STANZ
Sports Turf Association NZ Inc

CUT THIS

Cheers From Your Chair

Joe Hollier

Welcome to the first edition of "Cut This" STANZ's new newsletter. It's been a while since STANZ released a newsletter so we thought we would rebrand and bring something new.

Since the last newsletter, there has been a lot of work behind the scenes, especially with Covid throwing a spanner in the works. We have managed to sneak in a couple of Field days here and there. This year we held our AGM at Bay oval, where we looked at the new indoor net complex. We did a similar field day at NZC High-Performance Centre at Lincoln University.

We have built a new website, with profiles of the committee and blurbs and links of our sponsors. You will be able to find our newsletters and events that are happening. So please go and check it out.

In volume 1 of "Cut This" we have an interesting article from Micah Woods from The Asian Turfgrass Centre. In his article, he talks about the key things to understand while using MLSN. The exciting new event on the calendar debuting in 2022 "Turf days", I think this will be a very exciting couple of days for the industry. An article from Syngenta about minimising environmental impact while managing turf with plant growth technolgy. Ian McKendry from New Zealand Cricket and Trudy Anderson from the Woman's Cricket World Cup LOC talk about the upcoming Women's World Cup.

Keep a look out for events in 2022, our new bi-monthly newsletter "Cut This".

If you have any ideas for Field Days or articles you want to see in "Cut This" then please ask, flick me an email or talk to one of your local committee members.

On that note, Merry Christmas, enjoy a break if you're lucky enough to get one.

See you in the new year.

IN THIS ISSUE

Upcoming Events

16th Dec – Lancaster Park
Christchurch

One thing I'd like everyone to understand about MLSN

Micah Woods

When Larry Stowell and Wendy Gelernter and I were working on the MLSN guideline project ten years ago, we weren't sure if anyone would use these guidelines. To see how these guidelines have so quickly come into common use all over the world, that's been an unexpected and exciting development. I'd like to emphasize one thing about using the MLSN guidelines, because the way MLSN was developed, and the way it's intended to be used, is a bit different from the way people tend to think when they hear the word "guideline." Maybe I should stop using that word!

Conventional nutrient guidelines are used by taking a soil test result for a particular element and classifying the soil as low, medium, or high for that element. At the low level, the crop is expected to have a high probability of response to fertilizer additions of that element. At the high level, there is a low probability of crop response to fertilizer additions of that element. For the medium level, it depends who writes the definition—there's some variability in exactly what the medium level is supposed to mean!

With MLSN, we never tried to classify soils as low, medium, or high. What we did was study a large database of thousands of soil test results from good-performing professionally managed turf. Some of the sites with soil data included in the MLSN database are show in Figure 1. Then we made some calculations, threw away the lowest 10% even though the turf was performing well, and then we ended up with a single number that we called the MLSN guideline.

What this number means is something different than the way soils are typically classified as low, medium, and high. What the MLSN number means, in simple terms, is that soil with the MLSN minimum value of an element should be able to produce high quality turf. Today. But I remind people that their grass is alive (I hope!) and is using nutrients, so the quantity of an element in the soil will be lower tomorrow than it is today. It's not correct to do a soil test, look at the results, see they are at or above the MLSN minimum value, and say "everything's fine, no need to apply this element as fertilizer." One must consider the quantity of an element that the grass is going to use, and add that to the MLSN minimum amount, to determine if fertilizer applications are required or not.

This is something I think is commonly misunderstood. It's easy to get an estimate of the maximum amount of an element the grass can use, based on the nitrogen application rate which sets an upper bound on the rate at which grass can grow (and use nutrients). There's a tiny bit of math involved, which I think most people don't do. I think a lot of people look at their soil test result, check if the value is above or below a guideline (such as MLSN), and from that say they are fine, with no need to apply, or if they are below the guideline, they will interpret that as an indication that the element should be applied.

That's not the correct way to use MLSN. With MLSN, the "guideline" or minimum level should be thought of as a quantity of nutrients that are sufficient to produce good turf. To make the fertilizer rate calculation, however, one needs to add that quantity of an element, which is the MLSN value, to the quantity of the element expected to be used by the grass for the time period over which the fertilizer recommendation is being made. Then subtract the soil test amount of that element from the previously calculated sum of MLSN plus expected plant use. Now you've got a precise recommendation that is site specific based on your soil conditions, your grass type, your climate and the way you like to manage the grass in terms of N inputs, and for any time duration.

