

A close-up photograph of a soybean plant. The image shows several green, trifoliate leaves with prominent veins. In the foreground, a cluster of developing soybean pods is visible, showing their characteristic fuzzy, green, and slightly curved shape. The background is filled with more green foliage, creating a dense, natural setting.

Pennsylvania Soybean Yield Contest 2023 Report

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

Supported and directed by the Pennsylvania Soybean Board

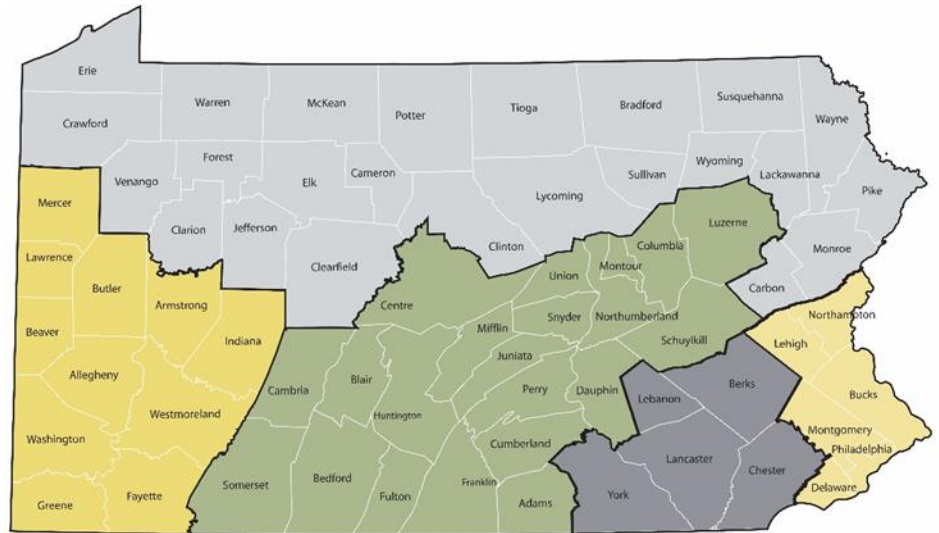
THE PENNSYLVANIA SOYBEAN CONTEST is designed to focus farmer attention on agronomic and management skills that will increase soybean profitability. If you know what it takes to produce great soybeans, you could be a winner in the Pa. Soybean Contest. The state is divided into five regions. The top producer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



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

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



THANKS TO OUR HARVEST SUPERVISORS

Supervisor	Position
Justin Brackenrich	Agronomy Educator, Penn State Extension, Butler County
John Bray	Former Agronomy Assistant, Penn State Extension
Andrew Frankenfield	Agronomy Educator, Penn State Extension, Montgomery County
Casey Gindon	Agronomy Educator, Penn State Extension, Bradford County
Jeff Graybill	Agronomy Educator, Penn State Extension, Lancaster County
Ryan Herstine	Ag Technician, Bucks County Conservation District
Ashley Issacson	Agronomy Educator, Penn State Extension, Dauphin County
Tyler McFeaters	Research Technologist, Penn State Esker Lab
John Mark Miller	Agronomy Educator, Penn State Extension, Butler County
Eric Rosenbaum	Agronomist, Rosetree Consulting LLC
Heidi Reed	Agronomy Educator, Penn State Extension, York County
Leon Ressler	Agronomy Educator, Penn State Extension, Lancaster County
Ryan Spellman	Agronomy Educator, Penn State Extension, Blair County
Jon Stutzman	Agronomist, Stutzman Crop Care, Inc.
Del Voight	Agronomy Educator, Penn State Extension, Lebanon County
Pierce Wilson	Agricultural Coordinator, Fayette County Conservation District
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	Eric Charles	101.00	Lancaster	Pioneer	P34A65PR
2	Dale Herr Jr.	95.21	Lancaster	Pioneer	P32T26E
3	James Hershey	91.40	Lancaster	Pioneer	P28A65
4	Herman Manbeck	88.73	Berks	Pioneer	P37A18E
5	Doug Lapp	85.08	Chester	Pioneer	P30A46
6	Mike Shearer	83.76	Lancaster	Pioneer	P30A93PR
7	Darren Grumbine	82.83	Lebanon	Pioneer	P31T64
8	Pete Koss	80.30	Berks	Chemgro	3354E
9	Brian Kreider	79.14	Lebanon	Pioneer	P25A16E
10	Josh Towson	78.69	York	Revere	3750E3
11	Joseph Conley	72.19	Lancaster	Pioneer	P34A65PR

