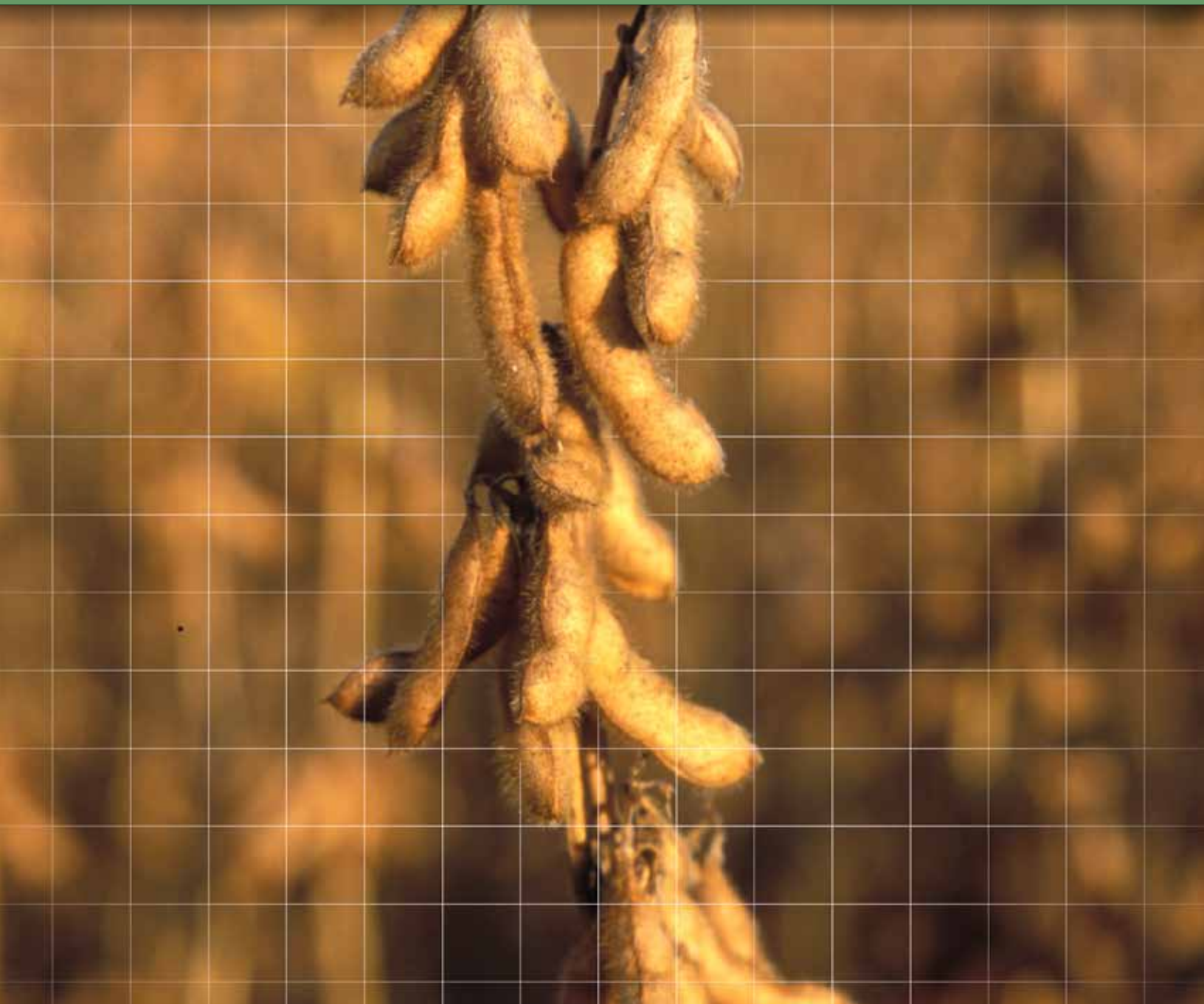


PENNSYLVANIA
SOYBEAN
YIELD CONTEST

2024 REPORT



**Pennsylvania
Soybean Board**

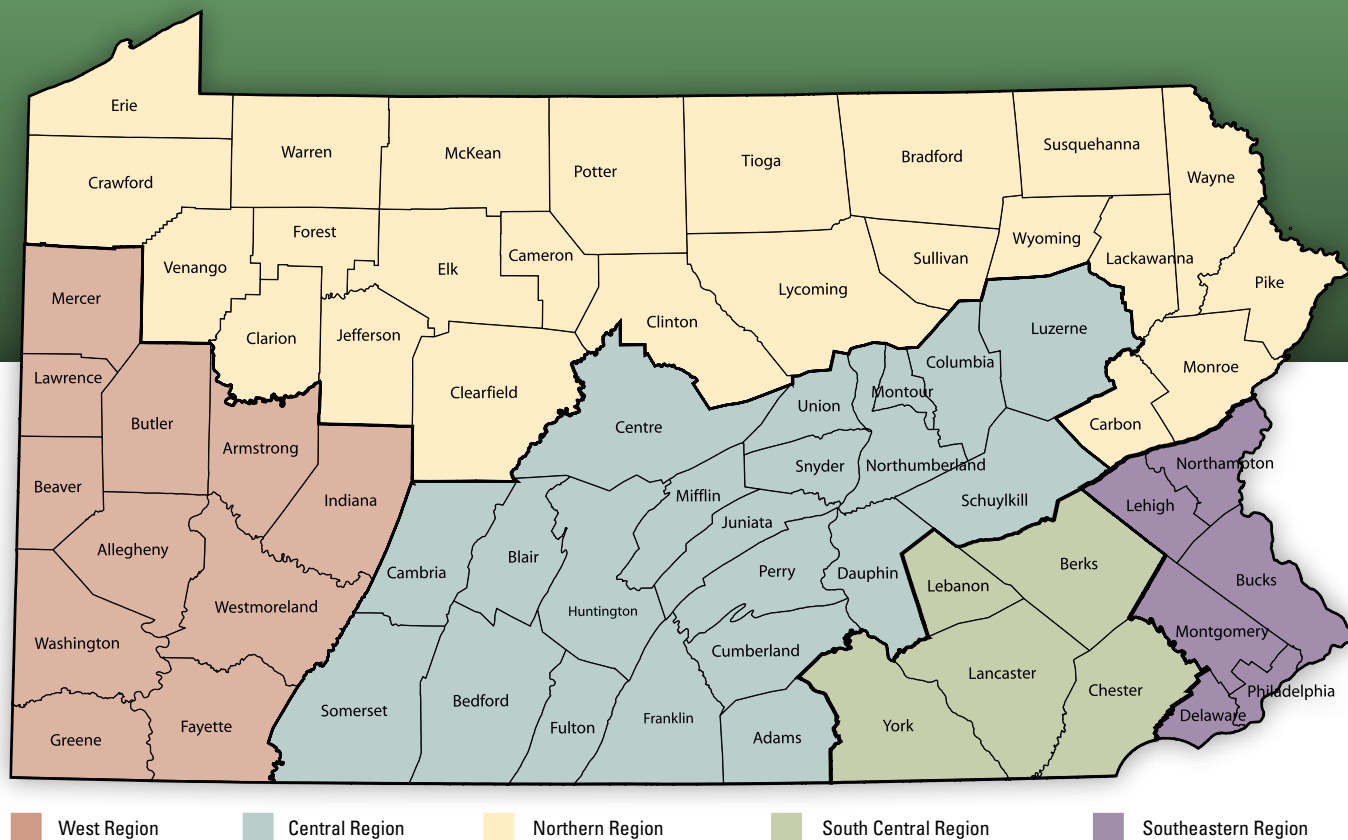


PennState Extension

Prepared by
Delbert G. Voight, Jr., Senior Extension Educator &
Andrew Frankenfield, Senior Extension Educator

Supported and directed by the Pennsylvania Soybean Board

THE PENNSYLVANIA SOYBEAN YIELD CONTEST is designed to focus farmer attention on agronomic and management skills that will increase soybean profitability. If you know what it takes to produce great soybeans, you could be a winner in the Pa. Soybean Yield Contest. The state is divided into five regions. The top producer in each region will win an educational trip to the Commodity Classic.



ELIGIBILITY: Any bona-fide farmer who farms in Pennsylvania and grows 5 acres or more of soybeans within the state is eligible.

PRODUCTION: For the state-wide and regional yield contest winners, participants must use non-irrigated soybeans, but are not restricted as to variety, fertilization, spacing or other cultural practices.

PRIZES! In addition to bragging rights, the state champion receives an educational trip for two (the winner and one other individual* with a direct financial interest in their farming operation) to the Commodity Classic. (Up to \$2,500.) The top yield winner in each region receives an educational trip for the winner to the Commodity Classic. (Up to \$1,500.) Special awards are presented for irrigated bean yield and for oil/protein quality.

