

Nutrition, growth, and surface performance

Micah Woods

December 8, 2023

Asian Turfgrass Center
www.asianturfgrass.com

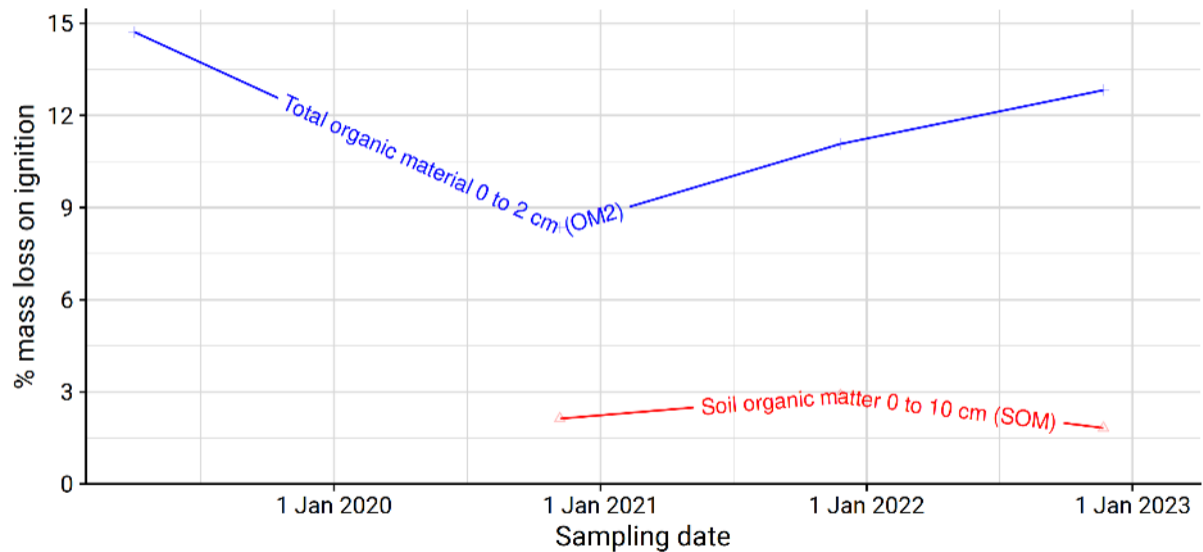
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Tifeagle putting greens

samples from Bangsai CC



All soil tests conducted at Brookside Labs





At the laboratory

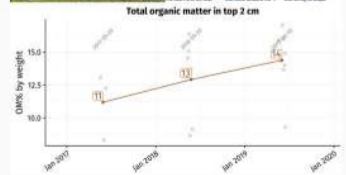






Organic matter bullet list

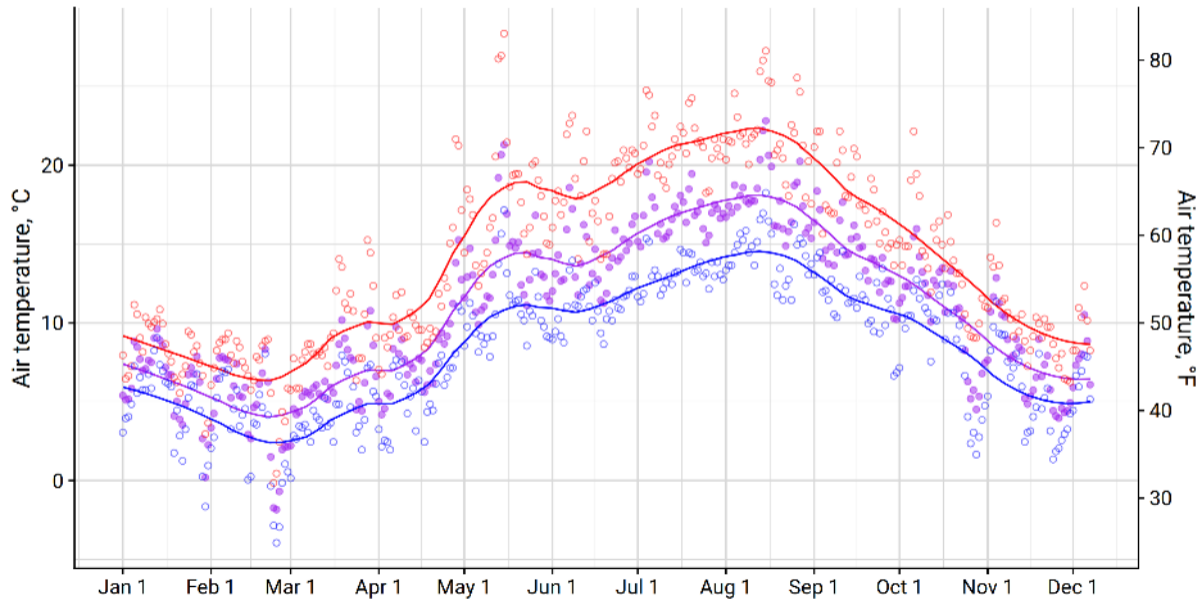
- Standard tests for soil organic matter *exclude* thatch, stems, & roots.
- Standard turfgrass tests are to a 10 cm depth, but organic matter accumulation (and ball reaction) are at the surface.
- Total organic matter in soil samples taken to a 2 cm (0.8 inches) depth measures *prior topdressing effect* & *future topdressing requirement*.
- I like to test 100% of the sample that is sent to the lab, with no screening, no removal of plant material, & burning at 440 °C.
- The average total OM I've measured in the top 2 cm on greens is *7.3%*.
- For golf courses, I recommend testing *at least 3 putting greens annually* & taking at least 5 subsamples per green to form a composite sample.
- By looking at *change in total OM over time*, one can adjust the topdressing amount to achieve the desired results.
- By looking at change in the total OM at the 2 to 4 cm & 4 to 6 cm depths, one can assess the need to add sand (or to remove material) at those depths. You might be surprised *at how stable the OM is at depth*, raising questions about *the need for coring*.



