

2020 Soybean Yield and Quality Contest

Summary of Management Practices

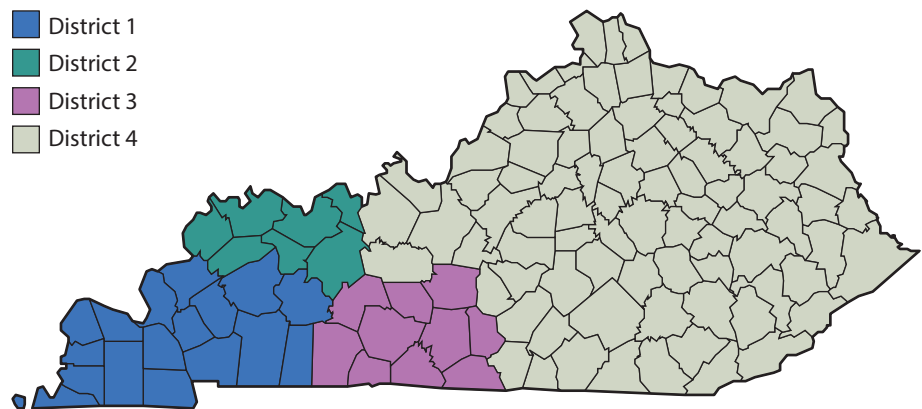
Carrie Knott, Clint Hardy, Mike Smith, Andrew Rideout, Danny Adams, Matt Adams, Samantha Anderson, Graham Cofield, Ricky Arnett, Daniel Carpenter, Meagan Diss, Greg Drake, Colby Guffey, Jason Phillips, Leann Martin, Glen Roberts, Ben Rudy, Michelle Simon, and Darrell Simpson

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 2020, 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 may result in increased value of Kentucky soybean.

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

Determination of Yield Entries

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

Any yield contest entry was also eligible to be submitted to 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.

Overall Observations

Growing Conditions

Average temperature across the entire state from April to October was fairly similar to the 30-year average except for April and May, which was about 3°F cooler than the 30-year average (Figure 2). The total precipitation, by month, was about 1 inch more than the 30-year average in May, June, and August and almost 2 inches more than the 30-year average in October (Figure 2).

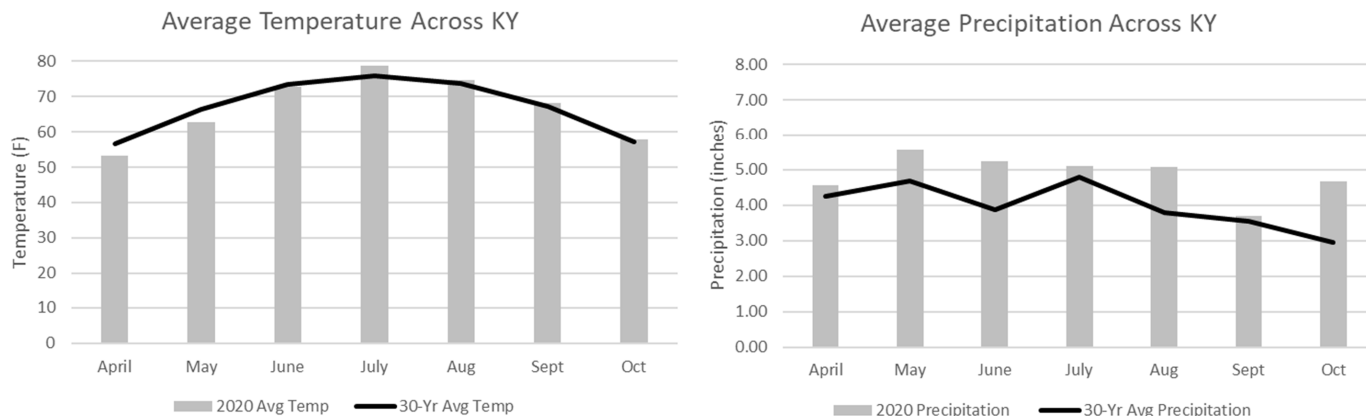


Figure 2. Average temperature and precipitation in 2020 and the 30-year average temperature and precipitation across Kentucky.

For District 1, average temperature was similar to the 30-year average for June and September only (Figure 3). April and May were 4°F cooler, October was 2°F cooler, and August was 1°F cooler than the 30-year average (Figure 3). July was 2°F warmer than the 30-year average (Figure 3). Precipitation in District 1 was greater than the 30-year average throughout the growing season except in April (Figure 3).

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

For District 3, average temperature was less than the 30-year average in April and May and was greater than average for the rest of the growing season. Precipitation was greater than the 30-year average in June, August, and October, and less than the 30-year average in April, May, and September.

For District 4, average temperature was less than the 30-year average April to June. July was 3°F warmer than the 30-year average and August, September, and October were 1°F warmer than average (Figure 3). Precipitation was greater than the 30-year average throughout the growing season.

Yield Contest Entries

In 2020, a total of 53 entries were submitted from 16 Kentucky counties (Table 1; Figure 4). Forty-seven entries were full season soybean, of which ten entries were irrigated (Table 2). There were six double crop entries; three of which were irrigated and three that were non-irrigated (Table 3).