Central

Rank	Name	Yield	County	Brand	Cultivar
1	Ian Stamy	84.71	Cumberland	Pioneer	P37A18E
2	Eric Meyers	82.54	Franklin	Pioneer	P36A83X
3	Dan Rice	79.70	Perry	Channel	2420RXF
4	Leslie Bowman	69.86	Franklin	Pioneer	P30A46PR
5	Brandon Cherry	67.37	Blair	Pioneer	P32T26E
6	Jay Arentz	66.20	Adams	Innotech	IS3444E3



West

Rank	Name	Yield	County	Brand	Cultivar
1	Thomas Hoovler	74.74	Mercer	Asgrow	AG30XF2
2	Rick Telesz	72.96	Lawrence	FS HiSoy	HS33F20
3	Mike Reskovic	70.98	Fayette	Pioneer	P23A40E
4	Michael Andrews	67.17	Fayette	Seed Consultants	CS7381E
5	Cayce Miller	67.00	Indiana	Pioneer	P29A25X

Northern

Rank	Name	Yield	County	Brand	Cultivar
1	John Tebbs	78.98	Lycoming	Asgrow	AG35XF1
2	Brett Taylor	72.06	Lycoming	FS HiSoy	HS30C80
3	Jerry Martin	70.49	Tioga	Pioneer	P25A16E
4	Vernon Martin	63.94	Tioga	Pioneer	P28A65E
5	Robert Miller	62.18	Bradford	Channel	2023
6	Travis Hartranft	61.59	Tioga	Pioneer	P28A65E
7	Todd Webster	56.97	Tioga	Pioneer	P18A73E

Southeast

Rank	Name	Yield	County	Brand	Cultivar
1	Brad Kiefer	93.73	Northampton	Pioneer	P37A18E
2	Kyle Henninger	87.17	Lehigh	Asgrow	AG30XF2
3	Nathan Crooke	77.73	Bucks	Channel	2918
4	Noah Detwiler	59.52	Montgomery	Chemgro	3755XT



Grain Quality			
Name	Protein %	Oil %	Protein + Oil %
Henninger	18.7	36.05	54.75
Crooke	18.7	36.04	54.74
Koss	19.47	35.17	54.64
Miller	17.11	37.47	54.58
Cherry	19.12	35.45	54.57
Hershey	19.37	35.19	54.56
Miller	17.75	36.69	54.44
Towson	20.13	34.30	54.43
Manbeck	19.50	34.88	54.38
Herr, Jr	19.83	34.50	54.33
Webster	19.78	34.55	54.33
Rice	19.56	34.75	54.31
Kreider	19.59	34.27	53.86
Grumbine	18.92	34.80	53.72
Kiefer	18.86	34.85	53.71
Taylor	18.58	35.09	53.67
Tebbs	19.37	34.27	53.64
Reskovac	18.77	34.56	53.33
Detwiler	19.61	33.65	53.26
Hartranft	16.99	36.23	53.22
Stamy	20.16	33.00	53.16
Telesz	17.28	35.82	53.10
Martin	17.06	36.02	53.08
Andrews	18.21	34.81	53.02
Hoovler	18.41	34.51	52.92
Martin	16.77	36.07	52.84
Meyers	18.95	33.69	52.64
Conley	17.42	34.52	51.94
Charles	17.32	34.17	51.49
Lapp	17.24	34.21	51.45
Bowman	16.22	34.71	50.93
Arentz	16.12	34.77	50.89
Shearer	17.04	32.76	49.80
Averages	18.42	34.90	53.33