There's all kinds of information about MLSN at my website, https://www.asianturfgrass.com/mlsn/, and I've explained MLSN and how it works and how to make these calculations in articles and videos you can find through that link. If you are using MLSN, I hope you'll consider it not as a way to classify a soil as low, medium, or high, but instead as a way to make a site-specific fertilizer application for any time duration.

TurfDays™ 2022

TurfDays is the inaugural two-day event celebrating the New Zealand turf industry which will be held in Lincoln, Canterbury at the Kimihia Research Facility on Wednesday the 6th and Thursday the 7th of April 2022.

The vision for the two-day event is a celebration of the New Zealand turf industry. This is an opportunity for the trade, associated with all aspects of the turf sector, to present their businesses and offerings to a wide section of the New Zealand turf market.

Attendees from the golf, council, stadia, bowls, landscape and the general amenity turf market are coming together for a hands-on experience with new technologies whilst being able to socialise and connect in a fun and vibrant atmosphere.

One of the key things that will make TurfDays unique is the location. In addition to static displays, interactive product promotions, technical workshops and more, there will be a designated service road and demonstration area for large machinery to be seen in action by attendees.

To find out more about the TurfDays programme, including information for prospective exhibitors or attendees visit www.turfdays.co.nz

Minimising environmental impact while managing turf with plant growth technology

Syngenta

Ask different industries what their key challenges are moving into the future, and one common issue arises: finding ways to reduce your environmental impact while maintaining performance and productivity.

This is especially true for today's turf managers. Caring for local parks, green spaces and sports fields is an essential service, but it also creates a carbon footprint and uses up a substantial amount of resources. Many of us are looking for ways to reduce this impact – for the sake of our planet's future, but also to meet community expectations regarding sustainability and action on climate change.

The good news is technology is helping the turf industry meet this challenge head on. Plant Growth Regulators (PGRs) have made significant inroads towards reducing the environmental impact of maintenance practices, with tangible outcomes such as longer spray intervals, reduced mowing frequency and clippings, improved stress tolerance and healthier grass that can better withstand extreme weather events caused by climate change.

This leads to a much more sustainable and productive maintenance schedule: a win for managers, the communities and clients they serve, and the environment.

How Plant Growth Regulators work

A PGR is an innovative solution that influences a plant's growth and development. It can be used as a management tool on a wide range of turfgrass commonly found in public spaces, such as Buffalo, Couch (Common, Hybrid), Kikuyu, Zoysia, Bent, Fescue and Perennial rye grass.

Recent types of PGRs, such as Syngenta's turf growth regulator, PRIMO® MAXX, are formulated as a micro emulsion concentrate that quickly enters the leaves and shoots before systemically moving throughout the entire plant. Once absorbed, the active ingredient works to temporarily block the plant's ability to produce a growth hormone called Gibberellic Acid. This suppresses the plant's vertical growth while allowing normal processes like photosynthesis and respiration to continue. Energy is diverted into the plant's lateral growth, resulting in smaller and finer leaves, increased tillering, and a larger, deeper root mass. The turf becomes denser with a more vibrant colour the public can enjoy.

Save water with PGRs

Regular PGR application ticks a lot of sustainability boxes, the biggest one being greener grass with less water requirements. This is due to a number of factors:

- Research from Rutgers University shows only 3% of water taken up by turf grass is used in photosynthesis, while 90% is lost in transpiration. PGRs like PRIMO® MAXX improve water management efficiency by encouraging the stomates (pores) of a plant to close for longer periods, which slows down the rate of water lost through transpiration.
- PGRs increase turf density, which reduces the amount of water evaporating from the ground
- Plants treated with PGR have roots that grow deeper and larger, providing better access to soil moisture and nutrients so the plant stays green and healthy for longer
- Slowing down turf growth allows the plant to accumulate higher reserves of carbohydrates, which improves its resilience in extreme weather events that may be caused by climate change

Ultimately, this means that if PRIMO® MAXX is consistently incorporated into your maintenance schedule at the right amounts, less water is needed to maintain the turf's quality. A&M University in Texas, for example, found that when PRIMO® MAXX was applied to Hybrid Couch on a golf course over a three month period, the amount of water needed for irrigation decreased from 24 mL/100m^2 to just 8 mL/100m^2, saving around 750 000 L of water across a 12 hectare space.