The 2020 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: 87.39 bushels per acre. Nine entries yielded more than 100 bushels per acre, which was the most 100+ bushel yields ever entered in the contest (Table 1). For the second year in a row, the State Champion for a full season entry documented a record low seeding rate (130,000 seeds per acre) for the winning entry. Another record was identified when examining only the state Yield Contest winners for full season soybean; the average yield was 102.16 bushels per acre (Table 5). Finally, for the first time in contest history one operation has won first place for both full season and double crop entries (Tables 4 and 5).

For the double crop entries, the average yield was 65.66 bushels per acre, with an average seeding rate of about 150,000 seeds per acre. Two of the 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, four district winners were awarded, regardless of production system (Figure 1). All the district winners were full season soybean; three were planted in early April, and the final one was planted in early June. 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 2020, twenty-three entries were submitted to the Soybean Quality Contest (Figure 5). Nineteen entries were from full season soybean, and the remaining four entries were double crop soybean (Table 7).

All winning entries of the quality contest were full season soybean that were planted by late May. The winning entries for oil concentration had the greatest oil concentration ever documented in the contest history. The winning entry had an oil concentration of 26.71 percent while the second-place winner had 26.50 percent oil concentration. The previous record for oil concentration was documented in 2016 with 25.97 percent.

The winning entry for percent protein concentration was planted in early April at a seeding rate of 115,000 seeds per acre. It had 41.15 percent protein concentration (Table 8), which ranks third for greatest protein concentration documented in the contest. The greatest protein concentration documented was 41.73 percent in 2016, and last year the second greatest protein concentration (41.34%) was documented.

