



DEEDI wear tolerance trials extended

DEEDI has been given the go ahead to extend its HAL-funded project on wear tolerance of warm-season turfgrasses under community sportsfield conditions. Redlands Research Station will be utilised to undertake further studies including efficacy/phytotoxicity testing of Trinexapac-Ethyl and mowing frequency trials

DEEDI senior research scientist Matt Roche provides an update on the extension of the Horticulture Australia Limited-funded research project investigating the traffic tolerance of warm-season turfgrasses under community sportsfield conditions.



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In 2008, a two-year research project (TU08018), funded by Horticulture Australia Limited (HAL), was set up to investigate the effect of wear and compaction of different turfgrasses, primarily for sports field use. Trial sites were established at Redlands Research Station (RRS) and the Redlands Touch Association (RTA) to apply and assess wear in a single simulated site utilising the Department of Employment, Economic Development and Innovation's (DEEDI) wear traffic simulator at RRS and two sites (RTA) undergoing actual wear through the playing of touch football games.

To obtain meaningful wear tolerance and surface hardness (de-compaction) information, it was necessary that the trial work be extended to capture a minimum of two years of replicated data at all three sites (one at RRS and two at RTA). Doing so would provide community sporting groups who rely on the performance, including safety, of natural turf surfaces with solid information on which to base future turf installation decisions.

The original two-year HAL study ended in November 2010. Following discussions and support from various turf associations and members of HAL and the Turf Industry Advisory Committee, voluntary contributors were sought and an out of session project application to extend the project was submitted to HAL in December 2010.

As part of the extension work it was decided that other smaller trials be set up at the same time to obtain meaningful data from the same grasses being trialled. By choosing to do so it not only strengthened the TU08018 project, but it also meant that the data collected would be invaluable and provide significant benefit directly to members of the wider turfgrass industry.

The additional trials are being undertaken on a range of warm-season grasses (see Table 1) suited for sportsfield, recreational, golf and/or lawns bowls use and include:

- The construction of a larger trial site (case study) at the University of Queensland (UQ) St Lucia Campus to undergo actual wear and be rated against cumulative field usage hours;
- To undertake/analyse studies of morphological and agronomic characteristics (vertical growth rate, lateral spread etc.);
- Efficacy/phytotoxicity testing of the growth regulator Trinexapac-Ethyl;
- Ash and lignin fibre testing to correlate against wear tolerance data; and
- Mowing frequency trials.

Project work is continuing in line with the original TU08018 project proposal, with data such as quality and percentage bare ground, traction, hardness and moisture being collected from the RRS and RTA trial sites.

Work to install the case study site at UQ was to start on 17 January 2011. However, given the recent deluge and subsequent flooding received in south east Queensland, the planting of Grand Prix, OZ TUFF, TifSport and Wintergreen onto the two multiuse (soccer and hockey) sportsfields had to be rescheduled.

The 114-hectare campus situated seven kilometres from the Brisbane CBD was extensively damaged by flood water and debris from the neighbouring Brisbane River. Silt removal and

TABLE 1. TU08018 EXTENSION STUDY CULTIVARS

TifSport™	Grand Prix
OZ TUFF™	CT-2
Wintergreen	AGR D
Hatfield	Winter Gem
Conquest™	Premier
Legend®	Blue Dynasty
Tifgreen	MiniVerde™
Tifdwarf	Novotek™
MS-Supreme	Santa Ana
TifEagle	Patriot
Tropika	QLD Blue
Aussiblu	MRD-1
Sea Isle 2000	Velveteen™
Sea Isle Supreme™	
Whittet	

Note: Not all turfgrass cultivars are being tested in each study.

intense cultural practices were necessary on all nine sporting grounds, including Playing Field 4 where the case study was earmarked to be planted. Turfing of Playing Field 4 was carried out by staff from UQ, Dad and Dave's Turf, Evergreen Turf, Oz Tuff Turf, Australian Lawn Concepts and Twin View Turf in early February 2011.

Work has also been undertaken by DEEDI experimentalist Jon Penberthy to prepare the greens grass test facility, which was constructed for the national warm-season greens grass study (TU05001), and medium- to long-textured grasses, initially established for the purposes of undertaking a Plant Breeder's Rights study.

The latter two sites, both located at Redlands Research Station, will be used to undertake mowing and Trinexapac-Ethyl studies. Such work, particularly the medium- to long-textured grasses (suited for fairways, sportsfields and/or recreational areas) will be monitored and mown using the 'one-third mowing rule' (i.e.: never remove more than one third of the grass blade). The data will provide useful information on how frequently particular grasses need to be maintained when compared to other species and cultivars under the same management regime.

Data and information collected throughout the duration of the HAL study will be made available to the golf and wider sports turf industry through milestone reports, website updates, a field day (date TBC) and finally through the publication of a final report. The TU08018 extension project is scheduled to conclude in June 2012.

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Redlands Touch Association, Q Turf Machinery, Sports Turf Institute (Aust.), Sports Turf Association QLD Inc. (STA QLD), Sports Turf Association NSW Inc. (STA NSW), Turfgrass Association Australia Inc. (Victoria) (TGAA VIC), Australian Golf Course Superintendents Association (AGCSA), Golf Course Superintendents Association Queensland (GCSAQ), Golf Queensland, Syngenta Crop Protection Pty Ltd, Oz Tuff Turf, Australian Lawn Concepts, Dad and Dave's Turf, Evergreen Turf, Twin View Turf, Turf Force, Turf Solutions, Turf World, Caboolture Turf, Jimboomba Turf and Progressive Seeds.

A special mention should be made of their proactive approach to keeping the community's sportsfields safe and open and investing in research that will allow members of the community to continue playing sport and living a healthy lifestyle. For more information about the above trials, contact Matt Roche via email Matt.Roche@deedi.qld.gov.au.

The construction of a larger trial site at the University of Queensland's St Lucia Campus is also part of the extended work, however, the area designated was severely impacted by the recent floods to hit Brisbane



The Redlands greens grass test facility will also be used