Olives: friend or foe?

The European olive (Olea europaea spp. europaea) is a serious environmental weed in many areas of south eastern Australia. It was introduced to Australia around 1800 and it is now widely cultivated in most States and Territories.

Prior to the 1990s many groves were abandoned due to poor economics resulting from low global demand and high costs of picking. The olives from these groves have been spread by birds (at least 16 bird species in South Australia feed on olives), foxes and other mammals that eat the fruit. Feral olives have invaded a range of native vegetation types and become established along roadsides and in degraded pasture. Olives that are not planted and maintained for domestic or commercial uses are proclaimed as pest plants for most of the Mount Lofty Ranges.

The Natural Resources Management Act 2004 (which replaces the Animal and Plant Control Act) requires landowners (and this can implicate the garden contractor responsible for maintaining a garden) to control proclaimed plants on their property. If proclaimed plants are detected on a property, there is a legal requirement to control them and develop suitable management plans.

Under the Act, Olive not planted and maintained for domestic or commercial use is a Class 5d plant to which Section 57(2) applies; “an owner of land within a control area for a class of plants to which this subsection applies must control and keep controlled all plants of that class on that land.”

Current wild olive infestations have mostly arisen from deliberately planted trees. Seeds are spread by birds and animals. Wild olives have invaded agricultural land and native vegetation throughout the Adelaide Hills and increased the fire hazard in many areas.

Fruit on bearing trees should be harvested each year and any self-sown plant should be controlled. Minimising losses of fruit to birds will also minimise the spread of olives by seed. This can be done by:
- Prompt harvesting of olives
- Netting of orchards with bird-proof mesh on permanent posts
- An integrated program using a variety of bird-scaring techniques
- A buffer zone around the olives with perching sites where birds can drop seeds.
- Fox baiting programs in co-operation with adjoining landholders

If these practices are not maintained, Animal and Plant Control Officers may undertake control of self-sown olives on properties at landholders expense and may even authorise the removal of neglected trees. Eradication of feral olives from a site will take at least 3 years; target mature trees in the first year, regrowth and seedlings in subsequent years.

There are a number of different methods you can use to treat woody weeds. The option you choose will be determined by the size of the problem, the resources you have available and time constraints you are working to.

Cut stump application mature trees
Cut stems as close to the ground as practical, no higher than 10–15cm from ground level. Thoroughly spray the herbicide mixture immediately after the cut is made (within 30 seconds). This is necessary because the plant can seal the cut quickly, thus barring the chemical from penetrating into the sapstream.

Drill & Fill - Stem injection application Mature trees
Using a cordless drill or brace and bit, drill a hole into the base of the plant. Drill an angle of 45°, through the bark, and into the sapwood. Within 20-30 seconds fill this hole with undiluted herbicide. Repeat this process at 5cm intervals around the trunk. Herbicide is immediately placed/injected into the hole or cut. The objective is to reach the sapwood layer just under the bark (the cambium growth layer), which will transport the chemical throughout the plant.
Frilling Mature trees
Make horizontal cuts with a narrow-bladed axe (5–7cm wide) through the bark of the woody weed into the sapstream at waist height. Space these at 10–13cms centres. Leave the axe in the cut and immediately (within three seconds) apply the herbicide down the axe blade, to ensure the full dose enters the sapstream. This is necessary because the plant can seal the cut quickly, thus barring the chemical penetrating into the sapstream.
Do not treat trees with poor sap flow which occurs when plants are stressed. Where low branches are encountered place a cut immediately below the branch.

Brushcutter application for small saplings
This brushcutter takes the back-breaking effort out of the cut stump application method. It uses a high-powered tungsten-tipped cutting blade to remove the top growth as close to ground level as possible. A sprayer attachment delivers a dose of herbicide almost immediately to the cut surface.

An alternative to the cut and swab or drill and fill method. It offers advantages where access is difficult and the expense of removing large amounts of cut foliage is a consideration. It is more effective than drill and fill, where the holes are often too deep, going beyond the cambium layer where the poison can be taken up by the tree. There are no concerns about power or batteries to run drills. A chain saw is still required to remove lower branches, enabling good access to the base of the tree. It is slightly more labour intensive and time consuming but more effective.

The Chisel Method - this technique involves the chiselling of small chips around the base of the trees, about 3-5cm apart into the cambium layer. This is done with a hammer and chisel. Glyphosate® is then applied to the fresh cuts from a squeeze bottle. This must be done within one minute of making the cut and preferably within 20 seconds. Olive trees are usually multi trunked and it is necessary to make cuts in between the trunks as well as completely around the base on the lignotuber.

Large trees have three layers of chiselling done; around the base, at the start of the branches and about 30 – 40 cm up. Treatment is best carried out in winter to spring – when trees are taking up moisture. It is less effective in dry, summer time.
Usually trees will start to look sick one week after treatment; appear to be dying after two weeks and will be virtually defoliated after a month. Olives are notoriously difficult to kill and good success has been achieved with this method. It is recommended to go back about a year after treatment to check for any regrowth or creamy, live wood. Killing Olive trees where they stand has less impact on the environment than cut and swab and removal of debris.

Basal bark application Saplings
Use this method to treat saplings and regrowth less than 5 cm in basal diameter. The herbicide is applied mixed with diesel to assist penetration through the bark. Weeds with thick corky bark cannot be successfully treated using this method.
Do not treat if the stems are wet or charred as this prevents the herbicide from penetrating through the bark.
Make sure you thoroughly treat the whole circumference of each stem from ground level to a height of 30cm.
Some woody weeds can be treated when basal diameter is greater than 5 cm. Refer to the product label for details. Diesel assists to penetrate bark.

Pellet or granular soil application
Apply pellets to the soil prior to spring or summer rains. It is essential that the root area of the woody weed is evenly treated with the pellets or granules. This means covering the ground under the canopy from the root crown or stems to 30 cm beyond the dripline. The herbicide acts by moving into the root zone of the weed following rain, and from there it is absorbed into the plant.

Spray drift
Spray only when there is no movement of air towards non-target susceptible vegetation or waterways. Drift can be greatly reduced by using nozzles and spray pressures which produce a minimum proportion of small, drift-prone droplets – eg. lower pressure, larger droplets and higher spray volume. Under ideal conditions, spraying can be carried out near susceptible non-target plants and waterways by separating them with a suitable size buffer area.