

Note from the CEO



Welcome to the June edition of The Vegetation Manager.

We are excited to be holding another Vegetation Managers Forum, on the 18th of August at Suncorp Stadium. This forum will feature keynote speaker Dr Travis Gannon from North Carolina State University and several other renowned speakers. With the aim of growing knowledge and networks, this forum will seek to impart knowledge on some of our industry's pressing issues while also providing attendees with an opportunity to network and learn from other attendees. Mark the event in your diary and invitations will be released shortly.

It also gives me great pleasure to announce that two of our Team, Dr Sheldon Navie and Russell Warner, have been accepted to present at the 11th QLD Weeds Symposium in Mackay. Dr Navie will be presenting a paper titled "Tropical soda apple (*Solanum viarum*): an emerging threat to agriculture and the environment in Queensland". Tropical soda apple is a new and emerging threat in Queensland due to its ability to replacing native plants and disrupts normal ecological processes. Learn more about Dr Navie's presentation on page 3. Russell Warner will also be presenting a paper titled "Measuring for Success - a critical review of auditing and reporting tools for Natural Resource Managers". It is often stated "you can't manage it if you can't measure it". Measuring outcomes of your management plan assists in defining whether objectives are being achieved, while providing a basis for adaptive management and continued improvement. Learn more about Russell's presentation on page 3.

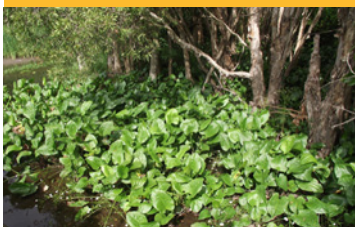
Finally, on a personal note, I would just like to express my sincere thanks to those who made our appearance on the ABC's New Inventors possible. It was a wonderful experience and we are all so proud to see how far the DriftProof Sprayer has come in the last 11 years.

See you next month,

Nick Bloor

It's that time of the year

Bindii



Treat Bindii before formation of burrs!

Bindii (*Soliva sessilis*) is a winter weed of eastern QLD and NSW. It generally raises its head in June and dies out in November. Bindii produces a spiky prickly burr, which is often troublesome to picnickers and children. This weed will start to raise its head this month, making now the perfect time to target it via a pre-emergent program. Learn more about bindii by reading our factsheet or talk to one of our turf specialist on 1800 678 611 or read our factsheet on page 5.

Fast Facts

- > The Sun's distance from the Earth is 150 million km
- > The diameter of the Sun is 1.4 million km
- > The Sun's core is composed of hot & dense gasses. It has an approximate temperature of 27 million degrees!

In the news

Technigro sponsors the Weeds of Southern Queensland publication

Technigro is pleased to be a major sponsor of the 3rd edition of the Weeds of Southern Queensland book.

Produced by the Weeds Society of Queensland, the Weeds of Southern Queensland features a wide variety of weeds found within South Queensland. The publication provides information in identification for a variety of weed including woody weeds; cacti and succulents; vines; groundcover and herbs; grasses and aquatics. The publication also provides readers with information on weed management, weed hygiene and control options and advice.

Nick Bloor, Technigro CEO, attended the official publication launch on the 1st of June. Although a cold and blustery day high in the hills at Toowoomba, Picnic Point was the perfect setting. Due mainly to the fact that while looking out into the sprawling valley it was evident just what a major problem Lantana had become in the Lockyer district.

Mike Horan, the honourable member for Toowoomba-South, officially launched the publication. In doing so he highlighted

that being able to keep abreast of emerging threats was vital so as the public is able to stay well-informed, and these pests can be dealt with as effectively as possible. The book will be an invaluable resource for farmers, contractors, service providers and peri-urban dwellers.

For information on how to obtain a copy of the Weeds of Southern Queensland book, please contact the WSQ by emailing them at: treasurer@wsq.org.au.



Technigro's DriftProof Sprayer features on the ABC's New Inventors program

Technigro is extremely proud to have had their DriftProof Sprayer® (DPS) featured on the ABC's weekly program The New Inventors.