** Subject to approval by the Pa. Soybean Board.
All decisions of the Board are final.
Awards are non-transferable.*

HOW TO ENTER:

If you would like to enter the Pennsylvania Soybean Contest, you must register by September 1. Online registration is available at www.pasoybean.org. Harvest report forms must be postmarked by November 15.

You may also request a registration form from your local Penn State Extension Educator, or by contacting:

Penn State Extension-Lebanon County
PA Soybean Contest c/o Del Voight
2120 Cornwall Road, Suite 1
Lebanon, PA 17042-9777
717-270-4391

Penn State Extension-Montgomery County
PA Soybean Contest c/o Andrew Frankenfield
1015 Bridge Road, Suite H
Collegeville, Pennsylvania 19426-1179
610-489-4315

Thanks to our Harvest Supervisors

Supervisor	Position
Justin Brackenrich	Agronomy Educator, Penn State Extension Greene County
John Bray	Retired Penn State Extension Program Assistant
Sarah Frame	Agronomy Educator, Penn State Extension Berks County
Andrew Frankenfield	Agronomy Educator, Penn State Extension Montgomery County
Casey Guindon	Agronomy Educator, Penn State Extension Bradford County
Jeff Graybill	Agronomy Educator, Penn State Extension Lancaster County
Anna Hodgson	Agronomy Educator, Penn State Extension Union County
Ashley Isaacson	Agronomy Educator, Penn State Extension Dauphin County
Tosh Mazzone	Agronomy Educator, Penn State Extension Franklin County
Tyler McFeaters	Research Technologist, Penn State Esker Lab
Eric Rosenbaum	Agronomist, Rosetree Consulting LLC
Heidi Reed	Agronomy Educator, Penn State Extension York County
Leon Ressler	Agronomy Educator, Penn State Extension Lancaster County
Jon Stutzman	Agronomist, Stutzman Crop Care Inc
Luke Vogel	CED, USDA FSA Mercer/Lawrence County
Craig Williams	Dairy Educator, Penn State Extension Tioga County
Brett Young	Treasurer, Mercer County Ag Land Preservation Board

Rank of Contest Entries

South Central

Rank	Name	Yield	County	Brand	Cultivar
1	Dale Herr Jr.	117.30	Lancaster	Pioneer	P35Z76E
2	Kristen Grumbine	104.06	Lebanon	Pioneer	P35Z76E
3	Herman Manbeck	101.23	Berks	Pioneer	P35Z76E
4	Eric Charles	100.75	Lancaster	Pioneer	P34A65PR
5	Christopher Martin	95.73	Lebanon	Pioneer	P34A65PR
6	Jon Stutzman	88.42	Berks	Hefty	Z3203E
7	Mike Shearer	87.79	Lancaster	Pioneer	P31Z32E
8	Jay Bomgardner	86.32	Lancaster	Seedway	SG3393E3
9	Merle Stoltzfus	85.58	Lancaster	Rob Seed Co.	—
10	Jay Bomgardner	81.62	Lebanon	Seedway	SG3393E3
11	Fred Herr	79.80	Lancaster	Seed Consultants	SC7364E
12	Josh Towson	77.31	York	Pioneer	P37A18E3
13	Pete Koss	75.87	Berks	Chemgro	3357E
14	Lowell Stoner	61.65	Lebanon	Seedway	SG3393E3

Central

Rank	Name	Yield	County	Brand	Cultivar
1	Eric Meyers	88.21	Franklin	Pioneer	P49Z02E
2	Jay Arentz	82.33	Adams	Revere	IS4233E3
3	Josh Marks	81.80	Columbia	Seedway	—
4	Leslie Bowman	64.72	Franklin	Pioneer	P30A93PR
5	Dan Rice	64.10	Perry	Channel	3521RXF

West

Rank	Name	Yield	County	Brand	Cultivar
1	Ricky Telesz	86.31	Lawrence	Asgrow	AG32XF2
2	David Mast	83.66	Mercer	Pioneer	22A46PR
3	Thomas Hoovler	63.51	Mercer	Asgrow	AG30XF2
4	Mike Reskovic	47.59	Fayette	Pioneer	P23A16E

