



## Spring 2009 Newsletter

Welcome to our latest newsletter - in this issue we look at 11<sup>th</sup> International Turfgrass Research Conference in Chile, the importance of construction hold points, importance of soil testing for optimum growth as well as bring you up to date with other happenings in the turf industry.

### 11th ITRC – Chile

The eleventh International Turfgrass Research Conference (ITRC) was held in Santiago, Chile in late July.

The staging of the ITRC every four years is one of the main activities of the International Turfgrass Society (ITS) and is the major forum for turfgrass scientists, consultants and educators from around the world to discuss the latest research.



*Santiago, Chile with the snow capped Andes as a backdrop was the venue for the 11<sup>th</sup> ITRC*

I was fortunate to be able to attend my fourth ITRC conference (Wales 2005, Toronto, 2001 & Sydney, 1997). There were more than 150 delegates from 19 countries including 11 from Australia.

The week long conference included 54 oral presentations and 111 posters. There were concurrent sessions covering;

- Diseases (plant pathology)
- Pests (insects & nematodes)
- Weed Science
- Soil Physics & Rootzone Construction
- Soil Biology, Chemistry & Plant Nutrition
- Establishment & Maintenance
- Physiology & Stress Physiology
- Genetics & Breeding
- Conservation & Environment
- Education & Information Technology

There were also technical tours to two golf courses, a race track, the National soccer stadium and a sod farm.

Being able to attend this conference is extremely worthwhile in terms of being exposed to the latest turfgrass research and catching up with leading turfgrass scientists from around the world.



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It is interesting to find that there are similar turf management issues all around the world. The information obtained and contacts made by attending these conferences can only benefit our clients.

The next conference will be held in 2013 in Beijing, China.



***Club Hipico de Santiago Racetrack (86 race meets per year & 18 races per meet)***



***National Soccer Stadium***



***Most of the Australian contingent + one Kiwi***

## **Construction “Hold Points”**

A vital part of any construction is making sure that the Contractor carries out what is required and has been tendered for. This is best achieved by the use of “Hold Points” in the Specification where the next stage of a Project cannot be commenced by the Contractor until the current “Hold Point” is passed or signed off.

The Specification should state as many “Hold Points” as is required to ensure that the project is completed properly and to the standard required by the Client.

No work must be allowed to be continued until the current “Hold Point” has been passed by the Construction Supervisor or another representative of the Client.

Key hold points can include:

- Contractor has carried out a Job Site Analysis
- security of the site before the Project commences
- setting out of the required work area
- required spraying results from the herbicide application have been achieved before removing the top
- only the machinery specified to carry out the various stages is being used and not heavier or less accurate larger machines such as scrapers
- accurate setting out of the irrigation system
- correct trenching depths for irrigation pipe is achieved before laying
- specified irrigation pipe is used
- valve boxes are installed as specified
- trenches are backfilled as specified after pipe laying
- irrigation system is fully functional before starting any grassing
- accurate setting out of the drainage system
- correct trenching depths and levels for drainage
- laboratory checking of materials to be used on the project (nutrient analysis, sieve analysis, drainage rates) well before they are used on site
- levels of the base before any topsoil or sand is applied
- specified surface levels have been achieved before grassing (seed, sprigs or sod)

- sprinkler heads are set correctly before grassing begins
- each sprinkler head has been surrounded by 1m<sup>2</sup> of sod, to prevent wash out, before the irrigation system is activated during grassing
- health of the sprigs or sod before laying
- evenness of any sprig application
- specified maintenance procedures are being carried out
- required coverage and density of grass has been achieved before hand over



There may be more “Hold Points” required depending on the project and what stages are deemed to be important.

All these points may not have to be passed off by an independent Construction Supervisor but they at least must be checked by a qualified representative from the Client.

“Once something is buried no one knows what is there until a problem occurs in the future.” And by then it is too late!

Not checking one “Hold Point” could jeopardize the whole project!

All specifications written by **Sportsturf Consultants** contain the “Hold Points” which we consider to be required to ensure that the client gets the end result that they wanted at the price that was tendered.

## Racecourse Consultancy - China

In May this year **Sportsturf Consultants** travelled overseas when it successfully gained the consultancy for the proposed new racecourse in Chengdu China.

The works involved the production of technical specifications for the construction of the new racing surface that is to be the envy of the world. Our major role was to provide the soil profile and grassing specifications. These works involved visiting local soil suppliers and turf farms to ascertain what is available.

The visit to the local turf farm was an eye opener the Chinese definitely do not believe in the use of machinery. All the work on the farm was manual labour from the hand weeding to the cutting and movement of sod.



The sod is cut as small squares with dimensions 150 mm x 150mm these are then laid similar to paving. The sod is not harvested as rolls.



The main turf species grown on the farm were couch, zoysia, Kentucky blue grass and tall fescue. Couch grass will be used on the track surface to provide the base cover with ryegrass and Kentucky bluegrass oversown.

