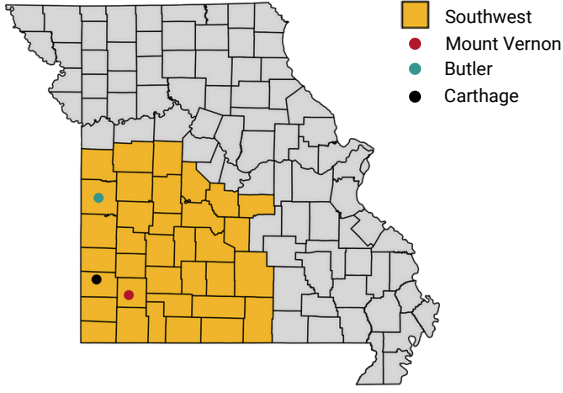




SOYBEAN GROWTH MONITORING

WEEK: 06 / 26 - SOUTHWEST - MO



- Soybean fields planted in May are finishing vegetative development and have not yet begun reproductive stages. Vegetative growth has been approximately 20% greater than in previous years due to favorable rainfall and warm temperatures.
- Predictions point to a likely reduction in 2024 yields. This is because the excess vegetative growth will likely use more water in the second part of the season. Historical weather data shows recurrent insufficient precipitation in the western counties in late August and September, negatively impacting seed filling and yield.
- Soybeans planted in May or later are still in vegetative development without canopy closure. Post-emergence herbicides may still be required.

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 |
| -6% | -6% | -7% | -7% | -7% | -8% | -1% | -1% | -2% | -2% | -2% | -1% |

Historical Baseline Yield*

| | | |
|--|---|--|
| Mount Vernon (Lawrence County) 37 bu/acre | Butler (Bates County) 40 bu/acre | Carthage (Jasper County) 36 bu/acre |
|--|---|--|

