Olive (feral)

Olea europaea (excluding cultivated trees)

Limestone Coast Landscape Board

DECLARED

Feral European olives are a major pest plant in native vegetation where they can reduce biodiversity and degrade fauna habitat.

The oil-rich trees burn with great heat and are a significant hazard in bushfires.

Feral olives are a declared plant under the *Landscape South Australia Act 2019*. Olive trees planted and maintained for domestic, public amenity or commercial purposes, are not declared.

Description

European olive is an erect, bushy tree growing up to 12 m tall.

It has a branched root system from a lignotuber which stores energy and generates new stems.

The trunk has rough grey to black bark. Leaves are narrow, glossy, dark green on top and silvery underneath. Small cream flowers with four petals appear in large clusters in late spring.

Mature trees produce thousands of fruit each year, each bearing one seed. The fruit is initially green and becomes purple-black as it ripens over summer.

Seeds germinate mainly in autumn and seedlings grow during winter. New plants are several years old before flowering.

New shoots and suckers can develop from the woody roots after the trunk is injured or removed.

Olive lignotuber

Feral olive tree on roadside

Impacts

Feral olives are a major pest plant of grassy woodlands and a number of ecological habitats. Feral olives develop a dense mid-storey which displaces shrubs and suppresses the growth of ground-cover plants.

They are a strong competitor and can form new infestations in undisturbed plant communities. Mass germinations can follow vegetation disturbance.

In severe infestations the understorey can be almost non-existent, which can create an erosion risk particularly along watercourses.

Olive trees are rich in oil and burn with intense heat. They increase the impact of bushfires on native vegetation and significantly increase the danger of fire fighting.

Distribution

European olives are native to the Mediterranean.

Many of the feral olives in the Limestone Coast region are believed to have been first introduced in 1836 from plantings. Ongoing escapees from tree crops and gardens contribute to the wild population.

Feral olives are well-adapted to the Limestone Coast's cool wet winters and warm dry summers. They are very tolerant of drought. They grow in a wide range of soils from deep loams to rocky outcrops.

Feral olives occur in scattered pockets in the Limestone Coast region and these infestations are spreading and becoming denser. Infestations have been increasing in districts near Padthway, Bordertown, Robe and Mount Gambier.

The oil-rich fruit is sought after by birds and mammals, including foxes. Seed distributed by animals can establish new infestations many kilometres from the original site.

Seeds and root fragments can be transported in soil and moved through earthworks.

Control methods

Effective control of feral olives requires a long-term plan.

The trees are hardy, have a persistent root system and have a long-lived seed bank. Regrowth and ongoing germination require continued control effort.

For advice on control techniques contact your nearest Limestone Coast Landscape Board office.

Control options include chemical control such as spraying, basal bark application, cutting and pasting and drill and fill. Other options include mechanical control and hand pulling. All methods require persistent follow up.

You can find more information on controlling this weed on Biosecurity SA's website at www.pir.sa.gov.au.

Feral olive plant with fruit

Surveying a roadside feral olive plant

Hand pull

Suitable when seedlings are small and in winter when soils are moist, making the plant and roots easier to remove.

Any disturbed soil should be tamped down after removal.

Grubbing

A grubber or 'tree popper' can be used in winter when soils are moist. Suitable for plants with stems from 6 cm to 1.5 m high.

Any disturbed soil should be stamped down after removal.

Cut and swab

Suitable for small seedlings and trees where minimal soil disturbance is desired. Can be treated all year, however avoid hot periods when the plant may be stressed.

When using this method it is recommended that the trunk(s) be cut as low as possible and swabbed with the appropriate chemicals as listed in the registered herbicide and permit rates.

Drill and fill

Holes are drilled 2-3 cm deep, into the lignotuber and trunk, about 40 mm apart and for a minimum of three rows. Roundup CT® glyphosate (450g/L) undiluted, or up to 1:1 PER 13371 (exp.2022) is then applied within 20 seconds to the holes. The dead tree can be left in situ to provide habitat or sentry points for birds, or removed at a later time. Suitable for small and mature trees. Can be treated all year, however avoid hot periods when the plant may be stressed.

Frill and fill

Grooves are cut with a hatchet or chainsaw around the lignotuber and trunk, 2-3 cm deep, about 40 mm apart (being careful not to ringbark the plant), at a 45 degree angle and for a minimum of three rows (the more the better). Fill each groove or cut with Roundup CT® glyphosate (450g/L) undiluted, or up to 1:1 PER 13371 (exp.2022) within 20 seconds.

Suitable for small and mature trees. Can be treated all year, however avoid hot periods when the plant may be stressed.

Spot spray

Use of a Roundup CT®glyphosate (360g/L) + Brush-Off® metsulfuron-methyl (600g/kg) with an organosilicone penetrant (i.e. Pulse® and spray oil in the permit tank mix rate of 1L + 10g per 100 L water (PER 13371 exp 2022) is effective. Suitable for seedlings and small plants up to 1.5 m tall. Can be treated all year, however avoid hot periods when the plant may be stressed.

