

Quarterly PTRC Update: September 2025

Since our last update, the PTRC (and most of central Alberta) received half its annual rainfall (227mm) in July, and are experiencing higher than normal summer temperatures. With forecasts showing high 20°C temps well into October, Alberta is embracing our new seasonal norm. The shifting climate has prompted a shift in maintenance practices, management strategies, and new research directives, as well as generating some late season revenue for golf operators! As of this report (September 24), we have yet to see our first frost, which aligns well with our headlining tarping project, validating our efforts to accommodate a changing climate.

Fall project:

Surviveability of poa annua subjected to forced hardening. We will soon begin covering our greens using a four-step approach, recording temperatures, gases, and UV to measure variables affecting hardening and survivability. We acknowledge Brett Young, Greenjacket, Canadian Turfgrass Research Foundation, Ontario Turfgrass Research Foundation, Syngenta, and IRIT Canada for their support and sponsorship. Complete project underway here - [LINK](#)



Snow Mold Product Testing continues:

Annually, the PTRC performs product trials for distributors looking to advance new herbicides, insecticides and fungicides. As arguably one of Canada's harshest winter climates, our PTRC site has been a key testing location since the 1980's. This fall we are pleased to conduct another fungicide trial for Syngenta.



Turf Research Field day

Over 100 attendees and 20 distributors gathered at the plots August 21st for our education and demonstration at our biennial research day. Beautiful weather provided a pleasant backdrop for the latest advances in perennial rye varieties, robotic mowers, as well as new subsurface and surface/mobile turf sensor technology. Special thanks to Katie Dodson of Syngenta, Itzik Mashiak of IRIT Canada, Bob Hoffos & Advanced UAV, Mike Ball of Western Turf Services, & Jeff (Husquvarna) for their demonstrations!



THANK YOU TO OUR SPONSORS



Field day highlights: Tailgate trade show, Drone Sprayer, Robot Mowers, SPIIO, IRIT, & Turf Rad Sensors



Trials Nearing Completion: Drought Avoidance - City of Calgary, Sod Growers Commodity Group

We also shared results from the joint project between the City of Calgary and the Sod Growers Commodity group. The study, which tested drought-avoidance perennials alongside eight sod varieties from Alberta Sod Growers, provided insightful data: minimum acceptable turf quality requires 12L/m²/week (or 1/2"/week), with turf potentially entering an initial dormancy stage after 25 days. Perennial testing was more complex, with many variables affecting survivability and plant health under varying evapotranspiration (ET) rates. The analysis and final report results will be available in the new year.

Below : 16 replications of 8 species among Calgary's "Yard Smart" plant list were grown as individual gardens AKA experimental units, under rain-out shelters since 2022.



water per week.

Drought avoidance testing over two years has illustrated some key take-aways, including minimum water requirements for turf establishment, the limitations of several perennial species when subjected to strict water regimen, and what may be considered minimum water requirements to maintain acceptable turfgrass health. As the final data is collected and analyzed, we hope the research will have assisted in reaching a preferred formula for residential turf and perennial plants, establishing a baseline for minimum water requirements of selected species, as well as the impact of over and under irrigated performance at a 300mm soil depth(s).

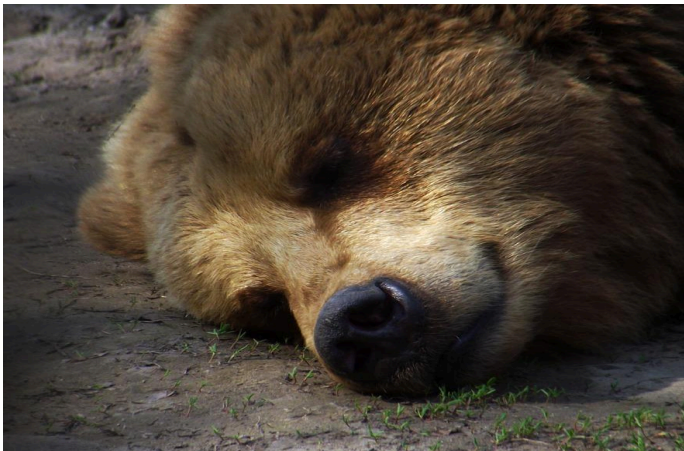
Sensor Technology: SPIIO, IRIT, TurfRad

This year's field day definitely had a theme of technology. Multiple sensors were presented, each with very unique uses and purposes. Whether you are tracking moisture, N/P/K, temperature or CO₂/O₂, the tech is undeniably advantageous to precision golf course management. Utilizing these tools has become an integral part of what we do everyday, reducing costs of labor and infrastructure, improving the efficiency of fertilizers and water use, and providing quantifiable data to set true parameters for optimum turfgrass health.



