

FACT SHEET



Australian Government



New South Wales
Government



Hawkesbury-Nepean

CMA CATCHMENT MANAGEMENT AUTHORITY

BASIC WEED CONTROL TECHNIQUES



Different types of weeds call for different measures to remove them. This fact sheet provides you with the techniques you need to employ for the four main types of weeds:

1. Smaller weeds
2. Vines and scramblers
3. Woody weeds
4. Weeds with underground reproductive systems

REMOVING WEEDS FROM STATE PROTECTED LAND

Controlling exotic or dead trees from areas classed as "state protected" land in NSW (e.g highly erodable, steep or riparian) can be carried out without approval if guidelines are followed under the Native Vegetation Conservation Act 1997. See www.environment.nsw.gov.au/resources/vegetation/nvinfosheet15.pdf

IMPORTANT MESSAGE ABOUT SELECTING AND USING HERBICIDES

SELECTING THE MOST APPROPRIATE HERBICIDE

- Ensure the weed is accurately identified. – the HNCMA and agencies listed below can assist
- Seek advice on the most appropriate herbicide and method of application for your needs (e.g. NSW Department of Primary Industries, local council weed officers, or Greening Australia)
- Know the types of natives present and their proximity to weeds
- Know how best to apply the herbicide (e.g. spraying, cut stump, stem injection)
- Be careful when selecting and using herbicides near streams so as not to contaminate the water. There are only a few herbicides registered for use near water.
- Most herbicides work best when plants are actively growing and not stressed from drought or frosts

HOW TO SAFELY USE HERBICIDES

- Read the label before opening the container
- Follow the instructions on the label
- Wear protective clothing as per the label
- Wash your hands after use and before eating or smoking

1. SMALLER WEEDS (e.g less than one metre tall)

Examples - Small soft weeds (fleabane, crofton weed, small grasses) and seedlings of weeds (privet, lantana, moth vine, serrated tussock, African lovegrass)

HOW TO REMOVE WEEDS LESS THAN ONE METRE TALL

A. By Hand (for ease and best results do this when the soil is moist. Wearing gloves is also highly recommended)

Step 1 – Gently remove any seeds or fruits and carefully place into a bag

Step 2 – Grasp stem at ground level

Step 3 – Rock plant backwards and forwards to loosen roots, and pull out gently

Step 4 – Carefully tap the roots to dislodge any soil. Replace disturbed soil and pat down

Step 5 - Leave weeds so that roots do not make contact with soil e.g. on a rock or hung in a tree

N.B. To avoid fatigue when using hand removal, vary your body position

B. Foliar Spray

There are three broad types of spraying; spot spraying, broad area spraying and splatter gun application. Spot spraying is recommended for targeting weeds where natives are present. Broad area spraying is used when there are no native plants present. Splatter guns are useful for dense infestations of particular weeds (eg lantana) and can be targeted to avoid natives.

Step 1 – Check weather conditions to ensure no rain is forecast and little wind.

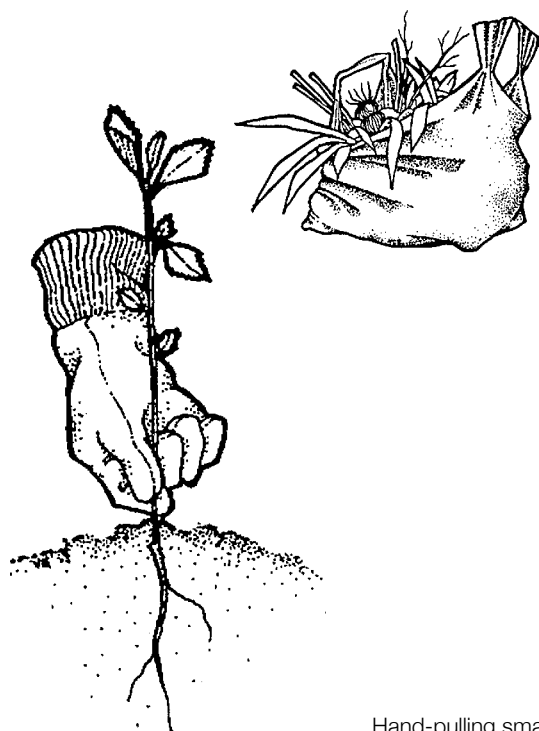
Step 2 – Identify native plants in the target area and clear weeds around them (half to one metre) using methods other than foliar spray that do not damage the native plants.

