WeedSwiper

A <u>Unique Non-Drip</u> weed wiper

with:

<u>Supply-On-Demand</u> Chemical Feed

Uses include:

- **Arable:** **weed beet & bolters etc. in sugar beet, oilseed rape in strawberries fathen in salad and vegetable crops**
- **Grassland:** **ragwort, thistles, nettles, docks etc.**
- **Marshland:** **hard and soft rush (juncus) etc.**
- **Moorland:** **bracken, gorse, bramble, etc. tree re- growth e.g. silver birch etc.**
- **Conservation:** **ESA's, SSSI's etc.**
- **Waterways:** **rushes, reeds etc. in and around water**
- **Vineyards:** **weeds between rows of vines**

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WeedSwiper

A New Generation of Weed Wiper from: J B Edlington & Co. Ltd.

Unique features of the WeedSwiper include:

- **SUPPLY-ON-DEMAND.** Automatic control of fluid flow to the contact pads via the patented sensors and Hydrostat control system
- Contact pads manufactured from R12, a strong, tufted material that holds fluid until a target plant is swiped
- Pad material with extremely good fluid retention properties
- 150mm (6") deep pads provide a large fluid transfer area ensuring adequate dose of active ingredient (a.i.)
- All units can be folded and operated at narrower widths than their overall working width, and have simple boom end break-back return systems
- Pad height can be altered on all units to suit the terrain, weed height, etc.

Fluid control to the contact pads:

- The unique Hydrostat controller has variable settings to control the pump output to the pads, replacing fluid only when it has been swiped onto the target plant
- Hydrostat settings of 0 - 9 reflect the dilution rate of the a.i.
- Sensors in the pad material constantly measure pad wetness and, via the Hydrostat control system, replace fluid only as it is required
- The pad cannot receive more fluid than the chosen Hydrostat setting allows hence preventing a.i. from reaching non-target plants
- Hydrostat settings can be altered 'on the move' if required

Tanks:

- Every WeedSwiper is supplied with 2 tanks, one for the a.i. mixture, the other for clean water

The clean water tank is used to:

a) Wet the pads to near saturation point PRIOR to any work being carried out
b) Rinse the WeedSwiper through AFTER work. Detergent and brushing may also be required to clear any plant wax and soil from the pads

NB. ALWAYS pre-mix the a.i. solution BEFORE putting it into the tank.

WeedSwiper Target Plants

The WeedSwiper can control weeds growing at least 150mm (6”) above the desired plant species. Weeds in arable, grassland, forestry, vineyards, and amenity situations, and around waterways can be controlled.

EXAMPLES OF TARGET WEEDS INCLUDE: ragwort, thistles, nettles, docks, bracken, gorse, heather, broom, bramble, weed beet, wild chrysanthemum, fathen, wild oats, reed, bulrush, sedge, soft rush, ground elder, japanese knotweed, giant hogweed, rosebay willow herb, silver birch re-growth, hazel, rhododendron plus volunteer arable crops e.g. potatoes, oilseed rape, etc.

WeedSwiper Control of Weed Beet in Sugar Beet

A serious problem where sugar beet is grown. Control is aimed at reducing the seed return whenever possible within the rotation.

The WeedSwiper can be used in the sugar beet crop and must target those weed beet which are at least 150mm (6”) above the crop canopy, hence providing a clear target for the contact pads.

This treatment can be carried out from the time the weed beet are visible above the crop canopy, usually June - early July, until early August, although best results will be achieved from treatments applied to freshly bolted stems. When this is done effectively the weed beet will collapse and decompose by September. Treatments will be timed to treat each new flush of plants as they reach the critical minimum height above the crop. Two or more treatments may be required to achieve best results, with each treatment being carried out in the opposite direction to the previous one.

Swiping in late July to early August is usually treating plants that are showing signs of seed formation and, at this stage, the target weeds are unlikely to collapse and decay although seed viability will be greatly reduced. It is still, therefore, worth undertaking but may not have the optimum effect. Where plant density is high, each treatment should be carried out in opposite directions to one another, on the same day, where possible.

NB. ENSURE SUFFICIENT TIME HAS ELAPSED BETWEEN ANY 2 APPLICATIONS TO ALLOW THE PRODUCT FROM THE PREVIOUS TREATMENT TO DRY.

Weed beet can most effectively be controlled using the a.i. glyphosate.

The standard glyphosate 360 g/l formulation at the following dilution rates have been used; 1 in 1 part water (50%), 1 in 2 parts water (33%), 1 in 3 parts water (25%). The stronger mixes have been used during the later stages of growth of the weed beet. Glyphosate formulated products have clearance for use through weed wipers as listed in the BCPC UK Pesticide Guide. Roundup Gold at 50% dilution rate is reported to have given excellent results during 2003.

WeedSwiper Control of Grassland Weeds

These weeds can be found in grassland, upland, hill or marsh grazing, forestry plantations, amenity situations, heath and common land, orchards, vineyards, etc.
The list includes those injurious plants listed in the Weed Act 1959 as; spear thistle, creeping or field thistle, curled and broad leaved dock and common ragwort.
DEFRA can take action where there is a risk of injurious weeds spreading from neighbouring land. The list also includes japanese knotweed, regarded as the most invasive plant in Britain, scheduled under the Wildlife and Countryside Act 1981, and the Environment Protection Act 1990. It is classified as controlled waste, spread by rhizomes and from cut stems which can regenerate. Some of these plants are poisonous:

RAGWORT: as listed in the Weed Act 1959. Poisonous to horses and cattle, occasionally sheep. Very unpalatable when green and growing. Dangerous when cut in hay or when wilting or decomposing after treatment. Contains alkaloids that accumulate in the liver and are not excreted over time. Stock MUST be kept out of treated areas for AT LEAST four weeks. Horses should be found alternative grazing for longer periods. Treated plants can be removed and burnt. Translocation of a.i. should be complete within two weeks of treatment although complete collapse may take longer.

