The Vegetation Manager

MARCH> | It's that time of year | Weed Watch | Events | Innovation Update | News |

Note from the CEO

Welcome to the March edition of The Vegetation Manager.

This month features our latest edition of Weed Watch, your alert to new and emerging threats. Coral creeper (*Barleria repens*) is an emerging weed of urban bushland, riparian vegetation, coastal sand dunes, waste areas and disturbed sites. This weed has recently been reported in major urban centres in the coastal parts of eastern Queensland. Just last month, three larger dense infestations were reported in Brisbane, making it a weed we definitely need to watch out for!

This month we are pleased to feature two guest columnists. Dr Sheldon Navie from the Integrated Vegetation Management Project reports on a trial underway looking for better ways to manage tall growing Bahia grass (*Paspalum notatum*). Bahia grass poses a significant challenge for vegetation managers along Australia's east coast and the trial work is showing some very promising results.

Ashley Neuendorf, Nuturf Australia's Queensland Manager also shares his knowledge on how to use potassium to keep your turf in top condition.

Finally, we are very proud to announce the first Vegetation Managers Forum next month. With the mission of growing knowledge & networks, this is the first in a series of forums to be held this year. The forums will feature industry leaders presenting on topics specific to the needs and interests of vegetation managers. The first Vegetation Managers Forum is Thursday, April 22nd on the Gold Coast. For a list speakers presenting at the forum, go to page 3.

I look forward to speaking with you again next month.

Nick Bloor

weed watch

Welcome to Weed Watch, our newest addition to The Vegetation Manager. Each month, Dr Sheldon Navie will focus on a new and emerging weed and provide you with details on its appearance and distinguishing features to assist in ID, as well as best practice control methods.

Coral creeper (*Barleria repens*) is a creeping or scrambling shrubby plant that is an emerging weed of urban bushland, riparian vegetation, coastal sand dunes, waste areas and disturbed sites. The plant has recently been reported in major urban centres in the coastal parts of eastern QLD, with three larger infestations recently being reported in Brisbane.

Learn more about coral creeper by reading our Weed Watch fact sheet on page 4.

Upcoming Events

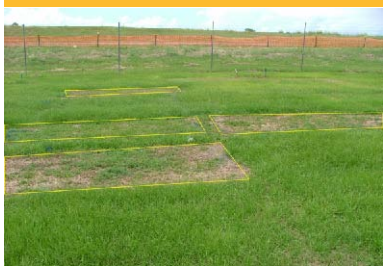
> **South East Queensland Pest Advisory Forum (SEQPAF)**
Wednesday, 24th March, Sunshine Coast Regional Council

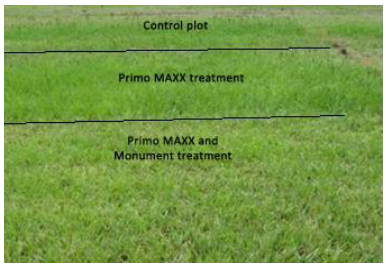
> **Vegetation Managers Forum**
22nd April, Radisson Resort, Gold Coast

> **ECO IPWEAQ South West QLD Branch Conference**
20th & 21st May, Stanthorpe

Innovation update

IVMP





Seed-head Suppression Trial

Bahia grass (*Paspalum notatum*) poses a significant challenge for vegetation mangers in South East Queensland due to prolific seed-head dispersion. In order to explore the best way to suppress seed-head production, the Integrated Vegetation Management Project (IVMP) is currently conducting a 12 week experiment.

In this experiment, a single application of various herbicides and plant growth regulators were applied to replicated trial plots. Untreated plots (control plots) and monthly mown treatment plots were also established for comparison. The experiment is intended to run for 12 weeks, with the interim results presented here showing what has occurred over the first 6 weeks.

Overall, most of the treatments are still performing very well 6 weeks after application. In fact, all 12 of the chemical treatments equalled or outperformed the mown treatment in reducing the number and height of seed-heads produced. This is surprising considering the chemical treatment plots had not been mown since the start of the experiment (approximately 6 weeks prior), while the mown treatment plots had been mown less than two weeks prior!

