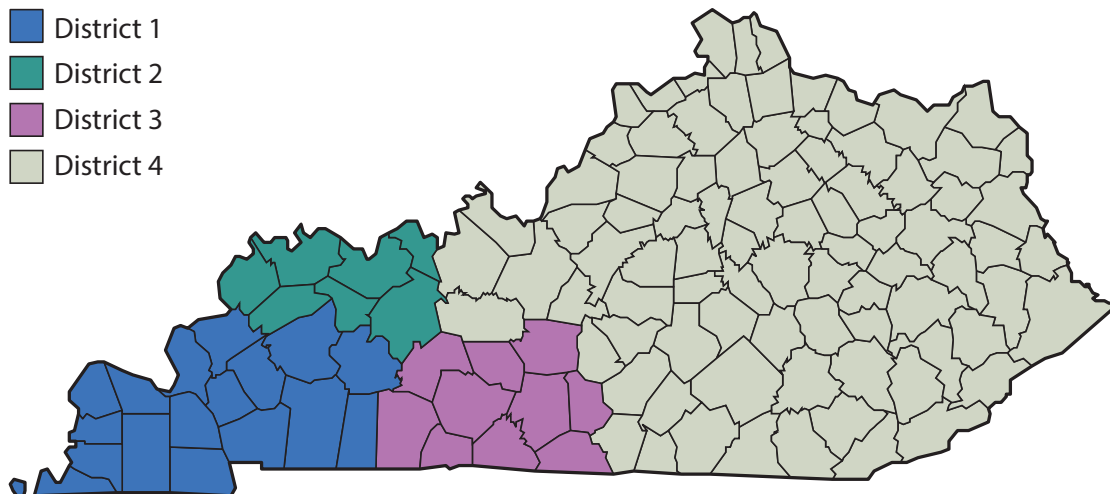


2021 Soybean Yield and Quality Contest

Summary of Management Practices

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Figure 1. The counties for each of the four districts of the Soybean Yield Contest.



District 1: Ballard, Caldwell, Calloway, Carlisle, Christian, Crittenden, Fulton, Graves, Hickman, Hopkins, Livingston, Lyon, Marshall, McCracken, Muhlenberg, Todd, Trigg
District 2: Daviess, Hancock, Henderson, McLean, Ohio, Union, Webster
District 3: Allen, Barren, Butler, Edmonson, Hart, Logan, Metcalfe, Monroe, Simpson, Warren
District 4: Rest of the state

In Kentucky, farmers grow soybeans in two common soybean production systems: full season and double crop. Farmers plant full season soybeans in the spring and harvest them that fall, so they have harvested one crop in one calendar year. Farmers plant double crop soybeans after wheat harvest in June. These soybeans are harvested later that fall, making them the second crop harvested in the same calendar year. Both systems are important to the overall production of soybean in Kentucky. Therefore, in 1980, an annual soybean yield contest was initiated in Kentucky to document the agronomic practices utilized by producers.

In 2021, there were 12 possible yield awards. Four statewide yield awards were awarded for full season entries: First Place Irrigated; Second Place Irrigated; First Place Non-Irrigated; and Second Place Non-Irrigated. Four possible statewide yield awards were awarded for the same categories of the double crop entries and four awards were

for the highest yielding entry of each of four districts (Figure 1).

Beginning in 2007, the contest expanded to include four awards for soybean quality: First Place Oil Concentration; Second Place Oil Concentration; First Place Protein Concentration; Second Place Protein Concentration. Protein and oil concentration of soybean are two important qualities that are considered worldwide by soybean purchasers. Therefore, documenting management practices that improve oil and protein concentration in Kentucky soybean may result in increased value of Kentucky soybean. This was the first year that oil and protein samples were required to enter the yield contest.

Determination of Yield Entries

Any farmer who produced ten (10) acres or more of soybean in Kentucky was eligible to enter the contest. Each contest field was at least ten (10) continuous acres, with a minimum of three (3) harvested acres.

Field measurement and yield determination were determined by supervisor(s) that are approved by each county's yield contest committee (typically the Agricultural and Natural Resources County Extension Agent). There were no restrictions on management practices.

A producer could enter more than one yield entry per category if the entries were from different fields. A producer could only win one award per category (Full Season; Double Crop; Oil Concentration; Protein Concentration).

Determination of Quality Entries

Beginning in 2021, all yield contest entries were required to submit samples for the Quality Contest. Contestants placed a one-pound seed sample from the harvested soybean into a plastic bag. Samples were then sent to the [University of Minnesota Research Analytical Laboratory](#) for analyses of oil and protein concentration.