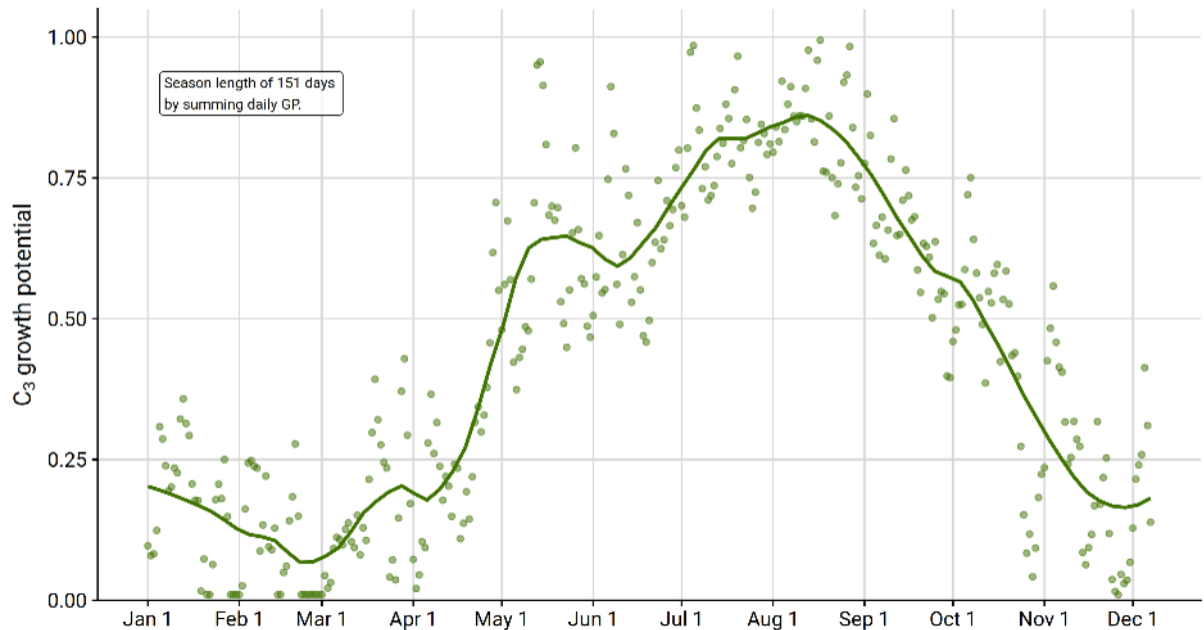
Nutrition

Daily temperature summary in 2023

Olympic View

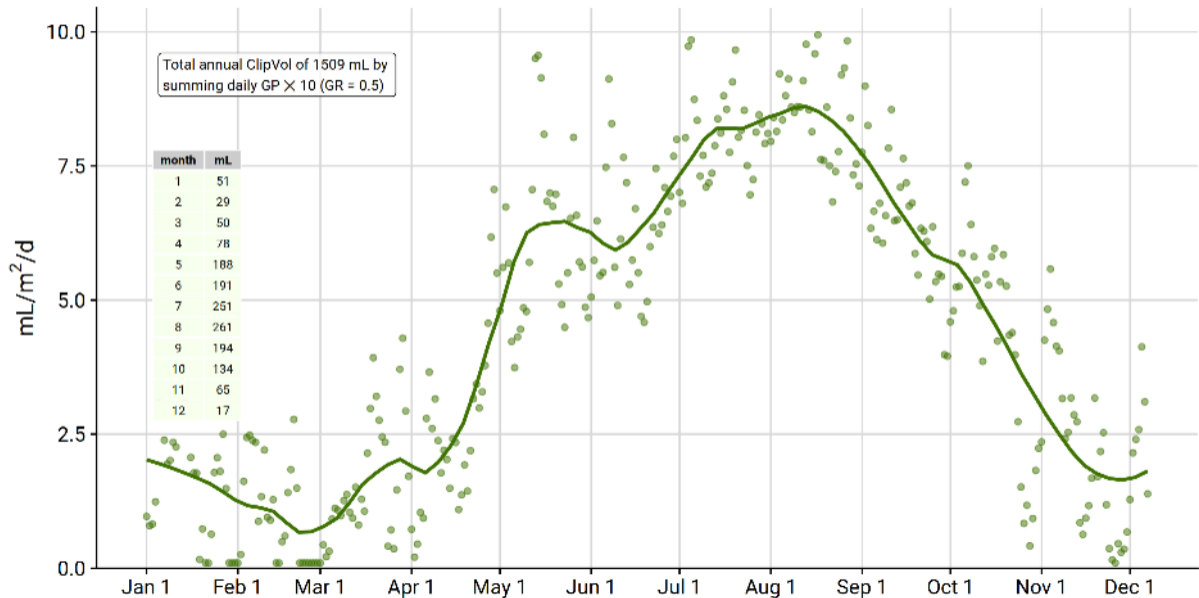


Growth potential at Olympic View in 2023