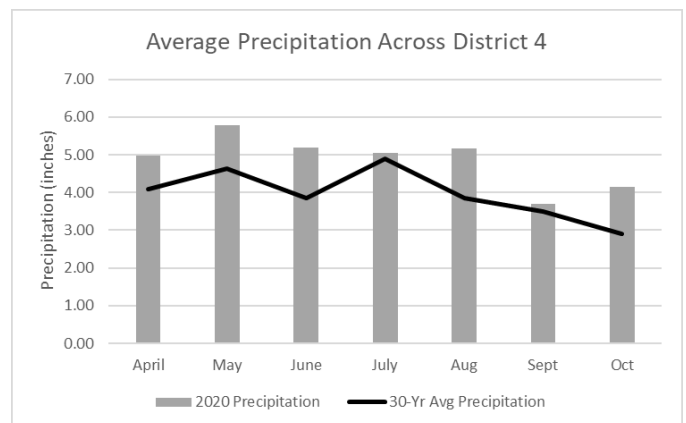
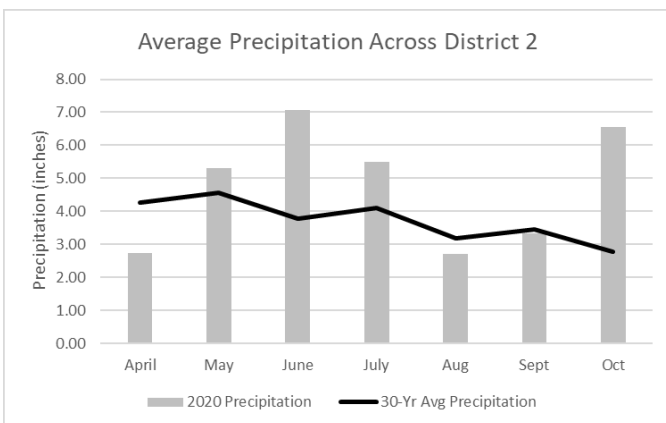
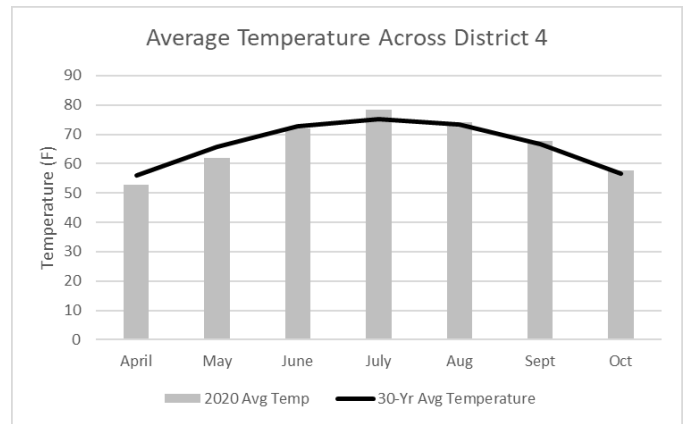
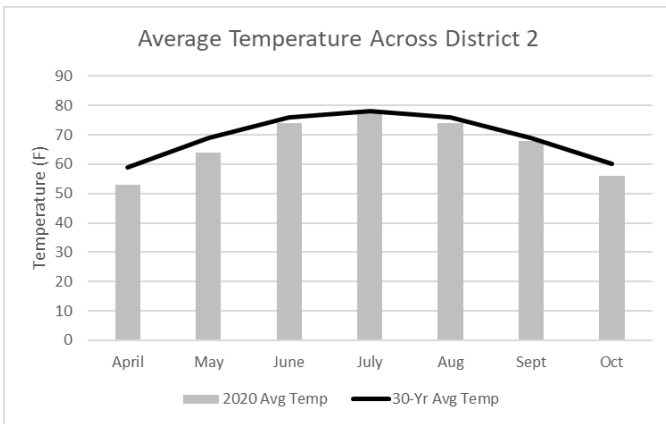
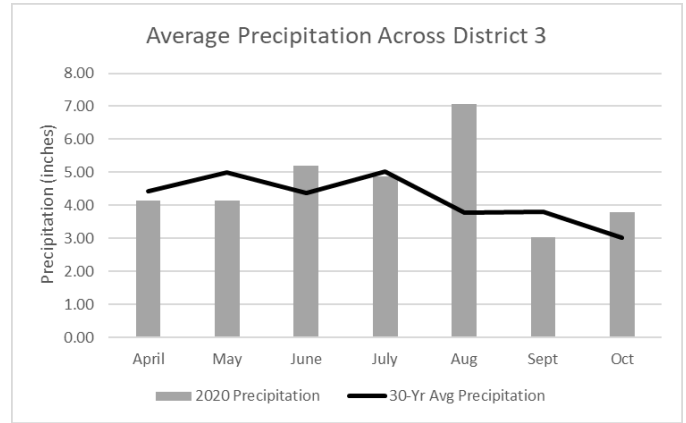
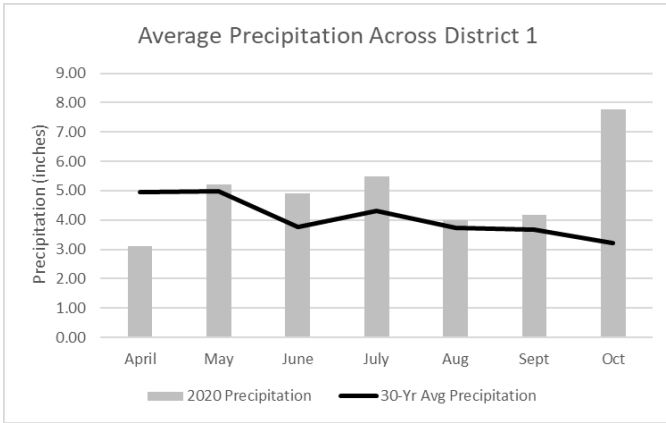
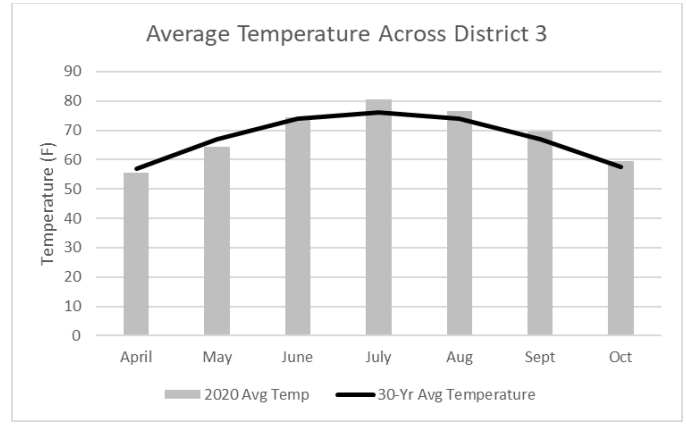
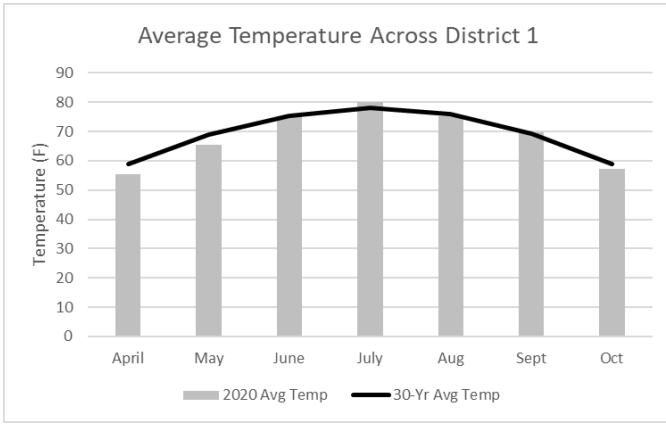


Figure 3. Average temperature and precipitation in 2020 and the 30-year average temperature and precipitation by district across Kentucky.

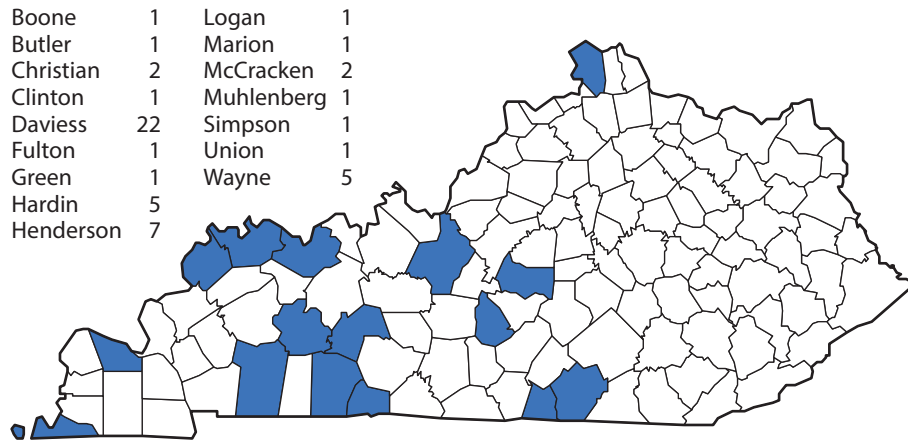


Figure 4. Number of soybean yield contest entries submitted in the 2020 Soybean Yield Production contest. Winning irrigated and non-irrigated entries were both submitted from Daviess County.