Yield Comparisons	Ave Bu/A
Mean Yield	76.54 bu/a
No-till (n=22, 69% of entries)	74.11 bu/a
Min-till (n=7, 22% of entries)	82.44 bu/a
Conventional till (n=3, 9% of entries)	79.75 bu/a
Drill (n=13, 41% of entries)	79.12 bu/a
Corn planter (n=19, 59% of entries)	74.64 bu/a
Planted April 1-10 (n=1, 3% of entries)	66.20 bu/a
Planted April 11 to 20 (n=12, 39% of entries)	81.88 bu/a
Planted April 21 to 30 (n=3, 10% of entries)	75.63 bu/a
Planted May 1 to 10 (n=8, 26% of entries)	80.33 bu/a
Planted May 11 to 20 (n=5, 16% of entries)	67.54 bu/a
Planted May 21 to 30 (n=1, 3% of entries)	67.00 bu/a
Planted in June (n=1, 3% of entries)	61.59 bu/a
Rows 7.5" (n=7, 22% of entries)	78.06 bu/a
Rows 15" (n=15, 47% of entries)	77.95 bu/a
Rows 20" (n=2, 6% of entries)	75.45 bu/a
Rows 30" (n=8, 25% of entries)	72.51 bu/a
No Foliar Fungicide or Insecticide Applied (n=13, 41% of entries)	71.53 bu/a
Only Foliar Insecticide Applied (n=0, 0% of entries)	
Combination of Foliar Fungicide and Insecticide (n=13, 41% of entries)	81.93 bu/a
Only Foliar Fungicide Applied (n=6, 19% of entries)	75.29 bu/a



Production Information

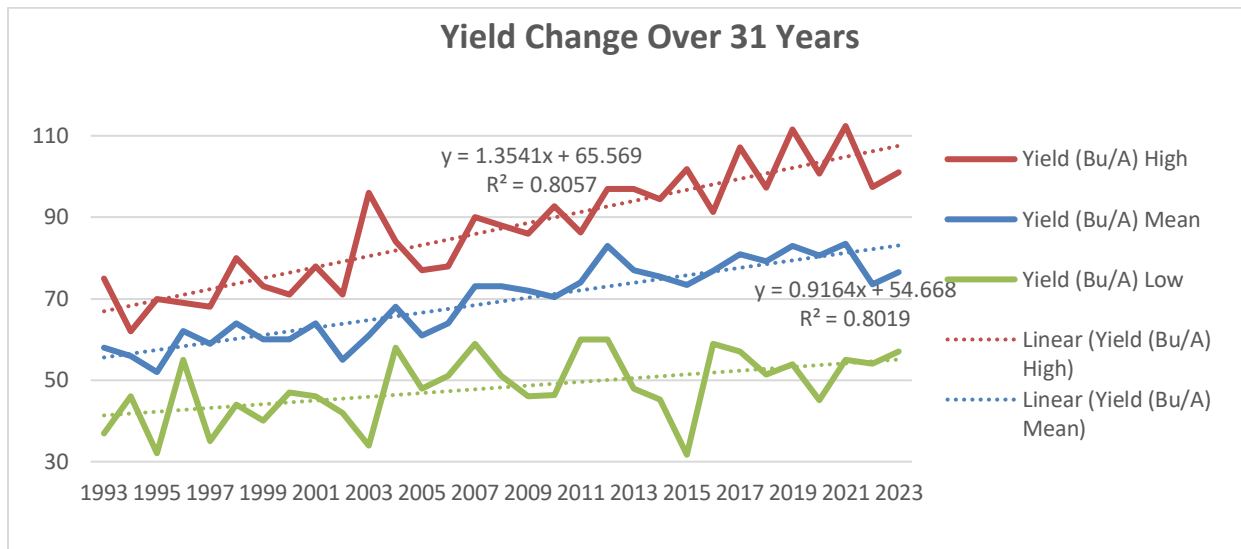
Seed Treatment (n=27, 90% of entries)	78.77 bu/a
No Seed Treatment (n=3, 10% of entries)	76.28 bu/a
Rhizobia Inoculation (n=30, 94% of entries)	76.35 bu/a
No Rhizobia Inoculation (n=2, 6% of entries)	78.05 bu/a
Dry Inoculation (n=8, 27% of entries)	77.34 bu/a
Liquid Inoculation (n=2, 7% of entries)	72.36 bu/a
Pre-Inoculation (n=20, 67% of entries)	76.02 bu/a
Calibrate Seed Equipment Yes 47% No 53%	81.85 bu/a 71.70 bu/a
Soil Test Yes (87%) No (13%)	77.12 bu/a 75.60 bu/a
pH less than 6.0 (5%) pH 6.0-6.3 (30%) pH 6.4-7.4 (65%)	77.73 bu/a 75.59 bu/a 81.69 bu/a
Low P (10%) Med P (50%) High P (40%)	81.40 bu/a 73.35 bu/a 81.74 bu/a
Low K (5%) Med K (65%) High K (30%)	77.73 bu/a 73.09 bu/a 87.04 bu/a
No Foliar Fertilizer (53%) Foliar Fertilizer (47%)	74.27 bu/a 78.94 bu/a
Nitrogen (35%) No Nitrogen (65%)	74.77 bu/a 77.27 bu/a
Herbicide	100% used a herbicide 88% utilized Glyphosate 88% Used a preemergent herbicide (others tilled) 79% uses multiple modes of action pre 91% Used a post emergent herbicide 52% used multiple modes of action post 25% utilized Engenia or Enlist
Yield Limiting Factors	Dry conditions, deer, lodging, lack of sun(smoke), white mold, early snowfall