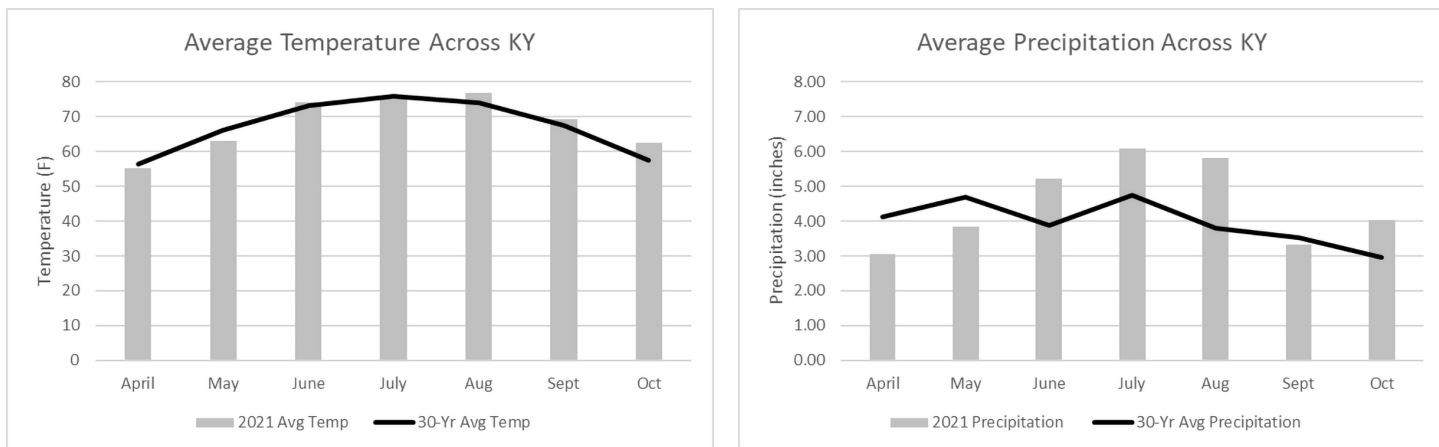


Figure 2. Average temperature and precipitation in 2021 and the 30-Year average across Kentucky.

Overall Observations

Growing Conditions

Average temperature across the entire state from April to October was relatively similar to the 30-year average. April and May were about 2°F cooler than the 30-year average and August through October were between 2°F and 5°F warmer (Figure 2). The total precipitation, by month, was about 1.5 inches more than the 30-year average in June and July and 2 inches more than the 30-year average in August but was below average in April, May and September (Figure 2).

For District 1, average temperature was similar to the 30-year average for July only (Figure 3). May was 4°F cooler and April was 2°F cooler (Figure 3). October was 5°F warmer and June, August and September were 1°F warmer than the 30-year average (Figure 3). Precipitation in District 1 was less than the 30-year average throughout the growing season by 0.49 inches or less except in September where it was -1.08 inches and June and July where it was greater by 1.32 inches and 2.66 inches. (Figure 3).

For District 2, average temperature was less than the 30-year average April through July and above average in August and October. Precipitation in District 2 was greater than the 30-year average for all months except April, May and September, which were less than the 30-year average.

For District 3, average temperature was less than the 30-year average in May and was greater than average for the rest of the growing season. Precipitation was greater than the 30-year average for all months except April and June. The differences were substantial for all months except July.

For District 4, average temperature was less than the 30-year average in April and May. October was 5°F warmer than the 30-year average August was 3°F warmer, September was 2°F warmer and June was 1°F warmer than the average. (Figure 3). Precipitation was greater than the 30-year average in June, July, August and October while April, May and September received less precipitation than average.

Yield Contest Entries

In 2021, a total of 34 entries were submitted from 8 Kentucky counties (Table 1; Figure 4). Twenty-eight entries were full season soybean, of which seven entries were irrigated (Table 2). There were six double crop entries; two of which were irrigated and four were non-irrigated (Table 3).

The 2021 yield contest produced numerous contest records. First, it documented the greatest average yield of all full season entries (Table 1) since the contest began in 1980: 88.29 bushels per acre. Seven entries yielded over 100 bushels per acre (Table 1). This year, the second-place full season entry documented a record low seeding rate (113,134 seeds per acre). Finally, for the second time in contest history and the second year in a row, one farm has won first place for both full-season and double-crop entries (Tables 4 and 5).

For the double crop entries, the second highest average yield was recorded at 70.07 bushels per acre, with an average seeding rate of about 150,000 seeds per acre, and two of the winning entries were planted in mid-June and two in late-June (Table 5). The average double crop soybean yield for the 2020 entries ranks fourth greatest in the

contest history. The greatest double crop soybean average occurred in 2017 with an average of 70.77 bushels per acre and was followed in 2016 and 2015 with 68.16 and 67.07 bushels per acre, respectively.

Of the remaining entries, three district winners were awarded, regardless of production system (Figure 1). There were no district three entries. All the district winners were full season soybean; two were planted in early April and one was planted in mid-May. The average yield was 91.82 bushels per acre with an average seeding rate of about 130,000 seeds per acre (Table 6).

Quality Entries

In 2021, this was the first year that all yield contest entries were required to submit samples for quality. Twenty-eight entries were from full season soybean and the remaining six entries were double crop soybean (Table 7).

All winning entries of the quality contest were full season soybean, three were planted the first week of April and one entry mid-May. The winning oil entry had a concentration of 25.26% while the second-place winner had 24.22% oil concentration. The previous record for oil concentration was documented in 2020 with 26.71%.

The winning entry for percent protein concentration was planted in early-April at a seeding rate of 140,000 seeds per acre. It had 41.55% protein concentration (Table 8), which ranks second for greatest protein concentration documented in the contest. The greatest protein concentration documented was 41.73% in 2016.