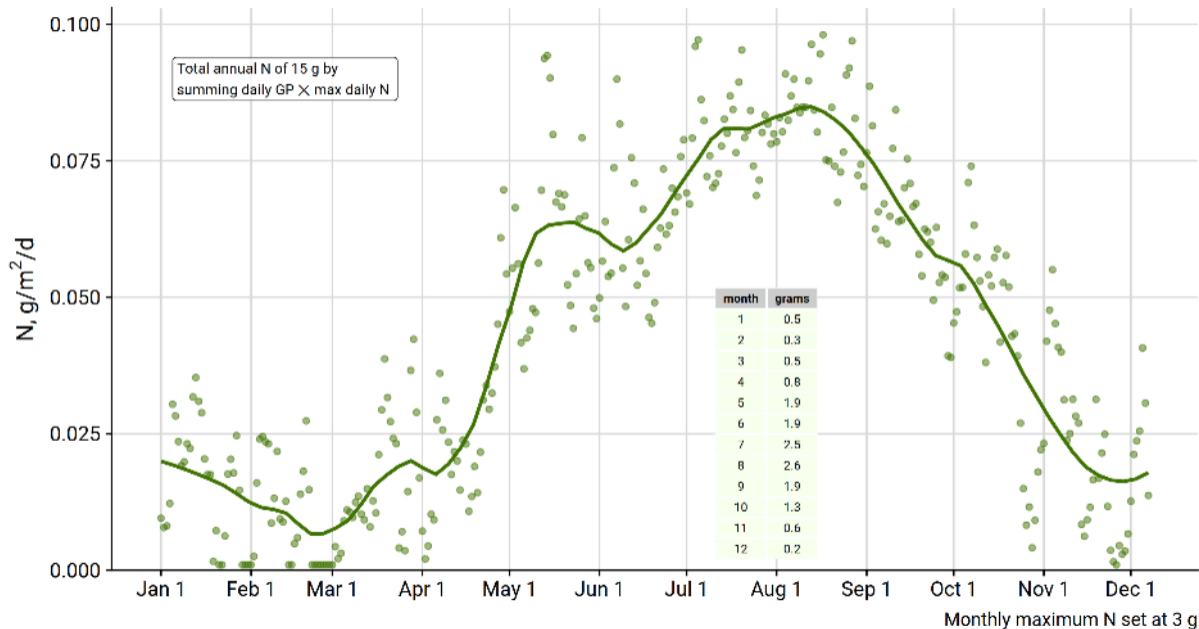


Expected clipping volume for Olympic View in 2023

based on a growth ratio of 0.5



Predicted daily N by GP at Olympic View in 2023



Growth rate

What's affected by the growth rate?