The New Inventors' is all about inventions and the inventors who have created them. Each week three totally new, never-before-seen inventions are demonstrated, examined, prodded, pushed, pulled (and occasionally dropped) by host James O'Loughlin's cohort of expert judges. The inventors are subject to questioning by the judges on things such as design and market, it's originality and manufacture, it's safety and need.

The DriftProof® Sprayer is a lightweight shielded sprayers that can apply an form of liquid products, such as selective herbicides, insecticides, fertilisers and soil conditioners, with zero spray drift. The patented shield confines the spray droplets to the target area, making it a much safer option for both the operator and the public. The tightly controlled nature of this technique means chemical use can be reduced up to 70%, saving money and better protecting the operator, community and the environment.

In preparation for the show, our Team built a brand new DPS in just 12 days! In late May, Nick Bloor travelled down to Sydney with the DPS to film the episode, which was aired on TV on the 1st of June. While we were not the winning innovation on the episode, we received some fantastic feedback from the judges, other contestants and all those involved in the program. To see Nick and our DPS in action visit <http://www.abc.net.au/tv/newinventors/txt/s3230487.htm>



The DriftProof Sprayer



Nick Bloor and the DPS on The New Inventors set

Dr Travis Gannon named key note speaker for August Vegetation Managers Forum

Dr Travis Gannon, Research Associate, Department of Crop Science, North Carolina State University.

Dr Gannon completed his PhD dissertation entitled "Downward Mobility and Efficacy of Select Herbicides in Turfgrass Systems" in 2011. Additionally he has extensive experience conducting field, greenhouse and growth chamber research with herbicides and plant growth regulators in all facets of turf including intensively managed turf and roadsides as well as pasture and rangelands.

Through his knowledge and expertise Dr Gannon has been closely involved with vegetation management research with

the Integrated Vegetation Management Program. Dr Gannon has also worked closely with North Carolina Department of Transportation conducting research and devising integrated vegetation management plans for roadsides and other noncrop areas. Along with a substantial amount of research and grant work undertaken Dr Gannon has written a number of journal articles for publications such as Weed Technology and Weed Science.

Dr Gannon provides and invaluable link with the US, where there has been significant developments and research in to plant growth regulators and their use along roadside turf.

In the news

Dr Sheldon Navie to present on Tropical Apple Soda at upcoming Weed Symposium

Dr Sheldon Navie, Technigro Consulting Scientist, has been accepted to present at the 11th QLD Weeds Symposium in Mackay. Dr Navie will be presenting a paper titled “Tropical soda apple (*Solanum viarum*): an emerging threat to agriculture and the environment in Queensland”.

Dr Navie is well known as one of the leading weed identification experts within Australia. He has spent several years undertaking scientific research on a number of projects involved with various aspects of weed biology and ecology, soil seed banks, biological control, seed dormancy and germination, herbicide resistance, herbicide efficacy and integrated vegetation management (IVM).

Dr Navie has previously worked at the University of Queensland as a lecturer and a supervisor for PhD and Master students. Dr Navie has published several articles in scientific journals and is the author of Technigro’s highly popular Weed Watch series. Dr Navie joined the Technigro Team as a Consulting Scientist in February 2011.

Dr Navie was part of the team who first discovered Tropical soda apple in southern QLD in early 2011. A native of South America, Tropical soda apple is a serious emerging threat in Queensland due to its ability to replacing native plants and disrupts normal ecological processes. This upright shrub was first recorded in Australia in the Kempsey area in NSW in August 2010. Smaller infestations were subsequently found in the surrounding areas. Due to the rapid rate of these new detections, it is likely this plant is already present in other parts of eastern Australia.

Tropical soda apple is an aggressive species that has the potential to spread throughout NSW, QLD and possibly into many other parts of northern Australia. Tropical apple soda is unpalatable to livestock and dense infestations of this prickly plant can restrict the movement of livestock, humans and native animals. Known as the “plant from hell” in the USA, Tropical apple soda is definitely a weed we need to all watch out for!