No seed-heads have yet been produced in the plots for the best performing treatments, i.e 100% seed-head reduction at this stage. In fact, most treatments trialled have provided ≥ 90% reduction in seed-heads after 6 weeks.

The effects of the treatments on seed-head height are very similar, as one might expect. Average seed-head height in the control plots was 43cm and was already up to 37cm in the recently mown plots. In comparison, the worst-performing experimental treatments had an average seed-head height of 29.5cm, while the few seed-heads produced in the most promising treatments had an average height of only 7cm.

The effect of the treatments on sward height was also relatively similar. Average sward height in the control plots was approximately 11cm, while it was 8.5cm in the recently mown plots. The best performing treatments had sward heights of 6-7cm, with most other treatments having sward heights of 7-8cm.

These results are suggesting that if you want to keep the Bahia grass green and suppress its seed-head production, a number of treatments being assessed are proving effective. It is also clear that a number of the treatments will be effective should your aim be to transition out the Bahia grass in an area under management.

Technigro would like to thank Dr Sheldon Navie and the IMVP for submission of this article. Further updates on this exciting experiment will be available in upcoming editions of The Vegetation Manager. Learn more about the IVMP here.

In the news

Townsville Woman Killed in Slasher Tragedy

Earlier this month a Townsville woman received fatal injuries when she was hit by a piece of pipe thrown from a tractor slasher working nearby. The projectile was thrown with such force that after impacting the woman it travelled a further 50 metres before coming to rest in front of a takeaway food store. Local police reported that the piece of pipe may have been obscured by the long grass. A month earlier a north Queensland woman lost her arm after an accident with a mower.

The Queensland Injury Surveillance Unit reports that each year there are at least 100 Queenslanders requiring hospital treatment for mower related injuries. Records show that 540 Queenslanders suffered from mower related injuries from 1998-2002. Figures from the United States reveal that there are over 70,000 mower injuries in the United States each year, with 17% of these being a result of projectiles being thrown from the mower.

In addition to the risk of injury there is also the significant risk of litigation. In 2006 a Redcliffe cyclist who was injured in a crash after a piece of glass was thrown up by a council mower won a $60,000 payout. Safety is the number one issue when undertaking any vegetation management activity within the community. Mowing is high risk due to its proximity to the public and the fact that it needs to be repeated often. Through the Integrated Vegetation Management Project (IVMP) we are researching better and safer ways to manage vegetation to reduce the need for repetitive, high risk mowing activities, including hand trimming.

Copies of the newspaper articles on the recent mower-related accidents are available on the Technigro website.

Steve Hampton is the Project Manager of the IVMP and will be attending the upcoming Vegetation Managers Forum on the 22nd April

Innovation Update

Potassium

Turf Toughening

There are sixteen elements directly involved in plant nutrition, which are necessary for the turfgrass plant to complete its lifecycle. Each essential nutrient is equally important in that a deficiency of any one can seriously impair the overall plant growth and development process.

More emphasis is usually placed on the macronutrients as these nutrients are generally needed in greater quantities by the plant when compared with micronutrients. These macronutrients include Carbon (C), Hydrogen (H) and Oxygen (O) which are obtained from carbon dioxide and water, and Nitrogen (N), Phosphorus (P), Potassium (K), and the secondary nutrients Calcium (Ca), Magnesium (Mg), and Sulphur (S) which are primarily obtained from the soil.

Of these elements Potassium is referred to as the turf 'toughener' as its main purpose is to improve stress tolerance. Turfgrasses require potassium in relatively large amounts, second only to nitrogen. It is an ideal element to be used in conjunction with nitrogen, as while nitrogen produces cell growth, potassium strengthens the walls of the cell, hardening it to aid resistance to disease and pest infestation.

