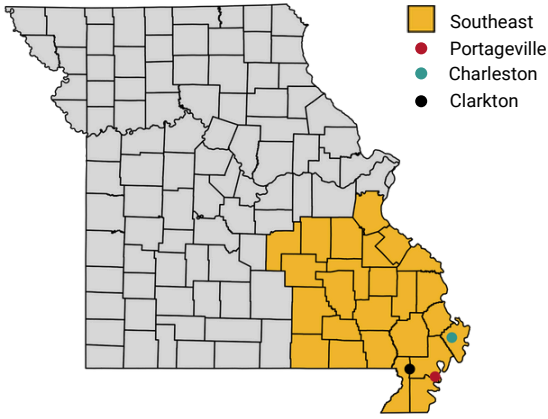




SOYBEAN GROWTH MONITORING

WEEK: 07/09 - SOUTHEAST - MO



- The rainfall over the last two weeks has brought soil moisture back to high levels, reducing the need for irrigation in the next week.
- This water availability helps initiate seed filling and pod setting in beans planted from April to mid-June in soils with moderate to good drainage. High soil moisture levels also benefit late-planted beans that are still in the vegetative development stage.
- Foliage biomass and node numbers have increased by approximately 10% compared to normal growth.
- Yields are expected to be slightly higher than in a normal year in areas not experiencing prolonged soil saturation or flooding.
- The growth simulation evaluated in this report considers an irrigated soybean field. Rainfed fields may experience a higher yield increase compared to a normal year without irrigation.
- The yield prediction model is not yet calibrated for oxygen stress.

2024 Relative Yield Prediction

Planting date:

04-05-2024			04-26-2024			05-17-2024			06-07-2024		
MG 3	MG 4	MG 5	MG 3	MG 4	MG 5	MG 3	MG 4	MG 5	MG 3	MG 4	MG 5
-1%	+1%	+2%	+1%	+3%	+4%	+3%	+3%	+4%	+4%	+4%	+4%

Historical Baseline Yield*

Portageville (New Madrid County) 52 bu/acre	Charleston (Mississippi County) 54 bu/acre	Clarkton (Dunklin County) 47 bu/acre
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- **Obs 1:** The 2024 yield prediction is relative to the normal yield of the same maturity group planted on the same date.
- **Obs 2:** *The historical baseline yield is the average from 2019 to 2023 reported by USDA-NASS Survey Program.

Soil water content

Planting date: 04-05-2024

Soil layer	0-9in	9-23in	23-54in
	Portageville (Portageville clay)	92%	92%
Charleston (Clana loamy fine sand)	99%	99%	98%
Clarkton (Malden fine sand)	96%	97%	96%

04-26-2024

Soil layer	0-9in	9-23in	23-54in
	Portageville	91%	93%
Charleston	100%	99%	97%
Clarkton	97%	98%	96%

05-17-2024

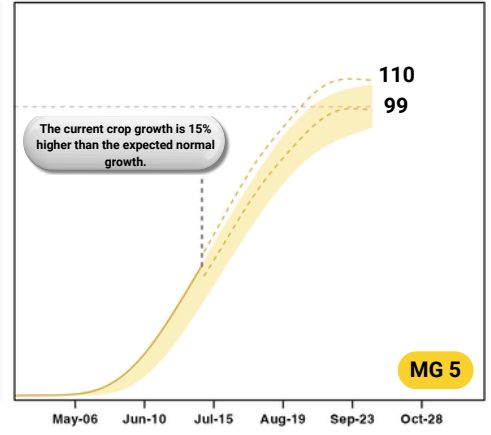
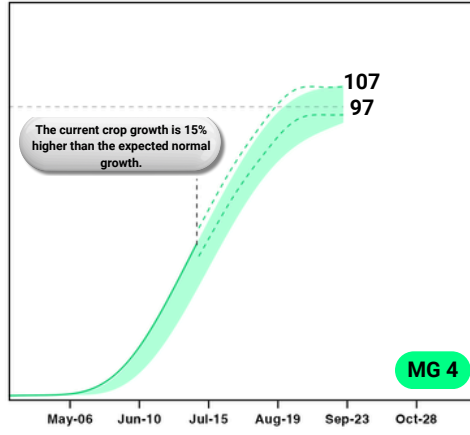
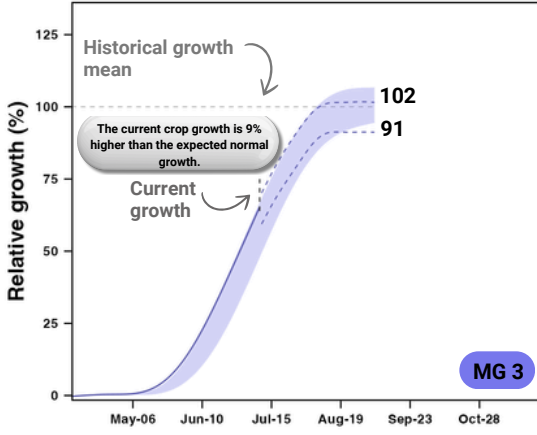
Soil layer	0-9in	9-23in	23-54in
	Portageville	94%	90%
Charleston	99%	99%	99%
Clarkton	97%	97%	95%

