

BECOME A WEED BUSTER TODAY!



Hinchinbrook Shire Council would like residents to be aware that after recent flood events there is an increased risk that new and emergent weed species may be spreading into our district, particularly in areas where flood waters have entered. Recent floods were primarily the result of water traveling down from the Upper Herbert River Catchment which has increased the possibility of the dispersal of weed species such as Gamba Grass, Siam Weed and others that have previously not been prevalent in the Shire.

Councillor Kate Milton has said, "It is important that landholders become aware of these weeds and how to identify and control them. The cost of weeds to Australian Agriculture now exceeds \$4 billion per year and if weeds are spotted early landholders have a much better chance of eradicating them. Controlling 10 plants is much easier than having to deal with 10 acres of them."

ABOUT THIS GUIDE

The following information is to be used as a guide for identifying and managing weeds in the Hinchinbrook Shire. Please keep this guide to refer to later. For more information please contact Council's Environmental Services Unit.

HOW TO IDENTIFY WEEDS

In simple terms, a weed is a plant out of place. Weeds are able to spread rapidly and have unwanted economic, environmental and social impacts.

Weeds can be difficult to identify, and may be confused with plants that are not weeds, including native or endangered species, with some weeds also varying in appearance during juvenile and mature stages. It is important to correctly identify a weed to ensure that control methods are effective and appropriate. Some factors to consider when identifying a weed are where and when the weed grows, its shape, size, leaf form and flower colour.

KEY CONTACTS

Hinchinbrook Shire Council's Environmental Services Unit 4776 4607

Herbert Cane Productivity Services Limited (HCPSL) 4776 1808

Queensland Herbarium 3896 9326

Visit your local agricultural supplier for further information regarding chemical treatments.

TOOLS TO HELP IDENTIFY WEEDS

These tools can help you identify weeds on your property.

WEED SPOTTER APP

The Weed Spotter App allows you to email photographs of plants to the Queensland Herbarium for identification. It has been developed to support the Weed Spotters Network, a joint project between the Queensland Herbarium, Biosecurity Queensland and local governments with funding support from the Land Protection Fund. The Weed Spotter App is now available for Android smartphones via the Google Play Store.



IDENTIFYING WEEDS FROM SPECIMENS

If you cannot identify the plant using online tools or weed identification publications, you can take a sample to Hinchinbrook Shire Council or send a sample to the Queensland Herbarium for analysis.

Please note: There is a specific process involved in collecting and preparing weed specimens for identification. For information on how to correctly prepare a specimen for analysis please visit the Queensland Herbarium website or contact Council's Environmental Services Unit.

WEEDS TO BE ON THE LOOKOUT FOR

GAMBA GRASS

Gamba Grass is an introduced weed that competes strongly with native pasture. Its high biomass can fuel intense bushfires damaging ecosystems and threatening the safety of people and property. Gamba Grass infestations have spread extensively across various landscapes where it has significantly altered soil-nutrient cycles, water cycles and fire regimes.

If this species establishes locally it will seriously threaten critically endangered ecosystems and animal species such as the last remaining mahogany glider populations locally and abroad.

DESCRIPTION

Gamba Grass is a perennial species introduced from Africa. It has many cultivars which have the following key features:

- Mature plants grow up to four metres tall with tussocks up to 70cm in diameter
- Leaves are 30 to 60cm long and up to 3cm wide, with a distinctive white midrib and covered with soft hairs
- Stems are robust and covered in soft hairs
- The root system spreads up to one metre from the tussock, close to the soil surface
- It reproduces from seed
- Seeds are contained in a fluffy V-shaped seed head consisting of up to six groups of branches, each containing between 2 and 18 primary branches

DISTRIBUTION

Gamba Grass reproduces by seed and spreads rapidly where the natural vegetation has been disturbed. Dispersal has been aided by the sale and historical distribution of the plant as a commercial pasture plant. Gamba Grass has also been spread when transported as hay and on roadside slashers.

Although not currently known to be found locally, there is the potential for this species to have made its way into our Shire from the upper catchment during the March 2018 floods. It is important that if found Council is notified immediately so officers can ensure a management program is implemented before it establishes.

IMPACTS

Gamba Grass infestations have spread extensively across various landscapes where it has significantly altered soil-nutrient cycles, water cycles and fire regimes in the following ways:

- Gamba Grass infested landscapes carry up to eight times higher fuel loads than native forest and pastures
- Bushfires are extensive with increased intensity and heat, which affects the tree canopy, transforming woodlands to grasslands. This also poses a serious threat to people and property.
- The changing demands for nutrients and water over a large area can alter catchment hydrology and downstream wetlands and watercourses
- Competition with crops such as sugarcane, grain and horticulture

CONTROL METHODS

Pasture management

Gamba Grass should be grazed with enough stock to keep it below a height of 90cm so that seed production and potential spread is limited. This ensures that plants do not become tall and rank in the dry season and reduces potential fire hazards. Stocking rates to achieve this may be as high as five animals per hectare during the peak wet season. Maintaining pastures in good condition with high crown and foliage cover will provide some resistance against Gamba Grass invasion and the spread of existing infestations. Pastures that are in poor condition or overgrazed are at a greater risk of invasion by Gamba Grass due to bare soil and the reduced vigour of existing grass species.