Acknowledgements

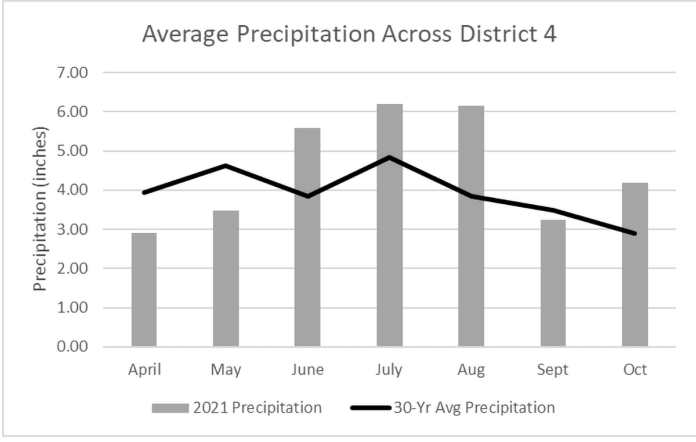
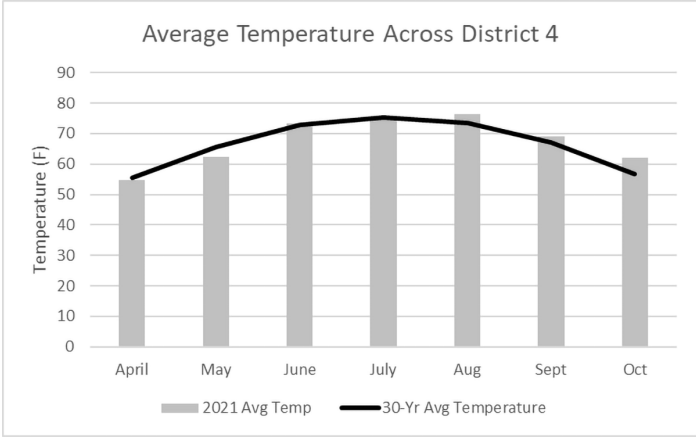
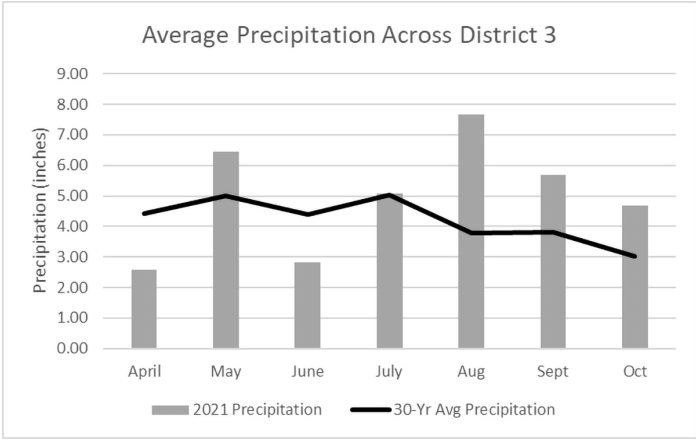
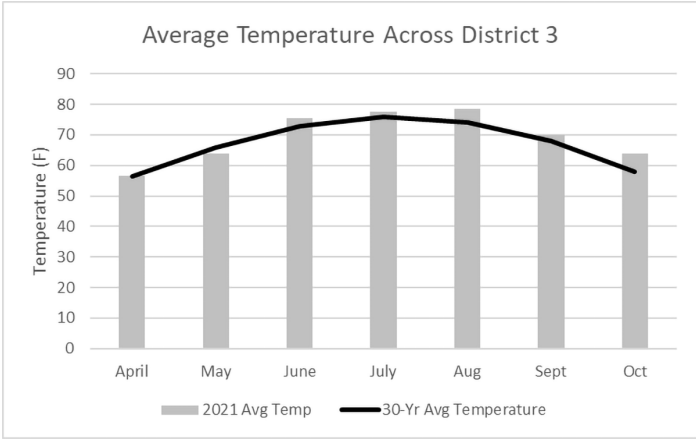
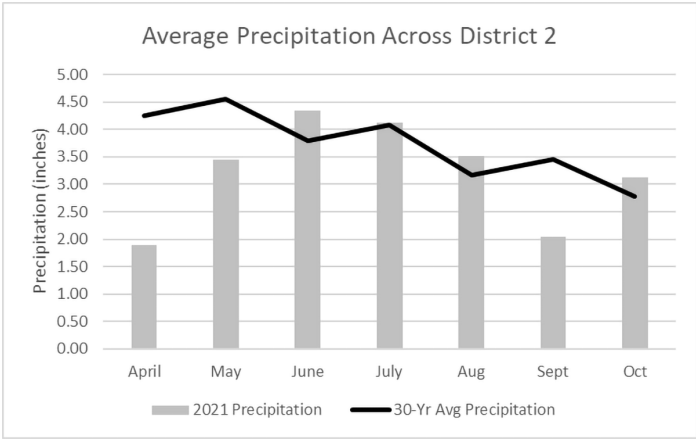
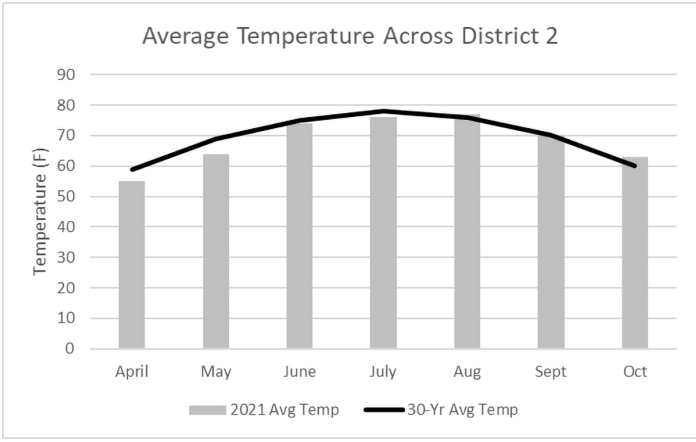
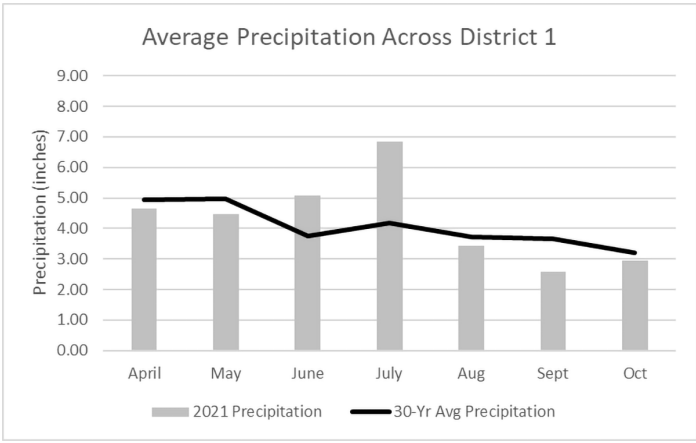
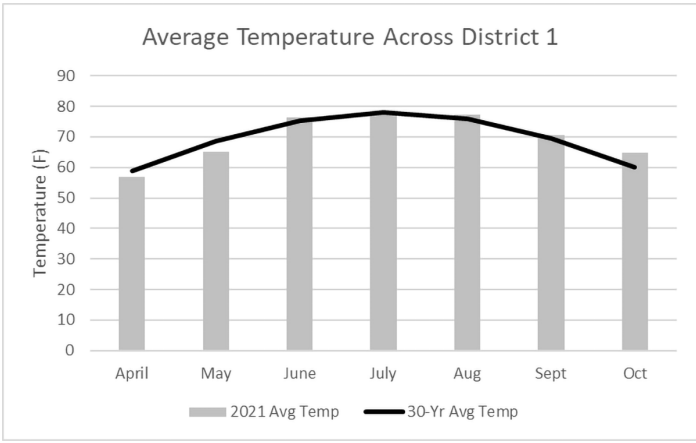


