The Vegetation Manager

Note from the CEO

Welcome to the April edition of The Vegetation Manager.

This month features our latest edition of Weed Watch, your alert to new and emerging threats. Northern Olive (*Chionanthus ramiflora*) is native to the coastal districts of northern and central Queensland. It was originally cultivated as an ornamental but has begun to spread from planted specimens and has recently become naturalised in the western suburbs of Brisbane. Northern Olive has a broad potential spread and is certainly a plant to watch out for.

We are pleased to feature Jyri Kaapro as a guest columnist. Jyri is a Research & Development specialist with Bayer and shares his knowledge on the effective use of Spearhead® in controlling broadleaf weeds.

Technigro is extremely proud to have been featured in the current edition of the Landscape Contractor Magazine. The article written by Kate Heffernan focuses on Technigro's commitment to finding better ways to manage vegetation.

Finally, the Vegetation Managers Forum is only a few days away on Thursday, April 22nd. With the mission of growing knowledge and networks the VMF has a great line up of speakers presenting on a wide range of topics specific to vegetation managers. Read more about the VMF on page 3.

Cheers,

Nick Bloor

weed watch

Welcome to Weed Watch, your alert to new and emerging threats. 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.

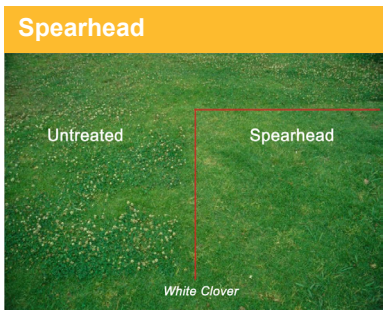
Northern Olive (*Chionanthus ramiflora*) is native to the coastal districts of northern and central Queensland. This small or medium-sized tree is occasionally cultivated as an ornamental in South East Queensland. This plant has recently begun to spread from cultivated individuals and become naturalised in the western suburbs of Brisbane.

Learn more about northern olive by reading our Weed Watch fact sheet on page 4.

Upcoming Events

- **Vegetation Managers Forum**
  22nd April, Radisson Resort, Gold Coast, QLD
- **ECO IPWEAQ South West QLD Branch Conference**
  20th & 21st May, Stanthorpe
- **World Environmental Day**
  5th June
- **26th Australian Turfgrass Conference**
  21st - 25th June, Gold Coast, QLD

Innovation update



Seed-head Suppression Trial

Spearhead® is the industry-leading selective herbicide from Bayer Environmental Science.

Spearhead® has been the standard for broadleaf weed control in the Australian turf industry since its release in 2001. Spearhead® continues to provide outstanding control of broadleaf weeds in turf, offering many other benefits, including:

- Improved efficacy
- Reduced rate of chemical use
- No volatility concerns
- Superior turf safety (cool and warm season grasses)
- A mix of active ingredients for improved resistance management
- No odour
- S5 Scheduling - safer when handling concentrate
- Additional surfactants not required

Spearhead® Herbicide for Broadleaf Weed control in turf is a formulation containing the active ingredients, MCPA as potassium salt, clopyralid as potassium salt and diflufenican. It is used at an application rate of 5 litres per hectare.

Traditional herbicides require high usage rates, create volatilisation concerns, often produce poor results and are not safe to use on some turf species. Spearhead® applies significantly less total active ingredient than another herbicides, making it safer to the public and the environment.

Spearhead® does not use any ester forms of active ingredients. Many of the older broad leaf herbicides contain esters that have the potential to cause volatilisation problems. Ester herbicides have been banned in some local government areas due to the risk to off-target plants.

Current broadleaf turf herbicides have a tendency to cause rapid desiccation of weed leaves and shoots. Recovery then occurs from the significant root systems and/or other underground components of the weed. The affect of Spearhead® is slower than other broadleaf herbicides but the ultimate result is more effective with no evidence of regrowth.

Traditionally herbicides used for broadleaf weed control in turf in Australia had two herbicide mode of action groups, C and I. Spearhead® introduced two new active ingredients (clopyralid and diflufenican) into turf registered products. In addition diflufenican was from a new mode of action group, Group F, therefore improving resistance management. This unique three-way mixture provides extended weed control (season-long) in most situations.

The first trials with Spearhead® commenced in 1997. Four years of trial work and 9 years of industry use have shown the improved efficacy and environmental benefits to turf managers in the management of broadleaf weeds offered by Spearhead®.

Jyri Kaapro is the Research Manager for Bayer Environmental Science Australia. Bayer has a strong global and local presence, with extensive and impressive product offerings in insecticides, herbicides, fungicides and seed treatments. Bayer Environmental Science are also the sponsor for the upcoming Vegetation Managers Forum.

