

# 2018 Pennsylvania Soybean Contest Report



**Supported and directed by the  
PA Soybean Board**

Prepared by: Andrew Frankenfield – Extension Educator  
Penn State Extension

## Thanks to our harvest supervisors:

<b>Supervisor</b>	<b>Position</b>
Mike Fournier	Retired County Agent
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
Phil Haussener	Ag Educator, Cedar Crest High School, Lebanon County
Zach Larson	Agronomy Educator, Penn State Extension Blair County
Heidi Reed	Agronomy Educator, Penn State Extension York County
Leon Ressler	Agronomy Educator, Penn State Extension Lancaster County
Mitchell Shirk	Agronomist, Rosetree Consulting
Brett Young	Treasurer, Mercer County Ag Land Preservation Board

# Rank of Contest Entries

## South Central

Rank	Name	Yield	County	Brand	Cultivar
1	Jim Hershey	97.19	Lancaster	Pioneer	P27T03
2	Matthew Beiler	93.75	Lancaster	Pioneer	P37T51PR
3	Elvin Reiff	90.77	Lancaster	Hubner	H34-37R2X
4	Robert Shearer	90.40	Lancaster	Pioneer	P34A13X
5	Daryl Alger	88.64	Lebanon	Asgrow	AG 28X7
6	Fred Herr	86.60	Lancaster	Doebblers	DB3817R
7	Merle Stoltzfus	86.26	Lancaster	Hubner	H36-28R2X
8	Kristen Grumbine	86.11	Lebanon	Pioneer	P31T77R
9	Bob Buser	85.56	York	Pioneer	P31T77R
10	Bob Buser	84.04	York	Pioneer	P37T51PR
11	Richard Kreider	79.19	Lebanon	Pioneer	P36T86R
12	Darren Grumbine	77.60	Lebanon	Asgrow	AG38X8
13	Ethan Buser	73.89	York	Pioneer	P31T77R
14	Patricia Buser	70.40	York	Pioneer	P31T77R
15	Herman Manbeck	69.08	Berks	Pioneer	P39T28X
16	Dylan Keller	68.02	York	Pioneer	P31T77R



**PennState Extension**



## Rank of Contest Entries

### Central

Rank	Name	Yield	County	Brand	Cultivar
1	Lesher Poultry Farm, Leslie Bowman	88.75	Franklin	Pioneer	P39T28X
2	Keith Strait	59.35	Huntingdon	Dyna-Gro	S28XT58

### West

1	Thomas M. Hoovler	71.06	Mercer	Asgrow	AG30X6
---	-------------------	-------	--------	--------	--------

### Northern

1	Vernon Martin	72.57	Tioga	Pioneer	P31T77R
2	Jerry Martin	61.66	Tioga	Pioneer	P31T77R
3	Justin Jones	51.32	Bradford	AgriGold	G2105RX

### Southeast

1	Tim Stewart	86.21	Bucks	Asgrow	AG36X6
2	Aaron Stepnoski	83.40	Bucks	FS HiSOY	HS37X70
3	John Frederick	77.01	Bucks	FS HiSOY	HS37X70

## Yield Comparisons

Yield Comparisons	Ave Bu/A
Mean Yield	79.15
No-till (n=22, 88% of entries)	79.11
Min-till (n=3, 12% of entries)	79.49
Conventional (n=0, 0% of entries)	
Drill (n=9, 36% of entries)	76.04
Corn planter (n=16, 64% of entries)	80.90
Planted May 10 or earlier (n=21, 88% of entries)	79.48
Planted May 11 to 20 (n=3, 12% of entries)	74.37
Planted May 21 to 30 (n=0, 0% of entries)	--
Planted after May 30 (n=0, 0% of entries)	--
Rows 10" or less (n=6, 24% of entries)	75.5
Rows 11" to 20" (n=13, 52% of entries)	83.26
Rows 30" (n=6, 24% of entries)	73.93
No Foliar Fungicide or Insecticide Applied (n=10, 40% of entries)	77.58
Foliar Fungicide Applied (n=3, 12% of entries)	82.04
Foliar Insecticide Applied (n=0, 0% of entries)	--
Combination of Foliar Fungicide and Insecticide (n=12, 48% of entries)	79.74