- divot recovery
- ball mark recovery
- water use
- nutrient use
- some diseases
- traffic damage
- green speed
- mowing requirement
- thatch (and everything associated with its management)





Eric Johnson

@altshot2

Following



Nice day for harvest. #MLSN





Manabu Taya

May 18 · Edited · 🌐

1面この半量ぐらいでいきたい。

[See Translation](#)

— at [メイフラワーゴルフクラブ](#).

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5

1 Share



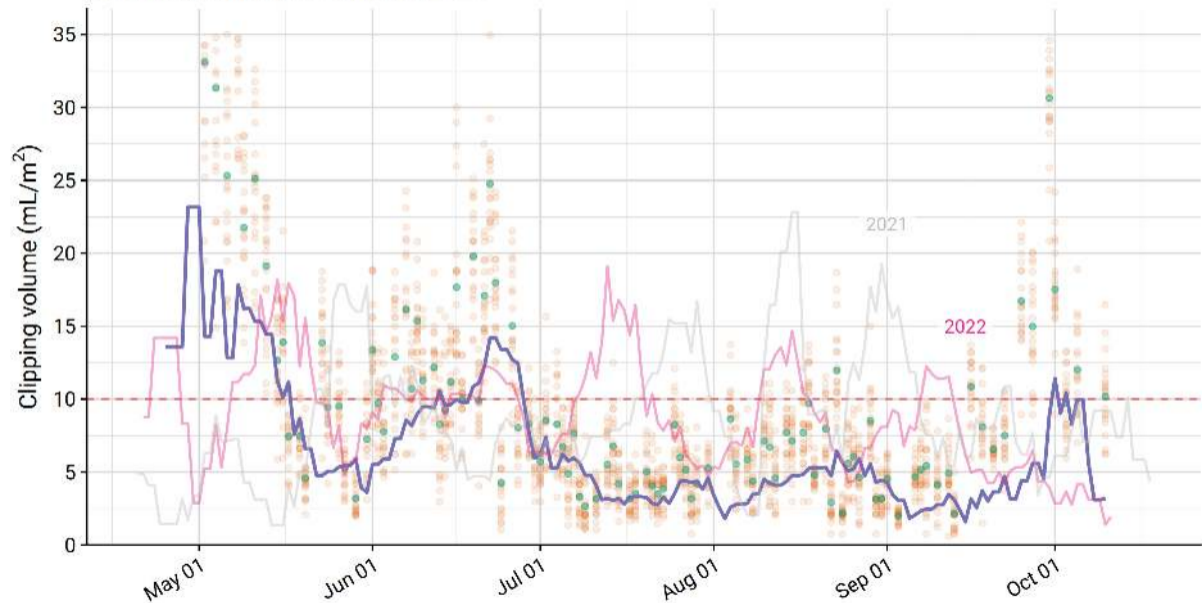
Write a comment...



Example uses for the data

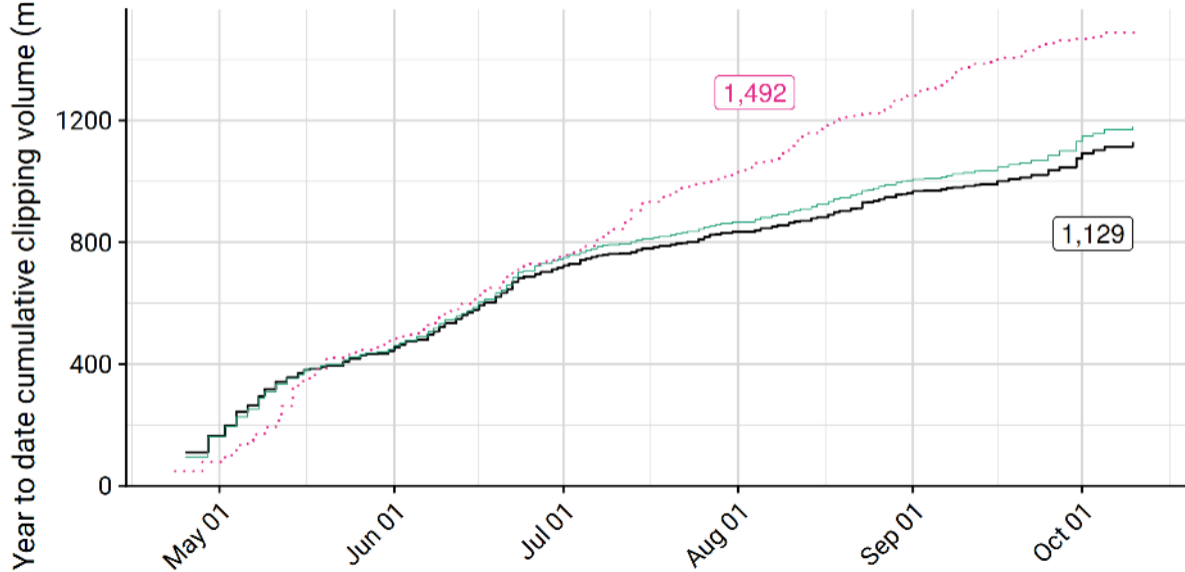
- Fine tune nutrient supply based on harvest
- When to mow again based on growth
- Growth regulator effect
- Topdressing requirement