Russell Warner, Technigro’s Consulting Manager, will also be presenting a paper titled

Russell Warner, Technigro’s Consulting Manager, will also be presenting a paper titled “Measuring for Success - a critical review of auditing and reporting tools for Natural Resource Managers” at the upcoming 11th Weed Symposium in Mackay.

Russell has extensive knowledge and a wealth of experience in Natural Resource Management (NRM) planning and implementation. His experience includes the development and rollout of the Townsville City Council Local Government Area Pest Management Plan and associated Council operational plans, budgets and on-ground works. Russell’s technical on-ground experience and exceptional project management skills will ensure that every project is delivered on time and of the highest standard expected by Local Government clients. Russell is actively involved in several environmental

industry groups including the Weed Society of Queensland, the Environmental Institute of Australia and New Zealand, the South East Queensland Pest Advisory Forum and South East Queensland’s Catchments Members Association.

It is often stated “you can’t manage it if you can’t measure it”. Measuring outcomes of your management plan assist in defining whether objectives are being achieved and provides a basis for adaptive management and continued improvement. Russell Warner’s presentation will review current tools available for measure NRM projects, such as field data forms, GIS, photo monitoring and other systems. His critical analysis of their advantages and disadvantages will assist Natural Resource Managers in selecting the best available and most suitable tools for their weed control projects in the future



YOUR ALERT TO NEW AND EMERGING THREATS

Colombian Waxweed



Colombian waxweed (*Cuphea carthagenensis*) was first recorded in the Murwillumbah district of New South Wales. In recent times it has spread throughout the area in between Murwillumbah and Bundeborg. Colombian waxweed is starting to take over mown vegetation in urban areas replacing desirable grasses and decreasing the aesthetic and amenity value, especially on the Gold Coast. It has also be found in pastures and is competing with native species in bushland area. Learn more on page 6.

Upcoming Events

> **27th Australian Turfgrass Conference & Trade Expo**

Plan - Build - Play
13th - 17th June, Adelaide Convention Centre, SA

> **11th Queensland Weed Symposium**

Weed Management - Back to Basics
31st July - 3rd August, 2011 Mackay, QLD

> **Vegetation Managers Forum**

18th August, Suncorp Stadium, Brisbane, QLD

> **23rd Asian-Pacific Weed Science Conference**

Weed Management in a Changing World
25th - 30th September, The Sebel, Cairns, QLD

Innovation Update

Warm Season Release assists in reducing mowing costs for South-East Queensland

In many areas of South East Queensland, numerous mowing rotations are often inevitable in late winter and spring. This mowing activity is largely not a result of grass growth, but is due to the growth of clover, flatweed, plantain and other broadleaf weeds.

A Warm Season Release program involves the application of selective herbicides to mown vegetation in late winter or early spring. This application is intended to remove a large proportion of the winter-growing dicot weeds from the grass sward and provide the best opportunity for uninhibited growth in the coming summer season. Not only will this increase the quality of the grass sward and significantly improve its appearance, it can also eliminate the need for several mowing rotations in early spring.

Research from the IVMP project has identified that such a program would prevent Bahia grass, which is the dominant grass that triggers a mowing event, from producing seed heads. Application of the Primo and Monument combination would control broadleaf weed species and delay Bahia grass

from seeding for between eight to ten weeks. Based on an intervention height of 10cm for mown vegetation areas it would be reasonable to expect a reduction of up to three mowing rotations at the beginning of the growing season.

Therefore, a Warm Season Release program will ensure mown areas remain tidy and aesthetically pleasing at the start of the growing season. It will also delay the commencement of mowing early in the season and save asset managers significant money. This strategy also reduces competition from broadleaf weeds during spring, resulting in a better quality grass sward that is easier to manage later in the season.

