

Weed Killing using a Knapsack Sprayer

Introduction

Getting rid of your existing weeds is the starting point. It won't happen in one treatment either:

- ☆ Some weeds need several treatments
- ☆ Some weeds are seasonal so may appear after you've applied lawn weedkiller
- ☆ Your soil will have a 'bank' of seeds which will germinate over time
- ☆ You're human so you'll miss some weeds with your liquid weedkiller
- ☆ The wind and birds will bring in a few seeds to keep you busy
- ☆ A few weeds are nigh on impossible to kill

Preparation

- ✓ Choose a dry calm day
- ✓ Clear the area of debris, toys, clothes lines, furniture etc
- ✓ Lock the kids and pets up!
- ✓ Select a place to mix your chemicals. Choose an area
 - Relatively flat for safe mixing
 - Has a water supply if possible
 - Where nobody will accidentally fall over it!
 - Not used for plants; perhaps a path or gravelled area; this allows any accidental spillage to soak away without harm to plants, trees or entry into drains



- ✓ Equipment
 - Watering can or sprayer
 - Hose pipe or water supply
 - Liquid Weed killer concentrate
 - Mixing jugs – 1 or 2 litre plastic jugs from the supermarket are fine
 - Two marker sticks – ideally one metre long with a nail in the end. If not any stick that can easily be stuck in the ground; even screwdrivers will do

- ✓ Safety – the chemical you use will tell you what you need though most amateur herbicides demand little protection. I suggest you use:
 - Nitrile gloves (chemical resistant rubber gloves) – not expensive
 - Goggles or face shield (for mixing only)
 - Wellies

- ✓ Ensure no children or animals have access to your mixing area

- ✓ Make sure the weed killer is suitable for your lawn – e.g. some are not for use on new grass or new turf

- ✓ Make sure you know what to do if you splash yourself



Having a pretty close idea of your lawn area IS a good idea. If you're unsure of your lawn area it's worth taking a bit of time to measure your lawn and find out by going to **How to Measure a Lawn**. You'll only need to do it once and you can order and apply all your lawn products accurately from then on.

In addition, the speed at which you walk will affect the amount you put on. A steady normal walk of 2.5 to 3 mph is best. If you think you are a fast or slow walker look at our **Pace Guide**.

Both documents can be found at <http://www.lawnsmith.co.uk/enthusiast/technical-lawn-help/measuring-testing>

CAUTION: Be careful applying weed killer at the edges of the lawn. DO NOT get any mixture on border plants. You'll find it advantageous to pull up short and use a spot weed killer for the weeds that don't die along the edges of the lawn.

Mixing for a knapsack sprayer

How much weed killing mixture do you need?

Verdone Extra Liquid Lawn Weeder Concentrate – The directions require a sprayer with 15mls concentrate in 1 litre water to cover 10 square metres of lawn. (1.5mls in 0.1 litres water per square metre). Check your instructions say the same as products change over time.

This means if your lawn is 100m² you will use 150mls Verdone in 10 litres of water and will end up going over the lawn about 3 times if you use the Lawnsmith knapsack sprayer with the blue deflector nozzle. This is required for good grass safety and maximum contact with spray and weeds.

You may find that due to the equipment you use or the speed at which you walk that you use more or less than 10 litres of water. We suggest that all you need to do is use clean water in your sprayer and measure the amount of water used to spray the whole lawn once (as per Application below). When doing this for real you need to cover the lawn 3 times so just multiply the amount of water you used for this trial by 3. You should end up with a number between about 8 and 12 litres for every 100m² of lawn. **I use about 9 litres for 100m² if sprayed 3 times.**

If you are not close to this you will need to adjust your speed or change your sprayer so that you stay close to the manufacturer's directions.

AN EXAMPLE – your water quantity may differ slightly:

For a lawn of 400m² with 1.5mls product per metre as above
 $400 \times 1.5 = 600\text{mls}$ of Verdone

Our Knapsack Sprayer holds 16 litres and I would need a total of 36 litres water (9 litres for 100m² so 4 times the amount). I would therefore put 12 litres in my knapsack and fill up 2 more times.