Morning clipping volume in 2023



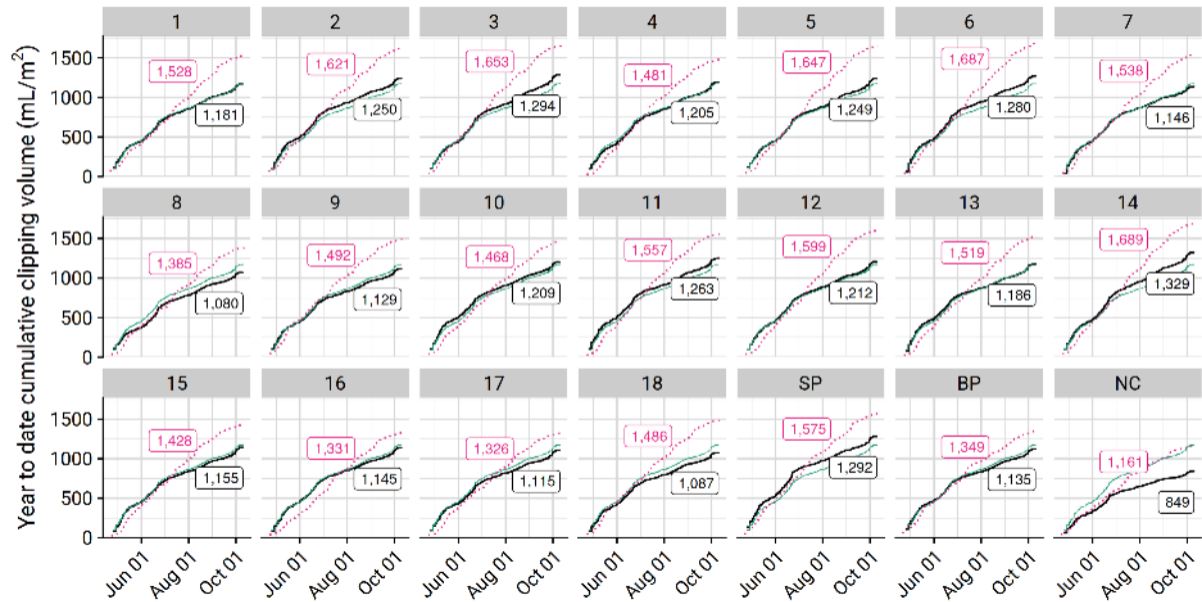
Cumulative clipping volume green by green

2023 in black, 2022 in pink, and the 2023 average across all holes in green.



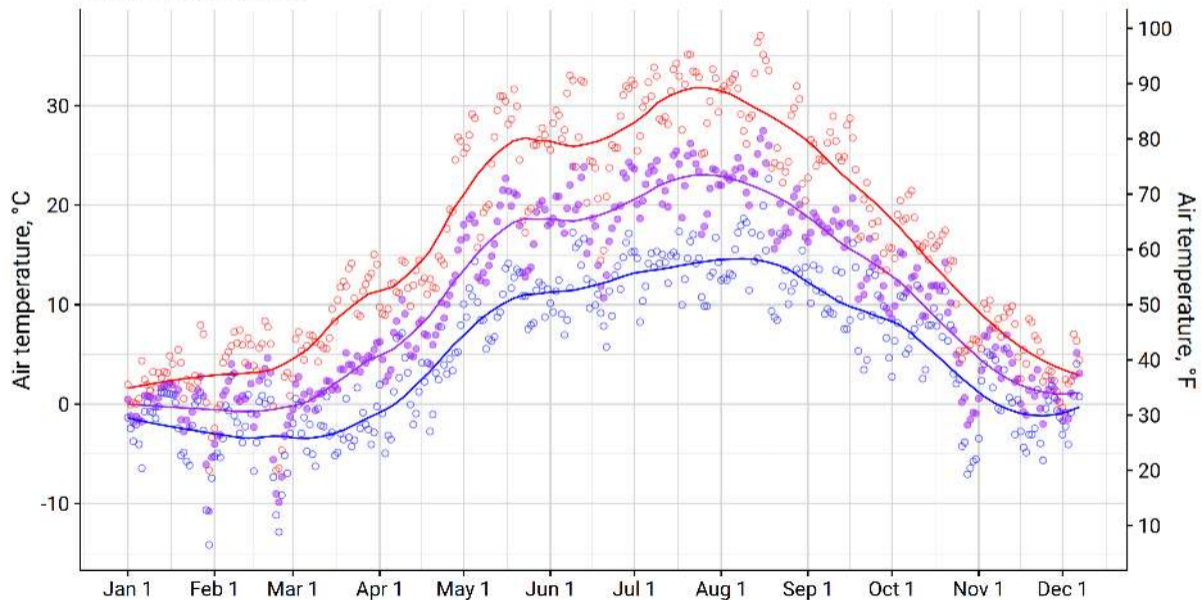
Cumulative clipping volume green by green