Figure 3. Average temperature and precipitation in 2021 and the 30-Year average by district across Kentucky.

Daviess	22
Hancock	1
Hardin	3
Henderson	1
Hickman	2
McLean	1
Muhlenberg	1
Union	3

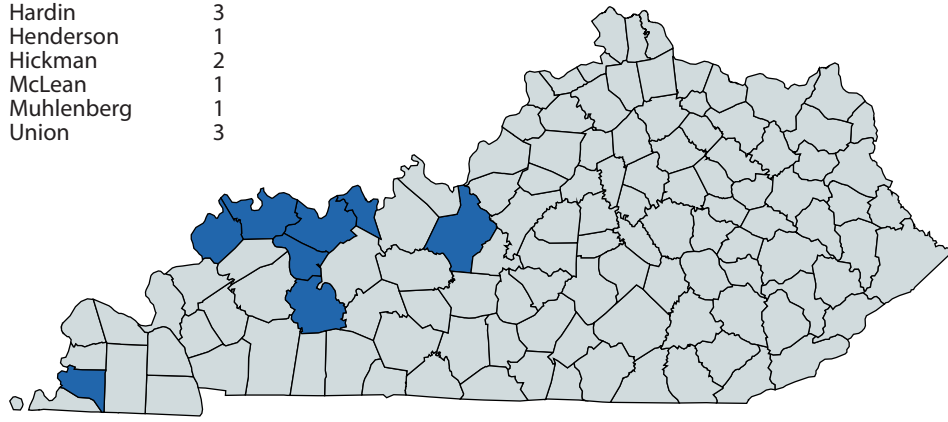


Figure 4. Number of soybean yield contest entries submitted in the 2021 Soybean Yield Production contest. Winning irrigated and non-irrigated entries were both submitted from Daviess County for the second year in a row.

The yield and quality contests are jointly sponsored by the University of Kentucky Cooperative Extension Service, the Kentucky Soybean Association with support from the Kentucky Soybean Promotion Board, and participating Agribusinesses related to soybean production. In 2021, the Agribusinesses that supported the contests were AgriGold, Beck's, Channel Seed, DeKalb Asgrow, FMC, NK, Pioneer, and Stine.

Weather data were obtained from the University of Kentucky Ag Weather Center (http://weather.uky.edu/ky/data.php#KY_Climate_Data). Weather stations included for District 1 are Mayfield, Paducah, Princeton; District 2 is Henderson; District 3 are Bowling Green and Glasgow; and District 4 are Bardstown, Berea, Buckhorn Lake, Campbellsville, Covington, Cumberland Gap, Dixon Dam, Grayson, Hardinsburg, Jackson, Lexington, London, Louisville, Nolin Lake, Quicksand, Somerset, Spindletop, Williamstown.

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Table 1. The category, grower/farm, whether the entry was irrigated or not, the county, cultivar information and yield for each entry submitted to the 2021 Soybean Yield Contest.

