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Gazing in the Grass

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Soil temperatures are climbing slowly into the low 50's and remain cooler than normal at 2" depth. These temperatures track the progress of the season and the persistently slow accumulating Growing Degree Days. Some areas of Northeast are as much as 21 days behind the 30 year average. Regular rainfall has kept soils in many areas adequately supplied for growth, yet air temperatures continue to hold the natural world in "suspended animation". Phenological indicators, *Forsythia* sp. holding blossoms longer, only now becoming more green than gold in Metro NYC and blossoming slowly moving north.



The phenology, or in this case flowering of species such as Forsythia as well as Pear and Magnolia, coincides with important emergence of certain weedy species as well as ideal timing for seeding new or existing turfgrass stands. It also signifies key timing parameters for Annual Bluegrass Weevil management and combined with monitoring populations increases the precision of chemical applications targeting adults. Additional indicators later in the season coincide with larval development.

Soil temperatures remain well below ideal conditions for drench applications that target the root patch diseases as well as fairy ring. Research indicates application timing is when average soil temperature at 2" depth is 65F for 3-6 days. Looking at the progression to date, these ideal applications remain weeks away for many in the Northeast region.

Wet soil conditions are disrupting many of the practices normally conducted at this time. Additionally, below normal temperatures are allowing for longer application windows for pre-emergence herbicides for grassy weeds such as crabgrass and goosegrass. Delaying applications will allow for longer periods of control later into the season. Generally, a pre-emergence applied now with 10-12 weeks of activity will break down by early August when 25% of crabgrass emergence for year has yet to occur.

Spring Turfgrass Establishment Strategies

Any return to Spring-like conditions in the next few weeks will allow for more regular planting of turfgrass from seed and sod.

Embarking upon this task requires adherence to some simple principles that, if followed, allow for successful establishment. FYI, several turfgrass establishment studies have shown clearly that failures during initial establishment plague a turfgrass stand for many years. The source of the trouble is weeds. In fact, a WI study from the early 2000's demonstrated how well established sod is less expensive when considered against Spring turf establishment from seed that is weakened by intense weed competition.

Clearly Spring turf establishment, including over-seeding into existing stands, faces stiff competition from **weeds**, that also take advantage of disturbed soil, adequate moisture and nutrients.

Soil preparation during establishment is the most significant determining factor of long term turfgrass success. Poor soils need more assistance to sustain a healthy stand. It is always recommended to make adjustments to soil physical properties during establishment before a permanent stand is in place and becomes more difficult to amend.

If patching or overseeding, the best strategy is to **minimize disturbance of the soil that recruits new weeds into the turfgrass stand**. If bare soil is exposed applying seed and firming the ground to ensure intimate seed to soil contact will provide good success. Slit-seeding also offers distinct advantages when large areas of moderately dense turf needs overseeding ensuring the seed is inserted into soil. When slit-seeding, especially during periods of peak grass growth in Spring, the seedlings are also competing with other grasses in the existing stand. Often use of PGRs in professional high value turf settings can be an advantage by reducing growth of existing stand.



Sod installed and drying over 7 days

Credit: Lindsey Hoffman UMass

Once planted its less a matter of nutrients and more a matter of **adequate soil temperature and moisture**. Exposed soils at the turfgrass surface can be 5-7 degrees warmer than 2" soil temperatures often cited. A bright sunny day can jump start emergence of plants that germinate in the mid-upper 50sF. **Consistent moisture** in the seedbed is the key to successful establishment. In fact, most consumer seed mixtures include coated seed to compensate for sporadic watering. Interestingly, while coating for enhanced moisture holding increases germination it DOES NOT increase establishment. Clearly, water management is key, not just for germination, but to ensure proper turf density is achieved and able to compete with weeds expected to arrive in earnest in the next few weeks.

Weed control is often required with Spring seedings and with several tools available, high-value turf managers should consider HPPD-herbicides such as Mesotrione, or post-emergence products such as quinchlorac that have safety and efficacy on certain species during establishment. ▲