Production Information

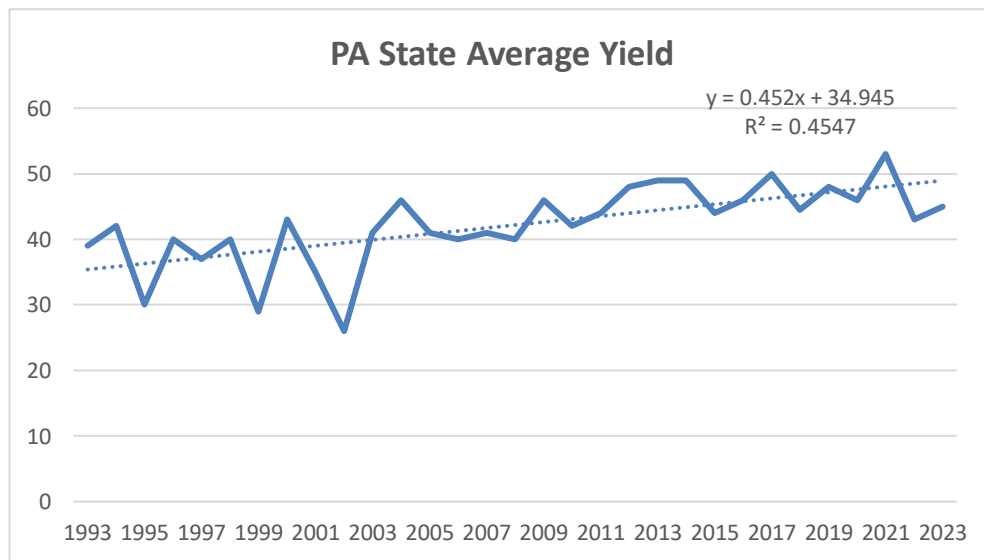
Average Seeds Per Pound	2,647
Average Seed Drop	154,371
Average Plants at Harvest	108,748 30% loss from planting
Average Pod Count	53 pods
Average Harvest Loss	0.63 bu/a
Average Harvest Date	10/15/23
Cover Crop	63% planted something after harvest 72% planted wheat alone or in a mixture 42% planted wheat alone 26% planted rye 32% planted a mixture