I now need to divide my product into 3 fills also. This means:
 $600\text{mls} \div 3 = 200\text{ mls}$ per knapsack with 12 litres of water.

Vitax Lawn Clear Weedkiller Concentrate – Requires a sprayer with 20mls concentrate in 0.6 litres water to cover 12 square metres of lawn. (1.7mls in 0.05 litres water per square metre). Check your instructions say the same as products change over time.

This means if your lawn is 100m² you will use 165mls Vitax in 5 litres of water and will end up going over the lawn twice. This is required for good grass safety and maximum contact with spray and weeds.

You may find that due to the equipment you use or the speed at which you walk that you use more or less than 5 litres of water. We suggest that all you need to do is use clean water in your sprayer and measure the amount of water used to spray the whole lawn once (as per Application below). When doing this for real you need to cover the lawn 2

times so just multiply the amount of water you used for this trial by 2. You should end up with a number between about 5 and 8 litres for every 100m² of lawn. **I use about 6 litres for 100m² if sprayed twice.**

If you are not close to this you will need to adjust your speed or change your sprayer so that you stay close to the manufacturer's directions.

AN EXAMPLE – your water quantity may differ slightly:

For a lawn of 400m² with 1.7mls product per metre as above
 $400 \times 1.7 = 680\text{mls}$ of Vitax

Our Knapsack Sprayer holds 16 litres and I would need a total of 24 litres water (6 litres for 100m² so 4 times the amount). I would therefore put 12 litres in my knapsack and fill up one more time.

I now need to divide my product into 2 fills also. This means:
 $680\text{mls} \div 2 = 340\text{ mls}$ per knapsack with 12 litres of water.

Applying the weed killer mixture

Wearing appropriate protection (see Health & Safety in Weed Control)

1. Fit a **Lawnsmith Green or Blue Deflector Nozzle** to your sprayer
2. Set the sprayer pressure to 1 to 1.5 bar
3. Shake the concentrate before use (check the cap is on tight first)
4. Make up your first spray tank mixture
 - a. put half the water in the tank
 - b. add the concentrate
 - c. add the other half of the water
5. Apply to the lawn as in the illustration
6. Make up mixture two
7. Apply to the lawn etc

