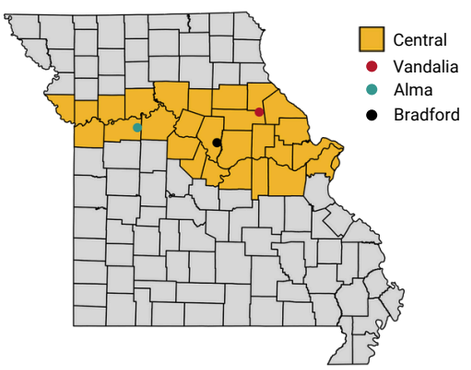
SOYBEAN GROWTH MONITORING

SOYBEAN FARMING SYSTEMS RESEARCH AND EXTENSION

WEEK: 06/10-CENTRAL-MO



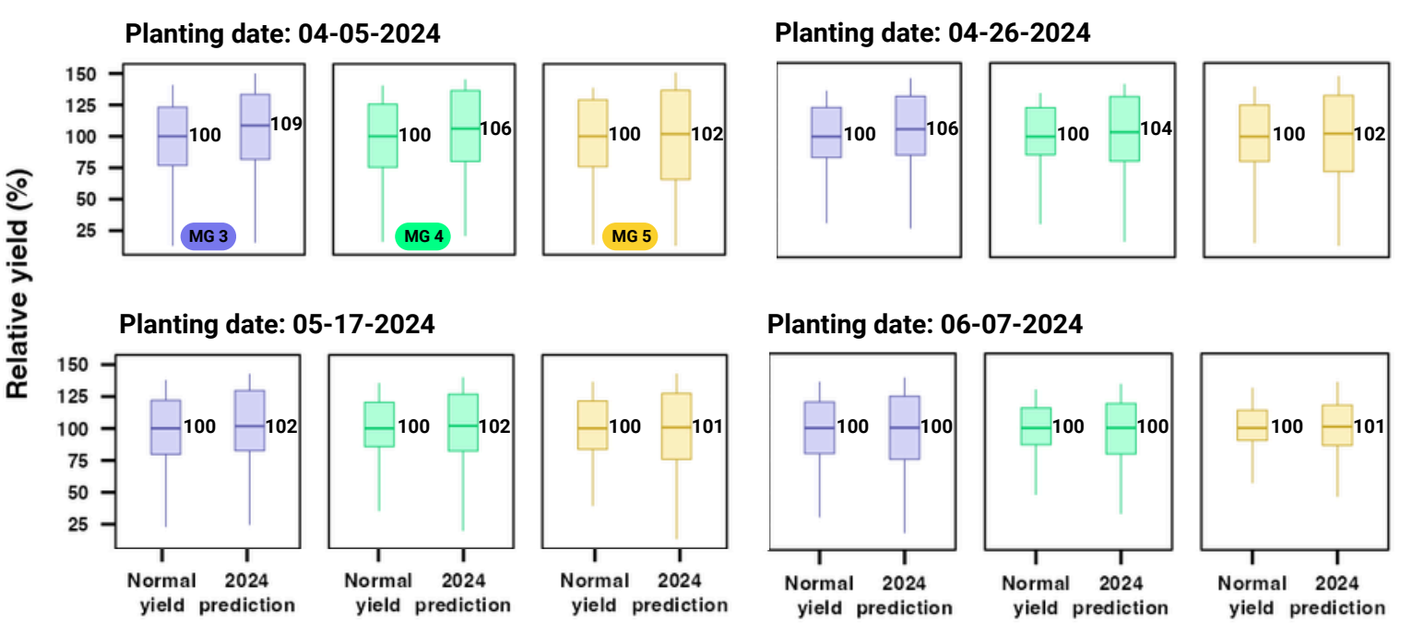
- Soybean vegetative growth for all MGs planted on 04/05, 04/26, and 05/17 is up to 76% greater than the expected growth. This increment is due to high soil moisture brought by approximately 16 inches of cumulative rainfall across the central region since the beginning of the year. Early canopy closure and early final herbicide application are expected.

- The vegetative growth will also impact the crop's water requirement until the end of the season. Vegetative biomass is linked to leaf area and greater leaf area uses more water.

- Soil water content remains high. No drought stress has been detected yet.

- MG 3.0 soybeans planted on 04/05 are already beginning to flower, while MG 4.0 or later planting dates have not yet reached this stage. It will be important to monitor for insects and diseases in the upcoming weeks.

2024 Relative Yield Prediction



The 2024 yield prediction for a 3.0 MG planted on 04/05 is expected to be 9% higher than the normal yield. The normal yield is the average expected yield for a specific location, based on weather scenarios observed over the past 40 years.

