



## PROGRAMMING PLANT GROWTH REGULATOR APPLICATIONS IN TURF

Bill Kreuser, PH.D.

This three-week course is packed with information and dives deep into turfgrass plant growth regulator (PGR) applications. It covers the growth response from different PGRs, recommended re-application intervals, modeling PGR response in both cool- and warm-season species, PGR & DMI mixtures, over-regulation risk, collar decline, and the impact of PGR programs on turfgrass performance. Participants will also create PGR programs for their facility which will be reviewed by Bill Kreuser.

### WEEK 1: INTRODUCTION TO PGRS AND THEIR IMPACT ON TURFGRASS GROWTH RATE

#### **Lecture 1 – How frequently do you need to re-apply PGR?**

- How does grass grow, intro PGRs, PGR growth phases

#### **Lecture 2 – “All models are wrong, but some are useful”**

- Perceived PGR response, basic models, building PGR/DMI GDD models

*Synchronous discussion – Manipulating PGR GDD models to understand plant response*

### WEEK 2: MODEL SELECTION, GREEN SPEED AND OVER-REGULATION

#### **Lecture 3 – The right model can make all the difference**

- Re-application intervals for different PGRs, grasses and mowing heights
- Plant response: Nitrogen fertilization, stress response, maximizing green speed

#### **Lecture 4 – Too much of a good thing?**

- Causes and recovery of PGR phytotoxicity and over-regulation
- PGR-induced golf collar decline

*Synchronous discussion – Understanding PGR and DMI interactions*

### WEEK 3: DESIGNING A SUCCESSFUL PGR PROGRAM FOR YOUR FACILITY

#### **Lecture 5 – Drive your growth rate**

- Growth needs, clipping volume, plant health
- New UNL research on aggressive PGR programs and putting green performance

#### **Lecture 6 – Programming PGR applications to achieve management goals**

- *Poa annua* control with PGRs, building programs, and PGR oddities

*Synchronous discussion – PGR Program Building Exercises and Program Reviews*

COURSE TO BE OFFERED NOV 29 to DEC 19, 2020