

# Herbicides & additives

## Glyphosate

(Roundup® G2, Renew, Glyphosate 360, Trounce®, Zero, Touchdown, etc)

- non selective, ie generally kills most plants, leaving bare ground. Sites often colonised by more weeds
- foliar contact active only, cannot be taken up by roots. Non-volatile
- low toxicity, non-residual, site can be planted immediately
- preferred for grasses and other monocots, useful for vines and some shrubs. Only herbicide generally permissible over water (Roundup G2 is the safest glyphosate formulation to use over water). Check your Regional Council rules for any restrictions on use over water.
- useful for stem/stump treatment
- widely available from garden centres, agricultural supply stores and even some supermarkets.

## Metsulfuron

(Escort®, Meturon®, Mustang®, Meteor 600, Eradicate 600, Matrix etc)

- kills ferns, conifers and most broadleaf spp except Solanum spp. Generally not effective on grasses or other monocots, however high rates will kill almost anything
- acts systemically i.e will spread through entire plant to roots
- non-volatile. Low toxicity, however short but very active residue, apply with extreme care, works at very low rates. Kills ferns. Replant sites only after seedlings appear naturally.
- preferred for hard-to-kill shrubs, trees. Very useful for vines
- recommended for stem/stump treatment
- available from agricultural supply stores.



## Triclopyr

(Grazon®, Vanguard, Victory, Renovate, Brushoff® etc)

- kills conifers and broadleaf spp. Doesn't kill grasses, sedges, flax or other monocots or ferns
- foliar active, slightly root active
- low-volatility
- moderately low toxicity, short soil residue. Replant sites only after seedlings appear naturally
- preferred for many shrubs and trees, some vines
- preferred for broadleaf control amongst monocots (grasses, flax, etc)
- useful for stem/stump treatment
- available from agricultural supply stores
- NB "Renovate" is half strength of the other products mentioned, so double the listed quantities required.

## Haloxifop

(Gallant® NF, Ignite)

- generally kills grasses only, can damage other monocots (cabbage trees, flax, rushes, etc)
- doesn't kill broadleaf plants, ferns, etc
- foliar active with minimal soil activity
- low volatility
- moderately low toxicity, short soil residue
- recommended for selective control of grass weeds
- available from agricultural supply stores.

## Tordon® Brushkiller

contains Triclopyr + Picloram

- kills conifers and most broadleaf spp. Doesn't kill grasses, sedges, flax or other monocots. acts systemically i.e will spread through entire plant to roots
- low volatility
- moderately low toxicity, long soil residue, apply with extreme care, works at very low rates
- replant sites only after seedlings appear naturally
- preferred for many shrubs and trees
- recommended for stem/stump treatment
- available from agricultural supply stores.

## Amitrole

(Activated Amitrole, Amitrole 4L)

- non-selective, ie generally kills most plants, leaves bare ground. Sites often colonised by more weeds
- acts systemically i.e will spread through entire plant to roots
- non-volatile
- moderate toxicity, but corrosive. Moderate soil residue, apply with care. Replant sites only after seedlings appear naturally
- preferred for several hard-to-kill species, not otherwise recommended
- useful for stem/stump treatment
- available from garden centres agricultural supply stores.

## 2,4-D Ethylhexyl Ester

(Pasture-Kleen, Relay®, Thistle Killerm LV, 2,4-D Ester 520 etc)

- kills a wide range of herb spp and some trees and shrubs. Can check ferns. Doesn't kill grasses, sedges, flax or other monocots
- mainly contact foliar active but some minor root activity
- volatile, can drift during application
- moderate-low toxicity, short soil residue. Replant herbs only after seedlings appear naturally
- preferred for broadleaf weed control amongst grasses and other monocots
- available from agricultural supply stores.

## 2,4-D + Dicamba (Banvine®)

contains 2,4-D + Dicamba

- kills a wide range of herb spp and some trees and shrubs. Can damage ferns. Doesn't kill grasses, sedges, flax or other monocots.
- mainly foliar active but appreciable root activity.
- non-volatile
- moderate-low toxicity, medium residue. Replant herbs only after seedlings appear naturally
- preferred for broadleaf weed control amongst grasses and other monocots. Very useful for vines
- very useful for stem/stump treatment
- available from agricultural supply stores.

## Diquat

(Reglone®)

- totally non-selective, destroys green tissue wherever it comes into contact
- contact active only, does not translocate to other sites (eg roots). Does not kill plant but "cuts" at contact point.
- non-volatile
- high contact toxicity, no residue. Can replant immediately.
- used only to control growth of submerged aquatic plants.
- check with your local territorial authority whether a consent for use in a waterway is needed
- available from agricultural supply stores.

## Hexazinone

(Velpar® DF, Velpar® 20G)

- non-selective, kills everything in the upper root zone
- almost entirely root absorbed, acts like a soil sterilant
- non-volatile but liquid formulation can lose its solvent by evaporation
- low toxicity to animals. Long term soil residue, and very soluble, moves with soil water so can kill plants off-site after rain. Apply with care. Replant sites only after seedlings appear naturally
- used to kill stubborn perennials (eg bamboo)
- available from agricultural supply stores.

## Clopyralid

(Versatill®, Tango, Cloralid 300, Vivendi® 300, Archer, Contest etc)

- do not use in home gardens
- kills only a narrow band of broadleaf spp in Fabaceae (legume), Asteraceae (daisy) family and a few other spp. Doesn't kill most other spp, especially not grasses or other monocots.
- acts systemically i.e will spread through entire plant to roots
- non-volatile
- low toxicity. Long term soil residue to spp controlled
- used for specialised selective control amongst sensitive spp
- available from agricultural supply stores.

## Vigilant®

a pre-mixed gel containing picloram

- kills a wide range of species
- acts systemically i.e. will spread through entire plant to roots  
non-volatile
- low toxicity. Long term soil residue, and very soluble, moves with soil water so can kill plants off-site after rain. May also move across roots to another plant. Apply with care.
- cuts should be as horizontal as possible to prevent dripping and where possible cuts should be made above 5cm of the ground.
- apply the herbicide as soon as possible and no more than five minutes after cutting.
- do not use a large "glob" of gel as pictured on the label (only small amounts are required to kill many woody and perennial broadleaf plants), apply right across the stem surface.
- avoid using excessively in one area.
- very useful for woody weeds incl climbers and woolly nightshade, also kills rhizomatous plants and ground covers.
- available from garden centres and agricultural supply stores.

## Penetrant

(Pulse®, Boost®, Freeway, Dewdrop, Kiwi Buddy etc)

- an additive used to improve ability of herbicide to penetrate leaf cuticle or stomata, thereby raising effectiveness or lowering cost
- generally works much more effectively than mere "spreaders" or "stickers"
- usually cause rapid uptake of herbicide, thereby lowering rainfast periods from hours to minutes
- should always be added last to spray mix to prevent foaming. Rates used should always relate to percentage of spray mix (normally 0.1% or 1 part per 1000), not to litres per hectare of penetrant or herbicide
- available from agricultural supply stores and some garden centres.

## Crop Oil

(Uptake, C-Dax Oil®, Codacide Oil etc)

- an additive which improves spray wetting, reduces evaporation and increases herbicide uptake
- use with Gallant, Preside and Radiate
- best added to the spray mix last, immediately before application
- available from agricultural supply stores and some garden centres.