Entry	Div.	Grower/Farm	County	Company	Brand/ Variety	Irrigation	Yield (bu/A)	District
1.	I	Goetz Brothers Farm	Daviess	Asgrow	AG36X6	Non-Irrigated	112.02	2
2.	I	O'Bryan Grain Farms	Daviess	Pioneer	P32T26E	Irrigated	109.95	2
3.	I	Greenwell Acres	Union	Channel	3521RXF	Non-Irrigated	109.95	2
4.	I	Knott Farms	Daviess	Pioneer	P38T05E	Irrigated	108.06	2
5.	I	Stephen Farms	Daviess	Agrigold	G3520RX	Irrigated	106.30	2
6.	I	Ken-Maur Farms	Daviess	Agrigold	G3520RX	Irrigated	104.69	2
7.	I	Flat Lick Grain Farms, LLC	Daviess	AgriGold	G3520RX	Non-Irrigated	104.59	2
8.	I	O'Bryan Grain Farms	Daviess	Pioneer	P34T21SE	Non-Irrigated	99.42	2
9.	I	Pasture Belt Farms	Daviess	Beck's	3555XF	Non-Irrigated	98.89	2
10.	I	Flat Lick Grain Farms, LLC	Daviess	Asgrow	AG35XF1	Non-Irrigated	98.27	2
11.	I	Meredith Farms	Henderson	Pioneer		Irrigated	98.13	2
12.	I	Gene Glenn and Sons	Daviess	Pioneer	P36A38X	Non-Irrigated	93.76	2
13.	I	White Farms	Union	Asgrow	AG33X8	Non-Irrigated	92.96	2
14.	I	Gene Glenn and Sons	Daviess	Pioneer	P36A38X	Non-Irrigated	91.57	2
15.	I	Knott Farms	Daviess	Agrigold	G2905XF	Non-Irrigated	91.01	2
16.	I	Clements Brothers LLC	Union	Pioneer	P45T88E	Non-Irrigated	88.80	2
17.	I	Ken-Maur Farms	Daviess	Agrigold	G3520RX	Non-Irrigated	88.58	2
18.	I	PPJ Thompson Farms	Daviess	Pioneer	P34T21SE	Non-Irrigated	87.37	2
19.	I	Mark Thomas	Hardin	Agrigold	4212XF	Non-Irrigated	86.12	4
20.	I	Murray Farms	McLean	Stewart	2840R2X	Non-Irrigated	85.91	2
21.	I	PPJ Thompson Farms	Daviess	Pioneer	P38T05E	Non-Irrigated	83.73	2
22.	I	Cole Hamilton Farm	Daviess	NK	37-V4E3S	Non-Irrigated	83.44	2
23.	I	Sparks Farms	Daviess	Asgrow	AG35XF1	Non-Irrigated	81.16	2
24.	I	Mark Thomas	Hardin	Agrigold	G3722RX	Irrigated	80.22	4
25.	II	Goetz Brothers Farm	Daviess	Asgrow	AG40XF1	Non-Irrigated	79.06	2
26.	I	Andrew Bullock Farms	Muhlenberg	Asgrow	AG35XF1	Non-Irrigated	77.17	1
27.	II	Goetz Brothers Farm	Daviess	Asgrow	AG40XF1	Non-Irrigated	75.77	2
28.	I	PPJ Thompson Farms	Daviess	Pioneer	P37T33E	Non-Irrigated	75.31	2
29.	I	Mark Thomas	Hardin	Pioneer	P39A58X	Irrigated	74.32	4
30.	II	Dixon Farms	Hickman	Asgrow	AG46X0	Irrigated	73.13	1
31.	I	Cole Hamilton Farm	Hancock	NK	37-Z9XF	Non-Irrigated	69.80	2
32.	II	Ken-Maur Farms	Daviess	Beck's	4119X2	Irrigated	68.00	2
33.	II	Dixon Farms	Hickman	Asgrow	AG43X0	Non-Irrigated	67.33	1
34.	II	PPJ Thompson Farms	Daviess	Pioneer	P38T05E	Non-Irrigated	57.16	2

I = Single Crop

II = Double Crop

Overall Contest Average 88.29

Full-Season (Division I) Average 92.20

Double-Crop (Division II) Average 70.07

Table 2. A summary of all production practices for the 28 full season yield contest entries.

		Division I-Irrigated				Division I-Non-Irrigated				
		Bushels/A								
		100	90	80	70	100	90	80	70	Participants
		Entries for each Practice								
Production Practices		4	1	1	1	3	7	8	2	1
Average Yield (bu/A)		107.25	98.13	80.22	74.32	108.85	95.12	85.64	76.24	69.80
Seed Company	AgriGold	2		1		1	1	2		
	Asgrow					1	2	1	1	
	Beck's						1			
	Croplan					1				
	DynaGro							1		1
	LG Seeds	2	1		1		3	3	1	
	NK							1		
	Pioneer									
	Stewart									
	Stine									
Herbicide Tolerance Technology	Enlist E3	2						2	1	
	Enlist E3 STS						1	2		
	Roundup Ready 2 Xtend	2			1	1	3	2		
	Roundup Ready 2 Xtend STS			1		1				
	XtendFlex					1	3	2	1	1
Seed Treatment	Acceleron					1			1	
	CruiserMaxx Vibrance							1		
	CruiserMaxx Vibrance, Saltro									1
	Equity VIP						1			
	Pioneer Premium Seed Treatment							3	1	
	Saltro					1				
	Product Not Stated	2		1	1		3	2		
Seed Inoculant	Dyna-Start 3P						1			
	Graph-Ex							1		1
	Seed Guard Bio					1				
	Product Not Stated	4		1	1		1	4	1	
In-Furrow Treatment		2				1		1		
	3-18-18					1				
	30	1								
	Product Not Stated	1								
Foliar Insecticide	Baythroid						1			
	bifenthrin, Hero	1								
	bifenthrin, Lambda	1						1		
	Endigo							2		1
	Hero	2	1	1	1	2	3	1	1	
	Sultrus						2			
	Tombstone					1	1	1		
	generic Warrior							1		
Foliar Fungicide	Delaro						1			
	Lucento		1						1	
	Miravis Top					2	4	3		1
	Priaxor	1					1			
	Priaxor, propiconazole	1						1		
	Priaxor, Tilt, Aframe Plus	1								
	Quadris Top SBX	1					1			
	generic Quilt							1		
	Revytek			1	1			1		
Veltyma					1					

Table 2. A summary of all production practices for the 28 full season yield contest entries (continued).