In the news

Technigro features in the Landscape Contractor Magazine

Technigro was fortunate enough to feature in the Landscape Contractor Magazine this month. Written by Kate Heffernan, the article focuses on our commitment to changing the way vegetation is managed. Each year we invest heavily in research and development with the aim of finding safer, green and more cost effective methods of vegetation management. Technigro is also the lead partner in the Integrated Vegetation Management Project which aims at developing a sustainable model for managing mown vegetation in public spaces and roadsides.

Read the full article on our website at http://www.technigro.com.au/documents/landscape_contractor_magazine.pdf

In the news

Countdown to the 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 at the Radisson Resort on the Gold Coast. This event will feature the following topics and guest speakers:

- Vegetation Management in SEQ - Nick Bloor, Technigro
- Worker Safety: The Simple Facts - Craig Hutton, Workplace Health & Safety QLD
- New Ammunition in the Mowing Battle - Dr Henk Smith, Syngenta
- Natural Areas Management on the Gold Coast - Jen Ford, Gold Coast City Council
- Programmed Asset Management - Peter Apps, Gold Coast City Council
- Latest Emerging Threats in SEQ - Dr Sheldon Navie, Integrated Vegetation Management Project
- IVMP Update - Steve Hampton, Integrated Vegetation Management Project
- Understanding Herbicides - Ashley Neuendorf, Nuturf Australia

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

If you would be interested in attending this event, please contact Lucy on lucy.clark@technigro.com.au.

Fast Facts

- In Queensland, a Class 2 declared plant is established and has, or could have, an adverse economic, environmental or social impact.
- All landholders in Queensland must try to keep their land free of Class 2 declared plants.
- It is an offence to keep or sell a Class 2 declared plant without a permit. Fines of up to $30,000 apply!

It’s that time of the year

Crowsfoot

Perfect conditions to treat Crowsfoot

Crowsfoot (Eluesine indica) is a common weed of lawns and playing fields. Post emergent control is most effective when temperatures are below 24°C. This means a narrow window of opportunity usually in early Spring and early Autumn, making now the perfect time to work this into your treatment schedule. Learn more about Crowsfoot by reading our factsheet on page 6 or talk to one of our turf specialist on 1800 678 611.

weed watch

YOUR ALERT TO NEW AND EMERGING THREATS.

1. Habit in flower. 2. Young plant in a garden in St Lucia, Queensland. 3. Close up of tiny whitish flowers. 4. Larger plant growing in remnant native vegetation in Cairns, Queensland.

Northern Olive (*Chionanthus ramiflora*)

Introduced | Native | Not Declared

This tree is a member of the Oleaceae plant family and is native to the Indian sub-continent, southern China, Taiwan, the Philippines, New Guinea, north-eastern Australia and some Pacific Islands. Within Australia it is only native to the coastal districts of northern and central Queensland, where it is also known as native olive.

Distribution

Northern olive is native to the coastal districts of northern and central Queensland, from the Torres Strait Islands south to the Rockhampton area. It has recently become naturalised in South East Queensland.

Description

A small or medium-sized tree growing 3-25 m tall. The main trunk is covered in greyish or greyish-brown bark, while the younger stems are green, hairless, and slightly flattened. The paired leaves are simple and borne on stalks 2-5 cm long. These leaves (8-20 cm long and 4-7 cm wide) are oval or somewhat elongated in shape with entire margins. They are hairless with bright green and shiny upper surfaces, and paler and duller undersides.

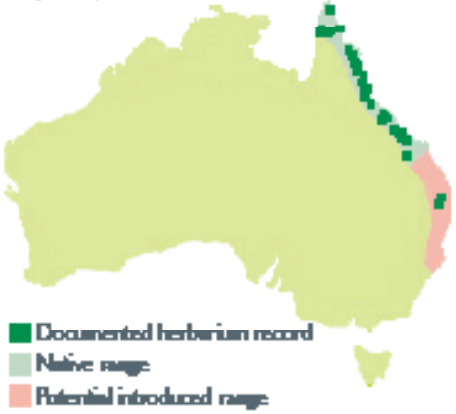
The small flowers are arranged in branched clusters (2.5-12 cm long) in the upper leaf forks or occasionally at the tips of the branches. These flowers are borne on stalks 1-6 mm long. They have four tiny green sepals (about 1 mm long) and four small white or yellowish petals (2.5-5.5 mm long). They also have two stamens and an ovary topped with a short style and stigma. The fruit resembles an olive, and has a hard centre containing a single large seed. These fruit (10-30 mm long and 5-22 mm wide) are usually oval in shape and turn from green to black or bluish-black in colour as they mature. They often have a slight, whitish, powdery coating.