Northern

Rank	Name	Yield	County	Brand	Cultivar
1	John Tebbs	102.18	Lycoming	Asgrow	AG35XF1
2	Jerry Martin	73.87	Tioga	Pioneer	P22A67E
3	Vernon Martin	71.38	Tioga	Pioneer	P28A39E
4	Justin Jones	60.60	Bradford	Asgrow	AG30XF2
5	Robert Miller	59.57	Bradford	Channel	2321RXF
6	Derick Coolidge	55.69	Tioga	Hubner	2241
7	Travis Hartranfit	48.47	Tioga	Pioneer	P25A16

Southeast

Rank	Name	Yield	County	Brand	Cultivar
1	Brad Kiefer	100.54	Northampton	Pioneer	P37Z06E
2	Kevin Brewer	72.58	Northampton	Asgrow	AG38XF3
3	Nathan Crooke	63.33	Bucks	Channel	3223RFX

Irrigated

Rank	Name	Yield	County	Brand	Cultivar
1	Steve Chapin	85.06	Columbia	Pioneer	P34A65PR

Yield Comparisons	Ave Bu/A
Mean Yield	79.38 bu/a
No-till (n=23, 68% of entries)	79.05 bu/a
Min-till (n=9, 26% of entries)	81.885 bu/a
Conventional till (n=2, 6% of entries)	71.95 bu/a
Drill (n=10, 29% of entries)	82.82 bu/a
Corn planter (n=24, 71% of entries)	77.94 bu/a
Planted April 1-10 (n=1, 3% of entries)	61.65 bu/a
Planted April 11 to 20 (n=3, 9% of entries)	76.28 bu/a
Planted April 21 to 30 (n=17, 50% of entries)	86.03 bu/a
Planted May 1 to 10 (n=5, 15% of entries)	78.41 bu/a
Planted May 11 to 20 (n=3, 9% of entries)	76.90 bu/a
Planted May 21 to 30 (n=2, 6% of entries)	79.45 bu/a
Planted in June (n=3, 9% of entries)	54.58 bu/a
Rows 7.5" (n=5, 15% of entries)	74.53 bu/a
Rows 15" (n=15, 44% of entries)	87.27 bu/a
Rows 30" (n=12, 35% of entries)	73.27 bu/a
No Foliar Fungicide or Insecticide Applied (n=11, 32% of entries)	67.44 bu/a
Only Foliar Fungicide Applied (n=7, 21% of entries)	81.40 bu/a
Combination of Foliar Fungicide and Insecticide (n=16, 47% of entries)	86.70 bu/a

