



Government
of South Australia

WEED IDENTIFICATION NOTES

ANIMAL AND PLANT CONTROL COMMISSION

BROOMRAPES



Branched broomrape showing root system



Branched broomrape in flower



Native broomrape



Clover broomrape

BROOMRAPES



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Broomrapes, *Orobanche* species, are parasitic weeds of broadleaf plants. Two introduced species of broomrape are currently found in Australia: branched broomrape, *O. ramosa*, and clover broomrape, *O. minor*. Clover broomrape is already naturalised in Australia and has not been recorded as causing serious problems to date. A recently discovered infestation of branched broomrape near Murray Bridge is a much greater threat to agriculture. There is also a native broomrape, *O. cernua* var. *australiana* which is rare but has been found growing on native plants along the Murray River. It has never been found attacking crops.

Distribution

Eyre Peninsula	- one known infestation of <i>O. minor</i>
Northern pastoral	- not known to be present
Northern ag districts / Yorke Peninsula	- a few outbreaks of <i>O. minor</i> in townships
Murray Mallee	- large localised infestation of <i>O. ramosa</i> near Murray Bridge; small isolated patches of <i>O. minor</i> in the Riverland area
South East	- one record of <i>O. minor</i>
Central region	- few small isolated infestations of <i>O. minor</i>

Impacts

The potential impact of broomrape is very serious in terms of both production losses and threats to export markets. The main industries at risk are oilseeds, field peas, vegetables, lupins and vetch; and in particular the seed industry for these crops. The indirect impact on the cereal seed industry could also be devastating if broomrape seeds were found in export produce due to the broomrape growing on broadleaf weeds within cereal crops.

Recognition

Broomrape will only be found alongside a suitable broadleaf host plant since it is a parasite. The underground parts look like a mass of fleshy roots, some of them attached to the roots of the host plant, with a bulb-like tubercle from which the flowering stem grows.

The only part of the broomrape plant that can be seen above the ground is the flowering shoot, and this is only visible for a few months each year. It is leafless and yellow to buff coloured. No part of the plant is green, and the only leaves produced are a few small brownish scales.

Branched broomrape has stems 5-20cm high, densely branched from the base, with a row of lavender-blue trumpet-shaped flowers protruding from the sides of the stem. The other species have taller unbranched stems 15-60cm high, and dark mauve to dull cream flowers.

The seeds of broomrape are dust sized and dark brown, and each single capsule contains 600-800 seeds; they have a rough surface that sticks them to dry surfaces including the seeds of other plants.

Biology

Seed may stay viable for many years until the right conditions for germination are met, forming a large seed bank in the soil. The seeds germinate in response to chemicals exuded from the roots of plants, but they must stay moist in the soil at the right temperature for at least a week to respond to these chemicals. The underground seedling is prompted to attach to a host root by other chemical stimuli. After attachment the parasite lives under the ground and accumulates food reserves for 1 to 2 months, after which time the flowering stems emerge in spring. Flowering begins within days of emergence and the seed can ripen within a further week.

Broomrape seed is spread by livestock - through the gut or on their feet - farm machinery via soil (particularly in wet periods), contaminated fodder and seed, contaminated soil and sand, flood water. Wind dispersal is also possible, especially in a sand dune blow-out, but does not happen frequently.

Further Information:

Broomrape Operations Centre 1800 245 704

Animal and Plant Control Commission 08 8303 9500

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For more advice on recognising and controlling broomrape, contact your local Animal and Plant Control Board:



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