## Production Information

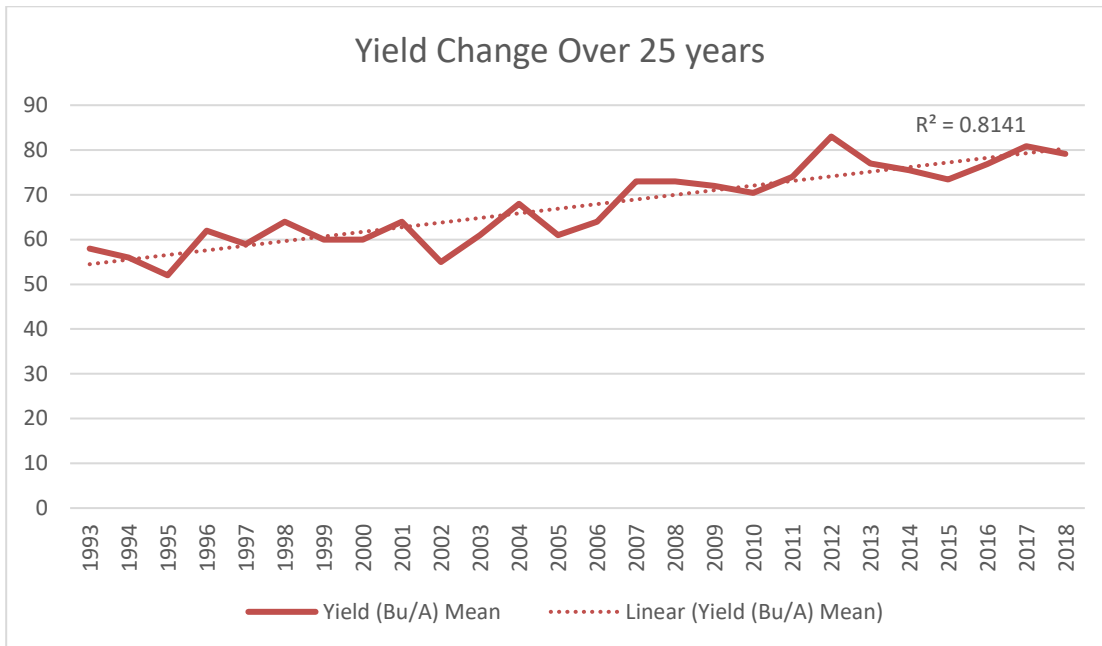
Seed Treatment (n=22, 88% of entries)	79.81 bu/a
No Seed Treatment (n=3, 12% of entries)	74.32 bu/a
Rhizobia Inoculation (n=23, 92% of entries)	79.27 bu/a
Dry Inoculation (n=8, 35% of entries)	76.23 bu/a
Liquid Inoculation (n=2, 9% of entries)	78.66 bu/a
Pre-Inoculation (n=13, 57% of entries)	81.23 bu/a
Calibrate Seed Equipment	60%
Soil Test (within past 3 years)	96%
pH	6.6
Foliar Fertilizer (n=5, 21% of entries)	87.68 bu/a
No Foliar Fertilizer (n=19, 79% of entries)	76.91 bu/a
Herbicide	100% utilized Glyphosate 80% used a preemergent herbicide 90% of those used a residual product pre 100% used a post emergent herbicide 8% utilized Engenia or Fexipan Post
Yield Limiting Factors	Lack of sunshine and too much rain, delayed harvest, seed quality
Average Seeds Per Pound	2,753
Average Seed Drop	162,894
Average Plants at Harvest	117,849 28% loss from planting
Average Pod Count	54
Average Harvest Loss	0.49 bu/a
Average Harvest Date	10/16/2018
Cover crop	70% planted a cover crop or small grain crop 84% in southern regions, 80% planted wheat



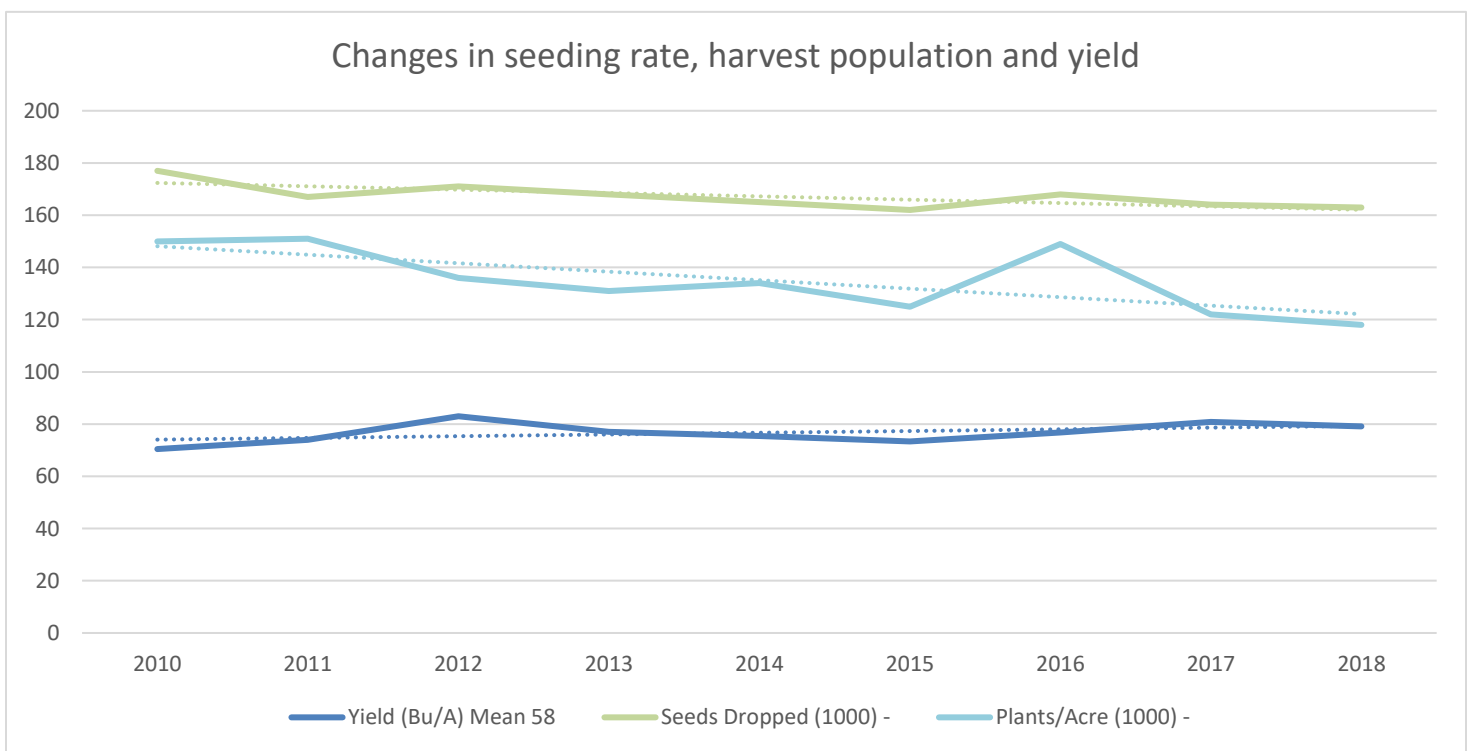
## Soybean Management Practices - Regional Award Winners

