



*Understanding turfgrass growth potential can help guide decisions and deliver better results.*

## UNLOCK THE VALUE OF GROWTH POTENTIAL GRAPHS

BY CHRIS HARTWIGER | DIRECTOR, COURSE CONSULTING SERVICE

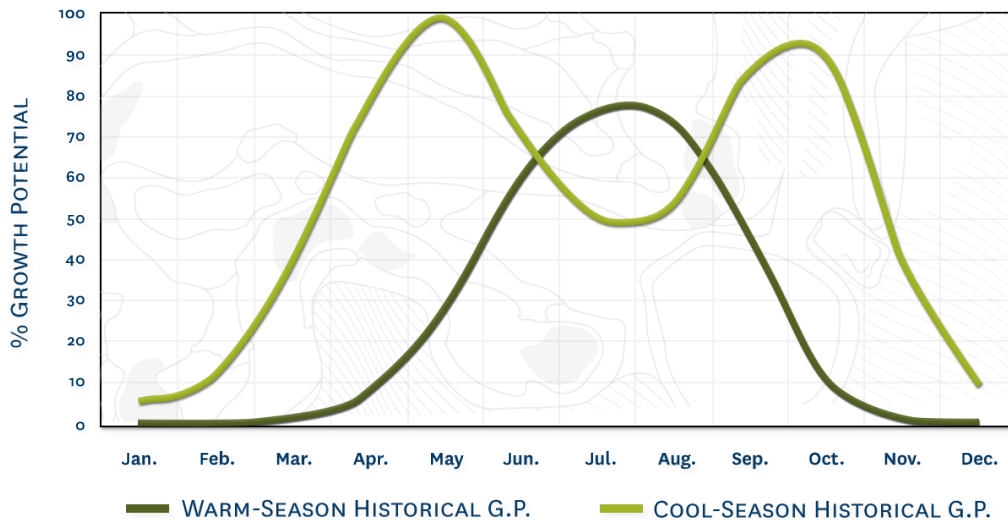
An excellent graph presents a complex topic in a way that is easy to grasp and apply. A graph of turfgrass growth potential is a perfect example. It makes the concept easy to understand and has more applications in turf management than one might imagine. This update will review the concept of growth potential and describe several examples of how growth potential graphs found their way into recent conversations during USGA Course Consulting Service visits.

### **Growth Potential – What is it?**

Growth potential is a [concept that was developed by Pace Turf](#) to express the relative growth rate of turfgrass at a given temperature. According to this model, the maximum growth rate of cool-season turf occurs at 67.5 degrees Fahrenheit and the maximum growth rate of warm-season turf occurs at 88 degrees Fahrenheit. Turfgrass with a growth potential of more than 50 percent is considered to be in the growing season.

## COOL-SEASON AND WARM-SEASON TURFGRASS (Opelika, Ala.)

The growth potential for cool-season and warm-season turf in Opelika, Alabama, based on 30 years of data collected from 1980-2010. (National Weather Service)



### Growth Potential Graphs – Aren’t these graphs just stating the obvious?

We all know turfgrass growth accelerates quickly from winter to spring, but can we visualize the historical patterns and understand how growth potential changes from month to month in the spring? We can learn this by spending just a few minutes studying the growth potential curves. The insights gained can be applied to common golf course management decisions.

### Growth Potential Graphs – How can they be used to make decisions?

Below are a few examples where growth potential graphs were used during USGA Course Consulting Service visits in Alabama over the last few weeks.

- A question was raised about whether a facility should core aerate their creeping bentgrass putting greens in February or April? In an average year, the growth potential for bentgrass in that area is 12 percent in February and 79 percent for April. Courses that pick a February date because there is less play can expect a much longer recovery time.
- By looking at growth potential graphs, we can see that the month of May is when things really start to happen on ultradwarf bermudagrass putting greens in Alabama. The growth potential moves from about 20 percent to about 50 percent in 30 days. Understanding when these rapid changes in growth potential occur allows superintendents to be proactive instead of reactive.
- An Alabama course hosting a golf tournament with elite professional players in late April wondered if it would be possible to fertilize the bermudagrass rough and stimulate enough growth to make it a factor. Based on the growth potential graph for warm-season grasses, growth potential is going to be less than 20 percent at that time of year. Therefore, it’s unlikely the rough will grow enough to be a source of difficulty for the players.



For information on the USGA’s Course Consulting Service Contact the Green Section Staff.

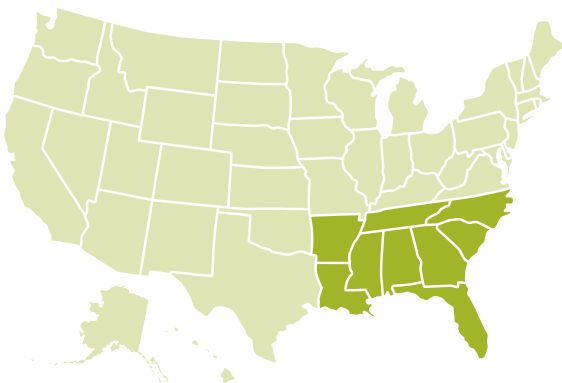
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### **Growth Potential – What if the year isn’t normal?**

Graphing the growth potential for both historical norms and the current year provides a snapshot as to whether the growth potential in the current year is tracking with historical trends. Maybe your course is having a warmer spring and bermudagrass is ahead of schedule, or maybe late summer is extra hot and the bentgrass growth potential is still low. In any case, plotting current-year growth potential against historical averages can serve as an excellent communication tool for decision-makers at a facility.

### **Make the most of growth potential at your course.**

This is only a glimpse into how understanding the growth potential for the turf at your course can provide more insight and help guide your decisions. Take the time to learn more about this topic, it’s a game changer.



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### **SOUTHEAST REGION AGRONOMISTS:**

Chris Hartwiger, Director, USGA Course Consulting Service, [chartwiger@usga.org](mailto:chartwiger@usga.org)

Steve Kammerer, Regional Director, [skammerer@usga.org](mailto:skammerer@usga.org)

Patrick M. O’Brien, Agronomist, [patobrien@usga.org](mailto:patobrien@usga.org)

Addison Barden, Agronomist, [abarden@usga.org](mailto:abarden@usga.org)

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