Estimates of Soybean Production and Yields Based on 8/11/25 Crop Conditions

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Abstract¹

This reports estimates soybean yields for the 18 leading soybean states and then calculates total soybean production and average national soybean yield using the August NASS crop acre estimates. Based on the 8/11/25 crop condition report, total soybean production is estimated to be 4.3 billion bushels with a range from 4.2 billion to 4.4 billion bushels. The national soybean yield is estimated to be 53.6 bu/ac with a range from 52.0 to 55.2 bu/ac. Ibendahl's estimate is almost identical to the USDA estimate.

Introduction

This estimate is based on the USDA estimate of crop conditions for 8/11/24 (week #32). For a full description of this procedure and model, readers are encouraged to read <u>"Estimates of Soybean Production and Yields Based on 6/30/24 Crop Conditions"</u>.

USDA/NASS released the <u>August Crop Production Report</u> this past week. USDA revised soybean acres downward by 3% and these new acre estimates are incorporated here. For comparison, USDA/NASS is currently estimating a 53.6 bu/ac national soybean yield.

Results

Figure 1 is a Likert graph of the soybean crop conditions for the last 20 years in the U.S. The Likert graph is centered on the fair category to make comparisons among years easier. The number along the left-hand-side of the figure is the total of the very poor and poor categories while the number along the right-hand-side is the total of the good and excellent categories.

Figures 2, 3, and 4 show the estimated yield per harvested acre, the estimated harvested acres, and the total production for each of the 18 leading soybean states. The harvested acre estimate comes directly from the USDA-NASS estimate from the August 12, 2025 Acreage Report.

Because the yield per acre from the individual states can't be summed together, the national yield per acre is calculated from the total production divided by the total harvested acres. Total U.S. soybean production is calculated by adjusting the production from the 18 leading soybean states upward based on the historic relationship between U.S. production and the production from the 18 leading soybean states. As calculated, total U.S. soybean production is estimated to be 4.291 billion bushels with a range from 4.165 billion to 4.420 billion bushels. The national soybean yield is estimated to be 53.6 bu/ac with a range from 52.0 to 55.2 bu/ac.

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References

Ibendahl, G. "<u>Estimates of Soybean Production and Yields Based on 6/30/2024 Crop Conditions</u>." *farmdoc daily* (14):125, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, July 8, 2024.

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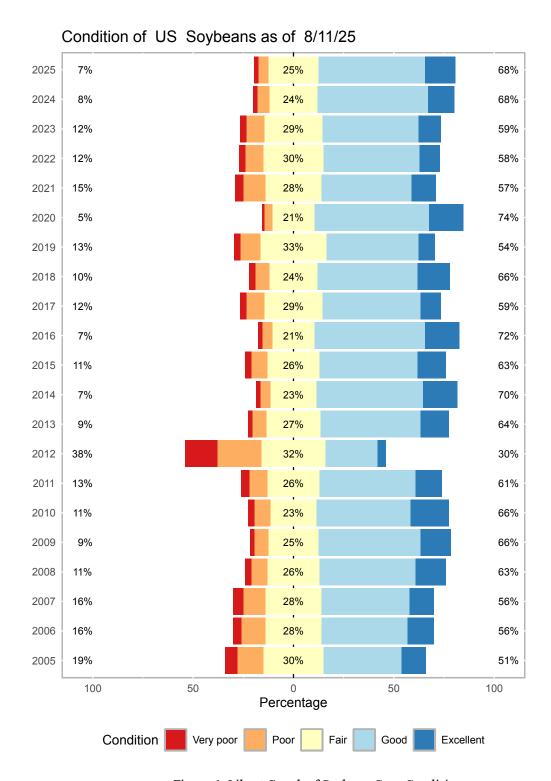


Figure 1. Likert Graph of Soybean Crop Condition

Soybean Yields per Acre by State - 8/11/25 Bushels per harvested acre								
		2025 prediction						
State	Last year	Lower	Predicted	Upper Cl	R squared			
Arkansas	55.0	56.7	57.9	59.1	0.35			
Illinois	64.0	62.4	63.7	64.9	0.16			
Indiana	59.0	59.9	60.9	61.9	0.45			
lowa	60.0	59.4	61.5	63.7	0.10			
Kansas	35.0	38.7	41.2	43.8	0.37			
Kentucky	48.0	53.3	54.9	56.5	0.43			
Louisiana	52.0	56.6	59.1	61.5	0.40			
Michigan	49.0	48.0	49.5	51.0	0.04			
Minnesota	45.0	48.4	50.2	51.9	0.06			
Mississippi	56.0	59.9	60.9	61.9	0.67			
Missouri	49.0	51.5	53.2	55.0	0.48			
Nebraska	57.5	61.3	62.8	64.4	0.49			
North_Carolina	39.0	41.3	42.4	43.6	0.63			
North_Dakota	37.5	33.0	34.5	36.0	0.07			
Ohio	50.0	56.2	57.4	58.6	0.37			
South_Dakota	43.0	44.8	46.5	48.2	0.14			
Tennessee	42.0	46.0	47.6	49.2	0.63			
Wisconsin	48.0	49.3	51.9	54.4	0.07			

Figure 2. Estimated Yields per Acre for 18 Leading Soybean States

Soybean Harvested Acres by State - 8/11/25 1,000 acres								
		Last	Planted	2025 harvest estimate				
	State	year	acres	NASS est				
	Arkansas	3,020	2,600	2,570				
	Illinois	10,750	10,300	10,250				
	Indiana	5,780	5,400	5,380				
	lowa	9,960	9,400	9,330				
	Kansas	4,420	4,100	4,050				
	Kentucky	2,040	1,800	1,790				
	Louisiana	1,060	790	760				
	Michigan	2,180	2,050	2,030				
	Minnesota	7,320	7,000	6,930				
	Mississippi	2,270	1,800	1,770				
	Missouri	5,840	5,600	5,540				
	Nebraska	5,240	4,800	4,750				
	North_Carolina	1,610	1,650	1,630				
	North_Dakota	6,550	6,600	6,550				
	Ohio	5,030	4,900	4,880				
	South_Dakota	5,380	5,100	5,060				
	Tennessee	1,800	1,550	1,520				
	Wisconsin	2,120	2,000	1,970				
sum		82,370	77,440	76,760				

Figure 3. Estimated NASS Harvested Acres for 18 Leading Soybean States

Total Soybean Production by State - 8/11/25 1,000,000 bushels

			2025 prediction		
	Ctoto	Last	Lower	Dradiated	Upper
	State	year	CI	Predicted	CI
	Arkansas	166	146	149	152
	Illinois	688	640	653	666
	Indiana	341	322	328	333
	lowa	598	554	574	594
	Kansas	155	157	167	177
	Kentucky	98	95	98	101
	Louisiana	55	43	45	47
	Michigan	107	97	100	104
	Minnesota	329	336	348	359
	Mississippi	127	106	108	110
	Missouri	286	285	295	305
	Nebraska	301	291	299	306
	North_Carolina	63	67	69	71
	North_Dakota	246	216	226	236
	Ohio	252	274	280	286
	South_Dakota	231	227	235	244
	Tennessee	76	70	72	75
	Wisconsin	102	97	102	107
sum	_	4,220	4,024	4,147	4,271

Figure 4. Estimated soybean Production for 18 Leading Soybean States

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