Potassium is also important for many plant processes and it performs the following functions:

1. Regulation of the opening and closing of the stomata, which effectively improves heat and drought tolerance.
2. Production of proteins and carbohydrates. Potassium also assists in moving these compounds throughout the plant. This becomes very important for winter survival and recovery.
3. Controls uptake of certain nutrients.
4. Increases root development, enhancing greater branching of the root system. This contributes to improved drought and wear tolerance.

Turfgrasses have the ability to take up far greater quantities of potassium than that required for plant growth. In addition, potassium is held primarily in the leaf of the plant and readily leached through the soil profile, therefore very large single applications are best avoided.

Potassium deficiency symptoms include interveinal yellowing of older leaves, and rolling and burning of the leaf tip. The leaf veins eventually appear yellow and the margins appear scorched. Furthermore, the turfgrass plant will also rapidly deteriorate when subjected to stressful conditions.

Nuturf recommends the use of Stand SKH to toughen your turf. Stand SKH is a specially developed silicon and potassium formulation to improve turf hardiness and disease resistance.

Ashley Neuendorf is the QLD State Manager for Nuturf Australia. Nuturf Australia are the leading distributor of products and technical services to the professional turf industry throughout Australia and have worked in partnership with Technigro for many years.

In the news

Vegetation Managers Forum

Technigro is proud to announce a series of Vegetation Managers Forums to be held in South East Queensland during 2010. These forums will feature industry renowned speakers focussing on the pressing issues facing vegetation mangers today and allow attendees the opportunity to network with others within the industry.

The first forum will be held on the 22nd of April on the Gold Coast. This event will feature, among others, the following guest speakers:

- Dr Henk Smith - Technical Manager Professional Products, Syngenta
- Peter Apps - Management Officer Sports Facilities & Turfgrass, Gold Coast City Council
- Jen Ford - Natural Areas Restoration Officer, Gold Coast City Council
- Ashley Neuendorf - QLD State Manager, Nuturf Australia
- Dr Sheldon Navie - Research Scientist, Integrated Vegetation Management Project

These speakers will share their knowledge and expertise on the problematic issues that the vegetation management industry faces on a regular basis.

Keep your eye out for more information on this event in the April edition of The Vegetation Manager and be sure to mark the 22nd of April in your diary.

weed watch™

YOUR ALERT TO NEW AND EMERGING THREATS.

1. *Dense infestation in bushland at Kuraby, QLD.* ***2.*** *Glossy paired leaves* ***3.*** *Showy red flower.* ***4.*** *Scattered infestation in forest understorey at Drewvale, QLD.*

GROUNDCOVER

Coral Creeper (*Barleria repens*)

Introduced | Not Declared

Coral creeper is a creeping or scrambling shrubby plant that is an emerging weed of urban bushland, riparian vegetation, coastal sand dunes, waste areas and disturbed sites. Also known as creeping barleria, red barleria and coral bells, this species is a member of the Acanthaceae family and is native to Africa.

Distribution

This plant has recently been reported in major urban centres in the coastal parts of eastern QLD (e.g. Mackay, Gladstone and Brisbane). The first records were from gardens in Brisbane in 2006, where collectors noted large numbers of young plants germinating near cultivated individuals.

In February of this year, two infestations were reported from the margins of urban bushland reserves in south-eastern Brisbane. A very dense population is located in a disturbed forest backing onto houses near the upper reaches of Slacks Creek in Kuraby, while a second population is present in the understorey of a bushland area in Drewvale. Shortly afterwards, a third infestation was detected in Toohey Forest at Tarragindi.

Description

A creeping or scrambling shrubby plant usually less than 70 cm tall. However when growing in the forest understorey it scrambles over nearby shrubs and can occasionally climb up to 2m in height. The younger stems are green and sparsely hairy, while older stems may become somewhat woody in nature. These stems tend to produce roots where they touch the ground, enabling this plant to spread quite quickly. The shiny, dark green leaves have entire margins and are borne in pairs along the stems.