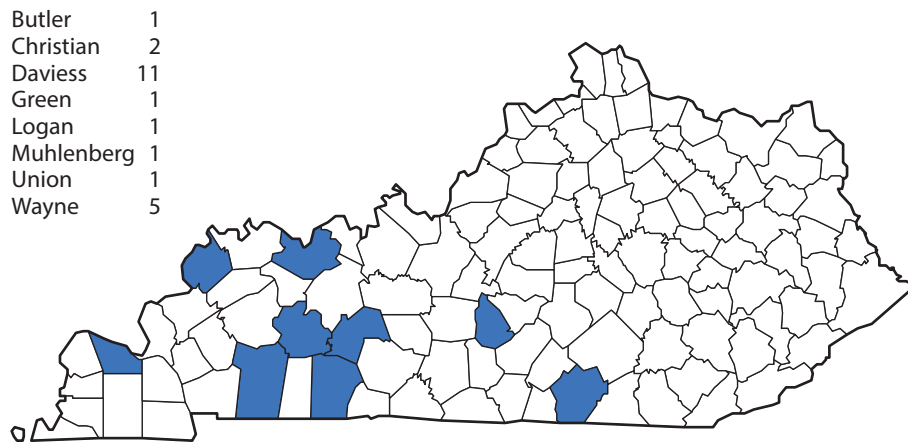


Figure 5. Counties and number of entries submitted to the 2020 Soybean Quality Contest.

Acknowledgements

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 2020, 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, and 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, and Williamstown.

Contact

Dr. Carrie Knott
 PO Box 469
 348 University Drive
 Princeton, KY 42445
 859-562-1320

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 2020 Soybean Yield Contest.