		Division I-Irrigated				Division I-Non-Irrigated				
		Bushels/A								Participants
		100	90	80	70	100	90	80	70	
Production Practices		Entries for each Practice								
		4	1	1	1	3	7	8	2	1
Herbicide	Pre-Emergence Only	2						1		
	Post-Emergence Only								1	
	Pre+Post Emergence	2	1	1	1	3	7	7	1	1
Tillage	No-Till			1	1			5	1	1
	Tillage	4	1			3	7	3	1	
Methods	Fall Chisel; Spring 2210 Field Cultivator		1							
	Fall Disc x 1					1				
	Fall & Spring Disc	2					2			
	Spring	1				1	1	1		
	Spring Disc x 2							1		
	Vertical Till					1	2			
	Product Not Stated	1					2	1		
Seeds/A	100,000 to 125,000	4	1	1	1		2	2		
	126,000 to 150,000					1	4	6	2	1
	151,000 to 175,000					1				
Planting Date	Before April 20	4	1			2	6	4	2	
	Apr 20-30							3		
	May 11-20			1	1	1	1	1		1
Harvest Date	Sept 1-14					2	5	1		
	Sept 15-30	3	1				1	2	1	
	Oct 1-15	1					1	2	1	
	Oct 16-31					1		2		1
	Nov 1-15			1	1			1		
Row Width	7.5 inch							2	1	
	15 inch	4	1	1	1	3	6	6	1	1
	20 inch						1			
Irrigated	Yes	4	1	1	1					
	No					3	7	8	2	1
Nitrogen applied	None	4		1	1	1	7	7	2	1
	1 to 40 lbs/A					1				
	41 to 80 lbs/A							1		
	81-120 lbs/A					1				
P ₂ O ₅ applied	None	4				1	6	7	2	1
	1 to 40 lbs/A			1	1					
	41 to 80 lbs/A		1			2				
	81-120 lbs/A							1		
	>120 lbs/A						1			
Total K ₂ O (lbs/A)	None	4					4	5	2	
	1 to 40 lbs/A			1	1					
	41 to 80 lbs/A					2	1			
	81-120 lbs/A		1			1	1	2		
	>120 lbs/A						1	1		1
Manure/ Litter Applied	2 ton manure						2			
	3 ton chicken litter							1		
	10,000 gal swine manure	1					1			
Previous Crop	Corn	4	1	1	1	3	7	8	2	1
Other Inputs	Brandt Smart Trio, ProAcqua Finish							1		1

Table 3. A summary of all production practices for the 6 double crop yield contest entries.

Production Practices		Division II-Irrigated		Division II-Non-Irrigated	
		Bushels/A			
		70 Bushel Club	Participants	70 Bushel Club	Participants
		Entries for each Practice			
		1	1	2	2
Average Yield (bu/A)		73.13	68	77.41	62.25
Company	Asgrow	1		2	1
	Beck's		1		
	LG Seeds				1
Herbicide Tolerance Technology	Roundup Ready 2 SR		1		
	Roundup Ready 2 Xtend	1			1
	XtendFlex			2	
	Acceleron	1			1
Seed Treatment	Pioneer Premium				1
	Product Not Stated		1	2	
Seed Inoculant	Product Not Stated		1		
Foliar Insecticide	Baythroid	1			1
	Hero			2	
Foliar Fungicide	Priaxor, Propi-Star EC		1		
	Stratego YLD	1			1
Herbicide	Post-Emergence Only		1		
	Pre+Post Emergence	1		2	2
Tillage	No-Till	1	1	2	2
Seeds/A	126,000 to 150,000		1		1
	151,000 to 175,000	1		2	1
Planting Date	June 11-20	1	1		
	June 21-30			2	2
Harvest Date	Oct 16-31		1		
	Nov 1-15	1		2	2
Row Width	7.5 inch				1
	15 inch		1	2	
	20 inch	1			1
Irrigated	Yes	1	1		
	No			2	2
Nitrogen applied	None	1	1	2	2
P ₂ O ₅ applied	None	1	1	2	2
Total K ₂ O (lbs/A)	None	1	1	2	2
Other Fertilizer Applied	3.5 gal 3-18-18			2	
Previous Crop	Wheat	1	1	2	2

Table 4. All agronomic practices utilized to produce the state Yield Contest winning entries for irrigated and non-irrigated full season soybean in Kentucky in 2021.