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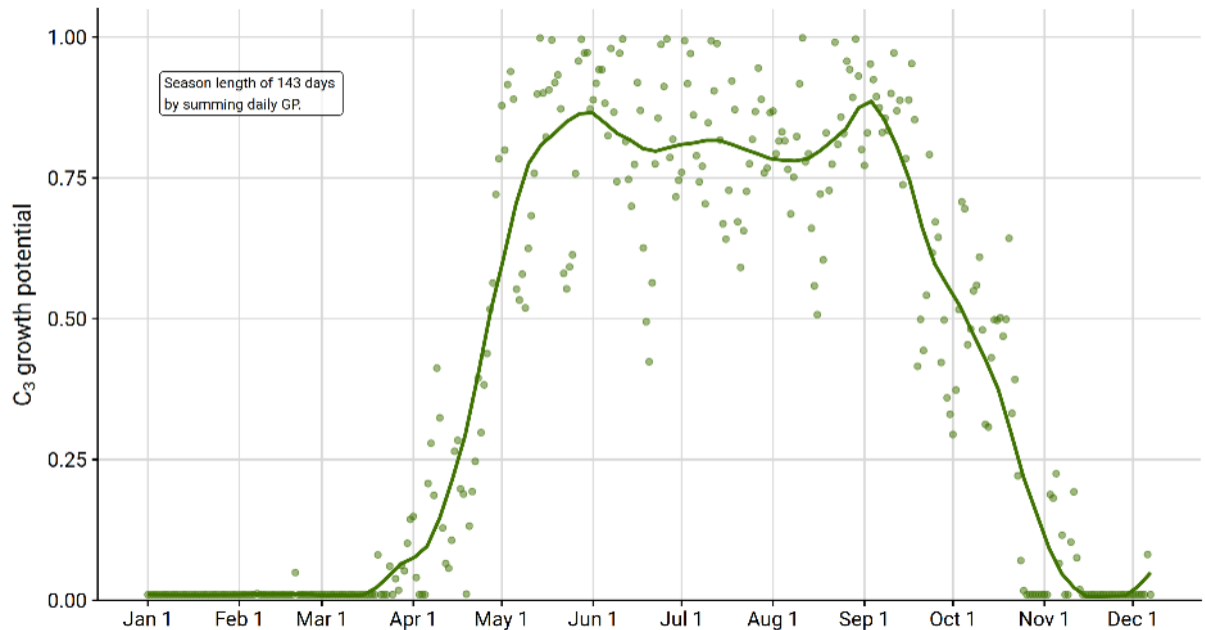