Entry	Category	Grower/Farm	Irrigation	County	Company	Brand/Variety	Yield (bu/A)
1.	Full Season	Ken-Maur Farms	Irrigated	Daviess	AgriGold	G3722RX	106.51
2.	Full Season	Goetz Brothers Farm	Non-Irrigated	Daviess	AgriGold	G3520RX	103.47
3.	Full Season	Phillip Meredith	Non-Irrigated	Henderson	AgriGold	G3520RX	103.13
4.	Full Season	Lea Meredith	Irrigated	Henderson	Beck's	rMG3.7	102.05
5.	Full Season	Knott Farms	Non-Irrigated	Daviess	AgriGold	G3520RX	101.90
6.	Full Season	Fischer CrossCreek Farms	Non-Irrigated	Daviess	Pioneer	P36A83X	101.05
7.	Full Season	Meredith Farms	Non-Irrigated	Henderson	Pioneer	rMG3.6	100.57
8.	Full Season	Lea Meredith	Irrigated	Henderson	AgriGold	G3722RX	100.45
9.	Full Season	Flatlick Grain Farms	Non-Irrigated	Daviess	AgriGold	G3520RX	100.05
10.	Full Season	O'Bryan Grain Farms	Non-Irrigated	Daviess	Pioneer	P36A83X	98.72
11.	Full Season	Phillip Meredith	Irrigated	Henderson	AgriGold	G3520RX	98.30
12.	Full Season	Goetz Brothers Farm	Non-Irrigated	Daviess	Asgrow	AG36X6	98.23
13.	Full Season	Lea Meredith	Irrigated	Henderson	Pioneer	rMG4.6	97.84
14.	Full Season	Knott Farms	Non-Irrigated	Daviess	AgriGold	G3722RX	96.10
15.	Full Season	Phillip Meredith	Irrigated	Henderson	Pioneer	rMG3.6	95.54
16.	Full Season	Drew Langley	Irrigated	Hardin	Asgrow	AG43X0	95.53
17.	Full Season	Tanner Stroup	Non-Irrigated	Daviess	Croplan	CP3850X	93.81
18.	Full Season	Sparks Farms	Non-Irrigated	Daviess	Asgrow	AG36X6	91.61
19.	Full Season	Tanner Stroup	Non-Irrigated	Daviess	Croplan	CP3850X	90.56
20.	Full Season	Schwenke Brothers Farms	Irrigated	Boone	Pioneer	P38A49L	90.10
21.	Full Season	Old Lydanne Farms	Non-Irrigated	Daviess	NK	S39-E3	89.01
22.	Full Season	Rice Farms	Non-Irrigated	Butler	AgriGold	G2900RX	88.73
23.	Full Season	Flatlick Grain Farms	Non-Irrigated	Daviess	DynaGro	S48XT56	88.33
24.	Full Season	Hancock Family Farms	Non-Irrigated	Fulton	Asgrow	AG48X9	86.56
25.	Full Season	PPJ Thompson Farms	Non-Irrigated	Daviess	Stewart	4228R2X	86.15
26.	Full Season	Josh Simpson	Non-Irrigated	Wayne	Beck's	4991X2	85.82
27.	Full Season	Ken-Maur Farms	Irrigated	Daviess	AgriGold	G3722RX	85.76
28.	Full Season	Gough Farms	Non-Irrigated	McCracken	Asgrow	AG48X9	84.74
29.	Full Season	S&P Farms	Non-Irrigated	Union	DynaGro	S3305N	84.39
30.	Full Season	Mark Thomas	Non-Irrigated	Hardin	AgriGold	G3722RX	84.05
31.	Full Season	Ken-Maur Farms	Irrigated	Daviess	AgriGold	G3722RX	83.94
32.	Full Season	Darrell Hagan	Non-Irrigated	Daviess	Croplan	CP3360X	83.77
33.	Full Season	PPJ Thompson Farms	Non-Irrigated	Daviess	Pioneer	39A58X	83.68
34.	Full Season	Cole Hamilton Farms	Non-Irrigated	Daviess	NK	S37-A4X	83.30
35.	Full Season	Tim and Jesse Horn	Non-Irrigated	Daviess	Beck's	3789X2	82.61
36.	Full Season	Drew Langley	Non-Irrigated	Hardin	Pioneer	P42A96X	81.33
37.	Full Season	Mark Thomas	Non-Irrigated	Hardin	AgriGold	G3722RX	81.06
38.	Full Season	Summers Farms	Non-Irrigated	Simpson	Beck's	4991X2	79.65
39.	Full Season	Goetz Brothers Farm	Non-Irrigated	Daviess	Asgrow	42X9	79.53
40.	Full Season	Paul Howlett	Irrigated	Hardin	Asgrow	AG46X6	76.97
41.	Full Season	Donald Poore	Non-Irrigated	Clinton	Beck's	4991X2	76.39
42.	Full Season	CKC Farms	Non-Irrigated	Green	Pioneer	P42A96X	72.81
43.	Full Season	Petrie Farms	Non-Irrigated	Muhlenberg	Pioneer	P48A60X	71.90
44.	Double Crop	Folz Farms	Irrigated	Christian	Beck's	4991X2	70.04
45.	Double Crop	Armistead Farms	Irrigated	Logan	Beck's	BCS4601XF20	68.40
46.	Double Crop	Folz Farms	Non-Irrigated	Christian	Beck's	4991X2	66.86
47.	Full Season	James Sexton	Non-Irrigated	Wayne	LG Seeds	C2888RX	65.73
48.	Full Season	Gough Farms	Non-Irrigated	McCracken	Asgrow	AG48X9	64.77
49.	Full Season	James Sexton	Non-Irrigated	Wayne	LG Seeds	C4845RX	64.43
50.	Double Crop	Peterson Farms	Irrigated	Marion	Stine	39K02	63.80
51.	Full Season	Josh Simpson	Non-Irrigated	Wayne	Beck's	4669X2	63.23
52.	Full Season	Thomas Kelsay	Non-Irrigated	Wayne	Beck's	4664FP	62.80
53.	Double Crop	PPJ Thompson Farms	Non-Irrigated	Daviess	Pioneer	P42A96X	45.36

Overall Contest Average 76.53
Full-Season (Division I) Average 87.39
Double-Crop (Division II) Average 65.66

Table 2. A summary of all production practices for the 47 full season yield contest entries.

Production Practices		Division I-Irrigated				Division I-Non-Irrigated				
		Bushels/A								Participants
		100	90	80	70	100	90	80	70	
		Entries for each Practice								
		3	5	2	1	6	6	15	3	5
Average Yield (bu/A)		103.00	95.46	84.85	76.97	101.69	94.84	84.90	74.79	64.19
Seed Company	AgriGold	2	1	2		4	1	3		
	Asgrow		1		1		2	2		1
	Beck's	1						2	1	2
	Croplan						2	1		
	DynaGro							2		
	LG Seeds									2
	NK							2		
	Pioneer		3			2	1	2	2	
Stewart							1			
Herbicide Tolerance Technology	Roundup Ready 2 Yield	1				2	1	1		
	DuPont STS	1		2						
	Roundup Ready 2 Xtend	2	3	2	1	4	5	12	3	4
	Liberty Link		2							1
	GT27									1
	Enlist							1		
	None							1		
Seed Treatment	Acceleron						1	1		
	Agrishield Max	1	1	2		1				
	Apron Maxx		1					1		
	Escalate	1							1	
	Escalate SDS+							1		
	Equity VIP							2		1
	Pioneer Premium		1			2				
	Warden CS, Saltro						2			
	Product Not Stated		2		1	2	2	7	1	4
	Seed Inoculant								1	
	Dyna-Start PBC								1	
	Environoc 401		2			1				
	Graph-Ex							1		
	TerraMax Dry									2
Product Not Stated		1	2	1		1	5	2	2	
In-Furrow Treatment	EnzUp	1								
	Priaxor (2 oz), Radiate (3 oz)							1		
Foliar Insecticide	Endigo	2	3			2				
	Hero				1	1	2	5		
	Tombstone						1	2		1
Foliar Fungicide	Fortix							1		1
	Lucento							1		
	Miravis Top	2	3			4	2	3		
	Priaxor					2	1	1		
	Quadris Top SBX						1	1		
Herbicide	Pre+Post Emergence							1		
Tillage	No-Till		1		1		3	9	2	4
	Tillage	3	3	2		5	2	4	1	1
	Minimal Tillage		1			1	1	2		
Methods	Spring Disc			2						
	Spring Disc x 2					1		1		
	Turbo Till					1				
	Vertical Tillage		1							
Seeds/A	100,000 to 125,000		1	2		1	2	2		
	126,000 to 150,000	3	4		1	4	3	10	2	2
	151,000 to 175,000					1	1	3		1
	176,000 to 200,000									2