Physical control

Hand pulling or digging out isolated plants is an effective control method. Ensure excess soil is shaken from the roots to prevent regrowth. Slashing to reduce seed set or to remove old rank growth should be done before seeding and after seeds have dropped to reduce the risk of seed spread. This will also improve the effectiveness of applied herbicides and reduce fire hazards. Weed seed hygiene protocols must be observed for machinery, vehicles and people working in Gamba Grass areas.

Fire

Gamba Grass is tolerant to fire at any time of the year. Burning Gamba Grass in the dry season can be hazardous to property, people

and livestock due to the high fuel loads and height of the plants, which create an extremely intense fire. Gamba Grass should be burnt only to reduce fire hazard, limit seed set and remove old rank growth. This will also improve herbicide control. Low intensity burns early in the wet season can remove old rank growth and promote new growth suitable for herbicide application. These fires can also control young Gamba Grass seedlings, reducing the establishment of new plants. Gamba Grass should not be burnt when plants have mature seeds as the updrafts caused by the fire may spread the light fluffy seeds across large distances.

Herbicide control

Gamba Grass should be sprayed early in the wet season (when leaves are at least 40cm

long) or well before May to prevent seeding and potential spread. Spraying early makes herbicide application easier as plants are smaller, less herbicide is required and good coverage is achieved. Every part of the plant should be sprayed to ensure adequate herbicide uptake. Care should be taken to limit overspray as considerable damage can be caused to non-target plants. An off-label use permit allows the use of various herbicides for the control of Gamba Grass in non-agricultural areas, bushland and forests.

When spraying herbicides within a cropping situation, it is important that the product is registered for use within the crop. Visit your local agricultural supplier for further information regarding chemical treatments.



NAVUA SEDGE

Navua Sedge is extremely aggressive and competes strongly for nutrients, light and moisture and is capable of forming dense stands that can smother many tropical pasture species. This species is already invading high valued pasture land within our Shire and residents and landowner assistance is required in managing this species.

DESCRIPTION

Navua Sedge is a vigorous grass-like, perennial sedge. It normally grows 30 to 70cm in height, but may occasionally reach two metres. The plant has a continuously growing underground stem which produces shoots at regular intervals along its length. These interconnected plants then develop an extensive shallow fibrous root system. Each plant has a cluster of drooping leaves at the base of the stem, with each leaf being approximately 5 to 15cm long and 3mm wide. The flower stalk is triangular with the flower at the apex of the stalk. Immediately under the white knob-like flower are six leaf-like bracts. Three of these are long and three are short. The seed is egg shaped with a hook on one end, and brown to black in colour.

DISTRIBUTION

Navua Sedge prefers areas with an annual rainfall exceeding 2500mm, without a distinct dry season. In areas where there is substantially less rain and a distinct dry season, it is generally restricted to damp, low-lying parts in pastures, drains or disturbed areas. Recent years have seen the species spread rapidly in the lower floodplains of the Herbert River.

IMPACTS

Navua Sedge outcompetes pastures and displaces native grasses and sedges. The plant is allelopathic, releasing a toxin which inhibits the growth and germination of other plants. It is difficult to control selectively and can decrease productivity significantly, particularly in land used for cattle production. Navua Sedge can also be a problem in sugar cane where the crop is light with poor canopy cover. It reduces crop yields and can stall the basecutter on a cane harvester.

CONTROL METHODS

Mechanical control

Physical removal is possible for small clumps. Each clump has to be dug out with a spade and the entire plant turned over, exposing the root system while making sure all aerial parts of the plant are completely covered. For large infestations, it may be possible to bring the underground roots to the surface by discing and allowing them to dry out. The effectiveness of this technique can depend on the weather, since considerable regrowth would be expected in damp conditions. Any mechanical techniques that contribute to deeper seed burial are likely to prolong seed

longevity and reduce seed losses in the paddock. Mechanical control methods are generally not a long-term solution and require repeated applications.

Pasture management

Maintaining pastures in good condition with high crown and foliage cover will provide some resistance against Navua Sedge invasion and the spread of existing infestations. Pastures that are in poor condition or overgrazed are at a greater risk of invasion due to bare soil and the reduced vigour of existing grass species.

Herbicide control

Treatments that include herbicides are the most effective option for controlling Navua Sedge stands.

Sempra® herbicide used in conjunction with the wetting agent Bonza® is currently the only selective herbicide registered for Navua Sedge control. Unfortunately, due to the competitive and persistent nature of Navua Sedge, regular application of herbicide will be required.

The herbicide should be applied during February to October when Navua Sedge is actively growing and prior to seed set.

A minimum re-treatment interval of 10 weeks

between consecutive applications should be adhered to, and a maximum of three foliar applications per year can be applied to the same area.