Technigro will be implementing Warm Season Release programs across South East Queensland throughout the latter part of this winter season. If you are interested in learning more about how a Warm Season Release program can save your mowing budget next financial year, please do not hesitate to contact Dr Sheldon Navie on 0425 431 793 or [sheldon.navie@technigro.com.au](mailto:navie@technigro.com.au)

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Dr Travis Gannon

BINDII

Soliva sessilis



Photographs are courtesy of Dr Sheldon Navie

Description & life cycle

Bindii (*Soliva sessilis*) is chiefly a winter weed of eastern QLD and NSW. It generally first raises its head in June and dies out in November; when the weather becomes warmer.

Bindii is a small rosette-forming annual with carrot like leaves.

Bindii hugs closely to the ground and primarily is a weed of lawns, playing fields and parks, where the burrs are familiar to many bare-footed children

Like all plants, Bindii produce seeds from which new plants grow. Bindii uses a spiky prickly burr to attach their seed.

Nature has designed that the burrs stick to the fur of animals so that the Bindii spreads from place to place.

Bindii is a winter weed. The Bindii burrs are soft and fluffy when they first form in August/September. As the temperatures rise, the Bindii begins to die and the burrs turn into hard prickles.

Key features

- > It grows very low to the ground, making it impossible to be mown out.
- > It's favourite haunts include worn areas around playgrounds, picnic spots, under trees and other shady areas.
- > When the burrs can be seen (or felt!), it is too late to spray.

Control

1. A few plants can be lifted with a fork or removed with a steel garden rake, but most infestations require treatment with selected turf herbicides to achieve effective control
2. If Bindii is identified early and treatment can occur before formation of the burrs, Spearhead®, which contains a mixture of Clopyralid, Diflufenican and MCPA, is the preferred herbicide as it contains some pre-emergent qualities. It is also useful for treating Clover and other broadleaf weeds.
3. If treated late in the season, Millennium®, which contains 2,4-D, Clopyralid & Dicamba, is the preferred herbicide as it provides quicker control. This herbicide also controls Clover and other broadleaf weeds which emerge over the winter period.
4. Depending on the season and infestation, Bindii can re-emerge weeks after an initial treatment. For this reason Technigro recommends a proactive approach be developed in late Autumn to ensure your program is planned well in advance of treatment being required. Experience has proven that customers who have targeted Bindii with Spearhead at the right time of the year have fewer complaints and reduce the need to undertake follow up treatments later in the same season.

Your Provider of Vegetation Management Solutions

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for **smarter** solutions



1. Habit growing in a mown area 2. Leaves and small flowers with six petals 3. Close-up of stem covered with sticky hairs 4. Dense infestation in a park at Helensvale



Colombian waxweed (*Cuphea carthagenensis*)

Introduced

Not Declared

Colombian waxweed is a short-lived herbaceous plant from tropical America that is also known by the names tarweed and Colombian cuphea. While it has been present in Australia for some time, this member of the Lythraceae plant family has become more abundant in recent years. It is quickly becoming a common weed of native vegetation, pastures and amenity areas in the wetter parts of south-eastern Queensland and north-eastern NSW.

Distribution

This species was first recorded becoming naturalised in the Murwillumbah district of New South Wales in 1973. It then appeared in the Bundaberg area in Queensland in the 1980s. Since this time it has spread throughout the area in between, including into the Greater Brisbane and Gold Coast regions. It is now quite common and widespread in the wetter parts of south-eastern Queensland and north-eastern NSW.

Description

Colombian waxweed is an upright or spreading short-lived plant usually growing up to 45 cm tall, but occasionally reaching 60 cm in height. Its slender stems are densely covered in sticky hairs and may be green or reddish in colour. Its leaves are arranged in pairs along the stems and may be borne on very short stalks or appear almost stalkless. These small leaves (1-6 cm long and 5-25 mm wide) are somewhat oval in shape with pointed tips.

