



Knapsack application advice

In Brief

Knapsack application allows precise treatment of selected areas

Targeted applications on areas of weed and disease invasion, including greens collars and

Convenient treatment on inaccessible areas of rough, out-of-play areas and bunker faces

Syngenta products approved for knapsack application:



See www.greencast.co.uk for full information on Syngenta Turf products, application advice and programmes.



Knapsack application can provide precise and convenient treatment on selected areas, including greens, surrounds and rough

Knapsack sprayer calibration

Knapsack calibration is essential to know the volume of spray mix – and consequently the application rate of Rescue – being applied across a given area.

- 1 Mark out an area 10 m x 10 m (100 sq m) on a surface typical of that to be sprayed**
Walking through deep rough or uneven terrain is more difficult, resulting in significantly different application rates.
- 2 Half fill the knapsack sprayer with clean water. Place on a flat surface and mark precisely the water level with a waterproof pen**
Be aware walking speed can vary considerably when carrying a full sprayer, compared to when empty.
- 3 Carefully spray the pre-marked area**
Check your sprayer pattern and spraying technique first (see overleaf).
- 4 Put the sprayer back on the flat surface and, using a measuring jug, refill the sprayer back to the marked line**
Water volume used = application rate per 100 sq m

Repeat the calibration process for different surfaces and terrains being sprayed. Different operators will walk at different speeds; check calibration for each operator and instigate standard spraying practices (see overleaf).

Check the calibration for each different knapsack sprayer; it can vary considerably between manufacturers and sprayers.

For an alternative knapsack calibration technique visit the Application Zone on www.greencast.co.uk

Knapsack spraying techniques



Maintain nozzle height to hit the application target; you will have to hold the boom higher in rough, compared to a mown green. Remember, walking in rough may be significantly slower than on greens and will affect application rate accordingly.

Where spraying large areas use a cane to mark the end of each run (allowing for the required spray pattern) and ensure even coverage across the area.

Spray at the required height above the target to attain the desired spray pattern (see below).

Do not spray out right to the bottom of the tank, unless it is the last tank of the job. Spray pattern and application rate of knapsack sprayers at the end of the tank is always poor.

Carry a cane, fixed to the knapsack with an elastic band, to mark any point where you stopped spraying to refill.

If there is any spray mix left when the treated area has been completed either (a) spray out on an additional area where the problem being treated is an issue and mark on your spray records accordingly, or (b) dispose of safely through an approved waste disposal route. DO NOT spray back over the treated area.

Ideally designate specific knapsack sprayers for herbicide and fungicide applications

Key tips

Paint canes white to make them easily visible when spraying in tall rough

Fix a piece of cord or light chain to the end of the lance, cut to the required spraying height as a guide

The use of spray marker dye can help to ensure even coverage and avoid misses with knapsack application. Spray dye marker costs around 50 pence per 15 litre knapsack fill

Checking spray pattern

Operators should check knapsack sprayers and spraying technique to ensure a consistent and even spray pattern.

Clean all filters (including within the lance handle if appropriate) and check seals to ensure sprayer is achieving consistent and even pressure with a smooth, easy pumping action.

Visually inspect the nozzle for scuffs or burrs; unprotected knapsack nozzles are frequently damaged when spraying hard surfaces. Replace as necessary.

Wash out the sprayer thoroughly and fill with clean water. On a dry concrete surface, follow your typical spraying technique to check even distribution and coverage.

Assess overlap or distance between passes to achieve even coverage.

Check for consistent spray coverage between pumps of the handle and to ensure any pressure regulator valve is working efficiently.

Adjust spraying technique and speed to achieve good coverage.

Key action points

Ensure all knapsack operators have necessary PA1 and PA6 qualifications

Check calibration of different knapsack sprayers

Service and maintain knapsack sprayers regularly

Anvil-style knapsack nozzles will deliver a flat fan spray pattern and even coverage

Fit an appropriately sized nozzle to deliver a medium to fine spray pattern

Follow advice on fungicide and herbicide application timing

For more information visit www.greencast.co.uk