06-07-2024

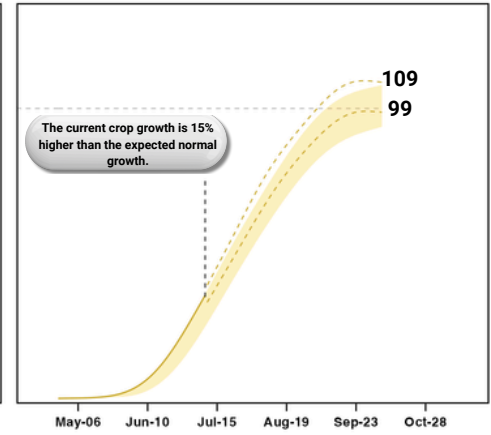
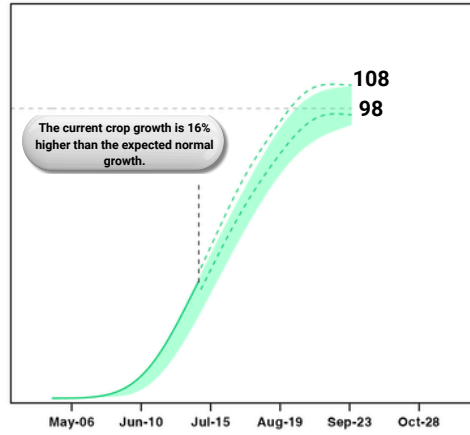
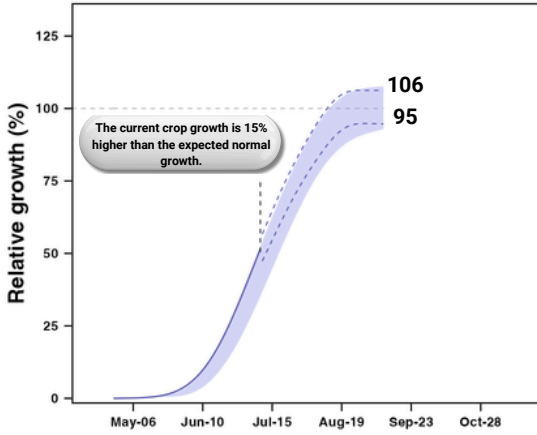
Soil layer	0-8in	8-30in	30-60in
	Portageville	91%	91%
Charleston	98%	99%	97%
Clarkton	92%	96%	95%

End-of-season growth prediction

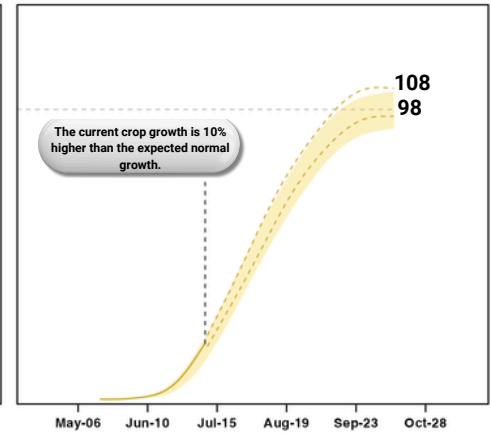
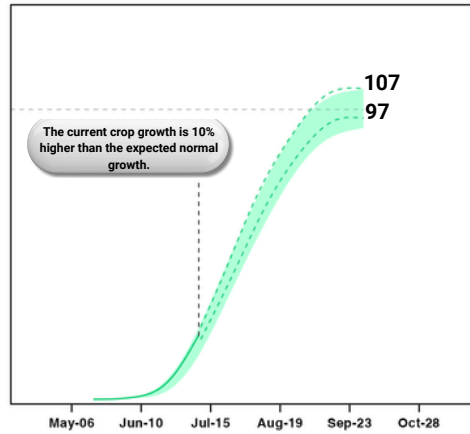
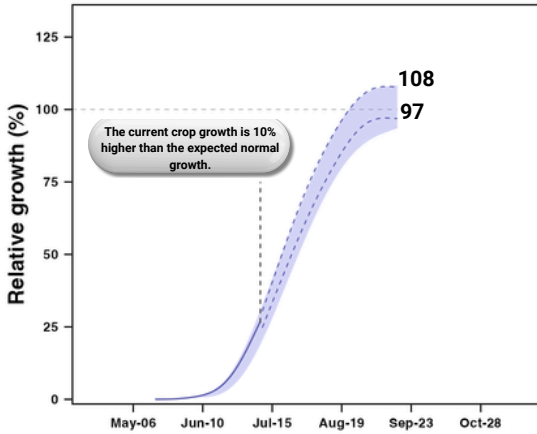
Planting date: 04-05-2024



