Using glyphosate to kill Dutchman’s pipe

Glyphosate is known by numerous trade names – including Roundup, Weedmaster Duo, Glypho, Zero, Cleanup and many more.

It is the most commonly used all-purpose herbicide for killing a wide variety of weeds.

Getting the best out of using glyphosate requires some knowledge of how it works and what to do / what not to do. This fact sheet is aimed at giving you a better picture of how to go about getting the best results.

**The chemical**

Glyphosate basically works by disrupting the plants biochemical systems that allow it to produce foods and nutrients for its survival. As a consequence, the plant ‘starves to death’, as it can’t produce energy to survive.

The active ingredient in glyphosate is rapidly and tightly absorbed to soil and organic matter. There is no soil activity due to this rapid absorption. Biodegradation is by microbial action and the breakdown rates vary with soil conditions and the micro-organism population.

Most of the commonly sold glyphosate products have an in-built wetting agent. This means that generally, no extra wetting agent will need to be added to the herbicide mixture for the most common uses.

It has been found that the wetting agents in the original glyphosate products (e.g. ‘Roundup®’) have the ability to harm some types of frogs. Therefore, if the product is being used on water, around water or where water will flow within 4 days of the spraying, the glyphosate product must be one that has a different type of wetting agent that won’t impact upon frogs (e.g. “Roundup Biactive®”). These products are informally known as “frog-friendly”. It is now illegal to use the non-frog-friendly products in or around water.

Glyphosate is called a non-selective translocating herbicide. Basically, this means that it affects all plants (both broadleaves and grasses) and once absorbed, will be transported throughout the plant by its vascular system.

It is also a water soluble herbicide and won’t mix with oil-based products like diesel.

**Toxicity to animals**

Studies have found that it is basically non-toxic to animals. It is practically non-toxic to fish, aquatic invertebrates, birds and bees; and has low toxicity to earth worms. However, the wetting agent in non-frog friendly products can affect the skin of some tadpoles and frogs.

It has a low toxicity to humans – about the same poison rating as table salt. Contact with the skin can cause skin rashes, especially to people with sensitive skin.
How to best use Glyphosate against Dutchman’s pipe

Glyphosate can be used effectively to treat Dutchman’s pipe using the cut and paint, scrape and paint or cut and dip techniques. Foliar spraying is not recommended, as it will not give a very good level of control and it will cause too much non-target damage to other plants.

Cut and paint
The smaller the vine thickness, the less likely that cut and paint will work effectively.

The problem is that the small cut surface won’t be able to absorb enough of the painted-on herbicide to affect the whole root system. It is better to use either the scrape and paint or the cut and dip techniques on thin vines.

To cut and paint, use a mixture of one part glyphosate 360g/L herbicide to one part water. Cut the stem and paint/spray the solution on within 15 seconds. Any longer than this and the technique may not be effective. Treat only the stem that goes to the ground. Treating stems that go into trees is a waste of time and herbicide, as that part of the vine will die once it is cut.

Also, the closer to the ground you can cut, the better – but not so close that the cut surface could be contaminated with dirt – which could render the herbicide ineffective.

Scrape and paint
This technique involves scraping 10-20cm of the bark layer of the stem to expose the sap and water vessels underneath, and then applying the herbicide to the scraped section within 15 seconds.

By leaving the vine actively growing, the herbicide will be taken into the plant and transported through the roots, stems and leaves more effectively than if the stem were cut and the herbicide applied to the cut surface.

It is easiest to use a knife to scrape the stems, and then a paint brush or foam topped shoe polish bottle to apply the herbicide.

More than one scrape may be needed on larger stems. This may be done on either side of the stem. Make sure that in scraping the stem it isn’t ringbarked, as this will reduce the likelihood of the technique working.

The mixing rate is one part glyphosate 360g/L herbicide to one part water.

Cut and dip
This is an improvement on the cut and paint technique. The vines are cut and – within 15 seconds – dipped into the glyphosate mixture. They are held under for about 15 seconds. It is only necessary to dip the ends of the vines that go down into the ground. A cut off plastic drink bottle is perfect for this. Use the same mixture rate as for cut and paint.

An improvement on this is to cut the stem and leave them in the herbicide solution overnight to suck up the chemical. This technique maximises the amount of herbicide that gets into the plants system. You can again use the cut-off drink bottle, or poke the stems into a hole punched in the lid of a film canister. This approach will
stop dirt or rain from getting into the herbicide mixture. But remember – the cut ends must be immersed within 15 seconds.

**How to tell if it’s working**
If you are using the cut and paint or cut and dip technique, you will see some drastic and rapid results, as the top of the vine withers and dies. Results from scape and paint may take a couple of weeks to become evident, and it may take a couple of months for the vines to look like they are dying off – depending on the growing conditions.

If you’ve scape and painted, it is important that you don’t damage the plants. Don’t cut them with a brush-cutter; don’t pull them out of the trees; don’t spray them with other chemicals; don’t burn the area. This will only stop the herbicide from doing its work properly.

The stems may resprout after the herbicide treatment. This is a natural response by the plant to the stress of dying. The plant is trying to survive. Don’t worry about these shoots, as you can’t really treat them until they grow more leaves, and they may still die as the remaining herbicide in their system kicks in. The tell-tale signs of glyphosate effects on regrowth are that the growth will be misshapen, leaves will look stunted and they may have a yellowish-green look.

So, the consistent message is … be patient and have faith. Give the herbicide at least 3 months to do its stuff.

**Follow up**
Don’t expect glyphosate to be the silver bullet. You’ll need to monitor the problem and be prepared for follow-up control over the next couple of years at least.

That may involve tracing the vines that you’ve missed – they’ll be easy to find as they’ll have healthy green leaves six months after the initial treatment.

As with using any herbicide read and follow the directions on the label. Wear appropriate protective clothes and equipment. Store it appropriately and securely.