4.1	RR2, Xtend	ACCLRN+PV+B200	68.9	40	3.0	1.0	37.2	18.2		
Hubner	H35-27R2X	3.5	RR2, Xtend	Acceleron	66.6	27	0.0	3.0	36.3	19.3	69.1	
Credenz	CZ 3601 LL	3.6	LL	PVI	66.1	32	1.5	1.0	35.7	19.4	69.2	
Dyna-Gro Seed	Dyna-Gro S37XS89	3.7	RR2, Xtend, STS	Equity VIP	65.9	36	1.0	3.0	36.8	18.7		
Mid-Atlantic Seeds	MAS3611RR2/STS/X	3.6	RR2, Xtend, STS		65.9	36	1.0	2.0	36.1	18.6		
Dyna-Gro Seed	Dyna-Gro S39XT68	3.9	RR2, Xtend	Equity VIP	65.8	34	1.0	2.0	37.1	17.9		
CHANNEL	3519R2X	3.5	RR2, Xtend	ACCLRN+PV+B200	65.7	35	0.5	3.0	35.8	18.1		
CHANNEL	3919R2X	3.9	RR2, Xtend	ACCLRN+PV+B200	65.7	37	0.5	3.0	35.9	19.5		
Dyna-Gro Seed	Dyna-Gro S38LL54	3.8	LL	Equity VIP	65.4	30	0.5	1.0	35.7	19.7	72.7	72.9
Syngenta	S35-K9X Brand	3.5	RR2, Xtend	Clariva Complet + Mertect	65.4	41	1.0	3.0	35.1	19.0	66.2	
Doebler's	40R8	4.0	RR	DPH Boost	65.3	43	2.0	2.0	35.2	19.3		
Credenz	CZ 4105 LL	4.1	LL	PVI	65.2	40	1.0	1.0	37.8	18.2	70.8	70.9
Dyna-Gro Seed	Dyna-Gro S35LS15	3.5	LL, STS	Equity VIP	65.2	34	0.5	2.0	34.3	20.1	70.8	72.3
Hubner	H36-28R2X	3.6	RR2, Xtend	Acceleron	65.2	33	0.0	2.0	36.5	19.2		
Local Seed	LS3665S	3.6	Conv, STS	Trius Elite	65.1	34	1.5	2.0	37.9	17.6		
Credenz	CZ 4308 LL	4.3	LL	PVI	64.4	40	2.0	1.0	37.0	18.9		
Doebler's	42X9	4.2	RR2, Xtend	DPH Boost	64.4	40	3.0	1.0	35.8	18.3		
Hubner	H36-27R2X	3.8	RR2, Xtend	Acceleron	64.1	37	2.5	1.0	36.3	18.2	67.8	
Keystone Group Ag Seeds	CPM 3614 STS	3.6	Non-GMO	Rancana/MetalaxyI	64.0	33	0.5	2.0	38.5	17.4		
Pioneer	P36T36X	3.6	RR2, Xtend		63.9	36	0.5	1.0	35.3	19.0		
Dyna-Gro Seed	Dyna-Gro S36LL77	3.6	LL	Equity VIP	63.5	36	1.0	2.0	36.0	19.3	68.9	69.5
Mid-Atlantic Seeds	MAS3516RR2	3.5	RR2		63.1	32	0.5	2.0	36.4	17.8		
Seedway	SG3494XT	3.4	RR2, Xtend		62.8	42	2.5	3.0	36.8	18.7		
Chemgro	C3751RXS	3.7	RR2, Xtend	Encase Excalibre SA	62.4	34	0.5	3.0	37.5	18.7	66.6	
Credenz	CZ 3738 LL	3.7	LL	PVI	62.3	34	1.0	1.0	35.4	18.6	70.7	
Chemgro	C3551BG	3.5	GT27		61.9	33	1.0	2.0	36.0	19.4		
Credenz	CZ 3548 LL	3.5	LL, STS	PVI	61.4	33	0.0	2.0	35.2	19.5	66.2	
Doebler's	39X9	3.9	RR2, Xtend	DPH Boost	61.3	37	1.0	3.0	37.6	18.2		
CHANNEL	3718R2X	3.7	RR2, Xtend	ACCLRN+PV+B200	61.2	27	0.5	2.0	35.6	19.2	64.4	
Syngenta	S39-P5X Brand	3.9	RR2, Xtend	Clariva Complet + Mertect	60.6	41	1.5	1.0	35.2	19.0		
Dyna-Gro Seed	Dyna-Gro S35XT97	3.5	RR2, Xtend	Equity VIP	60.3	28	0.5	2.0	36.8	19.1	64.4	61.2
Keystone Group Ag Seeds	CPM 3418 STS	3.4	Non-GMO	Rancana/MetalaxyI	60.2	43	2.0	1.0	37.8	18.4		
Mid-Atlantic Seeds	MAS3681RR2/X	3.6	RR2, Xtend		59.9	35	0.5	3.0	36.0	19.1		
Seedway	SG3783XT	3.7	RR2, Xtend		59.6	34	0.5	2.0	37.9	19.2	67.2	60.0
Doebler's	DB3517R	3.5	RR	DPH Boost	58.5	32	1.0	2.0	35.9	19.3	64.0	59.2
Hubner	H34-37R2X	3.4	RR2, Xtend	Acceleron	58.2	31	0.5	2.0	36.0	18.0	65.0	
Dyna-Gro Seed	Dyna-Gro S36XT09	3.6	RR2, Xtend	Equity VIP	57.4	34	1.0	1.0	35.9	18.7		
Doebler's	DB3617X	3.6	RR2, Xtend	DPH Boost	56.8	37	1.5	2.0	35.5	18.8		
Local Seed	TS3759R2	3.7	RR2Y	Trius Elite	53.7	34	1.5	2.0	37.7	18.0		
Dyna-Gro Seed	Dyna-Gro S34XT69	3.4	RR2, Xtend	Equity VIP	52.5	27	0.0	3.0	37.0	19.1		
Keystone Group Ag Seeds	DKG 3808	3.8	Non-GMO	EclipseTrio IM	52.3	35	2.5	3.0	37.4	18.4		
Chemgro	C3451RX	3.4	RR2, Xtend	Encase Excalibre SA	52.1	34	1.0	3.0	37.1	18.3		
Keystone Group Ag Seeds	DKG RESNIK	3.4	Non-GMO	EclipseTrio IM	49.9	36	1.0	3.0	38.5	19.5		
Mean					62.8	36	1.2	1.9	36.3	18.8	68.4	67.2
LSD(0.05)					7.1							
LSD(0.2)					4.6							
CV%					8.1							