- **Obs 1:** The 2024 yield prediction is relative to the normal yield of the same maturity MG planted on the same date.
- **Obs 2:**The normal yield is the average yield expected from simulating a current crop variety using 40 years of historical weather data for a specific location and planting date.
- **Obs 3:** The normal yield serves as the 100% baseline for the 2024 yield prediction.

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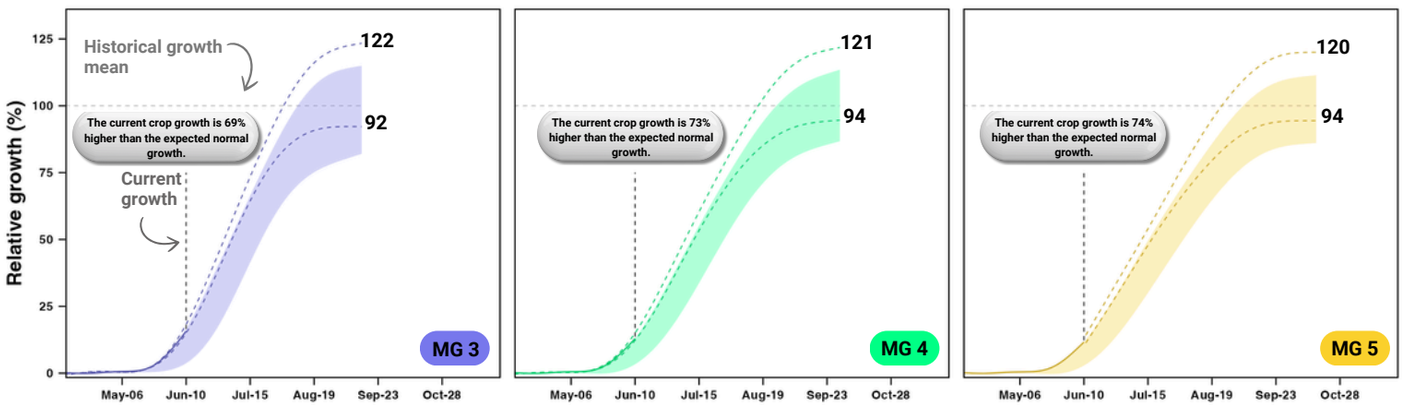
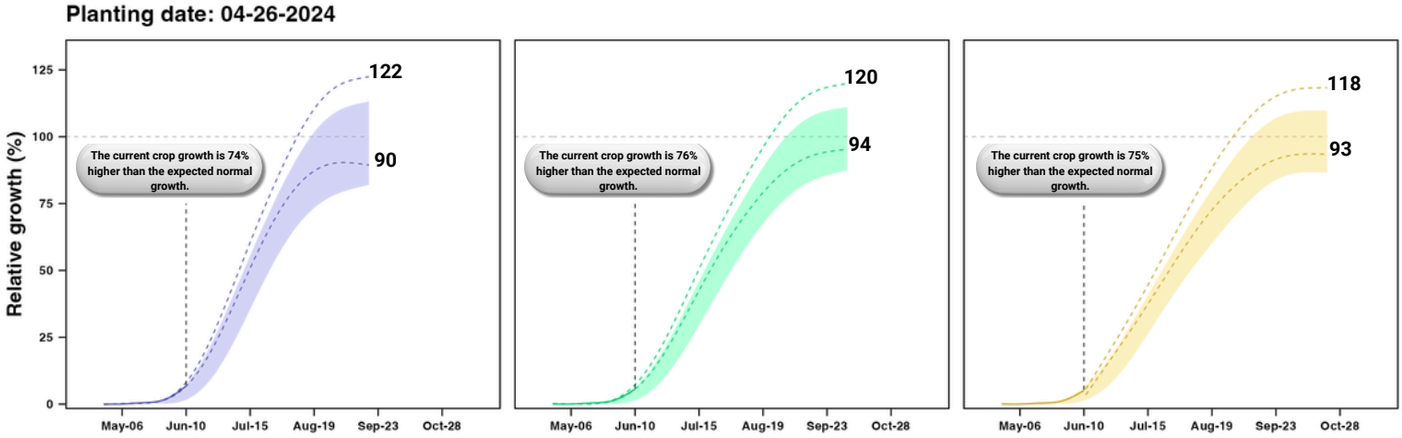
End-of-season growth prediction