Step 3 – Prepare herbicide and equipment in accordance with manufacturer's instructions.

Step 4 – Using the appropriate method, spray the target area taking care to avoid spray 'drift' so as not to spray natives.

Note: protective clothing and equipment should be worn – including long pants, sleeves, and gloves, eye protection etc.

Note: Serrated tussock can also be removed by chipping with a mattock or by ploughing.



Hand-pulling small weeds

2. VINES AND SCRAMBLERS

Examples - balloon vine, morning glory, honeysuckle, cape ivy, jasmine, madeira vine

HOW TO REMOVE VINES AND SCRAMBLERS

A. By Hand

Step 1 – Take hold of one runner and gently pull it along the ground towards you

Step 2 – Check points of resistance where fibrous roots grow from the nodes. Cut roots with a knife or dig out with a trowel and continue to follow the runner

Step 3 – Manually remove the major root systems or scrape/cut and paint with herbicide

Step 4 – Bag any reproductive parts

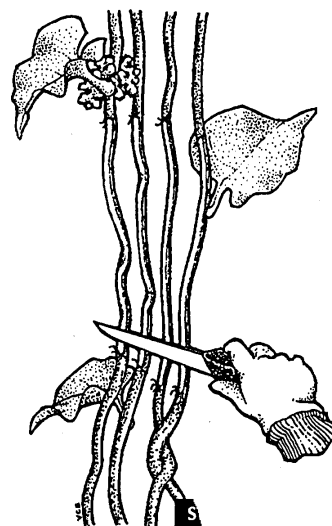
N.B. To avoid fatigue when using hand removal, vary your body position. Wearing gloves is also highly recommended.

B. Stem Scraping

Step 1 – With a knife, scrape 15 to 30 cm off the stem to reach the layer below the bark/outer layer. No more than half the stem diameter should be scraped. Do not ring bark. Larger stems (>1 cm) should have two scrapes opposite each other

Step 2 – Immediately apply herbicide along the length of the scrape. Vines can be left hanging in trees after treatment

Step 3 – (For madeira vine only) Aerial tubers on madeira vine should die with the plant when stem scraping is used. Those that fall from the plant in the scraping process need to be bagged



Stem scraping

C. Skirting (e.g for balloon vine)

Step 1 – With a pair of secateurs or loppers cut stems of vines leading into the tree canopy at approximately waist height. This will kill the top of the vine and allow light to reach the plant being smothered.

Step 2 – Cut and immediately paint stems still attached to the soil with herbicide.

D. Foliar Spray

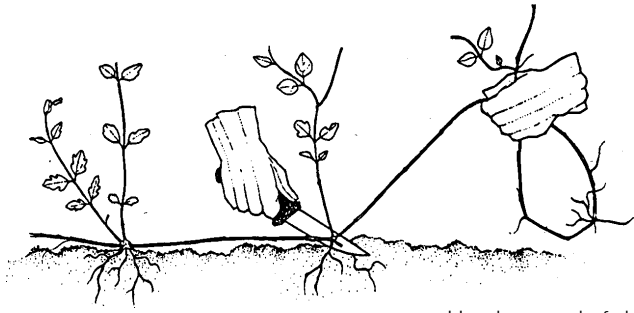
There are three broad types of spraying; spot spraying, broad area spraying and splatter gun application. Spot spraying involves targeting weeds where natives are present. Broad area spraying is used when there are no native plants present. Splatter guns are useful for dense infestations of particular weeds and can be targeted to avoid natives.

Step 1 – Check weather conditions to ensure no rain is forecast and little wind.

Step 2 – Identify native plants in the target area and clear weeds around them (half to one metre)

Step 3 – Prepare herbicide and equipment in accordance with manufacturer's instructions.