Fall Fertility and Overwintering? Myth: “We don’t want to enter the winter too lush”

Pack carbs. If your grass can't see the sun, its burning reserves. Make sure you've applied sufficient fall fertility and ensure it has the energy to “hibernate”. Latest research from PTRC recommends 1#N/5#K, anytime in September. As ambient temperatures drop, your daily mowing program shifts to 3-4days/wk. While a deep green turf might be viewed as “lush”, its only the chlorophyll expression proving the plant is photosynthesizing -

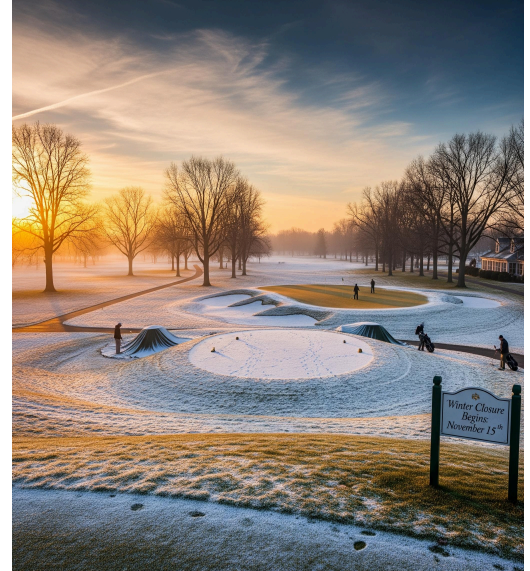


and packing carbohydrate this time of year as needed for winter hibernation. This physiological change is unmistakable, top growth slows and we reduce mowing frequency. The energy applied is not gone, but redirected - top growth has shifted towards storage. Latest testing at PTRC applied fall rates over 4lbs/N/1000ft² in the month of September, illustrating no significant difference than that of 1lb/N/. This defeats the “Too Lush” myth. Notably, foliarly applied N can accumulate as fast as granular up to 4.% tissue content. Conversely, potassium applications are best applied granularly. [LINK : Anderson, Pick](#)

When should we close the course? An objective approach.

It can be a challenging time of year when our owners are pushing to stay open, losing our summer staff, it's arguably the busiest time of year to prep for closure. Aeration, blow-out, fall fert., spray snow mold protection, etc., all become priority one. We rarely have time to fight that "closure time" battle with the board, perhaps because that conversation is clouded with subjectivity. That inevitable conversation is right around the corner, on when to close.

We are all here to make the course money, but extending too late carries risk - without minimum temps of 10°C, when the turf has been injured (by traffic) it cannot heal. Without healthy leaf blades, we risk the effective translocation of fall fungicides. To add a degree of objectivity to the course closure discussion, consider the growing degree day model to base course closure upon. The simple math is, take daytime high plus daytime low, divided by 2. $13^{\circ}\text{C} + 3^{\circ}\text{C} / 2 = 8^{\circ}\text{C}$. If that number is below 10°C, it's time to shut down.



Below images, Edmonton AB, Oct 14. Average weekly daytime temperatures 13°C, nighttime temperatures 3°C. Two pictures taken the same day: On the left, roped off bentgrass nursery, and on



the right, in-play golf green still running roughly 120 rounds per day. Macro lens identifies the turf on the right was injured, damaged from foot traffic and maintenance rolling and occasional cut. The left, a perfectly healthy green with all the same maintenance performed minus the golfer traffic. I feel this was a good example why we propose a "10 degree" rule for daily average temp.

It's Microdochium Season!

As temperatures begin to fall, be on the lookout for small, circular patches on our greens. White or pink fungal threads (mycelium) may be visible - these are spore producing sporangia. Few other diseases will occur during this time of year when temperatures drop 0-10°C night. This is the precursor to pink snow mold, and occurs without snow cover. Image - [PSU Extension](#)



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Prevention:

When conditions are right, apply a preventative for microdochium about a month prior to your final treatment. Reverse engineer your fall applications - ensuring fall treatments are applied before the minimum 10°C to ensure adequate translocation of your systemics. In accordance to your product label interval, 21-28 days prior to that, should be your microdochium preventative application.

Membership Update:

We don't "push" our annual voluntary invoicing, but occasionally send out another friendly reminder, that your membership provides base funding for operations at the Prairie Turfgrass Research Center. As the only Canadian turf research center in Western Canada, we provide the turf industry a climate appropriate testing center for new products and services. Our central location ensures rapid response 24hr turnaround turf disease diagnostics, and complimentary education to all members. Serving turfcare professionals from Manitoba to Vancouver Island, in collaboration with the University of Guelphs GTI, we ensure turf professionals right across Canada have the tools and resources to succeed. Thank you to all who have renewed your 2025 membership.



As the growing season comes to an end, acknowledging the team who make all this possible. Rachel Borges and Mark Anderson facilitate our research projects, maintain our grounds & greens, and perform the turf disease diagnostics you rely on. We also thank our Board of Directors, for the direction and opportunity to serve our diverse turfgrass industry!

[Alberta Turfgrass Research Foundation](#)