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Gazing in the Grass

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“Of seedheads, roots and stems” someone might wax poetically to describe this time of the growing season. Cool season grasses are flowering en masse, often associated with slight declines in root production, and as dry weather persists in the parts of region, expect to see browning stalky grasses.

When a tiller on a grass plant produces a flower (seedhead) that tiller that produced it dies. New buds at the crown meristem (base of plant at soil line) produce new tillers that maintain shoot density for maximum light interception.

All cool season grasses will experience some level of decline in shoot density following profuse flowering. The flowering is more pronounced in response to reduced mowing that had been encouraged in the early stages of the pandemic. When mowing frequency is extended with higher mowing heights, the plants shift from a vegetative (producing leaves) to reproductive (producing seed) growth habit. Additionally, due to persistent low supplies of high quality turfgrass seed over the last two decades, many turfgrass stands include very high seed yielding varieties widely grown in the Pacific Northwest US for their quantity. Therefore, when able to flower, these varieties are more likely to do so.

Following the “ripening” of the seed on the flower in the next few weeks, the flowering stem/stalk/culm will persist, and as summer dry conditions arrive many higher cut turfgrass stands will develop a typical brown stemmy appearance. The steminess is less common on lower heights of cut, more frequently mowed turfgrass stands.

All turfgrass stands, regardless of management, experience a shift in energy movement from building roots to building leaves that are replaced after the flowering. This occurs at a time when environmental stress begins to build as soils warm, light levels and water loss (ET>Rainfall) increase, and pest pressure is expected to rise in the next week.



Pest Pressure Above and Below and on the Rise

Increasing temperatures the last few weeks, with some short reprieves of cooler days, has begun to build abiotic stress that exposes weaknesses in our due to the pandemic and from the normal Spring to Summer transition of pest problems.

The annual bluegrass weevil has moved well into the larval stage and second generation adults are likely not far behind. Damage is evident along collars and fairway edges. Andy Wilson, Director of Agronomy at the Bethpage State Park (master IPM scout) has records over the last several years that suggests the last week of May is ideal time for larvicide application and new options exist for LI in 2020. The slow prolonged Spring conditions where phenological indicators bloomed for four weeks, made adult control programs challenging, often requiring multiple applications that increase the risk of developing resistance in areas where product use might be limited. Diagnostic lab reports from Rich Buckley at Rutgers indicate many suspected anthracnose samples have significant ABW larvae.



In the early phases of the pandemic plant growth management was emphasized in our messaging from the Cornell Turfgrass Program. Most of society was shut down, golf courses and sports fields were idle. Limited traffic meant no need to promote growth, in fact aggressive growth suppression with plant growth regulators (PGR) was suggested to allow limited staff to keep up with mowing. Surprisingly while the growing season seemed to progressing rapidly in early April, there was very little advancement (measured by GDD) for six weeks. As temperatures warmed and the pandemic began to subside enough for golf to resume in earnest, active growth was needed to keep pace with traffic.

Simultaneously, high quality playing conditions were beginning to be in demand, “where’s our fast-greens”. The honeymoon of golfers understanding for reduced expectations of playing conditions was short-lived! In addition to aggressive growth suppression in fairway turf using PGRs, many skipped or delayed Spring fertilizer applications. As traffic, especially cart traffic, increased from nothing to 250 rounds per day, the turf was not able to become conditioned as it would normally be when trafficked regularly since late-March sans pandemic. Many Superintendents raised fairway and rough heights of cut to reduce labor during the pandemic then began to lower the mowing height back to provide traditional playing conditions, and that simple shock of lowering mowing has profound impact on root growth. Root growth is in transition at this time of year for many turf grasses as flowering wanes. Warming soils can increase infection levels from root pathogens and these conditions exacerbate the symptoms of take-all patch and soon summer patch. These issues can be challenging to address. Research by UConn Professor John Inguagiato demonstrated the value of relieving soil compaction and use of Manganese Sulfate. ▲