continued

Table 2. continued

Production Practices		Division I-Irrigated				Division I-Non-Irrigated				Participants
		Bushels/A								
		100	90	80	70	100	90	80	70	
		Entries for each Practice								
		3	5	2	1	6	6	15	3	5
Planting Date	Before April 20	2	3			5	6	10	1	
	Apr 20-30			2				1		
	May 1-10				1					1
	May 11-20		1					2	2	2
	May 21-31	1				1		1		1
	June 1-10		1					1		1
Harvest Date	before Sept 14									
	Sept 15-30	2	2			5	2	4		
	Oct 1-15	1	3	2		1	4	7		2
	Oct 16-31							3		1
	Nov 1-15				1			1	2	2
	Nov 15+								1	
Row Width	7.5 inch							2		
	15 inch	3	5	2		6	6	12	3	5
	30 inch							1		
Irrigated	Yes	3	5	2	1					
	No					6	6	15	3	5
Nitrogen Applied	None	1	1	2	1	1	3	11	1	4
	7.5 lbs/A					1	1			
	12 lbs/A							1		
	18 lbs/A		1						1	
	27 lbs/A	2	3			2				
	60 lbs/A								1	
P ₂ O ₅ Applied	None	1		2			1	7		4
	1 to 40 lbs/A							1		
	41 to 80 lbs/A	2	5		1	4	1	3	1	
	81-120 lbs/A							2		1
	>120 lbs/A						2		2	
Total K ₂ O (lbs/A)	None	1		2			1	6		4
	41 to 80 lbs/A					1	3	4	1	
	81-120 lbs/A	2	5			3		1		
	>120 lbs/A				1			1	2	
Manure/Litter Applied	2 tons chicken litter									2
	3 tons chicken litter							2		
	2 tons swine compost						1			
Other Fertilizer Applied	16 oz Boron							1		
	Nutrisync Boron							1		1
Previous Crop	Corn	3	5	2	1	6	5	9	1	3
	Corn f.b. Cereal Rye Cover Crop							1		
	Hemp							1		
	Silage Corn							1		
	Soybean							1	1	2
	Tobacco							1	1	1
	No Response						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	2	1	2
Average Yield (bu/A)		70.04	66.10	79.53	56.11
Company	Asgrow			1	
	Beck's	1	1		1
	Pioneer				1
	Stine		1		
Herbicide Tolerance Technology	Roundup Ready 2 Yield		1		
	DuPont STS		1		
	Roundup Ready 2 Xtend	1		1	2
Seed Treatment	Apron Maxx, imidacloprid		1		
	Escalate	1			1
	Saltro			1	
	Product Not Stated		1		
In-Furrow Treatment	2.5 gal 3-18-18			1	
Foliar Insecticide	Hero		1		
	Lamcap	1	1		1
	Tombstone			1	
Foliar Fungicide	Miravis Top		2		
Herbicide	Post-Emergence Only	1		1	
	Pre+Post Emergence		2		2
Tillage	No-Till	1	1	1	2
	Tillage		1		
Seeds/A	126,000 to 150,000	1	1		1
	151,000 to 175,000			1	1
	176,000 to 200,000		1		
Planting Date	June 11-20	1	2		1
	June 21-30			1	1
Harvest Date	Oct 16-31			1	
	Nov 1-15	1	1		2
	Nov 15+		1		
Row Width	7.5 inch		1		1
	15 inch	1	1	1	1
	30 inch				
Irrigated	Yes	1			
	No			1	2
Nitrogen Applied	None		1		1
	7.5 lbs/A			1	
	30 lbs/A		1		
P ₂ O ₅ Applied	None		1		1
	41 to 80 lbs/A			1	
	81-120 lbs/A	1	1		1
Total K ₂ O (lbs/A)	None		1		1
	41 to 80 lbs/A		1	1	
	81-120 lbs/A	1			1
Other Fertilizer Applied	Branch Manager Foliar Feed		1		
Previous Crop	Wheat	1	2	1	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 2020.