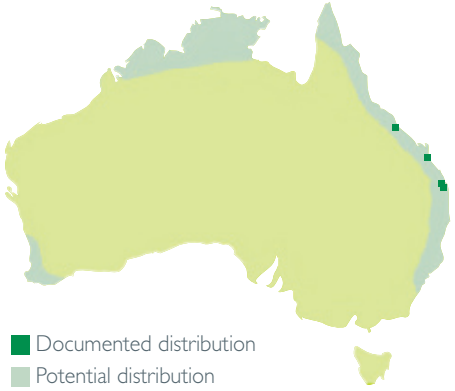
The showy tubular flowers have five spreading lobes and are mostly produced in late summer and autumn (i.e. from February to April). These flowers are borne in the leaf forks and have two large green leafy bracts at their bases. Forms with pink, mauve and purple flowers are common in South Africa, but the form that is cultivated and naturalised in Queensland has bright red or pinkish-red flowers. The fruit is a small club-shaped capsule that splits open when mature to release four seeds.

Quick Facts

- A creeping or scrambling shrubby plant with bright red tubular flowers
- Its stems produce roots where they come into contact with the soil
- Capable of forming a dense groundcover in forest understoreys

Habitat

This plant has been recorded in the understorey of urban bushland and disturbed forests, but it is also a potential weed of riparian vegetation, roadsides, disturbed sites and waste areas.



weed watch™

YOUR ALERT TO NEW AND EMERGING THREATS.

1. *Creeping habit of plant cultivated in a garden.* ***2.*** *Immature fruit and pair of leafy bracts.*

Reproduction and Dispersal

Coral creeper reproduces by seed and vegetatively via its rooting stems. Its seeds may be spread up to a few metres from the parent plant when they are explosively released from their fruit. They may be further dispersed by water, animals and in mud. Stem segments and seeds are commonly spread from gardens into bushland via dumped garden waste and may also be spread by mowers and slashers.

Why is it an Emerging Threat?

Like many closely related species in the Acanthaceae plant family that have become problem weeds in recent years, this plant is a potential threat to natural vegetation in sub-tropical and tropical Australia. It has shown a propensity to form dense infestations in the understorey of urban bushland reserves and is also likely to become a weed of riparian vegetation.

Control Methods

Individual plants and stems can be manually removed by hand pulling or with the aid of suitable tools taking care to ensure that as little as possible of the root system is left behind. In cases where total removal of the plant cannot be carried-out, the removal of flowers and immature fruit, preventing the opportunity for seed dispersal, will help reduce the potential of new infestations becoming established in the surrounding area.

For this particular species, documentation on the use of herbicides for control has proven difficult to find however treatment using Starane has proven to be successful on the infestation found in Kuraby.

There is also information available for similar species belonging to the same genus. Research suggests that control of coral creeper is also likely to be achieved using a range of other herbicides including Glyphosate, 2,4-D or Fluroxypyr. Application methods may include cut & swab, stem scraping and leaf wiping or foliar spray. For the latter, the use of a suitable non-ionic surfactant is recommended due to the glossy nature of the leaves. Within Queensland, the APVMA's Environmental Weeds Permit PER11463 (*http://permits.apvma.gov.au/PER11463.PDF*) covers the use of these herbicides in an appropriate, non-crop situation. Before applying these methods of control within other state boundaries, it is recommended that you consult any relevant permits and government legislation.

Look a-likes

Coral creeper is closely related to Philippine violet (*Barleria cristata*) which is a more upright shrubby plant. The flowers of Philippine violet are very similar in shape to those of the coral creeper but are usually white or mauve instead of red. The bracts at the base of Philippine violet flowers are also spine-tipped, while those of coral creeper are not.

Top. *Mauve flower*
Bottom. *Upright shrubby plant*

This information has been developed with the assistance of Dr Sheldon Navie. Photographs are also courtesy of Dr Navie.

Your Provider of Vegetation Management Solutions
Brisbane: 3, 128 South Pine Road, Brendale, QLD. 4550
Gold Coast: 2-10 Rudman Parade, Andrews, QLD. 4220
Post: PO Box 2038, Burleigh BC, QLD, 4220
T: 1800 678 611 www.technigro.com.au

technigro
for smarter solutions