- **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

04-26-2024

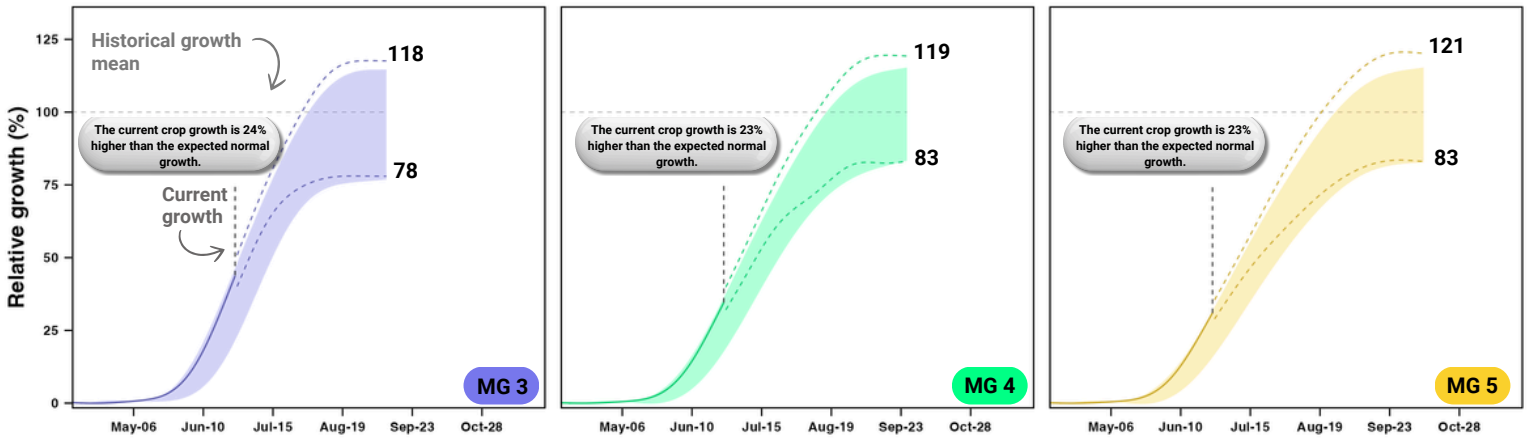
05-17-2024

06-07-2024

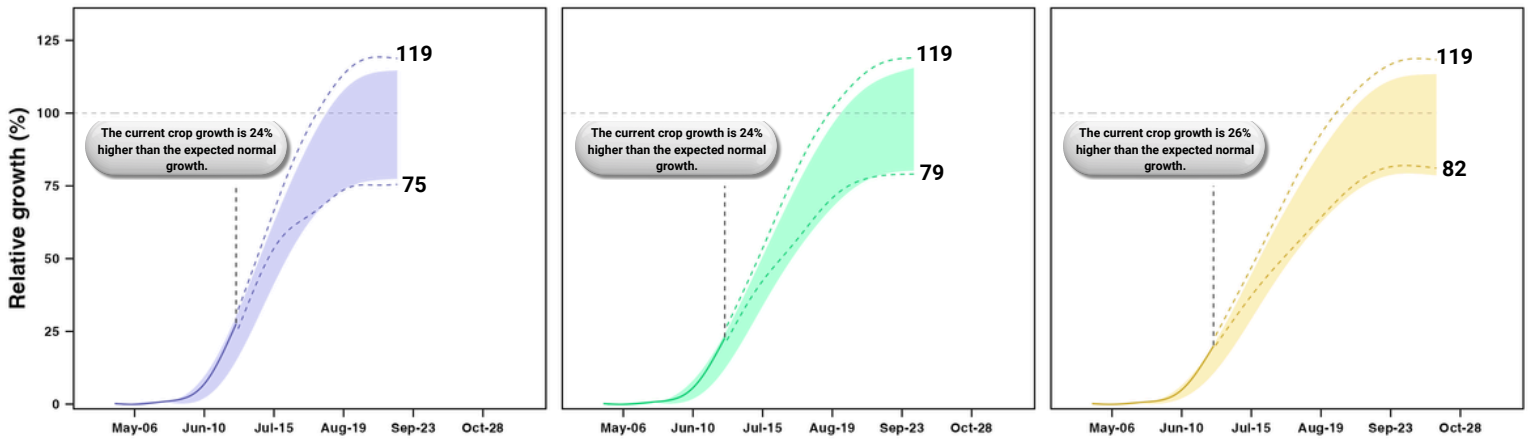
| Soil layer | 04-05-2024 | | | 04-26-2024 | | | 05-17-2024 | | | 06-07-2024 | | |
|--|------------|--------|---------|------------|--------|---------|------------|--------|---------|------------|--------|---------|
| | 0-9in | 9-23in | 23-54in | 0-9in | 9-23in | 23-54in | 0-9in | 9-23in | 23-54in | 0-8in | 8-30in | 30-60in |
| Mount Vernon (Wilderness gravelly silt loam) | 67% | 32% | 47% | 68% | 35% | 51% | 72% | 53% | 68% | 72% | 75% | 80% |
| Butler (Kenoma silt loam) | 81% | 85% | 68% | 82% | 86% | 69% | 76% | 87% | 87% | 67% | 92% | 94% |
| Carthage (Maple Grove silt loam) | 83% | 51% | 49% | 82% | 43% | 42% | 75% | 58% | 57% | 72% | 83% | 76% |