Quick Facts

- Produces bluish-black fruit that resemble small olives
- Paired leaves with shiny green upper surfaces and duller undersides
- Its tiny white or yellowish flowers are arranged in branched clusters

Habitat

In northern Queensland this species is a natural component of the sub-canopy tree layer of tropical rainforests and often grows in disturbed parts of these forests. It is a potential weed of riparian vegetation, urban bushland, rainforest gaps, roadsides, disturbed sites and waste areas in sub-tropical Queensland and Northern NSW.



weed watch™

YOUR ALERT TO NEW AND EMERGING THREATS.

1. Black-black mature fruit. 2. Glossy green leaves

Reproduction and Dispersal

This species reproduces only by seed which are mainly dispersed by birds and other animals that eat its fruit.

Why is it an Emerging Threat?

Northern olive is occasionally cultivated as an ornamental in South East Queensland. However, it has begun to spread from cultivated individuals and become naturalised in the western suburbs of Brisbane. For example, it has spread from plantings in the Sherwood Arboretum becoming established along nearby creeks and coming up under trees in suburban gardens. It has also been recorded in remnant dry rainforest in several Brisbane City Council bushland reserves at Corinda. Saplings have also been reported growing in the vicinity of mature cultivated plants at the Mount Coot-tha Botanic Gardens and at The University of Queensland in St. Lucia.

Control Methods

This species is not a declared plant and therefore its control is not required by law. However, as it is an emerging environmental weed it should be removed from sensitive bushland and conservation areas outside its native range.

Small plants can be pulled out by hand, while larger saplings and trees may need to be treated with herbicides using either the cut-stump or stem injection methods. No chemicals are currently registered for its control in Australia however research suggests Glyphosate may be effective.

Within QLD, the APVMA's Environmental Weeds Permit 11463 is applicable (http://permits.apvma.gov.au/PER11463.PDF). The following table, as found in Permit 11463, states recommended rates and techniques that could be effective in controlling Northern Olive.

Chemical	Rate	Technique
Glyphosate 360 g/L	Undiluted to 1L per 2L water at 1 mL per 2 cm of hole or cut.	Drill, frill, axe or stem injection.
Glyphosate 360 g/L	Undiluted to 1 L per 12 L water	Paint stump immediately after cutting paint basal green bark and/or crown.

Before applying any chemical control methods within other state boundaries, it is recommended that you consult all relevant permits and government legislation.

Look a-likes

Northern olive can be confused with some locally native species in south-eastern Queensland including Australian olive (*Olea paniculata*), and the mock olives (*Notelaea* spp.). However, Australian olive has smaller fruit (10-15 mm long) that turn yellowish-brown when mature, while the mock olives have flowers and fruit borne in unbranched clusters.

Top: Australian olive (Photo courtesy of Atlas Document Images)
Bottom: Mock olive (Photo courtesy of Dan West)

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
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technigro
for smarter solutions

CROWSFOOT

Eleusine indica

Description & life cycle

Crowsfoot (*Eleusine indica*) is a Summer growing grass that tolerates close mowing and compacted wet or dry soils. Crowsfoot competes aggressively with turf species and germinates in spring after rain when temperatures reach 15°C – 18°C.

Crowsfoot gains its name from the way the leaves angle from the stem, making it look like "crows feet".

Reaching up to 50cm in height, Crowsfoot has a very strong, fibrous root system and is a coloniser of bare or disturbed areas. The stems are upright to sprawling and can form a mat, however they do not make root at the nodes.

The seed head consists of several short, finger-like branches radiating from the top of an erect stalk.

Leaves are shiny, green and hair free. They can be up to 9cm long.

Crowsfoot has been recorded to produce up to 60,000 seeds per plant. These seeds will not germinate until soil temperatures are in the 15-18°C range. In optimum conditions, the time between germination and flowering is approximately 5 weeks.

Key features

- Is a common weed of lawns and playing fields, where the grass cover is thick or has been disturbed during Winter.
- When matured, it forms thick clumps that disrupt the surfaces of playing fields.
- Normally infests turf and over 40 crops throughout tropical areas of the world.

Control

1. Small clumps can be chipped out or removed by hand, although mature plants have a strong, fibrous root system that resist removal.
2. An effective management strategy is to improve turf-growing conditions by alleviating soil compaction and reducing excessive moisture. The current turf registration for pre-emergent controls in Australia includes Pendimethalin, Dithiopyr and Oxidiazon. These herbicides should be applied when soil temperatures at 10cm deep average 15°C for 24 hours. This is usually from early August to September.
3. The clumping nature of this weed significantly impacts on the safety and usability of the sporting surface or park. Post emergent control can be achieved with repeat applications of Diclofop-methyl. Diclofop-methyl is most effective on Crowsfoot in temperatures below 24°C. This means a narrow window of opportunity to treat in early spring and early Autumn.

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