Region	South Central	Central	West	Northern	Southeast
Winner	Jim Hershey	Leslie Bowman	Thomas Hoovler	Vernon Martin	Tim Stewart
County	Lancaster	Franklin	Mercer	Tioga	Bucks
Previous Crop	Corn	Corn	Corn	Corn	Corn
Row Width	15"	15"	7.5"	15"	30"
Tillage Type	No-Till	No-Till	Min-Till	No-Till	No-Till
Variety	Pioneer P27T03	Pioneer P39T28X	Asgrow AG30X6	Pioneer P31T77R	Asgrow AG36X6
Seeding Date	5/2/2018	5/3/2018	5/17/2018	5/1/2018	5/4/2018
Seeding Rate	170,000	150,000	162,000	175,000	140,000
Final Stand	149,800	99,300	160,300	95,800	127,200
Seed Treatment	Acceleron	Pioneer Premium	Acceleron + Gaucho	Pioneer Premium	Acceleron
Inoculation	Pre	Pre	Liquid	Pre	Dry
Fungicide	None	Approach Prima + Priaxor	None	Headline	Delaro
Insecticides	None	Lambda-T	None	Baythroid	Cavalry
Pre-Herbicide	Roundup Ultra, Canopy, Sharpen	Metribuzin + Sharpen	None	Canopy	Zidua Pro
Post-Herbicide	Roundup Ultra, Classic, Dakota	Roundup	Roundup	Abundit Edge	Roundup
Date of Harvest	10/3/2018	10/17/2018	10/26/2018	10/19/2018	10/26/2018
Yield	97.19	88.75	71.06	72.57	86.21
Moisture	14.05	15.1	16.5	17	14.73
Ave Pod Count	53	--	42	53	50
Harvest Loss	0.44 bu/a	0.08 bu/a	0.26 bu/a	0.20 bu/a	0.34 bu/a
pH	6.5	--	6.1	6	6.5
P	Optimum	Optimum	Below Optimum	Optimum	Optimum
K	Optimum	Optimum	Below Optimum	Optimum	Optimum
Biostimulant	No	Yes	No	No	Periscope
Foliar Fertilizer	No	No	No	No	Brandt Smart Quatro
Cover Crop	Yes, Wheat	Yes	No	No	Yes, Rye





**Conclusion: Over a 25-year period, there is an average of slightly under one bushel increase per year.**



**Conclusion: Over a 10-year period, there has been a decrease in seeding rate by approximately 20,000 seeds and a decrease in the harvest population by approximately 25,000 plants, all while increasing yield 10 bushels 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.**

The Pennsylvania State University is committed to the policy that all persons shall have equal access to programs, facilities, admission, and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by University policy or by state or federal authorities. It is the policy of the University to maintain an academic and work environment free of discrimination, including harassment. The Pennsylvania State University prohibits discrimination and harassment against any person because of age, ancestry, color, disability or handicap, national origin, race, religious creed, sex, sexual orientation, or veteran status. Discriminations or harassment against faculty, staff, or students will not be tolerated at the Pennsylvania State University. Direct all inquiries regarding the non-discrimination policy to the Affirmative Action Director, The Pennsylvania State University, 328 Boucke Building, University Park, PA 16802-5901, Tel 814-865-4700, 814-863-1150/TTY.

Photos by Del Voight, Penn State Extension; United Soybean Board