Use of Sempra® imposes a withholding period on livestock grazing on the treated area. Do not graze for livestock, cut for fodder or forage for 10 weeks after treatment.

When spraying herbicides within a cropping situation, it is important that the product is registered for use within the crop.

Visit your local agricultural supplier for further information regarding chemical treatments.



GIANT RAT'S TAIL GRASS

DESCRIPTION

A robust, tufted, perennial grass growing up to two metres tall. Often difficult to distinguish from other pasture grasses before maturity. However their leaves are noticeably tougher than those of any other species.

DISTRIBUTION

Widespread distribution within the Hinchinbrook Shire, often associated with road and rail transport, areas of disturbance or fallow and unused land.

IMPACTS

Giant Rat's Tail Grass is invasive and can reduce pasture productivity, out compete desirable pasture grasses, and cause significant degradation of natural areas. It can also cause significant damage to the teeth of grazing animals.

CONTROL METHODS

Foliar spray, aerial or spot pellet application, hand removal and pasture management.



CANDLE BUSH

DESCRIPTION

A coarse shrub growing up to four metres tall. Prefers open areas and sunlight. Shallow mat root system with distinctive candle-like flowers and spherical yellow petal balls at the bottom. Long, dark brown to black pods grow up from the stem and have two wings.

DISTRIBUTION

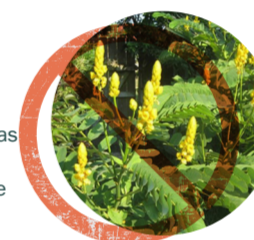
A major weed of all river systems and connected wetlands in the Lower Herbert. The heaviest infestations are in the Palm and Trebonne Creek systems. Often associated with floodwaters, road and rail transport and when animals eat and expel seeds.

IMPACTS

Candle Bush invades bushland in wetter areas to form dense thickets. This can impede access to waterways and is suspected of being poisonous to stock.

CONTROL METHODS

Foliar spray and hand removal.



SINGAPORE DAISY

DESCRIPTION

A dense, low ground cover with lobed, glossy leaves and brown/maroon runners rooting wherever they contact the soil. Distinctive yellow daisy flowers are formed year round. The plant spreads mainly from stem, from fragments and runners.

DISTRIBUTION

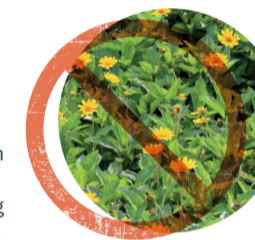
Singapore Daisy has a limited distribution across the Hinchinbrook Shire.

IMPACTS

Singapore Daisy forms dense mats smothering out native vegetation and pasture. The plant is allelopathic, releasing a toxin which inhibits the growth and germination of other plants.

CONTROL METHODS

Foliar spray and hand removal.



SIAM WEED

DESCRIPTION

A scrambling woody shrub to three metres (higher as a scrambling climber) with distinctive forked leaf venation and purple flush on new leaves. Clusters of white flowers in May-June and October are a key identification feature. Distinguished from other weeds Bluetop, Praxelis and Billy Goat Weed, which all have mauve to purple flowers and are much smaller than Siam weeds' one to three metres in height.

DISTRIBUTION

Widespread but localised in the Upper Herbert from Ravenshoe to Blencoe Creek, now localised and abundant in the middle Herbert River above Abergowrie.

IMPACTS

This species can form dense thickets and outcompete native species and pasture in both disturbed and undisturbed sites. Prefers richer soils in alluvial and riparian zones but will grow in rock and escarpment.

CONTROL METHODS

Foliar spray, hand removal and fire.



GIANT SENSITIVE PLANT

DESCRIPTION

A shrubby or sprawling annual that has four angled branches with a line of sharp, hooked prickles along the angles. Unlike Common Sensitive Weed, Giant Sensitive Plant (GSP) grows as a small to large shrub.

DISTRIBUTION

Widespread distribution within the Hinchinbrook Shire, often associated with road and rail transport, areas of disturbance or fallow and unused land.

IMPACTS

GSP will choke up cane, other crops and grasslands causing loss of crop and pasture production. The seed of GSP can remain viable for many years, even decades, so any measures to prevent spread and establishment in new areas is worthwhile.

CONTROL METHODS

Foliar spray, hand removal, slashing and chainsaw/cut stump.



OLIVE HYMENACHNE

DESCRIPTION

A robust, upright perennial aquatic grass one to two metres in height with distinctive stem clasping leaves.

DISTRIBUTION

A major weed of all river systems and connected wetlands in the lower Herbert. The heaviest infestations are in the Cattle, Palm and Trebonne Creek systems.

IMPACTS

Blocks drainage systems in cane farms. Readily invades and outcompetes native plants in wetlands and waterways. Prevents fish passage and breeding opportunity for key species like Barramundi. Hymenachne can also impede boat access and potentially damage infrastructure like bridges and weirs.

CONTROL METHODS

Foliar spray and fire.



Connect with Council

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