

PEST PLANTS OF PORT STEPHENS

African Olive

(*Olea europaea* - subsp. *cuspidata*)



IDENTIFICATION

Appearance: An evergreen tree usually growing to heights and widths of 5m to 10m. Bark is pale to dark grey developing a rough texture with age.

Leaves: The upper surface of the leaves is glossy grey-green and the underside is silver, green to brown. Leaves have a hooked tip.

Flowers: White flowers appear in spring on branchlets at the leaf axils (where leaves join the stem). Flowering time is between October and December.

Fruit: The fruit is oval shaped, initially green maturing over autumn – winter to purple-black. African Olive produce up to 25,000 seeds per season when mature.

Alert: This weed can be confused with the native Olive (*Notelaea longifolia*).

Dispersal: Seed is spread by birds and foxes.

Impacts: Highly invasive weed in dry woodlands, riverine, coastal headlands and dunes. It out-competes native vegetation and prevents regeneration. African Olives aggressively invade cleared land, reducing the value and productivity of properties. They provide poor habitat for native animals and good habitat for feral birds such as Indian Mynas. If not controlled, the plant will take over large areas forming huge, dense monocultures of African Olive.

Current distribution: Significant emerging infestation occurs in Hinton, Wallalong, Osterley and Brandy Hill.

Legal Requirement: Currently only an Environmental Weed in Port Stephens.

Plant this instead: Local species of Grevilleas, Banksias and Hakeas.

CONTROL MEASURES

Seedlings can be hand pulled if all the roots can be removed. Beds of dense seedlings can be sprayed.



More established plants will need to be cut and painted with herbicide. Apply herbicide mixture to cut surface as quickly as possible.



Roundup (Glyphosate 360g/L) 100ml: 150ml water (no wetting agent)

Garlon (Triclopyr 600g/L) 800ml/10 litres diesel

For larger plants, inject herbicide into the stem or basal bark spray. The wood of African Olives is very hard, so ensure drilling or chiselling gets well into the stem.

Basal bark spray: suitable for tree trunks up to 50cm diameter. Spray herbicide/diesel mix directly onto lower 90cm of each stem or trunk on all sides. Usually takes several weeks to exert control. Garlon (Triclopyr 600g/L) 800ml/10 litres diesel

Stem injection: use a drill to make downward angled holes into the sapwood about 5cm apart. Inject herbicide into holes immediately after each hole is drilled. Roundup (Glyphosate 360g/L) 100%

Because the berries are bird spread it is best to treat plants before they fruit. If you can't bag the fruit, treat in hot compost to kill the seeds. Other parts of the plant can be picked up and spread out off the ground to dry and breakdown.



African Olive

OTHER TREATMENT TECHNIQUES

| Technique | Application method | Comments |
|----------------------------|---|---|
| Cut Stump | Plants are sawn off close to ground level and undiluted Glyphosate 360g/l (eg Roundup®) is applied by brush or applicator bottle (within 30 seconds to the entire stump APVMA permit 9158). | Plants growing in damp areas or treated during dry conditions may require special attention as they may reshoot. |
| Foliar Spray | Spray control of seedlings and coppice shoots using Glyphosate 360g/l diluted at 1:75 or 1:100 rate (APVMA permit 9158) | Effectiveness is highly variable. Reports increased effectiveness in seedling control with the addition of Urea in spray tank. |
| Tree injection | Portable drills are used to drill 3cm deep holes into the trunk at a 45 degree angle, spaced 4 cm apart. Undiluted Glyphosate 360 g/l at a rate of 2.5ml per hole is injected into each hole using an applicator bottle or backpack injection unit (APVMA permit 9158). Frilling technique is similar, with chisels used instead of portable drills to create an opening at regular intervals in the trunk for the injection of glyphosate. | This is commonly used to control African Olive in inaccessible areas, such as olive "halos" around large Eucalypt perch trees, where cutting and removal of material is not practical. African Olives are left in situ and can be useful in maintaining temporary habitat for small native birds. |
| Basal bark spray | Garlon® (Triclopyr) diluted in diesel oil applied to the first 30 cm of trunk, wetting the bark to runoff point. In NSW & SA Garlon® is registered for use on Olive and both a cut stump and basal bark application at a rate of 1:14 with diesel oil (Reg label 31898). | Simple-to-apply technique, outstanding in controlling olive regardless of size. Cost effective, but best done by experienced personnel with spray equipment fitted with Viton® seals (resistant to mineral oils). Care is required to prevent soil contamination in bushland areas. |
| Fire | Young olive plants <1 metre are killed by low intensity fire. | Mature African Olive trees can be controlled by fire when individual cut stumps are exposed to intense heat produced by large pile burns placed on top. |
| Physical removal/cultural | Seedlings can be hand pulled at the <10 cm stage, which is best done during moist soil conditions. African Olive is palatable to stock, who effectively control the development of young seedlings. In agricultural situations, African Olive is readily controlled by increasing grazing pressure. | |
| Mechanical removal | Mechanical control of mature plants with drum mulcher (attached to excavator) has been used where access is available and erosion hazard is low. | Highly effective for large scale infestations, provided African Olive trees and seedlings are treated with herbicide prior to mechanical mulching. Mulched material maintains soil cover. |
| Biological control Options | A number of property owners have been experimenting with chemical free methods including the use of specially trained goats. | The use of herd goats has been used in a four week trial at the Mt Annan Botanical Gardens, with great success. |

Table Information taken from Cuneo, P & Leishman M.R (2006) African Olive (*Olea europaea* - subsp. *cuspidata*) as an environmental weed in Eastern Australia; A review; *Cunninghamia* 9(4): 545-577