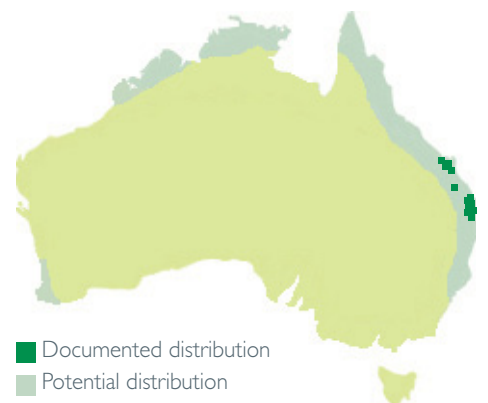
The small pink or purple flowers are borne singly or in small clusters in the leaf forks or at the tips of the branches. These flowers have a green or reddish tube at the base (4-7 mm long) that is topped with six tiny pinkish petals (1.5-2 mm long). The fruit is a tiny rounded capsule (2-5 mm across) that is contained inside the tubular flower base. When the seeds are still green this tube splits open down one side to expose them. The cluster of 4-8 exposed seeds (each about 2 mm across) quickly turn brown in colour and are shed shortly afterwards.

Quick Facts

- > A small short-lived plant usually less than 45cm tall
- > Stems densely covered with sticky hairs and bearing leaves in pairs.
- > Small pink or purplish flowers usually found in the leaf forks
- > Small brown seeds that are exposed prior to being shed.

Habitat

This species is commonly found growing in moister habitats, such as in or along waterways, swamps, wetlands or drainage lines. However, it is also found as a weed of pastures in rural areas and in managed vegetation in urban areas (mown parks, along roadsides and in amenity gardens).





1. Habit growing along a footpath 2. Close-up of brown seeds

Reproduction and Dispersal

Colombian waxweed reproduces only by seed. These seeds are probably spread to new areas by water during floods, on mowers and slashers, in mud attached to vehicles and machinery, and in contaminated agricultural produce.

Why is it an Emerging Threat?

This species is starting to take over native vegetation in urban areas on the Gold Coast, where it is replacing desirable grasses and decreasing the aesthetic and amenity value of these areas. It can also form very dense populations in pastures, replacing desirable pasture grasses and reducing the productivity of invaded areas. It also competes with and replaces native species in bushland areas, particularly in moist sites that have been disturbed in some way.

Control Methods

Individual plants may be easily hand-pulled, bagged, and disposed of in an appropriate manner, if found in small quantities in natural areas. However, this is usually impractical with larger infestations and is not inappropriate for the management of pastures and mown vegetation.

Chemical control may be required in these situations. The use of selective broadleaf herbicides should be the most suitable control option for mown vegetation and native grass pastures, but as yet there are no specific registrations for this species or details available as to which products are most effective against it.

Where large infestations of this weed are present in wetter sites in natural areas, spraying with an aquatically registered herbicide may be the only practical option. Within Queensland, the use of aquatically registered formulations of Glyphosate 360 (e.g. Round-up Biactive and Weedmaster Duo) is permitted for the spot spraying of environmental weeds such as *Cuphea carthagenensis* in non-crop situations via the APVMA off-label permit number PER 11463 (<http://permits.apvma.gov.au/PER11463.PDF>). However, unless otherwise stated in this permit, the use of the product must be in accordance with the instructions on its label. Within other state boundaries, it is recommended that all managers consult any relevant permits or government legislation applicable to their region.

The control methods referred to in Weed Watch™ should be used in accordance with the restrictions (federal and state legislation and local government laws) directly or indirectly related to each control method. These restrictions may prevent the utilisation of one or more of the methods referred to, depending on individual circumstances. While every care is taken to ensure the accuracy of this information, Technigro does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.

This information has been developed with the assistance of Dr Sheldon Navie. Photographs are also courtesy of Dr Sheldon Navie © Technigro Australia Pty Ltd 2011

Look a-likes

Colombian waxweed is closely related to Mexican heather (*Cuphea hyssopifolia*), a similar plant which is commonly cultivated in gardens in Australia. However, Mexican heather has smaller leaves (up to 20 mm long and 5 mm wide) and its stems are not covered in sticky hairs.



Top. Habit of Mexican heather
Bottom. Close-up of flowers and smaller leaves