Step 4 – Using the appropriate method, spray the target area taking care of spray 'drift' so as not to spray natives. Note: protective clothing and equipment should be worn – including long pants, sleeves, and gloves, eye protection etc.



Hand removal of vines

3. WOODY WEEDS

Examples – willow, false bamboo, honey locust, hawthorn, gorse, wild tobacco, African boxthorn, African olive, lantana, blackberry, bitou bush, cotoneaster, privet, camphor laurel, mickey mouse plant (ochna) and cassia/senna

HOW TO REMOVE WOODY WEEDS

A. Cut and Paint (Useful for small to medium sized woody weeds up to 10cm basal diameter)

Step 1 – Make a horizontal cut as close to the ground as possible with secateurs, loppers, brushcutter, chainsaw or a bush saw. Cuts should be horizontal to prevent herbicide from running off the stump. Please note that sharp angle cuts are hazardous

Step 2 – Immediately apply herbicide to the exposed flat stump surface before the plant cells close and translocation of herbicide ceases

Step 3 – If plants resprout, cut and paint the shoots after sufficient regrowth has occurred

B. Drilling

Step 1 – At the base of the tree drill holes at a 45 degree angle into the sapwood at 5 cm intervals. For multi-stemmed plants, inject below the lowest branch or treat each stem individually. Please note that plants should be healthy and actively growing.

Step 2 – Immediately fill each hole or cut with herbicide before the plant cells close (within 30 seconds) and translocation of herbicide ceases

Step 3 - Repeat the process at 5 cm intervals around the tree

N.B. Deciduous plants are best treated from late Spring to early Autumn when the plant is growing the most.

C. Frilling or Chipping

Step 1 - Make a cut into the sapwood with a chisel or axe. For multi-stemmed plants, chip below the lowest branch or treat each stem individually. Please note that plants should be healthy and actively growing

Step 2 – Immediately fill each hole or cut with herbicide before the plant cells close (within 30 seconds) and translocation of herbicide ceases

Step 3 - Repeat the process at 5 cm intervals around the tree

N.B. Deciduous plants are best treated from late Spring to early Autumn when the plant is growing the most.

D. Foliar Spray (only where weed is >one metre high)

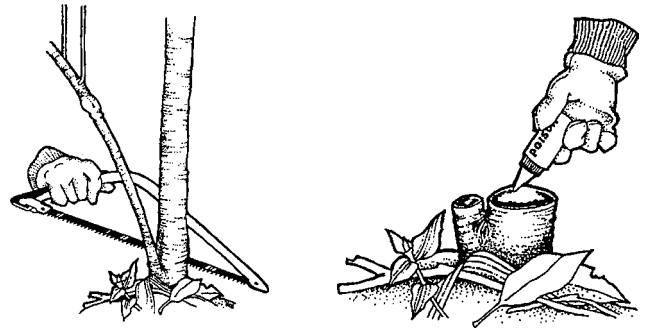
There are three broad types of spraying; spot spraying, broad area spraying and splatter gun application. Spot spraying involves targeting weeds where natives are present. Broad area spraying is used when there are no native plants present. Splatter guns are useful for dense infestations of particular weeds and can be targeted to avoid natives.

Step 1 – Check weather conditions to ensure no rain is forecast and little wind.

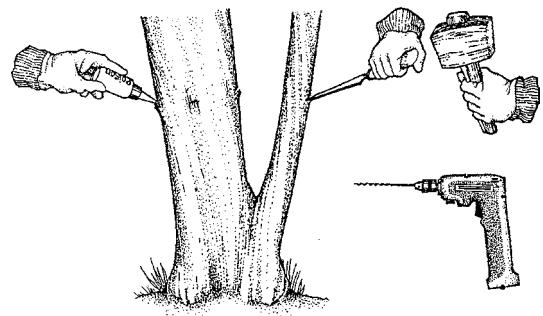
Step 2 – Identify native plants in the target area and clear weeds around them (half to one metre)

Step 3 – Prepare herbicide and equipment in accordance with manufacturer's instructions.

