



MLSN newsletter #19

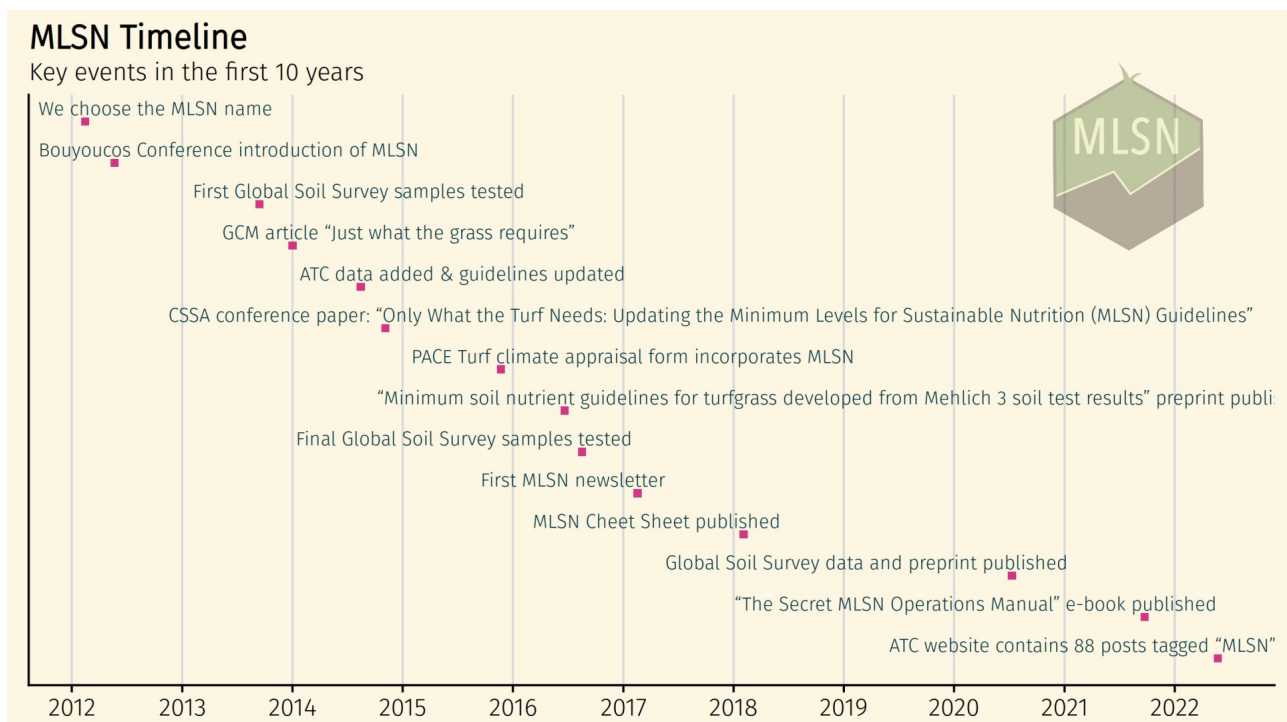
Hello,

Ten years ago this month, on 21 May 2012, Dr. Larry Stowell gave a 30 minute talk entitled *Minimum levels for sustainable nutrition (MLSN)* at a conference in Philadelphia. That's what I use as the official date for the introduction of MLSN.

Happy 10th birthday, MLSN! You've sure done a lot in your first ten years.

A ten year timeline

I put together a list of some key events over the first ten years. From the name choice, to the introduction, checking the reality of MLSN with the Global Soil Survey, publishing explanations and summaries, sharing the data, and much more—see how it developed here.



Date

2012-02-15

2012-05-21

2013-09-13

2014-01-01

2014-08-15

Event

We choose the MLSN name

Bouyoucos Conference introduction of MLSN

First Global Soil Survey samples tested

GCM article [Just what the grass requires](#)

ATC data added & guidelines updated

Date	Event
2014-11-05	CSSA conference paper: Only What the Turf Needs: Updating the Minimum Levels for Sustainable Nutrition (MLSN) Guidelines
2015-11-22	PACE Turf climate appraisal form incorporates MLSN
2016-06-20	Minimum soil nutrient guidelines for turfgrass developed from Mehlich 3 soil test results preprint published and MLSN data put in the public domain
2016-08-17	Final Global Soil Survey samples tested
2017-02-17	First MLSN newsletter mailed
2018-02-03	MLSN Cheat Sheet published
2020-07-11	Global Soil Survey data and preprint published
2021-09-23	The Secret MLSN Operations Manual e-book published
2022-05-24	ATC website contains 88 posts tagged MLSN