Soybean Management Practices - Regional Award Winners

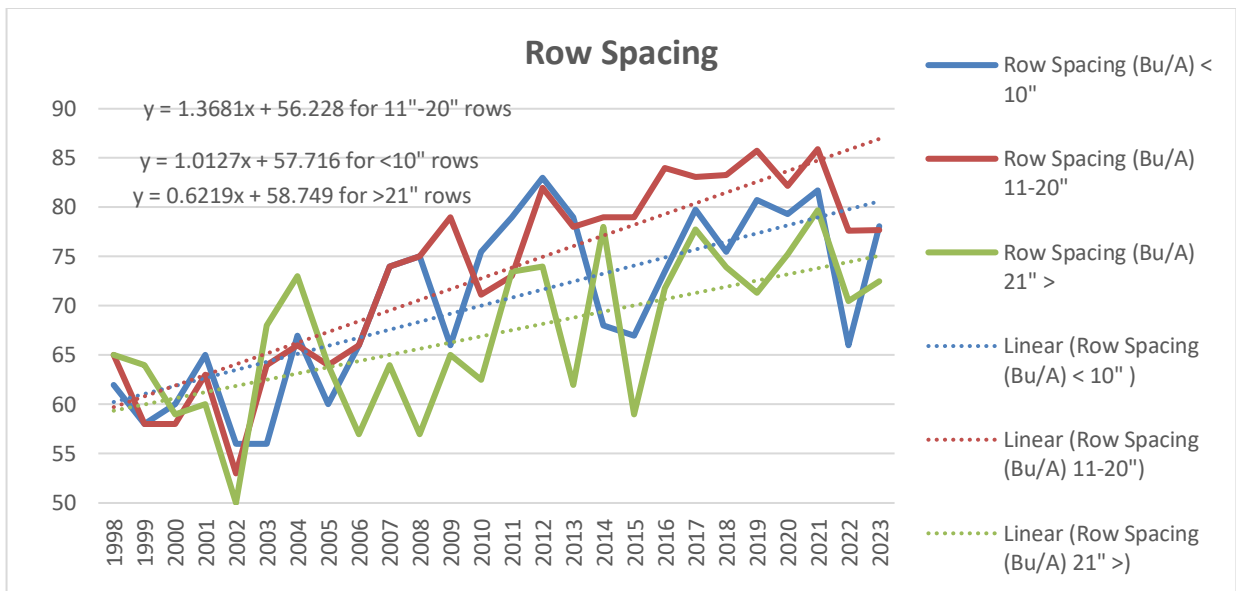
Region	South Central	Central	West	Northern	Southeast
Winner	Eric Charles	Ian Stamy	Thomas Hoovler	John Tebbs	Brad Kiefer
County	Lancaster	Cumberland	Mercer	Lycoming	Northampton
Previous Crop	Corn/ryelage	Corn	Corn	Corn	Corn
Row Width	7.5"	20"	30"	7.5"	15"
Tillage Type	No-Till	Min-Till	No-Till	Conventional	Min-till
Variety	Pioneer P34A65PR	Pioneer P37A18E	Asgrow AG30XF2	Asgrow AG35XF	Pioneer P37A18E
Seeding Date	5/4/23	5/8/23	5/11/23	4/17/23	5/2/23
Seeding Rate	180,000	135,000	165,000	175,000	140,000
Final Stand	160,000	62,712	106,140	69,600	99,180
Seed Treatment	Pioneer Premium	Pioneer Premium	Accelaron	Cruiser Max	Pioneer Premium
Inoculation	Pre	Pre	Dry	Pre	Pre
Fungicide	Miravis Neo	Revytek	None	Revytek	Delaro Complete
Insecticides	Endigo ZC	Yes	None	Mustang Max	Hero
Pre-Herbicide	Glyphosate First Rate	Zidua Pro	Glyphosate	Antares Complete Gramoxone	None
Post-Herbicide	Glyphosate	None	Glyphosate, Glufosinate	Classic Glyphosate	Glyphosate Glufosinate
Date of Harvest	10/11/23	10/12/23	11/12/23	10/19/23	10/26/23
Yield	101.00	84.71	74.74	78.98	93.73
Moisture %	12.93	11.90	13.30	17.10	11.40
Ave Pod Count	50	61	49	135	60
Harvest Loss	0.2 bu/a	0.2 bu/a	3.75 bu/a	0.31 bu/a	0.25 bu/a
Biostimulant	None	None	None	None	No
Foliar Fertilizer	AlfaPower MP	Maximum N-Pact	None	Yes	No
Cover Crop	Wheat	None	None	Rye	Rye