Soybean Company Contact Information

CHANNEL<https://www.channel.com/Pages/default.aspx>

Varieties tested: 2519R2X, 2719R2X, 2918R2X, 3119R2X, 3318R2X, 3519R2X, 3718R2X, 3919R2X, 4018R2X, 4119R2X

BASF<https://www.basf.com/us/en.html>

Varieties tested: CZ 2312 LL, CZ 2408 LL, CZ 2601 LL, CZ 2928 LL, CZ 3118 LL, CZ 3233 LL, CZ 3548 LL, CZ 3601 LL, CZ 3738 LL, CZ 3841 LL, CZ 4105 LL, CZ 4308 LL

Hubner Seed<https://www.hubnerseed.com/en-us.html>

Varieties tested: H24-38R2X, H28-27R2X, H33-37R2X, H34-37R2X, H35-27R2X, H36-28R2X, H38-27R2X

Doebler's PA Hybrids<https://www.doeblers.com800-853-2676>

Varieties tested: 22R8, 23X9, DB2616R, 28X9, 30R8, 32L9, DB3517R, DB3617X, 39X9, 40R8, 42X9

Chemgro Seed<http://www.chemgro.com/home.htm800-374-3326>

Varieties tested: C2851RX, C3051BG, C3152RX, C3451RX, C3551BG, C3751RXS

Syngenta Seed<http://www.syngenta-us.com/seed>

Varieties tested: S27-M8X Brand, S35-K9X Brand, S39-P5X Brand, S42-B9XS Brand

Local Seed Company<https://www.localseed.com901-260-6000>

Varieties tested: LS3665S, LS2685X, LS2847R2S, TS3759R2, LS3787XS, LS3956R2S, LS3976X

Keystone Group Ag Seed<https://keystoneagseeds.com888-825-5088>

Varieties tested: CPM 2119, CPM 2719, CPM 3418 STS, CPM 3614 STS, DKG SUMMIT, DKG STREETER, DKG RESNIK, DKG 3808

Soybean Company Contact Information (cont.)

Dyna-Gro Seed<https://www.dynagroseed.com/>

Varieties tested: Dyna-Gro S28XT58, Dyna-Gro S30XT96, Dyna-Gro S31XT59, Dyna-Gro S33RY76, Dyna-Gro S33XT79, Dyna-Gro S34XT69, Dyna-Gro S35XT97, Dyna-Gro S36XT09, Dyna-Gro S37XS89, Dyna-Gro S39XT68, Dyna-Gro S27LL55, Dyna-Gro S31LL43, Dyna-Gro S35LS15, Dyna-Gro S36LL77, Dyna-Gro S38LL54

Seedway LL<http://www.seedway.com> 800-836-3710

Varieties tested: SG2832XT, SG3042XT, SG3494XT, SG3783XT

Growmark FS<https://www.growmarkfs.com> (800) 787-2767

Varieties tested: HS 29X80, HS 34X80, HS 37X70

Mid-Atlantic Seeds<http://midatlanticseeds.com> 800-854-6251

Varieties tested: MAS3516RR2, MAS4355NRR2/STS, MAS3611RR2/STS/X, MAS3718RR2/X, MAS3311RR2/X, MAS3681RR2/X, MAS2916RR2

Asgrow<https://www.aganytime.com/asgrow/Pages/default.aspx>

Varieties tested: AG30X6

Dupont Pioneer<https://www.pioneer.com/landing>

Varieties tested: P36T36X

Prepared by: Courtney Anchor and Mark Antle, Plant Science Department.

Where trade names appear, no discrimination is intended, and no endorsement by Penn State Cooperative Extension is implied.

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.

Updated results can be found at:

<https://extension.psu.edu/2018-soybean-variety-trials>