Production Practices	Full Season-Irrigated		Full Season-Non-Irrigated	
	First Place	Second Place	First Place	Second Place
Grower/Farm	O'Bryan Grain Farms	Knott Farms	Goetz Brothers Farm	Greenwell Acres
County	Daviess	Daviess	Daviess	Union
Company	Pioneer	Pioneer	Asgrow	Channel
Brand	P32T26E	P38T05E	AG36X6	3521RFX
Yield (bu/A)	109.95	108.06	112.02	109.95
Tillage	Tilled	Tilled	Minimal Till	Tilled
Soil Preparation		Fall & Spring Disc	Vertical Till	Fall Disc x 1
Planting Date	3/30/2021	4/5/2021	4/10/2021	4/9/2021
Row Width (in.)	15	15	15	15
Seeds/A	115,000	113,194	160,000	130,000
Irrigated	Yes	Yes	no	no
Harvest Date	9/27/2021	10/11/2021	10/19/2021	9/10/2021
Previous Crop	Corn	Corn	Corn	Corn
Total N (lbs/A)			12	27
Total P ₂ O ₅ (lbs/A)			72	69
Total K ₂ O (lbs/A)			72	90
Total Manure (lbs/A)	10,000 gal swine manure			
Seed Treatment			Saltro	Acceleron
Seed Inoculant				Seed Guard Bio
In-Furrow Treatment			3/18/2018	
Foliar Insecticide	Hero	Hero	Hero	Hero
Foliar Fungicide	Quadris Top SBX	Priaxor	Miravis Top	Veltyma
Herbicide -Pre-Emergence	2,4-D, glyphosate	Zidua SC, Roundup, 2,4-D	Authority Elite, Roundup	Roundup, Extendimax, Verdict
Herbicide -Post-Emergence	Zidua SC, glyphosate, Prefix, Enlist	Enlist, glyphosate, Zidua	Roundup, Prefix	Roundup, Extendimax, Zidua
Herbicide Tolerance Technology	Enlist E3	Enlist E3	Roundup Ready 2 Xtend	XtendFlex

Table 5. All agronomic practices utilized to produce the state Yield Contest winning entries for irrigated and non-irrigated double crop soybean in Kentucky in 2021.

Production Practices	Double Crop-Irrigated		Double Crop-Non-Irrigated	
	First Place	Second Place	First Place	Second Place
Grower/Farm	Dixon Farms	Ken-Maur Farms	Goetz Brothers Farm	Dixon Farms
County	Hickman	Daviess	Daviess	Hickman
Company	Asgrow	Beck's	Asgrow	Asgrow
Brand	AG46X0	4119X2	AG40XF1	AG43X0
Yield (bu/A)	73.13	68	79.06	67.33
Tillage	No-Till	No-Till	No-Till	No-Till
Planting Date	6/16/2021	6/19/2021	6/25/2021	6/23/2021
Row Width (in.)	20	15	15	20
Seeds/A	165,000	150,000	160,000	165,000
Irrigated	Yes	Yes	no	no
Harvest Date	11/4/2021	10/27/2021	11/4/2021	11/6/2021
Previous Crop	Wheat	Wheat	Wheat	Wheat
Total Other (lbs/A)			3.5 gal 3-18-18	
Seed Treatment	Acceleron			Acceleron
Foliar Insecticide	Baythroid		Hero	Baythroid
Foliar Fungicide	Stratego YLD	Priaxor, Propi-Star EC	Trivapro	Stratego YLD
Herbicide -Pre-Emergence	Roundup, Zidua		Roundup	Roundup, Zidua
Herbicide -Post-Emergence	Roundup	Roundup (2qt)	Roundup, Prefix	Roundup
Herbicide Tolerance Technology	Roundup Ready 2 Xtend SR	Roundup Ready 2 Xtend	XtendFlex SR	Roundup Ready 2 Extend SR

Table 6. All agronomic practices utilized to produce the district Yield Contest winning entries in Kentucky in 2021.

Production Practices	District		
	1	2	4
Grower/Farm	Andrew Bullock Farms	Stephen Farms	Mark Thomas
County	Muhlenberg	Daviess	Hardin
Company	Asgrow	Agrigold	Agrigold
Brand	AG35XF1	G3520RX	4212XF
Yield (bu/A)	77.17	106.3	86.12
Division	I	I	I
	Tilled	Tilled	No-Till
Tillage	Spring: Plow x1, Disc x2, Field Cultivator	Fall & Spring Disc	
Soil Preparation			
Planting Date	4/13/2021	4/12/2021	5/17/2021
Row Width (in.)	15	15	15
Seeds/A	140,000	110,000	125,000
Irrigated	No	Yes	no
Harvest Date	10/1/2021	9/27/2021	11/4/2021
Previous Crop	Corn	Corn	Corn
Seed Treatment	Acceleron		
In-Furrow Treatment		30	
Foliar Insecticide	Hero	bifenthrin, Hero	Hero
Foliar Fungicide	Lucento	Priaxor, Tilt, Aframe Plus	Revytek
Herbicide -Pre-Emergence		Roundup, Anthem Maxx, Zidua, Engenia	Verdict, 2,4-D, Roundup
Herbicide -Post-Emergence	Roundup, Liberty		Roundup
Herbicide Tolerance Technology	ExtendFlex	Roundup Ready 2 Xtend	XtendFlex

Table 7. The category, grower/farm, county, cultivar information and percent oil and protein concentration for each entry submitted to the 2021 Soybean Quality Contest.