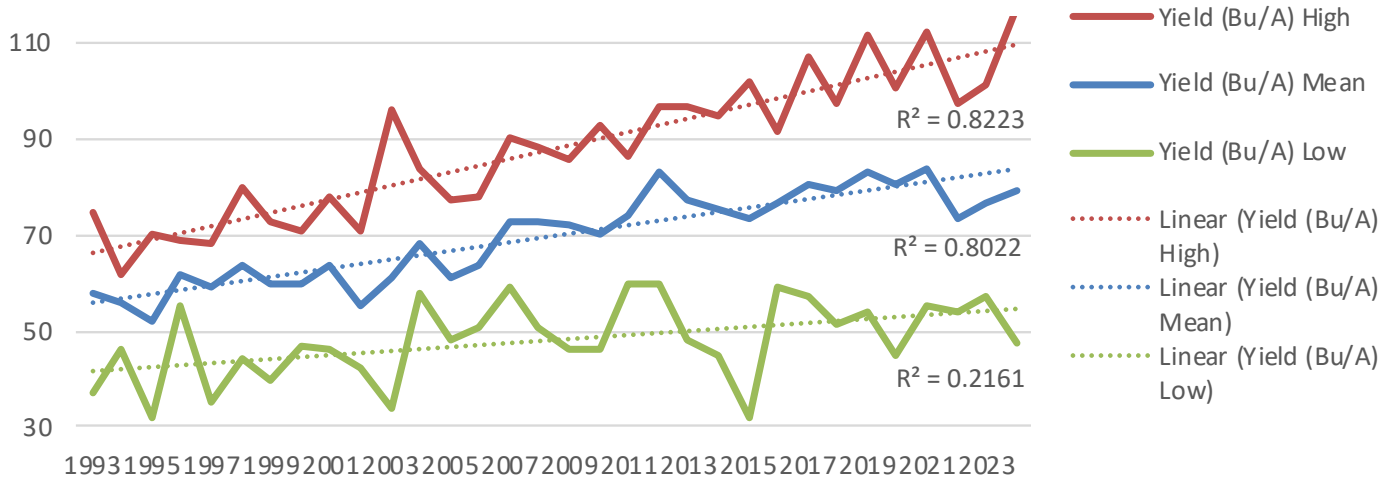
Production Information

Seed Treatment (n=33, 97% of entries)	79.17 bu/a
No Seed Treatment (n=1, 3% of entries)	86.32 bu/a
Rhizobia Inoculation (n=30, 88% of entries)	79.65 bu/a
No Rhizobia Inoculation (n=4, 12% of entries)	77.35 bu/a
Dry Inoculation (n=5, 15% of entries)	79.62 bu/a
Liquid Inoculation (n=3, 9% of entries)	72.36 bu/a
Pre-Inoculation (n=20, 59% of entries)	80.90 bu/a
Calibrate Seed Equipment Yes 52% / No 48%	86.40 bu/a / 71.65 bu/a
Soil Test Yes (82%) / No (18%)	80.02 bu/a / 76.40 bu/a
pH 6.0-6.3 (24%) / pH 6.4-7.4 (76%)	75.63 bu/a / 86.71 bu/a
Med P (55%) / High P (45%)	73.91 bu/a / 92.71 bu/a
Med K (59%) / High K (41%)	73.71 bu/a / 95.08 bu/a
No Foliar Fertilizer (45%) / Foliar Fertilizer (55%)	70.02 bu/a / 87.16 bu/a
Nitrogen (38%) / No Nitrogen (62%)	80.70 bu/a / 77.24 bu/a
Herbicide	100% utilized Glyphosate 85% Used a preemergent herbicide 97% Used multiple modes of action pre 100% Used a post emergent herbicide 62% used multiple modes of action post 26% utilized Enlist One
Yield Limiting Factors	Dry conditions, deer, delayed harvest due to late September rains, smaller seed size, higher than average harvest losses due to low grain moisture
Average Seeds Per Pound	2,771
Average Seed Drop	149,559
Average Plants at Harvest	107,708 28% loss from planting
Average Pod Count	54 pods
Average Harvest Loss	0.81 bu/a
Average Harvest Date	10/11/24
Cover crop	71% planted something after harvest 58% planted wheat alone or in a mixture 47% planted wheat alone 37% planted rye 16% planted a mixture