Production Practices	Full Season-Irrigated		Full Season-Non-Irrigated	
	First Place	Second Place	First Place	Second Place
Grower/Farm	Ken-Maur Farms	Drew Langley	Goetz Brothers Farm	Phillip Meredith
County	Daviess	Hardin	Daviess	Henderson
Company	AgriGold	Asgrow	AgriGold	AgriGold
Brand	G3722RX	AG43X0	G3520RX	G3520RX
Yield (bu/A)	106.51	95.53	103.47	103.13
Tillage	Conventional	No-Till	Minimal Till	Conventional
Soil Preparation	Spring Chisel and Disc		Turbo Till	Fall Chisel; Spring Field Cultivator x 2
Planting Date	5/28/2020	5/15/2020	5/22/2020	4/10/2020
Row Width (in.)	15	15	15	15
Seeds/A	130,000	120,000	153,000	140,000
Irrigated	yes	yes	no	no
Harvest Date	10/6/2020	10/14/2020	10/2/2020	9/29/2020
Previous Crop	Corn	Corn	Corn	Corn
Total N (lbs/A)			7.5	27
Total P ₂ O ₅ (lbs/A)		70	45	75
Total K ₂ O (lbs/A)		100	45	102
Seed Treatment		Apron Maxx		AgriShield Max
In-Furrow Treatment	EnzUp			
Foliar Insecticide	Lambda T-2		Hero	Endigo
Foliar Fungicide	Priaxor, propiconazole	Revytek	Miravis Top	Miravis Top
Herbicide Pre-Emergence	Anthem Maxx, Ringside	Authority XL, Roundup	Roundup (32 oz), Zidua PRO (6 oz)	Canopy
Herbicide Post-Emergence	clethodim, Zidua	Roundup	Roundup (24 oz), Prefix (32 oz)	Fexapan, Ringside, Buccaneer
Herbicide Tolerance Technology	Roundup Ready 2 Xtend, DuPont STS	Roundup Ready 2 Xtend	Roundup Ready 2 Yield	Roundup Ready 2 Xtend

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 2020.

Production Practices	Double Crop-Irrigated		Double Crop-Non-Irrigated	
	First Place	Second Place	First Place	Second Place
Grower/Farm	Folz Farms	Armistead Farms	Goetz Brothers Farm	PPJ Thompson Farms
County	Christian	Logan	Daviess	Daviess
Company	Beck's	Beck's	Asgrow	Pioneer
Brand	4991X2	BCS4601XF20	42X9	P42A96X
Yield (bu/A)	70.04	68.40	79.53	45.36
Tillage	No-Till	No-Till	No-Till	No-Till
Soil Preparation			Fall Disc x 2	
Planting Date	6/15/2020	6/17/2020	6/30/2020	6/26/2020
Row Width (in.)	15	7.5	15	7.5
Seeds/A	145,000	140,000	160,000	160,000
Irrigated	yes	yes	no	no
Harvest Date	11/9/2020	11/7/2020	10/22/2020	11/9/2020
Previous Crop	Wheat	Wheat	Wheat	Wheat
Total N (lbs/A)	30	30	7.5	
Total P ₂ O ₅ (lbs/A)	90		45	
Total K ₂ O (lbs/A)	90		45	
Total Other (lbs/A)	Sulfur 10#, Zinc 1#			
Seed Treatment	Escalate		Saltro	
In-Furrow Treatment			2.5 gal 3-18-18	
Foliar Insecticide	Lamcap	Lamcap	Tombstone	
Foliar Fungicide	Priaxor, propiconazole	Miravis Top	Mirvas Top	
Herbicide Pre-Emergence		Roundup, Zidua PRO		
Herbicide Post-Emergence	Zidua, Buccaneer	Liberty, Roundup	Roundup (32 oz.)	Roundup (1 qt), Zidua PRO (3 oz)
Herbicide Tolerance Technology	Roundup Ready 2 Xtend	Roundup Ready 2 Yield	Roundup Ready 2 Xtend	Roundup Ready 2 Xtend

Table 6. All agronomic practices utilized to produce the district Yield Contest winning entries in Kentucky in 2020.

Production Practices	District			
	1	2	3	4
Grower/Farm	Hancock Family Farms	Knott Farms	Rice Farms	Schwenke Brothers Farms
County	Fulton	Daviess	Butler	Boone
Company	Asgrow	AgriGold	AgriGold	Pioneer
Brand	AG48X9	G3520RX	G2900RX	P38A49L
Yield (bu/A)	86.56	101.90	88.73	90.10
Division	Full Season	Full Season	Full Season	Full Season
	No-Till	Conventional	No-Till	Minimal Till
Tillage		Spring Coulter Disc		Vertical Tillage
Planting Date	4/10/2020	4/6/2020	4/8/2020	6/3/2020
Row Width (in.)	30	15	15	15
Seeds/A	120,000	115,000	140,000	140,000
Irrigated	no	no	no	yes
Harvest Date	10/5/2020	9/17/2020	9/17/2020	10/13/2020
Previous Crop	Soybeans	Corn	Corn	Corn
Total N (lbs/A)				18
Total P ₂ O ₅ (lbs/A)				46
Total K ₂ O (lbs/A)				120
Seed Treatment	Acceleron			LumiGEN, PPST-20-20
Foliar Insecticide	Hero		Hero	Endigo ZC
Foliar Fungicide	Lucento	Priaxor	Miravis Top	Revytek
Herbicide Pre-Emergence	Dual	Roundup, Dicamba		Verdict
Herbicide Post-Emergence	Xtend, Anthem Maxx	Roundup, Reflex, Zidua	Tavium, glyphosate	Liberty
Herbicide Tolerance Technology	Roundup Ready 2 Xtend	Roundup Ready 2 Xtend	Roundup Ready 2 Xtend	Liberty Link

Table 7. The category, grower/farm, whether the entry was irrigated or not, county, cultivar information and percent oil and protein concentration for each entry submitted to the 2020 Soybean Quality Contest.