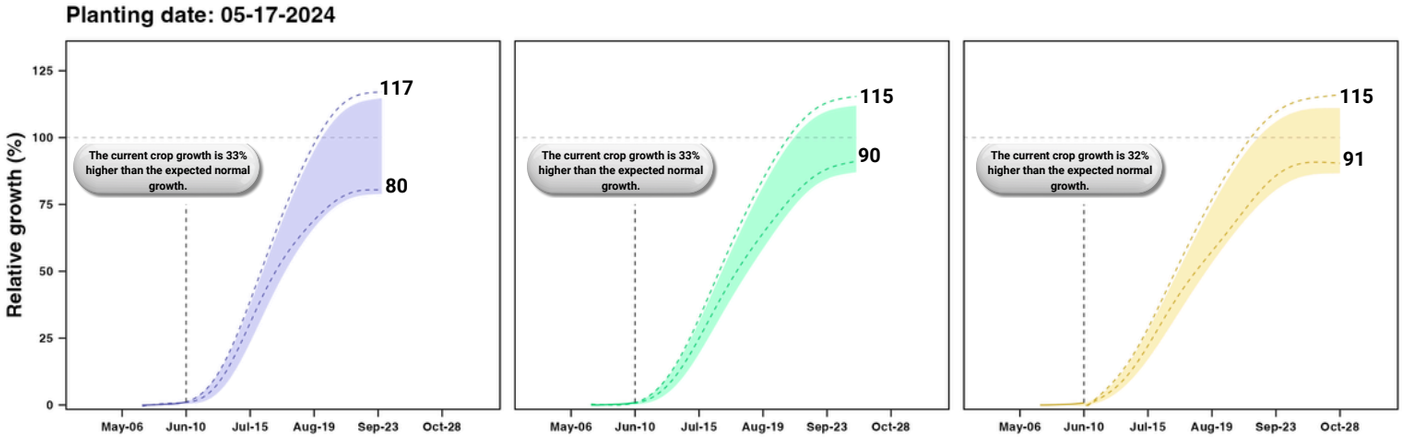
Planting date: 04-05-2024



Planting date: 04-26-2024



Planting date: 05-17-2024



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.

Soil water content

Planting date: 04-05-2024

Soil layer	0-9in	9-23in	23-54in
Bradford (Armstrong loam)	78%	88%	89%
Alma (Higginsville silt loam)	82%	88%	83%
Vandalia (Mexico silt loam)	77%	85%	83%

04-26-2024

	0-9in	9-23in	23-54in
	71%	86%	87%
	72%	87%	87%
	67%	85%	85%

05-17-2024

	0-9in	9-23in	23-54in
	70%	85%	88%
	69%	86%	91%
	70%	85%	83%

06-07-2024

	0-8in	8-30in	30-60in
	71%	86%	90%
	69%	86%	92%
	71%	85%	84%

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Extension University of Missouri | Variety Testing Program University of Missouri | Missouri Soybean Center University of Missouri | Missouri Soybeans

Growth Cycle

Planting date: 04-05-2024

	Stage	Nodes	Harvest
MG 3	R1	9	08/19 ± 3 days
MG 4	V9	9	09/04 ± 3 days
MG 5	V9	9	09/17 ± 4 days

04-26-2024

Stage	Nodes	Harvest
V7	7	08/28 ± 3 days
V7	7	09/11 ± 3 days
V7	7	09/24 ± 4 days

05-17-2024

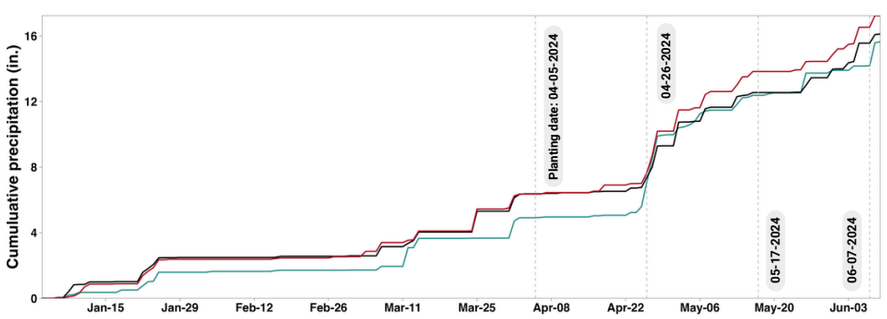
Stage	Nodes	Harvest
V3	3	09/07 ± 3 days
V3	3	09/20 ± 3 days
V3	3	10/02 ± 5 days

06-07-2024

Stage	Nodes	Harvest
VC	0	09/19 ± 3 days
VC	0	09/30 ± 4 days
VC	0	10/11 ± 5 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.

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