Soybean Management Practices - Regional Award Winners

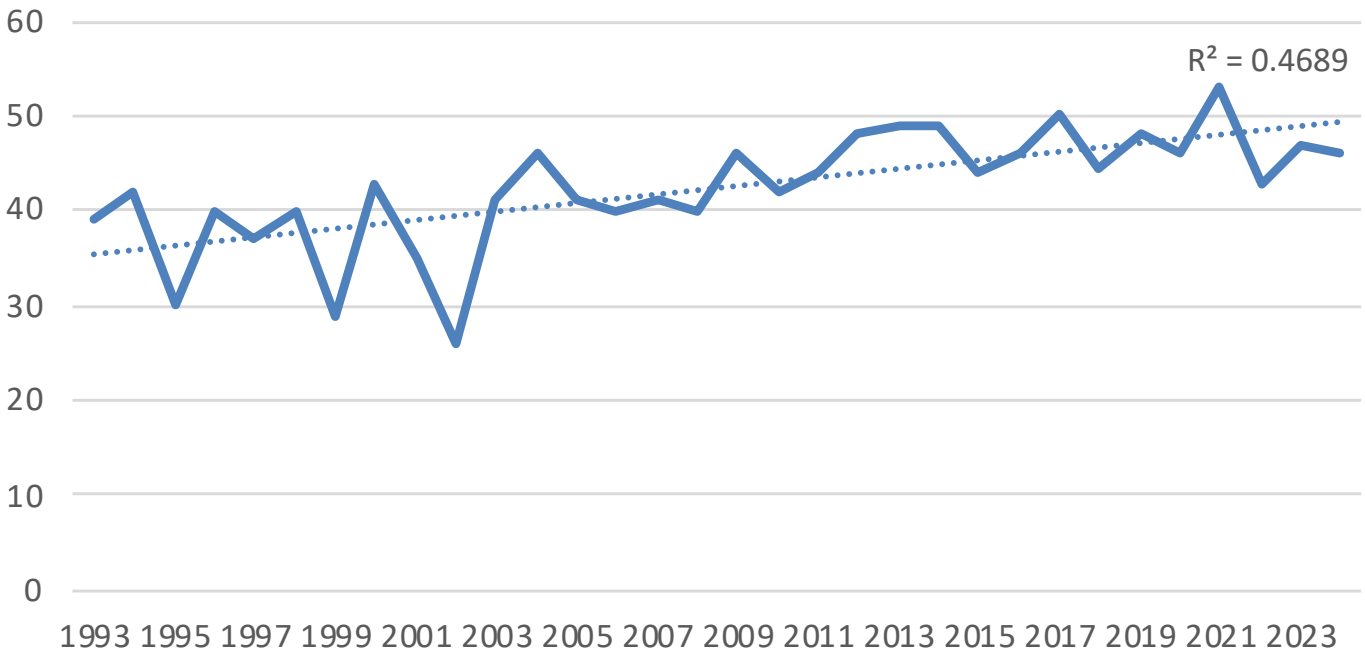
Region	South Central	Central	West	Northern	Southeast
Winner	A. Dale Herr, Jr	Eric Meyers	Ricky Telesz	John Tebbs	Brad Kiefer
County	Lancaster	Franklin	Lawrence	Lycoming	Northampton
Previous Crop	Corn	Corn	Corn	Corn	Corn
Row Width	15"	30"	15"	15"	15"
Tillage Type	No-Till	Conventional	Min-Till	Min-Till	Min-till
Variety	Pioneer P35Z76E	Pioneer P49Z02E	Asgrow AG32XF2	Asgrow AG35XF1	Pioneer P37Z06E
Seeding Date	4/27/24	4/26/24	4/30/24	4/25/24	5/2/24
Seeding Rate	140,000	110,000	178,000	140,000	140,000
Final Stand	102,660	102,000	127,020	80,500	120,000
Seed Treatment	Pioneer Premium	Pioneer Premium	Fungicide & Insecticide	Seed Shield	Pioneer Premium
Inoculation	Dry	Liquid	Pre	Liquid	Pre
Fungicide	Stratego YLD	Miravis Neo	Approach	Revytek	Delaro Complete
Insecticides	Sniper	Mustang Maxx	Yes	Mustang Maxx	None
Pre-Herbicide	Roundup, Sharpen, Tribal	Verdict, Zidua	Metribuzin, Valor	Antares Complete Gramoxone	None
Post-Herbicide	Roundup, Enlist, Intensity One	Roundup	Roundup	Classic Roundup	Roundup, Liberty, Synchrony
Date of Harvest	10/12/24	10/10/24	10/18/24	10/11/24	10/23/24
Yield	117.30	88.21	86.31	102.18	100.54
Moisture %	11.90	14.40	12.80	14.20	9.87
Ave Pod Count	93	89	39	68	65
Harvest Loss	0.75 bu/a	2.00 bu/a	0.68 bu/a	0.25 bu/a	1.00 bu/a
Biostimulant	Radiate	No	None	None	-
Foliar Fertilizer	Nutrisync, Reax K, Ativus PK, Terramar	Yes	None	Yes	-
Cover Crop	yes	Wheat	Clover/Rye Interseeded into standing beans	Rye	Rye