This benefit could easily be transferred to council green spaces and sporting facilities, to reduce water usage while producing thicker, more resilient turf that can better withstand long periods without rain.

Control growth and mow less

Slowing down turf growth also decreases the need to mow, which in turn reduces waste and makes maintenance practices far more sustainable. Applying PRIMO® MAXX to turfgrass effectively holds back vertical grass growth within 1 to 2 weeks of initial application. This leads to many benefits:

- Increased mowing speed and efficiency
- Minimised wear and tear on equipment, more downtime and better machinery performance with not as much force used to cut the turf
- less post-mowing operations such as dragging
- greater flexibility in cutting intervals, mitigating the disruptive impact of rain on schedules
- Less herbicides needed, as a smaller number of weeds germinate with regular PGR use due to denser turfgrass minimising the amount of soil exposed to the sun
- A smaller carbon footprint with less input requirements such as fuel, putting you one step closer to becoming carbon neutral

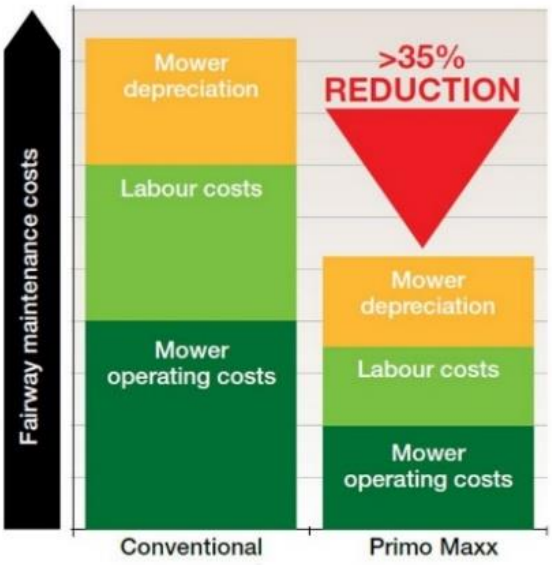


Image: Conventional practises vs PRIMO MAXX

On the other end of the scale, PGR use also helps minimise waste. When used at the label rate, PRIMO® MAXX noticeably reduces clippings by around 50% over the season. Smaller clippings decompose much more easily in the thatch without contributing to build-up, while clipping disposal becomes much more efficient and easier, with less impact on the environment.

When put together, all these benefits can help ease the pressure on tight budgets. Reducing mowing by 40%, for example, can save up to $6,000 in fuel costs over a year, while cutting down on clippings has an impact on future renovation costs. This frees up much needed funds for reallocation into other areas of your maintenance schedule, as well as creating a positive impact on the environment and reducing your overall carbon footprint.

Stand up to turf stress and extreme heat

Increased temperatures adds to turf stress on the sports field or greenspace, resulting in an undesirable loss of colour, turf density and quality.

Various research trials and turf managers' on-the-ground experience have consistently shown that incorporating PRIMO® MAXX into your maintenance program helps turf effectively withstand the effects of stress and recover faster. The main reason is that PRIMO® MAXX applications increase the level of bioactive cytokinins in the plant, improving its tolerance to heat and drought-induced stress. This allows the turf to recover faster from drought effects, extreme heat, or stress from high traffic and heavy play.

How to get the most out of PGRs for your turf

Alongside improving the sustainability of your maintenance practices, there are many ways PGRs can provide significant environmental benefits, such as:

- Over-seeding preparation – by applying PRIMO® MAXX 1 to 5 days before over-seeding or inter-seeding operations, you can enhance new seedling development with no negative effect on seed germination (just remember to apply the lowest rate when seed heads are present). Regulating growth of the existing sward during over seeding will reduce the competitiveness and allow the rapid establishment of newly germinated seedlings.