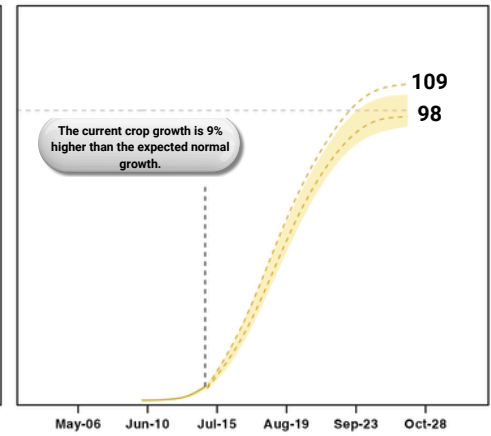
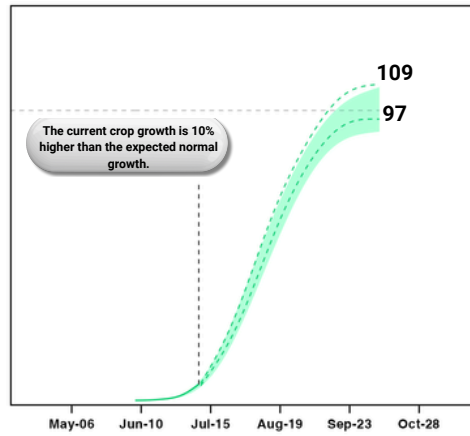
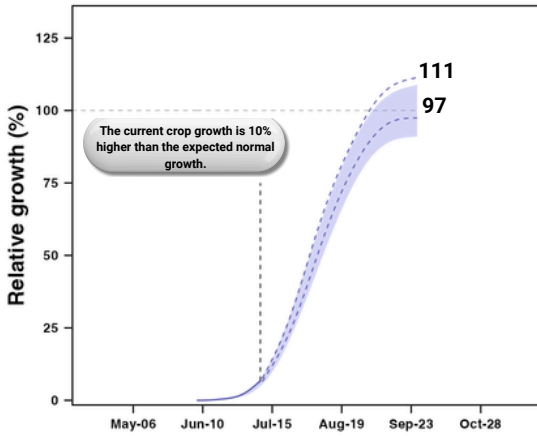
Planting date: 04-26-2024



Planting date: 05-17-2024



Planting date: 06-07-2024



Normal growth distribution
 Current growth
 Current growth distribution MIN/MAX

The normal growth represents the average growth expected at the reporting date, derived from simulating a current crop variety using 40 years of historical weather data specific to a particular location and planting date.

Growth Cycle

Planting date: 04-05-2024

04-26-2024

05-17-2024

06-07-2024

Stage	Nodes	Harvest
MG 3 R5	18	08/06 ± 2 days
MG 4 R5	19	08/23 ± 2 days
MG 5 R3	16	09/06 ± 2 days

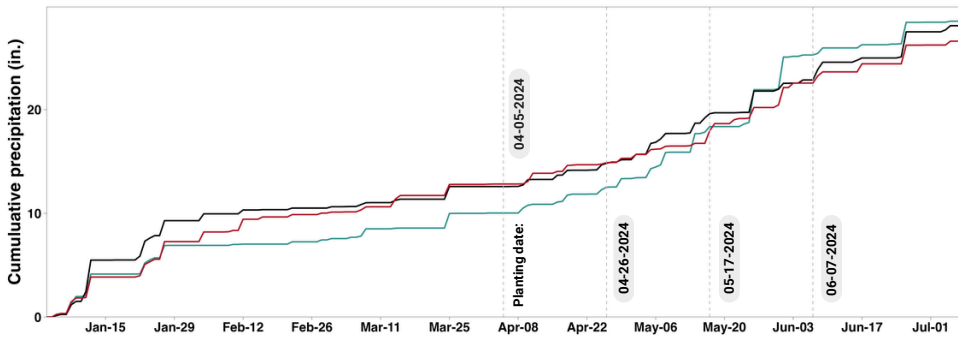
Stage	Nodes	Harvest
R5	16	08/18 ± 1 days
R3	16	09/01 ± 1 days
R3	16	09/14 ± 1 days

Stage	Nodes	Harvest
R3	12	08/31 ± 1 days
R1	12	09/13 ± 2 days
R1	12	09/24 ± 2 days

Stage	Nodes	Harvest
V7	7	09/14 ± 1 days
V7	7	09/24 ± 2 days
V7	7	10/04 ± 2 days

The stage and nodes indicate the current crop development as of the date of this report.

Rainfall



Drought Stress

Planting date:	MG 3	MG 4	MG 5
04-05-2024	0%	0%	0%
04-26-2024	0%	0%	0%
05-17-2024	0%	0%	0%
06-07-2024	0%	0%	0%

Drought stress is estimated by the cumulative crop transpiration reduction.