This is an ongoing project with the expected completion of the project in 2012 and we will be involved on the project throughout.



**Sportsturf Consultants** is also part of the winning tender for the reconstruction of **Werribee Racecourse**. We will be providing the specifications for soil and the grassing of the racing surface as well as the testing of the proposed growing medium. The racecourse is also to be home to the quarantine centre for the international horses from September 2010 replacing the current centre based at Sandown Racecourse.

**Sportsturf Consultants** have also been involved in grassing, soil selection and quality control for **Sandown** (Lakeside & Hillside), **Caulfield & Flemington Racetracks** in Melbourne.

### **Importance of Soil Test and Formulating Fertilizer Programs to Optimize Turf Growth**

The nutrient status of the soil is critical for establishing, producing and maintaining a strong, healthy and vigorous turf surface.

The importance of the nutrient status of the soil is often overlooked, especially when establishing turf.

Any delay with applying fertiliser can seriously set back the growth and progress of the turf surface. On the other hand, regular fertilising will not only stimulate the growth and coverage of the turf but will also hasten the maturity and hence durability of the turf surface.

The critical tests that need to be conducted with any soil test include:

- Soil pH to determine the reactivity of the soil and hence availability of nutrients for plant uptake
- Total soluble salts, which if too high will affect the performance of the turf and if too low highlight a low nutrient status of the soil
- Total Phosphorus, which is critical for seedling establishment and general growth
- Other main nutrients such as potassium, calcium, magnesium & sulphur
- Sodium, which can indicate soil and site issues
- Trace elements, including zinc, copper, manganese, boron
- Level of cations (calcium, magnesium, potassium & sodium) present
- Chloride, which can indicate slat issues with the site and possibly with the water source
- Organic matter content

This information is critical to determine if nutrient deficiencies and imbalances exist that need to be rectified.

The best time to rectify issues of pH, cation levels and organic matter is during the construction phase and prior to grassing. This allows the amendments to be applied and incorporated into the soil where it will react and change the soil chemical and physical properties.

Otherwise, modification of the soil is difficult and will be a long drawn out process once a profile has been constructed.

Soil testing needs to be more frequent on newly constructed and established turf areas. This is to monitor the changes to the soil nutrient levels following the implementation of a fertiliser and amendment program and to implement the changes needed to the program.



Soil testing is more important in sand based turf situations, where problems are likely to exist with supplying and maintaining adequate nutrient levels to the plant.

Delays and depletion of nutrients in a sand based situation can quickly lead to 'anorexic' conditions, where the turf can quickly become more susceptible to wear, thinning out and loss of turf cover, as well as greater proneness to disease and pest issues. This is the case with most diseases, which tend to attack weaker turf more than a healthy and strong growing turf.

It is important to be mindful of the impact of any fertiliser program on the soil conditions and environment. Problems usually arise when there is insufficient information on the soil conditions. Soils that have a high salt level will be more prone to damage from using salt based products than soils that do not have a salt issue. This is especially the case with products such as gypsum. Gypsum is often required at high levels to impact and modify the soil conditions.

A sudden elevation in salt can be detrimental and drastic in soils that already are high in salt. The outcome can often be the death of newly planted material, either from seed or sprigs, and an inability to re-grass the surface until the salt level has decreased sufficiently. This problem has been observed on fairways consisting of a heavy soil type that have been amended with gypsum before sprigging with couch.



 <b>Consultancy</b>	 <b>Supervision</b>
 <b>Soil Testing</b>	 <b>Audits</b>
 <b>Surveying</b>	 <b>Pest ID</b>
 <b>Research</b>	 <b>Education</b>

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The following are rules of thumb for soil testing.

### *1. New area about to be planted*

- Get a full nutrient test to determine the pH, salt levels, major and minor nutrients
- Amend the soil prior to planting. This is the best time to make major improvements or changes to the nutritional status of the soil
- Avoid issues associated with salt and use low salt index fertilisers where this is an issue
- Make sure that any changes in amendments to the soil to improve the nutrient holding properties of the soil does not adversely affect other important soil physical properties such as drainage and aeration etc.

### *2. Established Sand Based Profiles*

- Conduct a soil test more frequently, at least twice per year to monitor the nutrient status, avoid deficiencies and ensure the turf is receiving adequate supply of nutrients
- Conduct leaf tissue test at least once per year to monitor the nutrient status of the plant

### *3. Established heavier soil profiles*

- Conduct a soil test once per year to monitor the nutrient status
- Conduct leaf tissue test at least once every two years to monitor

**SportsTurf Consultants** provide soil nutrient and leaf tissue testing from which appropriate fertilizer programs can be developed for your turf situation.

*For expert advice call one of our experienced consultants*

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### **What Our Lawyers Make Us Say**

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