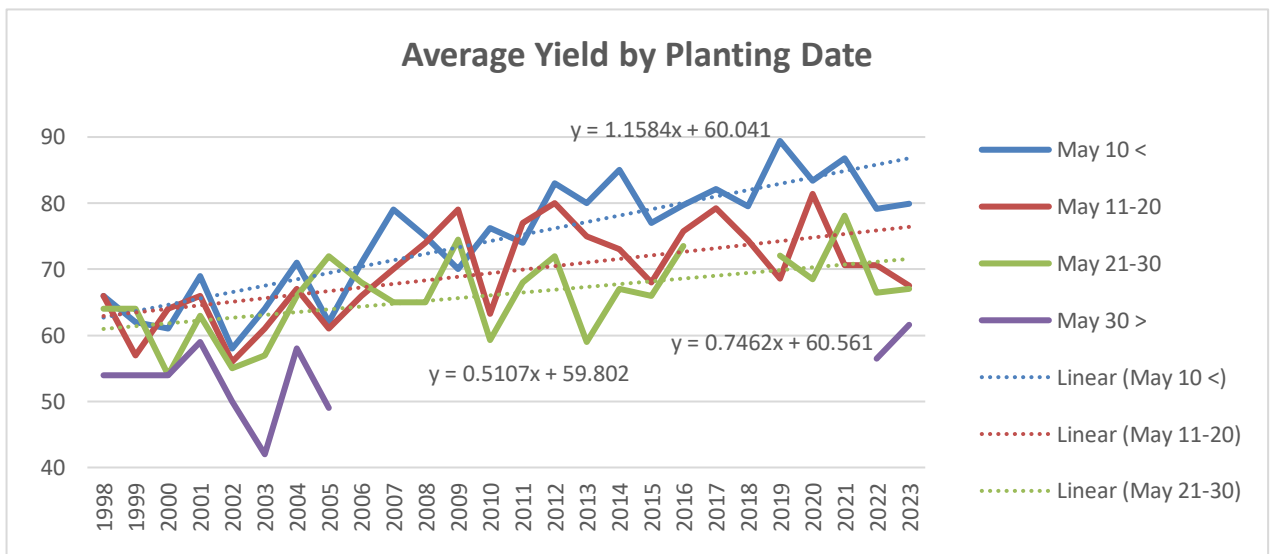
Conclusion: Over a 31-year period, the mean of all entries went up by nearly 1 bushel per year. Over the same period the winning yield went up by nearly 1.4 bushels per year.



Since 1993 the Pennsylvania average soybean yield has increase about ½ bushel per year.