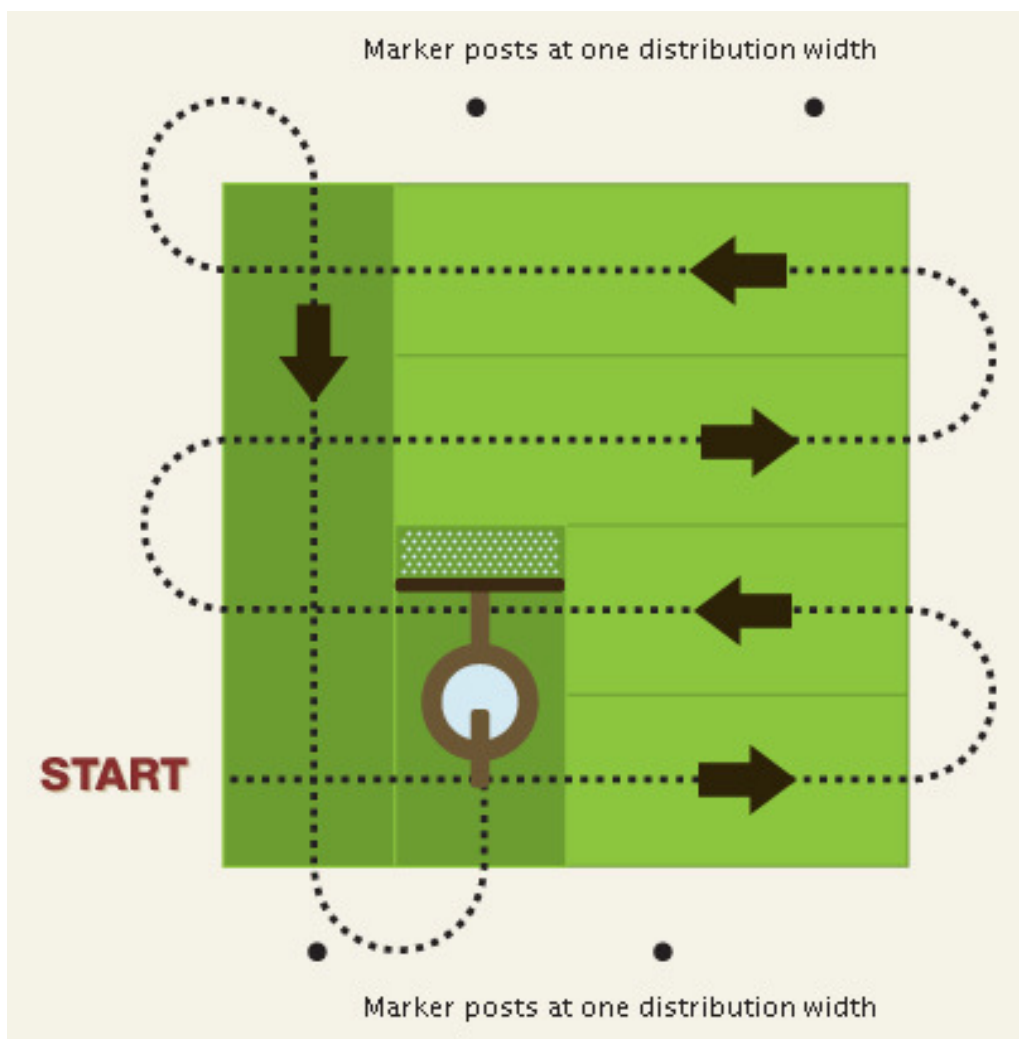
Remember to count the number of mixtures!

When making up the last mixture remember whether it's a full or part mixture. Rinse the concentrate measuring cup several times with your last lot of water into the tank before replacing the cup on the concentrate container.

Application

Depending on which product you use the manufacturer's instructions give enough total mixture to cover the lawn area 2 or 3 times over. This is necessary to thoroughly wet the lawn. This means that by the time you have gone over the whole lawn once you will only be part way through your total number of fills.

When you have covered the whole lawn once, just return the way you came back down the lawn and repeat watering the whole lawn. Alternatively you could also go the opposite direction across the lawn as illustrated if the lawn shape permits. Putting marker pegs or posts at the ends of the lawn can help in keeping in a straight line.



You will find it impossible to finish your last FILL without running out before the end of the lawn or with a little mixture left in the can or sprayer. So, just keep walking until it's all gone – no harm will be done.

If you happen to run out before the end of the lawn you may need to do two things before your next treatment assuming your lawn area measurements are correct:

- ✓ Start the next spray session at the end of the lawn that got the least the first time
- ✓ Slightly increase the volume of water next time you spray
- ✗ DO NOT increase the amount of concentrate
- ✗ DO NOT adjust your speed

If you happen to have a little too much mixture assuming your lawn area measurements are correct:

- ✓ Slightly decrease the volume of water next time you spray
- ✗ DO NOT decrease the amount of concentrate
- ✗ DO NOT adjust your speed

Timing

Spray when growth is good and moisture is available. In other words, do not apply to dry grass or when conditions are dry. The normal time for application is between spring and autumn.

Spray Nozzles

There is a whole plethora of different nozzles for fitting to your sprayer. They offer different spray patterns, flow rates and spray areas. For turf we generally only use deflector nozzles that give a wide flat spray area ideal for spraying and walking at a steady pace. I recommend you stick to either green or blue.

The Green Deflector Nozzle has a large opening and delivers about 3 litres mixture every minute with continuous heavy pumping. The Blue Deflector Nozzle has a smaller opening and only delivers about 2 litres a minute. This is the better one for most people when applying weed killer.

The nozzles are available here: <http://www.lawnsmith.co.uk/shop/sprayers-accessories/sprayers-accessories/sprayer-deflector-nozzles/>