This timeline doesn't include the research and articles others have done and written about MLSN. Nor does it include any of the presentations we've made around the world explaining this modern method for soil test interpretation: at BTME in Harrogate and at the European Turfgrass Society conference in Manchester, at the GCSAA conference, in Brisbane, Brno, Hafnarfjörður, Denver, Sevilla, Tavira, Tacoma, Manila, Macau, Moncton, Adelaide, Niagara Falls, Osaka, Sundsvall, Victoria, Canmore, Copenhagen, Pune, and Pattaya ...

The list goes on and on, and to think that this idea Larry and I had, this MLSN project that as we were getting ready to release it, Larry wrote to me "Thanks for working on this. I think we are going to make a valuable contribution, but, I have low hopes of widespread adoption;" that it would go on to have such an impact, used by turf managers and companies around the world, it's been an amazing thing to be involved with.

Nutrient recommendations: ratios or percentages?

I wrote about my habit of recommending specific [nutrient ratios](#), rather than nutrient quantities, and I explained this in an [ATC Doublecut episode](#) with special guest Andrew McDaniel. When Andrew asked why I have been doing it this way, I answered that I do so because I don't know how much nitrogen someone is going to apply.

By that I mean I don't know how much grass they will be growing, and consequently how much P or K they will be harvesting. I can guess at it. But I don't know exactly. When looking at the soil test result for an element, and seeing how that element has been changing in the soil over time, I can make a recommendation based on MLSN that is robust against nutrient deficiencies even with some uncertainty in how much N will be applied.

From that, I may end up with a nutrient recommendation that is something like, "for the next year, I recommend an N:P:K ratio of 8:1:4." As I've done this, I've

heard from a few people that the ratios are not perfectly clear. Could you please tell me what makes the most sense to you? I'll share the results of this survey question in the next newsletter, and probably on the ATC website in a blog post too.

Which of these makes the most sense to you?

Ratios, for example to apply N:P:K in an 8:1:4 ratio

Percentages, for example to apply P at 12.5% the N rate and K at 50% the N rate

Neither, this doesn't make complete sense to me right now

Both, I'd rather you include ratios and percentages

Submit answer

New blog posts about MLSN

[Fertilizer supply vs. nutrient use](#) looks at the discrepancy between the quantity of nutrients applied (on average) and the quantities of nutrients used by the grass. Using MLSN should bring this discrepancy down to zero.

In the PACE Turf Member Edition, I wrote about [nitrogen fertilizer rate and MLSN](#), which I think is critically important to understand. I'll be helping Larry and Wendy out with more content on the PACE Turf site. Have a look at the subscription there to be sure you can access [all those updates, alerts, and references](#).

The post about the [MLSN film shoot in Hua Hin](#) shows behind the scenes photos from filmmaker Mattias Brännholm's visit to Hua Hin.

When a company selling fertilizer is also providing soil testing services, and when that company provides you with a report that identifies a lot of "deficiencies," you would do well to cross-reference your test results with MLSN in regards to [correcting those soil "deficiencies."](#)

Brad Revill has some new posts and videos up on [his website](#) showing the results he's seeing, and [the methods he is using](#)—including MLSN—in a tropical climate. It's well worth a look.

Thanks to Joe Gulotti, and podcasts

I'm a regular listener of Joe's [The Talking Greenkeeper](#) podcast, and I've been glad to hear some of his guests explain that they discovered MLSN by listening to his show. Thanks, Joe!

If you like listening to turfgrass podcasts, have you listened to [The ATC Doublecut with Micah Woods](#) or [ATC Office Hours](#)? Joe manages to discuss MLSN in a lot of his Talking Greenkeeper episodes, and I try to keep up with him by sometimes discussing MLSN myself on these podcasts that I'm doing.

Also, have a listen to my appearance on the [Pullin' Weeds podcast](#), where there were some hard-hitting questions about MLSN.

My current schedule has me booked to speak about MLSN (and other matters) at conferences in New Zealand, Portugal, and Denmark over the upcoming months. I'll post the details of those in the ATC updates newsletter, and on the blog. Check out the recently updated [ATC newsletters subscribe page](#) to make sure you are getting the other newsletters too, if you want to hear about more than MLSN.

Thanks for reading. As usual, I'll send another newsletter after reaching a minimum level of new developments on this topic.

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