Yield Change Over 32 years



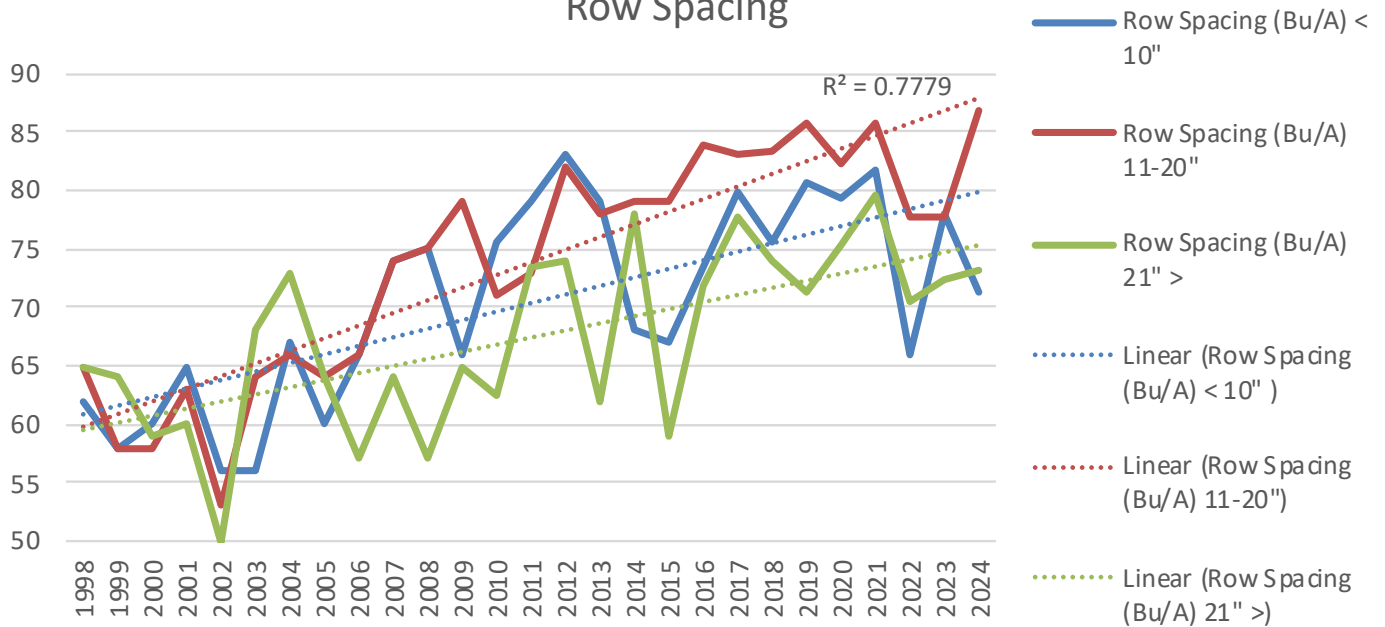
Over a 32-year period, the mean and highest entry went up by nearly 1 bushel per year.

PA State Average Yield



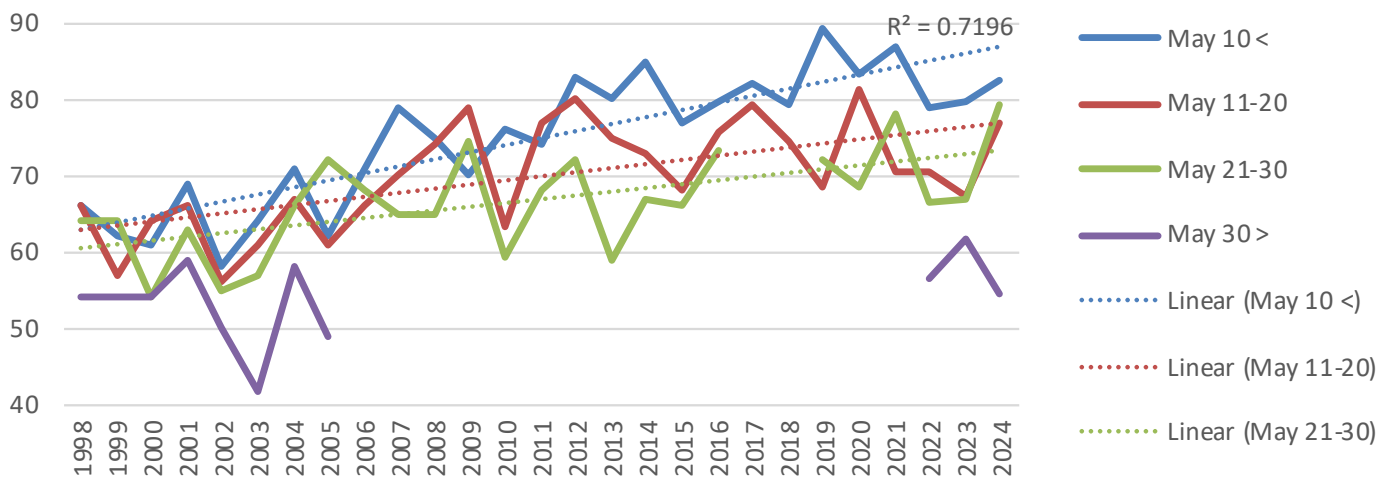
Since 1993 the Pennsylvania average soybean yield has increased about 0.5 bushels per year.