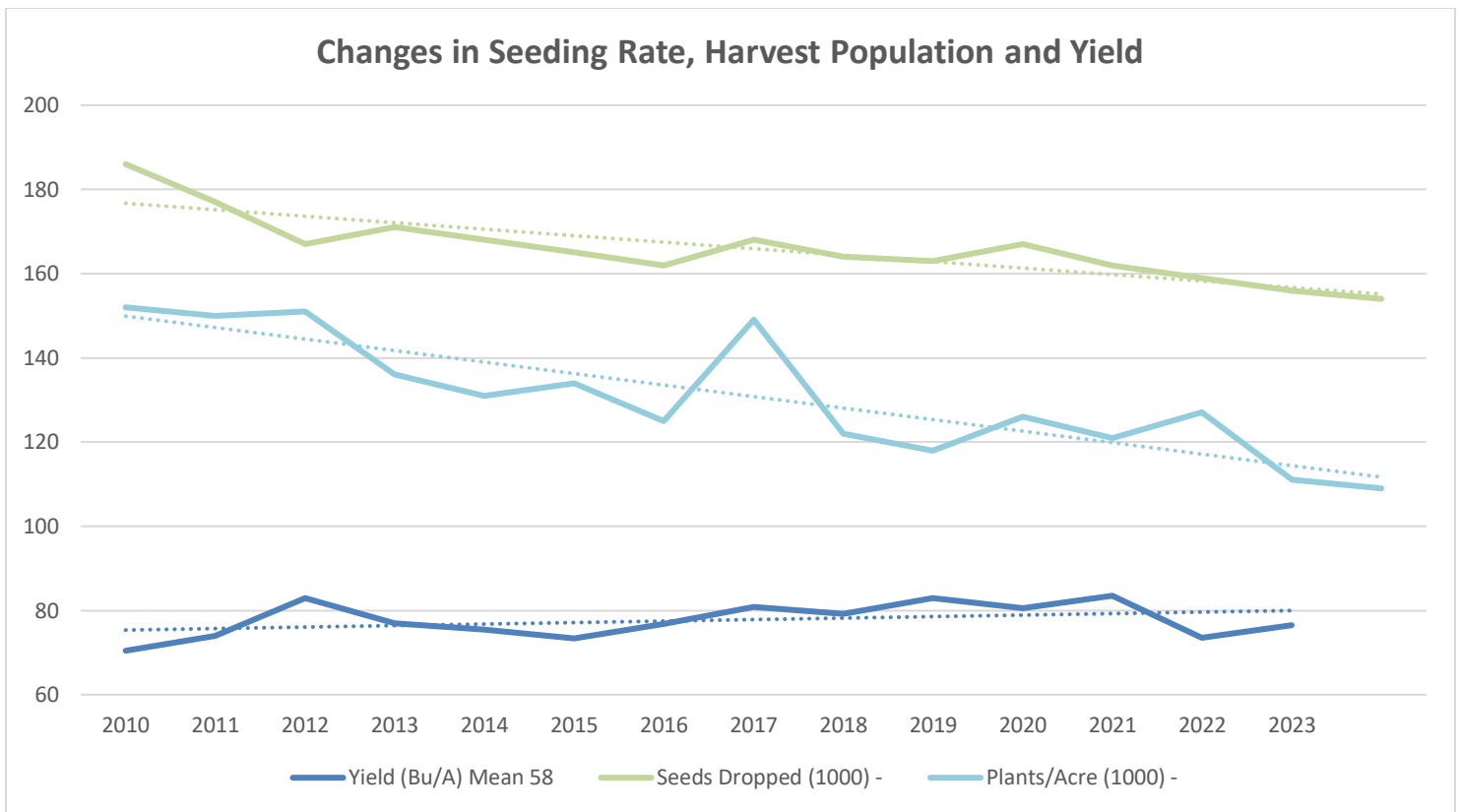


Since 2008 at least 50% of the entries in the contest were planted in 15" rows with a trend of yielding 1.37 bushels more per year compared to drilled soybeans planted in rows less than 10" which are trending up at a rate of 1.01 bushels per year. Wide row soybeans make up about 20% of the entries and are trending below drilled and 15" soybeans at a rate of 0.62 bushels per year.



Since 1998 the average yield of entries planted before May 10 increased 1.16 bushel per year compared to 0.75 bushels from May 10 – 20 and 0.51 bushels from May 21-30.

Since 2005 very few entries were planted after May 30.



Conclusion: Over a 15-year period, there has been a decrease in seeding rate by approximately 30,000 seeds per acre and a decrease in the harvest population by approximately 37,000 plants per acre, all while increasing yield 10 bushels per acre in the same period.

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This publication is available in alternative media on request.

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Photos by Pennsylvania Soybean Board