Step 4 – Using the appropriate method, spray the target area taking care of spray 'drift' so as not to spray natives. Note: protective clothing and equipment should be worn – including long pants, sleeves, and gloves, eye protection etc.



Cutting and painting



Drilling and frilling

4. WEEDS WITH UNDERGROUND REPRODUCTIVE STRUCTURES

Examples: Taproots (cats ear, dandelion), rhizomes (asparagus fern, ginger plant), bulbs and corms (oxalis, onion weed, watsonia, freesias, montbretia), tubers (madeira vine, turkey rhubarb)

HOW TO REMOVE WEEDS WITH UNDERGROUND REPRODUCTIVE STRUCTURE

A. Hand Removal of Plants with a Taproot

Step 1 – Gently remove and bag seeds or fruit

Step 2 – Push a narrow trowel or knife into the ground next to the taproot. Carefully loosen soil. Repeat this step around the taproot

Step 3 – Grasp stem at ground level, rock plant backwards and forwards and pull gently

Step 4 – Gently tap the roots to dislodge soil. Replace disturbed soil and lightly pat down

N.B. To avoid fatigue when using hand removal, vary your body position. Wearing gloves is also highly recommended.

B. Crowning and Crown Injection (for asparagus fern)

Asparagus fern with large crowns can be poisoned by cutting or drilling the crown and applying appropriate herbicide. Otherwise for smaller crowns:

Step 1 – Gently remove and bag stems with seed or fruit

Step 2 – Grasp the leaves or stems together so that the base of the plant is visible

Step 3 – Insert, at an angle, a knife or lever, close to the “crown” (woody section at base of the plant)

Step 4 – Cut through all the roots around the crown (Note: roots and tubers can be left in situ)

Step 5 – Remove and bag the crown

C. Removal of Plants with Bulbs, Corms or Tubers

(for onion weed, watsonia, arrowhead vine, montbretia)

Step 1 – Move leaf litter away from base of plant

Step 2 – Dig down next to the stem until the bulb or tuber is reached. Further digging may be required for plants with more than one tuber (e.g. arrowhead vine)

Step 3 – Remove plant and carefully bag the bulb or tuber.

Step 4 - Some bulbs (e.g. oxalis, onion weed) may have small bulbs attached or present in the soil around it. These need to be removed

D. Herbicide Treatment – Stem Swiping

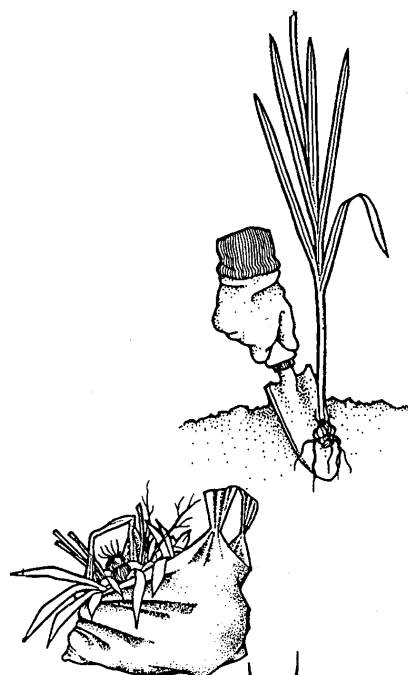
Step 1 – Gently remove any seed or fruit and carefully place into a bag

Step 2 – Swipe the stems and leaves with a herbicide applicator

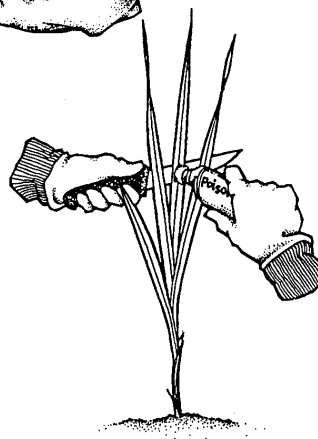


Removing taproots

Crowning



Removing plants with bulbs, corms and frilling



Stem swiping