Row Spacing



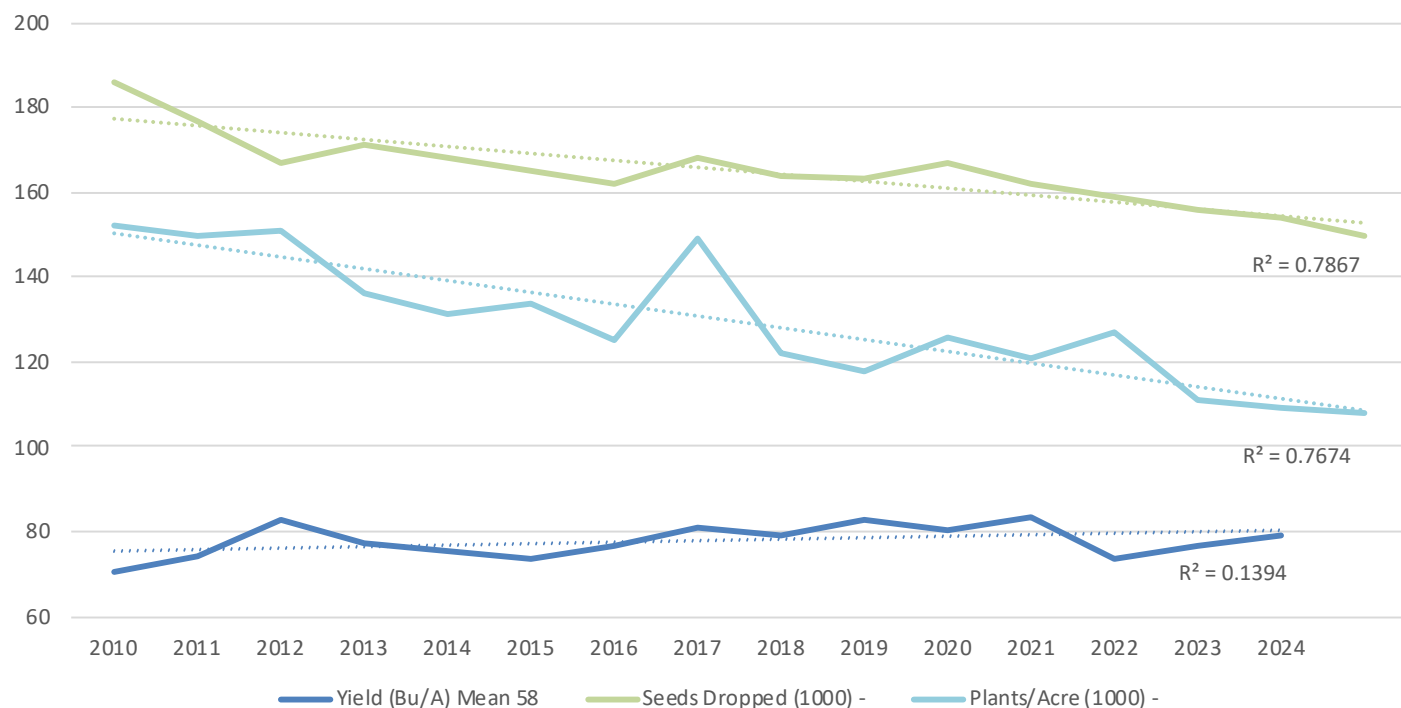
Since 2008 about 50% of the entries in the contest were planted in 15" rows with a trend of yielding 0.78 bushels more per year compared to drilled soybeans planted in rows less than 10" which are trending up at a rate of 0.48 bushels per year. Wide row soybeans make up about 35% of the entries and are trending below 15" soybeans at a rate of 0.4 bushels per year.

Average Yield by Planting Date



Since 1998 the average yield of entries planted before May 10th increased 0.72 bushel per year compared to 0.38 bushel from May 10 – 20 and 0.36 bushel from May 21-30. Since 2005 very few entries were planted after May 30th.

Changes in seeding rate, harvest population and yield



Conclusion:

Over a 15-year period, there has been a decrease in seeding rate by approximately 35,000 seeds per acre and a decrease in the harvest population by approximately 40,000 plants per acre, all while increasing yield 10 bushels per acre in the same period.

Penn State encourages persons with disabilities to participate in its programs and activities. If you anticipate needing any type of accommodation or have questions about the physical access provided, please contact Andrew Frankenfield at (610) 489-4315 in advance of your participation or visit.

This publication is available in alternative media on request.

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Photos by United Soybean Board



Pennsylvania Soybean Board



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