

# Olive hymenachne

## *Hymenachne amplexicaulis*

HABIT	STEMS & BRANCHES	LEAVES	FLOWERS	GERMINATION
 <p>Olive hymenachne is a perennial, robust grass to 2.5m tall. It can grow above or below water, with its roots in the ground.</p>	 <p>Although its stems float, they are not hollow and contain white pith. The stems can form stolons that run along the ground and produce new plants by rooting at the nodes (the joints between sections).</p>	 <p>It has long leaves (100 - 450mm) and the leaf base may be up to 30mm wide and covered with long hairs. The upper part of the leaf is narrower and without hairs. The leaf blade is heart-shaped at its base where it clasps around the stem – this is a key characteristic of this species.</p>	 <p>Flowers occur as a cylindrical cluster (200 - 400mm long) at the end of a spike that is occasionally branched. The flower cluster is made up of numerous spikelets that are short stalked, 3 - 5mm long and broadest below the middle (lance-shaped).</p>	 <p>Olive Hymenachne reproduces from both seed and broken stem fragments. It produces large numbers of viable seeds – one study reports 98% viability of seed.</p>

Olive hymenachne is declared a Class B (growth and spread to be controlled) and Class C (not to be introduced) weed in the Northern Territory and is a Weed of National Significance in Australia. Olive hymenachne is a declared weed in accordance with the *Weeds Management Act*.

### The problem

Hymenachne is a Weed of National Significance. It is regarded as one of the worst weeds in Australia because of its invasiveness, potential for spread, and economic and environmental impacts. Hymenachne is a semi-aquatic grass that was introduced as fodder in ponded pastures of central Queensland. It was subsequently planted in tropical wetlands of northern Queensland and the Northern Territory, and has since escaped from cultivation and seriously threatens northern wetlands.

Hymenachne invades permanent water bodies and seasonally inundated wetlands. It blocks waterways, potentially causing flooding and threatening drinking water. Fish habitat and nursery areas are also at risk. Hymenachne forms dense stands that reduce plant diversity and available habitat for native animals. It can also affect water quality. The potential exists to severely detract from the high conservation and tourism value of natural wetland systems (eg: Kakadu National Park).

## Habitat and distribution

As a semi-aquatic grass, hymenachne thrives best on clay soils that are inundated during the wet season rains but dry out to some extent in the dry season. The subsoil must remain moist during the dry season, as hymenachne can only withstand short periods of drought. Consequently, it is found mainly in low-lying areas along the edges of permanent water.

Hymenachne can withstand prolonged (40 weeks) flooding by growing above floodwaters. Because it grows so rapidly, it flourishes in wetlands that receive sediment and nutrient-rich water, and it may be a good indicator of such pollution. However, it does not tolerate brackish water and does not grow well in shaded areas. Hymenachne is native to tropical regions of South and Central America. It is a serious weed in Trinidad (West Indies), Florida (United States) and Surinam.

Based on climate, hymenachne could potentially occur in all seasonally flooded tropical wetlands, including the Kimberley Ranges and the central coastal region of Western Australia, the Top End of the Northern Territory and most of eastern coastal and central Queensland.

Hymenachne is currently well established across areas of pastoral land located on the floodplains of the Top End. In these areas management is focussed on containment. Elsewhere management objectives are focussed on the eradication of outlying infestations which are found near the NT/WA border, the lower Daly region and in Arnhem land. The monitoring of large, remote, inaccessible areas is a significant challenge in hymenachne management.

## Preventing spread of hymenachne

The most cost-effective way of dealing with any weed is to prevent its introduction. However, hymenachne has been actively planted throughout suitable habitat. Therefore, the main aim of hymenachne management is preventing its spread into uninfested catchments. This is a difficult task because the main agents of spread, floodwaters and probably waterfowl, are virtually impossible to control. The exclusion of hymenachne will require a policy of regular monitoring of 'at-risk' catchments and the ability to eradicate any small infestations.

## Controlling hymenachne

### Non-chemical control

Heavy grazing in the dry season can decrease seed production. Mechanical or physical removal is ineffective due to highly effective vegetative reproduction from small fragments. The use of heavy earth moving machinery to remove hymenachne from drains has met with some success in north Queensland.

### Chemical control

There are a wide range of products registered for use in the Northern Territory that can be used effectively for the management of hymenachne in accordance with the land use situation. These products contain active ingredients that include glyphosate, haloxyfop or sethoxydim for example.

Chemical and concentration	Rate	Situation, method and comments
<b>Glyphosate 360 g/L</b> Various trade names and formulations	10ml / 1L	<b>Seedling (individuals or infestation)</b> Foliar spray – apply when actively growing

Optimum treatment times – Darker colours represent preferred months for foliar treatment											
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec

## **Follow Up**

Spraying must be repeated about every three months to control regrowth.

## **Disclaimer**

In the Northern Territory, a registered product must only be used in situations consistent to those appearing on the label, unless authorised under a permit; and a person:

- must not have in their possession or use a chemical product unless the product is registered in Australia (exemptions apply)
- may use a registered product at a concentration, rate or frequency lower than that specified on the label unless this is specifically prohibited on the label. This does not apply to herbicide use occurring under an APVMA permit
- may use a registered product to control a pest not specified on the label provided the pest is in a situation that is on the label and use on that pest is not specifically prohibited on the label
- may also use a registered product using a method not specified on the label unless this is specifically prohibited on the label.

Users of agricultural (or veterinary) chemical products must always read the label and any permit, before using the product and strictly comply with the directions on the label and any conditions of any permit. Users are not absolved from compliance with the directions on the label or conditions of the permit by reason of any statement made in or omission from this publication.

## **Further information**

Weed Management Officers from the Weed Management Branch can provide advice on all aspects of weed management including control techniques, biological control, legislative responsibilities, policy advice, monitoring and reporting and regional planning.

For further information on weed management planning, integrated control, herbicide application techniques and monitoring please refer to the [NT Weed Management Handbook](#).