End-of-season growth prediction

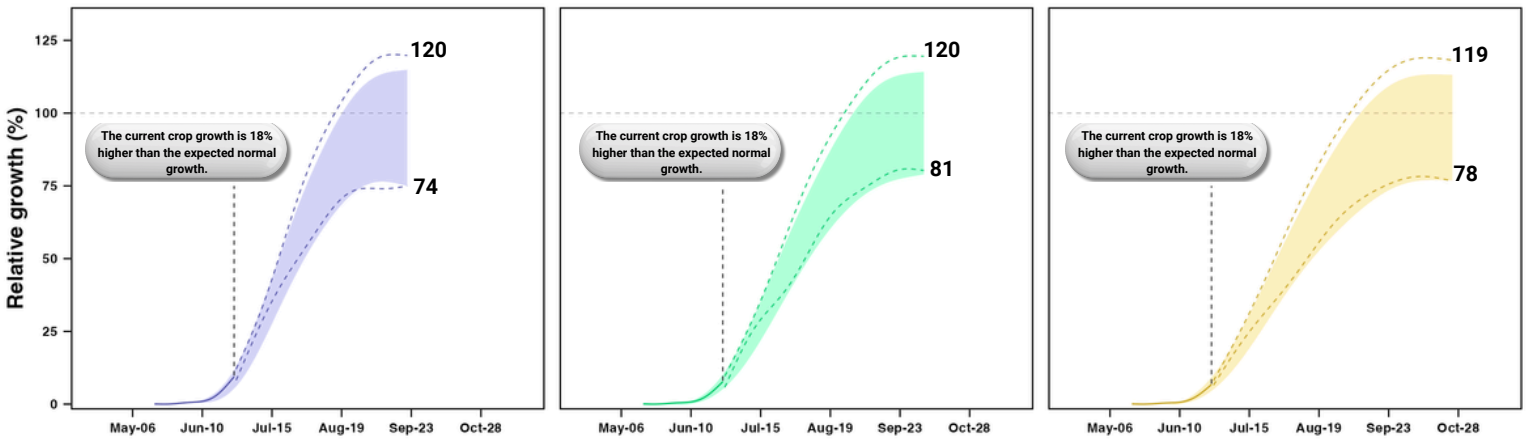
Planting date: 04-05-2024



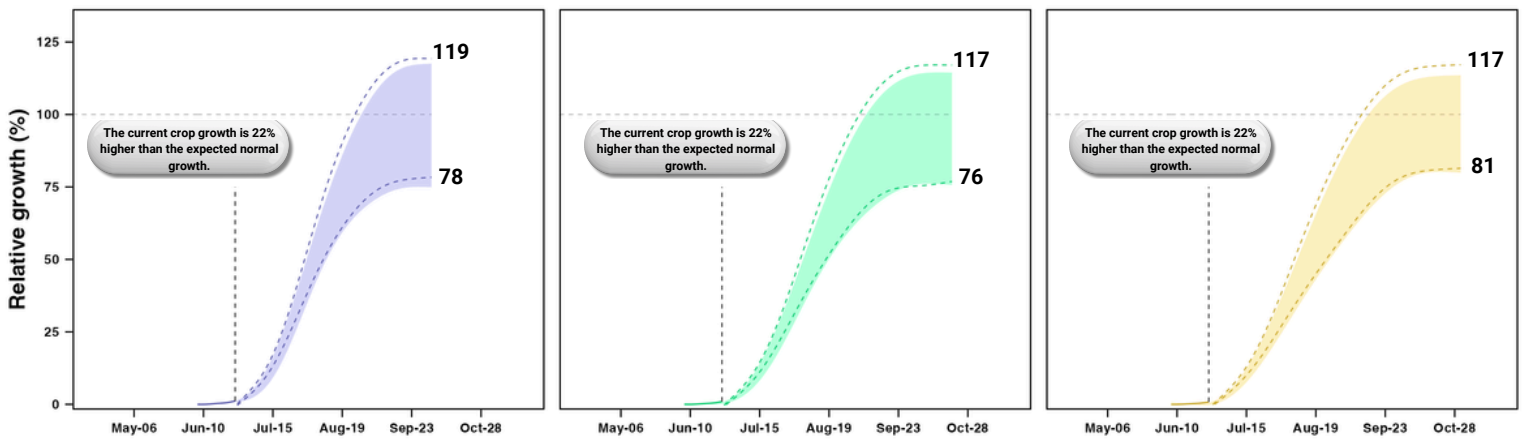
Planting date: 04-26-2024



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 | 14 | 08/12 ± 5 days |
| MG 4 R3 | 14 | 08/28 ± 5 days |
| MG 5 R1 | 14 | 09/10 ± 5 days |

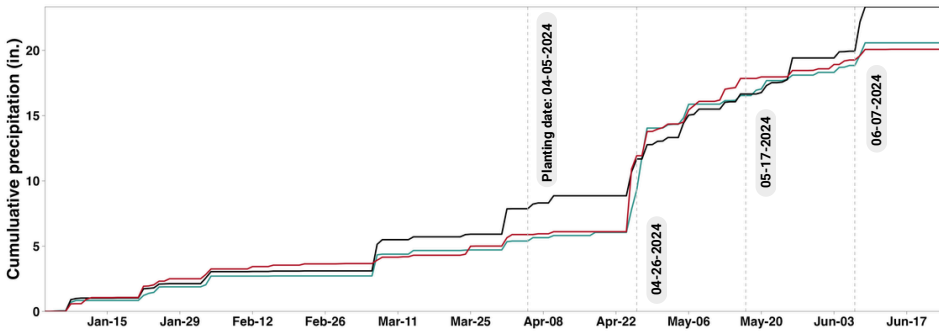
| Stage | Nodes | Harvest |
|-------|-------|-------------------|
| R3 | 11 | 08/22 ± 4 days |
| R1 | 11 | 09/05 ± 4 days |
| V11 | 11 | 09/17 ± 5 days |

| Stage | Nodes | Harvest |
|-------|-------|-------------------|
| V7 | 7 | 09/01 ± 4 days |
| V8 | 7 | 09/14 ± 4 days |
| V8 | 7 | 09/26 ± 6 days |

| Stage | Nodes | Harvest |
|-------|-------|-------------------|
| V3 | 3 | 09/13 ± 4 days |
| V3 | 3 | 09/24 ± 5 days |
| V3 | 3 | 10/05 ± 6 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.