Daily temperature summary in 2023

The Okanagan Golf Club

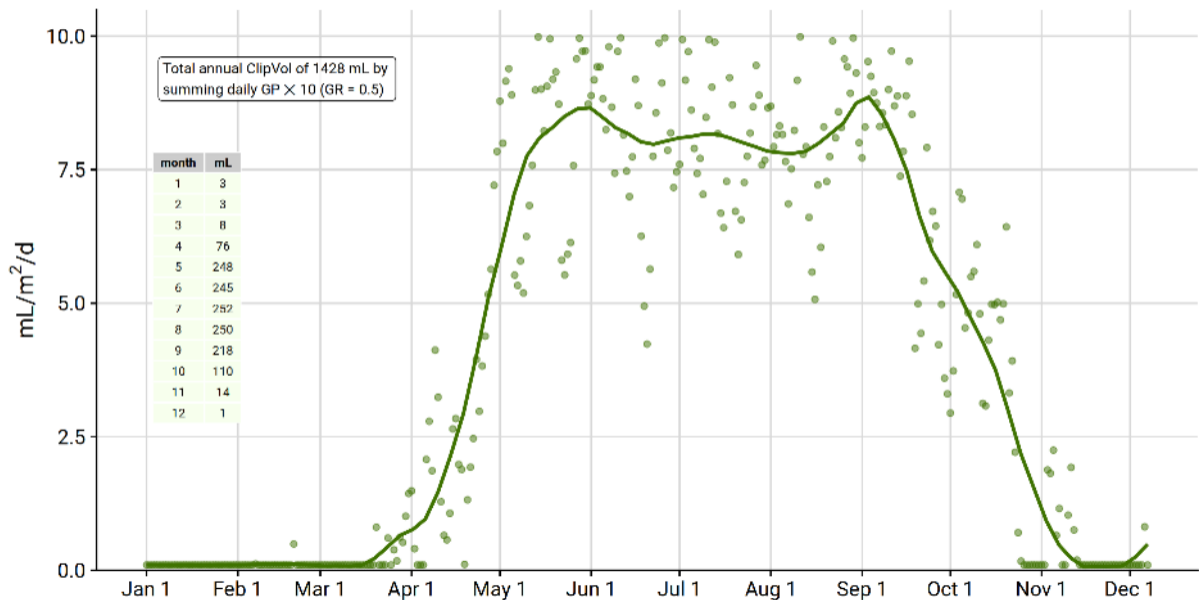


Growth potential at The Okanagan Golf Club in 2023

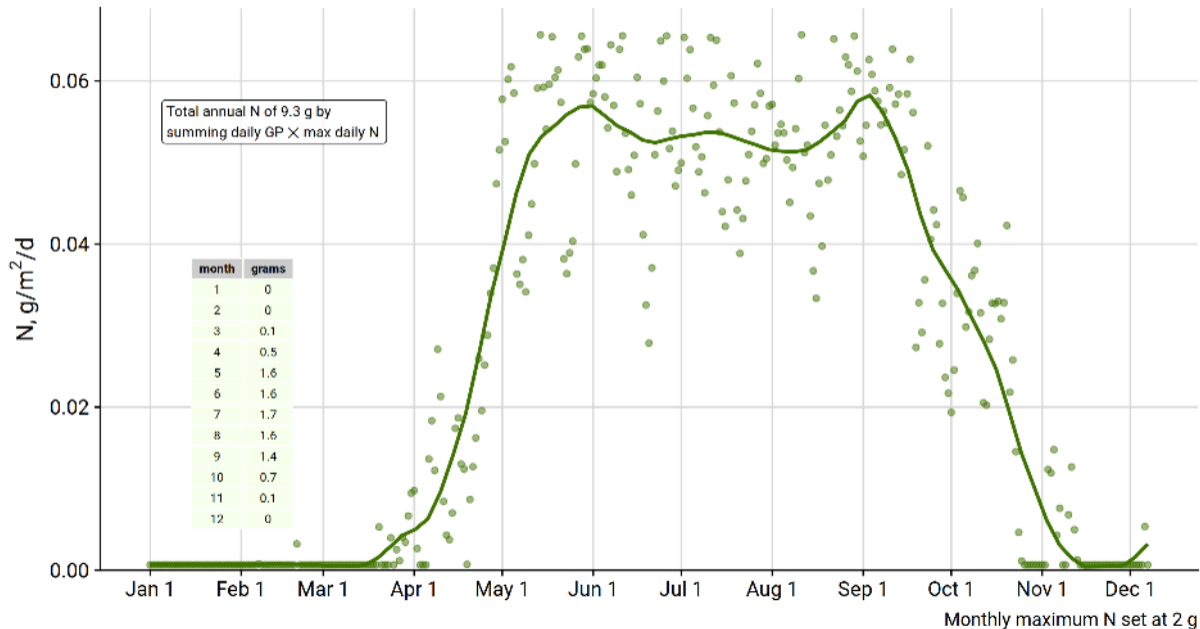


Expected clipping volume for The Okanagan Golf Club in 2023

based on a growth ratio of 0.5



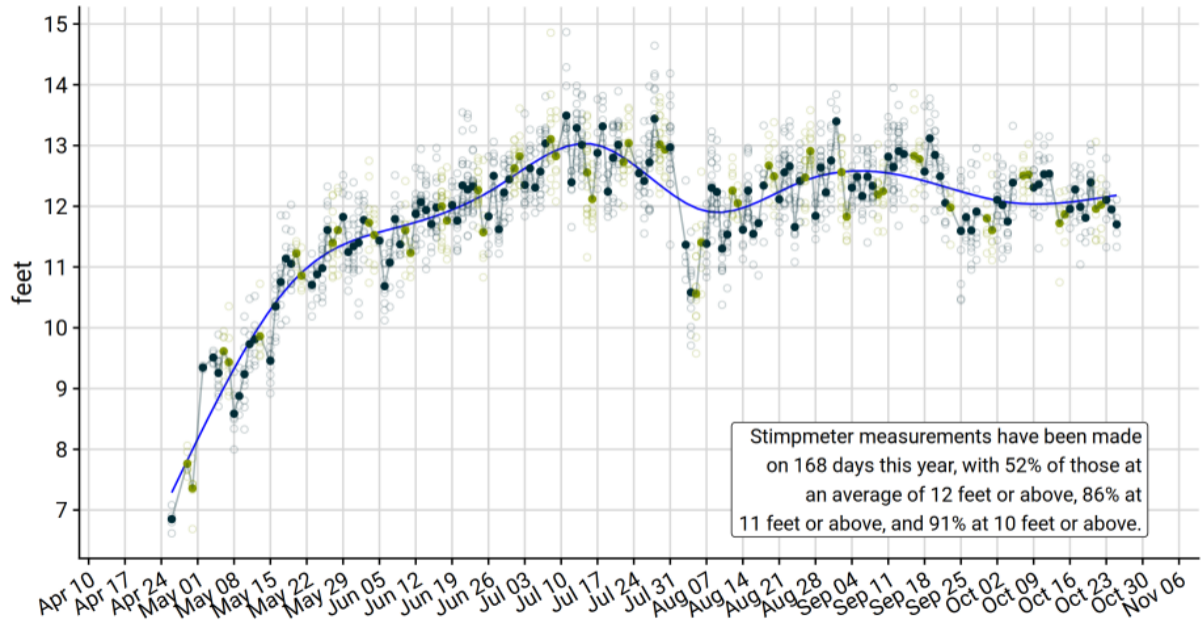
Predicted daily N by GP at The Okanagan Golf Club in 2023



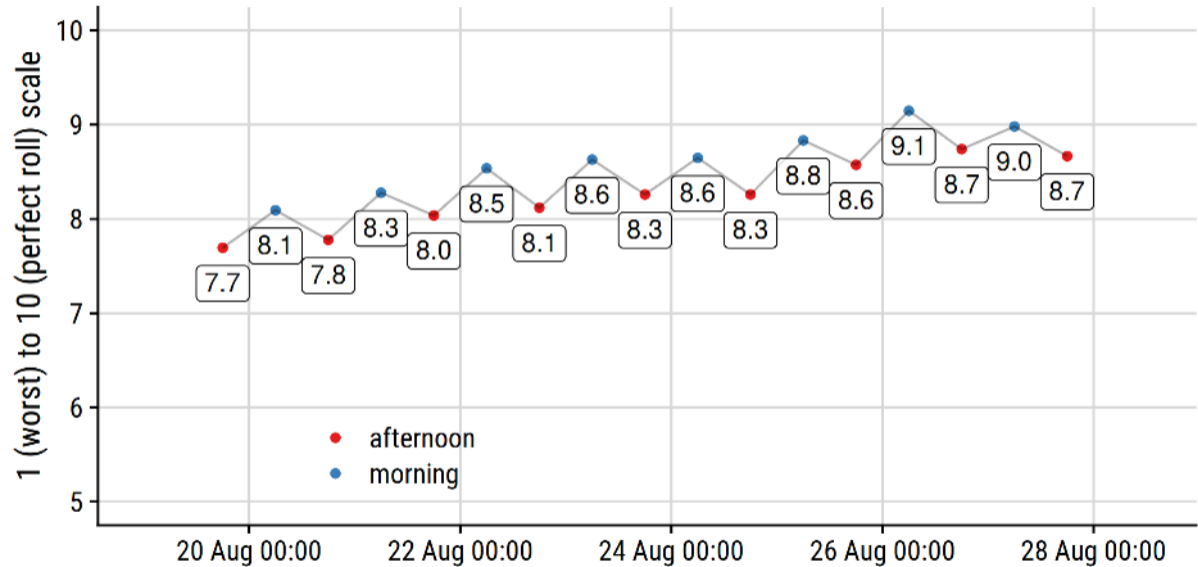
Surface performance



HNGC stimpmeter measurements 2023



Average bobble test



My recommendation

Assess playing conditions at least once per week

- green speed
- quality of roll (bobble test)
- surface firmness¹

¹Measure soil water content at the same time, if you have a meter.

My recommendation

Then, compare conditions to the desired level

Objective: to maximize the number of days in the year with conditions at the desired level.



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