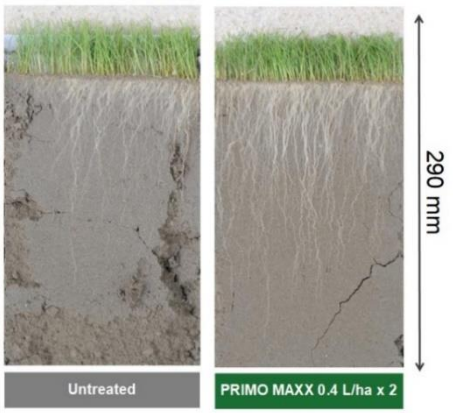
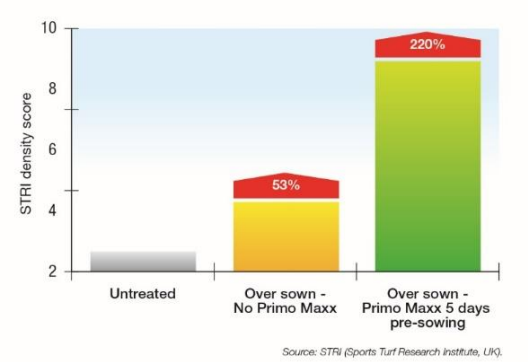


Image: Superior rooting assists with drought tolerance

- Ensuring the longevity of your turf – use PGRs as a pre-stress conditioning tool for Bent greens before hot, stressful summers or sports fields before high traffic seasons
- Reducing maintenance needs on edges that are difficult to mow
- A great benefit is Tank-mixing with fungicides and foliar fertilisers to enhance their performance and minimise their use, as the chemical is less likely to be quickly removed through mowing, saving money and further spray applications throughout the year therefore reducing impact to the environment at the same time.
- Retaining line durability and visibility for longer. Line marking in conjunction with PRIMO® MAXX reduces the need for line marking paint over the course of the season, leading to significant cost and time savings. Furthermore, PRIMO® MAXX retains healthy grass cover beneath the line marking paint, which avoids the need for reseeding at the end of the season.



The right application is always key to achieving good results with a PGR, so it's important to track the growth rate of your turfgrass alongside the rate of PGR application.

This will ensure your maintenance schedule not only creates efficiencies and produces beautiful green spaces, but also makes a positive impact on the planet.

Coordination and planning the key to delivering ICC Women's Cricket World Cup 2022 pitches

Trudy Anderson CWC LOC Cricket Operations Manager
Ian McKendry NZC Head of Turf Management

When the players cross the rope for ICC Women's Cricket World Cup, a lot of hard work and collaboration will have gone into making sure pitch and playing conditions are perfect for the players to showcase their skills. With 31 games in 31 days across six venues, as well as a full warm up programme, planning and communication is the key to get things right. With a full domestic and international summer to deliver before the tournament begins at Mount Maunganui on 4 March, ensuring the requirements for this pinnacle event are being set up and clearly understood is crucial.

The CWC22 team has worked closely with Turf Managers across the country to ensure the grounds and outfields are of the highest quality, beginning with a virtual Turf Managers Conference in November, with all match and warm up venue managers attending.

Turf staff have worked through their pitch plans, integrating their pitch allocations with the NZC international and domestic schedule – a key area of focus for turf managers will be to follow the ICC pitch characteristic guidelines for ICC Events. – This will consist of delivering pitches with consistent pace and bounce and maximising outfield speed, so the batters get good value for shots during the tournament. Another challenge of a tournament of this scale is practice facilities, including training nets and outfield practice areas, which are also required while matches are running and must meet the same high standards. Add to this the complexity of adhering to government requirements and COVID-19 protocols.

NZC International Turf Managers - inspecting the NZC High Performance greenhouse facility at Bay Oval

"All our Turf Managers have had experience with international pitch preparation. I've got every confidence in the team's ability to produce great playing conditions. New Zealand has a great history of producing world class pitches for international tournaments and matches, and this world cup will be no different," said Trudy Anderson, CWC22 Local Organising Committee's (LOC) Cricket Operations Manager.

Ian McKendry, NZC Head of Turf Management, is the link between the ICC and LOC. Pitch preparation will monitored and coordinated through the comprehensive NZC pitch app, that captures the turf management functions of pitch preparation. This includes the scientific elements through the collection and measurement of soil moisture content, bulk density, pore saturation and soil air volume readings during the pitch preparation phase and the recording and benchmarking of pitch characteristics through ball tracking software. This level of data analysis ensures that no stone is left unturned and quality surfaces will be provided across all venues for the tournament.

The players and fans at the grounds will have an ideal environment to showcase and enjoy the world's best women cricketers in March, thanks to the planning and hard work that each Turf Management team has undertaken leading into this important international tournament.