Entry	Category	Grower/Farm	County	Company	Brand/ Variety	Percent	
						Oil	Protein
1.	Full Season	Greenwell Acres	Union	Channel	3521RXF	23.1	37.85
2.	Full Season	White Farms	Union	Asgrow	AG33X8	22.31	40.5
3.	Full Season	Clements Brothers LLC	Union	Pioneer	P45T88E	24.05	37.85
4.	Full Season	Andrew Bullock Farms	Muhlenberg	Asgrow	AG35XF1	23.55	39.57
5.	Full Season	Mark Thomas	Hardin	Agrigold	4212XF	20.57	40.01
6.	Full Season	Knott Farms	Daviess	Pioneer	P38T05E	21.87	39.85
7.	Full Season	Meredith Farms	Henderson	Pioneer	P36A83X	25.26	38.74
8.	Full Season	Mark Thomas	Hardin	Pioneer	P39A58X	22.31	40.36
9.	Full Season	Mark Thomas	Hardin	Agrigold	G3722RX	22.08	41.06
10.	Full Season	Cole Hamilton Farm	Hancock	NK	37-Z9XF	23.95	36.98
11.	Full Season	Cole Hamilton Farm	Daviess	NK	37-V4E3S	22.98	38.64
12.	Full Season	Gene Glenn and Sons	Daviess	Pioneer	P36A38X	22.41	38.26
13.	Full Season	Gene Glenn and Sons	Daviess	Pioneer	P36A38X	21.85	37.7
14.	Full Season	Murray Farms	McLean	Stewart	2840R2X	23.05	38.65
15.	Full Season	Goetz Brothers Farm	Daviess	Asgrow	AG36X6	23.25	39.34
16.	Full Season	Flat Lick Grain Farms, LLC	Daviess	Asgrow	AG35XF1	22.94	39.35
17.	Full Season	Flat Lick Grain Farms, LLC	Daviess	AgriGold	G3520RX	22.5	40.07
18.	Full Season	PPJ Thompson Farms	Daviess	Pioneer	P34T21SE	24.22	37.69
19.	Full Season	PPJ Thompson Farms	Daviess	Pioneer	P38T05E	20.89	41.55
20.	Full Season	PPJ Thompson Farms	Daviess	Pioneer	P37T33E	20.94	41.3
21.	Full Season	Ken-Maur Farms	Daviess	Agrigold	G3520RX	23.24	38.72
22.	Full Season	Sparks Farms	Daviess	Asgrow	AG35XF1	22.7	40.28
23.	Full Season	Stephen Farms	Daviess	Agrigold	G3520RX	23.61	37.59
24.	Full Season	O'Bryan Grain Farms	Daviess	Pioneer	P32T26E	22.44	38.07
25.	Full Season	Ken-Maur Farms	Daviess	Agrigold	G3520RX	21.85	38.24
26.	Full Season	Pasture Belt Farms	Daviess	Beck's	3555XF	23.04	39.2
27.	Full Season	O'Bryan Grain Farms	Daviess	Pioneer	P34T21SE	23.85	38.14
28.	Full Season	Knott Farms	Daviess	Agrigold	G2905XF	21.58	40.41
29.	Double Crop	Dixon Farms	Hickman	Asgrow	AG46X0	23.02	38.29
30.	Double Crop	Goetz Brothers Farms	Daviess	Asgrow	AG40XF1	23.06	40.01
31.	Double Crop	Goetz Brothers Farms	Daviess	Asgrow	AG40XF1	23.22	39.79
32.	Double Crop	Dixon Farms	Hickman	Asgrow	AG43X0	20.46	36.41
33.	Double Crop	PPJ Thompson Farms	Daviess	Pioneer	P38T05E	22.62	38.55
34.	Double Crop	Ken-Maur Farms	Daviess	Beck's	4119X2	23.1	39.65

Full Season Average
Double Crop Average

22.65 **39.05**
22.58 **38.78**

Table 8. Agronomic practices utilized to produce the state Quality Contest winning entries in Kentucky in 2021.

Production Practices	Oil		Protein	
	1st Place	2nd Place	1st Place	2nd Place
Grower/Farm	Meredith Farms	PPJ Thompson Farms	PPJ Thompson Farms	Mark Thomas
County	Henderson	Daviess	Daviess	Hardin
Company	Pioneer	Pioneer	Pioneer	Agrigold
Brand/Variety	-	P34T21SE	P38T05E	G3722RX
Oil (%)	25.26	24.22	20.89	22.08
Protein (%)	38.74	37.69	41.55	41.06
Yield (bu/A)	98.13	87.37	83.73	80.22
Division	I	I	I	I
Tillage	Tilled	No-Till	No-Till	No-Till
Soil Preparation	Fall Chisel; Spring 2210 Field Cultivator			
Planting Date	4/3/2021	4/5/2021	4/6/2021	5/15/2021
Row Width (in.)	15	7.5	7.5	15
Seeds/A	120,000	140,000	140,000	125,000
Irrigated	yes	no	no	yes
Harvest Date	9/17/2021	9/14/2021	9/27/2021	11/8/2021
Previous Crop	Corn	Corn	Corn	Corn
Total N (lbs/A)	27			
Total P ₂ O ₅ (lbs/A)	68			30
Total K ₂ O (lbs/A)	102			30
Seed Treatment	Pioneer Premium Seed Treatment, Saltro	Pioneer Premium Seed Treatment	Pioneer Premium Seed Treatment	
Foliar Insecticide	Hero			Hero
Foliar Fungicide	Lucento			Revytek
Herbicide -Pre-Emergence	Parallel	Enlist Duo, Canopy, Fire-Zone	Enlist Duo, Canopy, Fire-Zone	Verdict, 2,4-D, Roundup
Herbicide -Post-Emergence	Dicamba, Roundup, Fomesafen	Enlist Duo, EverpreX	Enlist Duo, EverpreX	Roundup
Herbicide Tolerance Technology	-	Enlist E3 STS	Enlist E3	Roundup Ready 2 Xtend STS



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