Entry	Category	Grower/Farm	County	Company	Brand/	Percent	
					Variety	Oil	Protein
1.	Full Season	Rice Farms	Butler	AgriGold	G2900RX	25.40	36.93
2.	Full Season	PPJ Thompson Farms	Daviess	Stewart	4228R2X	23.55	38.25
3.	Full Season	PPJ Thompson Farms	Daviess	Pioneer	39A58X	23.31	37.08
4.	Full Season	Ken-Maur Farms	Daviess	AgriGold	G3722RX	25.36	37.58
5.	Full Season	Goetz Brothers Farm	Daviess	Asgrow	AG36X6	25.88	37.88
6.	Full Season	Goetz Brothers Farm	Daviess	AgriGold	G3520RX	25.47	39.30
7.	Full Season	Knott Farms	Daviess	AgriGold	G3722RX	24.08	40.52
8.	Full Season	Knott Farms	Daviess	AgriGold	G3520RX	23.41	41.15
9.	Full Season	Tim and Jesse Horn	Daviess	Beck's	3789X2	23.57	38.71
10.	Full Season	Fischer CrossCreek Farms	Daviess	Pioneer	P36A83X	24.29	36.66
11.	Full Season	Flatlick Grain Farms	Daviess	DynaGro	S48XT56	23.37	39.21
12.	Full Season	James Sexton	Wayne	LG Seeds	C2888RX	25.14	38.02
13.	Full Season	James Sexton	Wayne	LG Seeds	C4845RX	25.30	38.06
14.	Full Season	Josh Simpson	Wayne	Beck's	4991X2	24.59	38.98
15.	Full Season	Josh Simpson	Wayne	Beck's	4669X2	22.84	40.64
16.	Full Season	Thomas Kelsay	Wayne	Beck's	4664FP	23.72	36.55
17.	Full Season	S&P Farms	Union	DynaGro	S3305N	26.50	38.32
18.	Full Season	CKC Farms	Green	Pioneer	P42A96X	26.71	37.84
19.	Full Season	Petrie Farms	Muhlenberg	Pioneer	P48A60X	25.24	36.86
20.	Double Crop	Goetz Brothers Farm	Daviess	Asgrow	42X9	23.97	39.66
21.	Double Crop	Folz Farms	Christian	Beck's	4991X2	23.15	38.04
22.	Double Crop	Folz Farms	Christian	Beck's	4991X2	24.28	38.25
23.	Double Crop	Armistead Farms	Logan	Beck's	BCS4601XF20	23.18	38.29

Average of Entries	24.45	38.38
Full Season Average	24.62	38.34
Double Crop Average	23.65	38.56

Table 8. Agronomic practices utilized to produce the state Quality Contest winning entries in Kentucky in 2020.

Production Practices	Oil		Protein	
	1st Place	2nd Place	1st Place	2nd Place
Grower/Farm	CKC Farms	S&P Farms	Knott Farms	Josh Simpson
County	Green	Union	Daviess	Wayne
Company	Pioneer	DynaGro	AgriGold	Beck's
Brand/Variety	P42A96X	S3305N	G3520RX	4669X2
Oil (%)	26.71	26.50	23.41	22.84
Protein (%)	37.84	38.32	41.15	40.64
Yield (bu/A)	72.81	84.39	101.90	63.23
Division	I	I	I	I
Tillage	No-Till	Minimal Till	Conventional	No-Till
Soil Preparation		Fall Minimum Till	Spring Coulter Disc	
Planting Date	5/16/2020	4/24/2020	4/6/2020	5/20/2020
Row Width (in.)	15	15	15	15
Seeds/A	140,000	140,000	115,000	160,000
Irrigated	no	no	no	no
Harvest Date	11/6/2020	9/21/2020	9/17/2020	11/6/2020
Previous Crop	Soybean	Corn, Cereal Rye Cover Crop	Corn	Soybean
Total N (lbs/A)	60			
Total P ₂ O ₅ (lbs/A)	160	85		
Total K ₂ O (lbs/A)	176	65		
Total Manure (lbs/A)				2 tons chicken litter
Seed Treatment		Equity VIP		
Seed Inoculant		Dyna-Start PBC		
In-Furrow Treatment		Priaxor (2 oz), Radiate (3 oz)		
Foliar Insecticide		Tombstone (2 oz)		Kendo (3 oz)
Foliar Fungicide		Priaxor (4 oz)	Priaxor	Fortix (5 oz)
Herbicide Pre-Emergence		Matador-S (2.25 pt), Roundup (1 qt)	Roundup, Dicamba	2,4-D (1 pt), Canopy EX (3.3 oz), glyphosate (2 pts)
Herbicide Post-Emergence	Roundup	Anthem Maxx (3.2 oz), Classic (.33 oz)	Roundup, Reflex, Zidua	FirstRate (.3 oz), glyphosate (2 pts)
Herbicide Tolerance Technology	Roundup Ready 2 Xtend	None	Roundup Ready 2 Xtend	Roundup Ready 2 Xtend



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