

## Warm season grass vigor and green up in Spring 2023

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### What's up with the warm season grass?

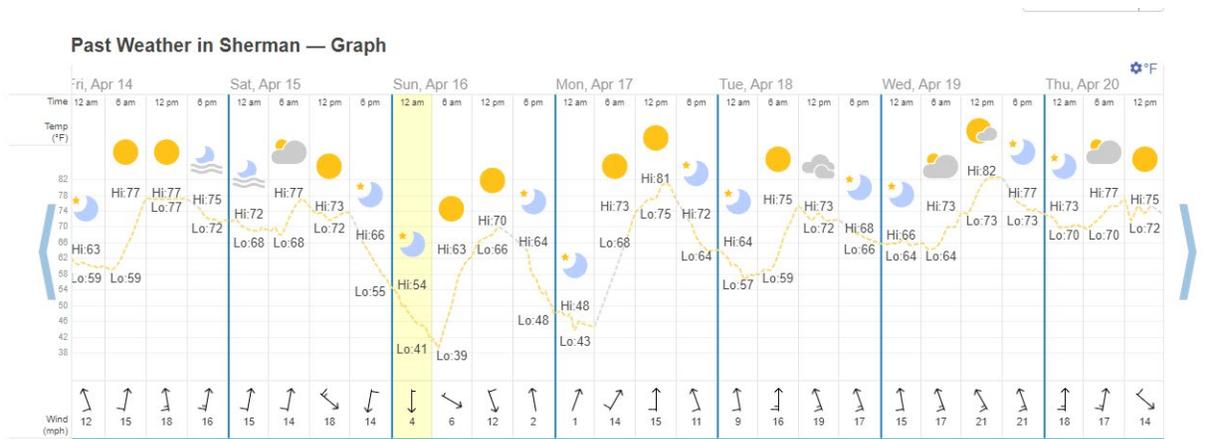
Funny you should ask. We've been receiving lots of questions regarding the delayed growth, stunted growth, and lack of runners in warm season lawn and forage grasses like bermudagrass, St. Augustine, and Zoysia recently. Both urban settings and pastures seem to be experiencing delayed growth grass compared to recent years.

**Stolons** are the above ground horizontal stems that grow in warm season forages.

**Rhizomes** are the below ground horizontal stems (pseudo roots) that grow in bermudagrass, and certain other grasses like Johnsongrass.

There are a few key factors to consider:

1) Bermudagrass and other warm season forages and turf grow best with air temps above 80 °F. We've only been there briefly this year, and the nighttime temperatures have remained very cool.



2) Soil temperatures above 65 °F are necessary for significant growth of stolons, rhizomes, and roots. While we have teetered above 65 °F for part of the last month, most of the month including now, we are well below 65 °F. See figure 6 for current soil temperature in Sherman at 12-inch depth – 61 °F on April 28, 2023.

Sherman, TX	Date (2023)						
Soil Temp. at 12" depth	February 15	February 21	March 6	March 20	March 31	April 20	April 28
Degrees (°F)	55	53	59	53	60	67	61

3) Bermudagrass varieties will have differing responses to environmental variables like soil and air temperature, moisture, and fertility. Varieties like Jiggs or Tifton 78/85 may take longer to come out of dormancy and begin rapid vegetative growth due to their decreased cold tolerance.

4) Other factors like soil pH, soil type, soil compaction, previous pesticide use, and previous harvest/mowing practices may all have impacts on the spring growth rate of warm season grasses.

5) Diseases like Take All and Leaf Rust may impact portions of the stand or yard but may not impact the whole field or area at once.

6) Insects like white grubs, ants, armyworms, and bermudagrass stem maggot can have local, often spotty impacts on stand vigor.

7) In turf types for lawns or recreational areas, over or under irrigating may lead to delayed rapid growth in the spring time.

For more information, check out these online resources:

<https://foragefax.tamu.edu/files/2013/05/E320.pdf>

<https://aggiehort.tamu.edu/plantanswers/turf/publications/Bermuda.html#:~:text=Soil%20temperature%2C%20as%20influenced%20by%20air%20temperature%2C%20is,soil%20temperature%20for%20root%20growth%20is%20around%2080%C2%B0F>

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Photo images 1-6 with captions.

Photos 1, 2, 3, 4, 6 taken by D. Chad Cummings

Photo 5 taken by Ron Courtney, envu Territory Manager for North Texas and eastern OK



Figure 1. Stolon growth on April 27, 2023 - Common bermudagrass in Bells, TX.



*Figure 2. Stolon growth of an improved variety of bermudagrass (Savoy, TX April 21, 2023).*



*Figure 3. Stolon growth of an improved variety of bermudagrass sprigged in 2022 in southern Grayson County (Gunter, TX April 18, 2023).*



*Figure 4. Stolon growth of a turf type bermudagrass (April 23, 2023).*



*Figure 5. Two different bermudagrass varieties - similar fertility, irrigation, and pesticide treatment up to this date (North TX April 25, 2023).*



Figure 6. Soil temperature at 12" depth, Sherman, TX (April 28, 2023).

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