Mechanical removal

Mature trees and their stumps can be bulldozed or mechanically removed, however the potential damage this may cause to soils must be weighed up. If necessary a Water Affecting Activity permit may be required if the works being carried out are in a watercourse. Please contact your local Limestone Coast Landscape Board office for more information.

Feral olive drill and fill control method

Basal treatment

Stems and trunks need to be dry. Do not apply for 24 hours after rainfall or where rain is expected within the next 24 hours.

Temperatures should be between 15–30 degrees Celsius. Wind strength should be light to moderate (< 30 km/h).

Basal treatment for olives is recommended at a rate of

- 1lt Garlon® triclopyr 600 g/l to 30 litres diesel or bio safe oil, as per label and APVMA permit no.PER12932.

All techniques should be monitored and any regrowth or new seedlings treated via the hand pull, grub, basal bark or spot spray techniques.

Feral olive basal bark spraying treatment method

Native alternatives to olive plants

Landholders are encouraged to consider their choice when purchasing an olive tree. There is significant maintenance required in their management and alternative native plant options offer similar aesthetic qualities along with the added benefit of habitat for native wildlife. Native alternatives include but are not limited to; wattles *(Acacia spp.)*, drooping sheoak *(Allocasuarina verticillata)*, hakea spp., sweet bursaria *(Bursaria spinosa)*, sticky hop-bush *(Dodonea viscosa spp.)*, sticky boobialla *(Myoporum viscosum)*, banksia *(Banksia marginata or ornata)* and native apricot *(Pittosporum angustifolium)*.

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More information

Limestone Coast Landscape Board

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Registered herbicide and permit rates for Olive (feral)

Limestone Coast Landscape Board

Control option	Product	Herbicide Group	Application	Application rate *(with water unless indicated)*	Situation	Timing	
triclopyr (600g/L)	Garlon 600® Registered	I	Basal bark	2L/60L biodiesel or diesel	Bushland, pastures and other non-crop areas.		Plants up to 5 cm basal diameter
triclopyr (600g/L)	Garlon 600® Registered	I	Cut stump	2L/60L biodiesel or diesel	Bushland, pastures and other non-crop areas.	Any time	Apply immediately after cutting.
picloram (44.7g/L) + aminopyralid (4.7 g/L)	Vigilant II® Registered	I	Cut stump	Undiluted gel	Native vegetation and other non-crop areas.	Any time	For seedlings and saplings. Cut stump and apply 3-5 mm thick layer immediately.
glyphosate (450g/L)	Roundup CT® PER 13371 (exp. 2022)	M	Cut stump	Undiluted	Conservation areas, bushland and other non-crop areas.	Any time	Effective on smaller plants only.
glyphosate (450g/L)	Roundup CT® PER 13371 (exp. 2022)	M	Stem injection	Undiluted, or up to 1:1	Conservation areas, bushland and other non-crop areas.	While actively growing	Place herbicide in holes drilled around trunk.
glyphosate (360g/L) + metsulfu-ron-methyl (600g/kg)	Roundup® + Brush-Off® PER 13371 (exp. 2022)	M,B	Spot spray	1L + 10g/100L	Conservation areas, bushland and other non-crop areas.	While actively growing	Add organosilicone penetrant and spray oil. For seedlings and saplings. Follow up control may be required. Non selective, avoid contact with desirable plants.
glyphosate dual salt (360g/L)	Weedmaster Duo® PER 13371 (exp. 2022)	M	Cut stump	1L/1L	Conservation areas, bushland and other non-crop areas.	Any time	Apply immediately after cutting.
glyphosate dual salt (360g/L)	Weedmaster Duo® PER 13371 (exp. 2022)	M	Stem injection	1L/1L	Conservation areas, bushland and other non-crop areas.	While actively growing	
metsulfu-ron-methyl (600g/kg)	Brush-Off® PER 13371 (exp. 2022)	B	Spot spray	15g/100L	Conservation areas, bushland and other non-crop areas.	While actively growing	Add a surfactant. Soil active herbicide, may damage desirable vegetation.
triclopyr (600g/L)	Garlon 600® PER 12932 (exp. 2021)	I	Stem injection	Undiluted	Bushland, pastures and other non-crop areas.	While actively growing	Place herbicide in holes drilled around trunk.
triclopyr (600g/L)	Garlon 600® PER 12932 (exp. 2021)	I	Spot spray	170mL/100L	Bushland, pastures and other non-crop areas.	While actively growing	Add a marking agent. Suitable for controlling seedlings and saplings.

Important: Always read the product label before undertaking herbicide application. Visit www.pir.sa.gov.au/biosecurity for further information on declared weed control.