BROOM: Alkaloid poisons are present in this plant.

RUSH: Hard and blue rush can be poisonous.

BRACKEN: Some one million acres are affected in the UK alone. The rhizome and green areas of this fern are poisonous. Cattle, sheep, horses and pigs can be affected. Both spores and rhizomes spread bracken. Spores released in September are carcinogenic when ripe and should be avoided. The WeedSwiper should be used on fully extended fronds in July and August. Herbicide will translocate to the root rhizome and reduce the vigour or kill the frond rhizome, hence reducing the vigour of the bracken area. This could take between two and five treatments to control. Glyphosate mixtures of between one part glyphosate in five parts water to one part glyphosate in twenty parts water have been effective.

ANIMALS MUST be kept away from wilting bracken and SHOULD NOT be returned until after the bracken has disintegrated.

HEMLOCK, HEMLOCK WATER DROPWORT and COWBANE are also toxic plants.

WeedSwiper Control of Grassland Weeds (continued)

Most grassland weed plants will be controlled using glyphosate. Plants will be most sensitive to control, and present the best target, when approaching or during the early flowering stage. By the late flowering / early seed set stage, sensitivity and translocation will be reduced and the plants may not collapse and decompose. Seed viability can still be significantly reduced which, in turn, will help in reducing regeneration of that species.

Intensive grazing, just before treatment with the WeedSwiper, will allow improved contact for the contact pads with the target weeds, therefore reducing any damage to the desired grassland species.

Dense weeds may require further treatments.

The following products have clearance for use through weed wipers:

GLYPHOSATE 360 g/l
Text clearance. Marketed as Roundup from Monsanto, plus numerous other branded products from various manufacturers.

NOTE. Glyphosate 360 g/l formulations, at the following dilution rates, have been used: 1 to 1 part water (50%) through to 1 to 3 parts water (25%). Dilution rates may be 1 to 10 parts water through to 1 to 20 parts water when the weeds are lush and green. Where glyphosate 360 g/l is being used at 1 part glyphosate to 2 parts water the Hydrostat setting should be set somewhere around number 7 or 8 on the control box, whereas dilution rates of 1:1 (50%) will be a setting of 8+

CHLORPYRALID 200 g/l
Text clearance. Marketed as Dow Shield from Dow Agchem. NFU SOLA no. 0662/92. Maximum dose 1 l/ha per year. Target - thistles in established grassland.

CHLORPYRALID & TRICLOPYR - 60:240 g/l
Text clearance. Marketed as Grazon 90 from Dow Agchem. NFU SOLA no. 0692/95. Target - woody weeds.

2 4-D + DICAMBA + TRICLOPYR - 200:85:65 g/l
Text clearance. Marketed as Nufarm Nu-shot from Nufarm Whyte Ltd, or Broadsword from United Phosphorous.

NOTE. All precautions regarding toxic plants and return of stock to treated areas apply, as do all label precautions, recommendations and maximum dose restrictions.

Operators Guide to Successful Use of the WeedSwiper

1. Weeds must be at least 150mm (6") taller than the crop canopy to ensure no risk of damage to the desired plant species.
2. Treat weeds as they become tall enough to be swiped, more than once if necessary, with successive treatments carried out in the opposite direction to the previous one.
3. ALWAYS use one tank for a.i. mix and the other tank for clean water, thereafter NEVER change its use.
4. NEVER operate the pump with the tank outlet tap closed.
5. AVOID forward speeds above 10 kph.
6. Use water only to thoroughly wet the pad material PRIOR to any treatments.
7. Where the clean water tank has been used to wet the pads remember to move the feed pipe to the a.i. tank BEFORE continuing.
8. PRE-MIX the chosen product PRIOR to putting into the tank and avoid mixing more a.i. mixture than is required for the task. Dilution rates will vary depending upon weed species and maturity.
9. Start work with only half a tank of mixture to evaluate product use compared to weed density. This will help to avoid the need to dispose of excess product mix.
10. ALWAYS endeavour to prevent the pads from dripping a.i. mixture into the crop canopy by choosing the correct Hydrostat setting for the a.i. mixture.
11. IMPORTANT. When working on hillsides that are too steep to travel up and down it is advisable to work these areas in runs of no more than 200 metres long across the hill to ensure the product does not concentrate at one end of the pads.
12. Site the WeedSwiper in a designated area to avoid pollution. Set the Hydrostat knob to 'constant pump' until the pad material drips across the entire width. Slowly reduce the Hydrostat setting until the pump stops. On the first few runs keep nudging the Hydrostat setting up until the pump comes on, then reduce it until the pump stops. Repeat this process until you have determined the 'drip point' of the a.i. mixture. When this point has been reached slowly reduce the Hydrostat setting until the pump stops to ensure it is set just below the drip point of the a.i. mix being used.
13. Swipe the first two runs again to ensure weeds are adequately treated as, initially, product takes a little time to reach the pads.
    IMPORTANT. Always ensure sufficient product mix has run through the pads to be certain the a.i. mixture has reached the pre-mixed dilution rate.
14. ALWAYS wash off and clear the pads of any plant wax or soil which may build up during work.
15. At the end of each task rinse the system through thoroughly with clean water from the rinsing tank. Use the 'constant pump' setting on the Hydrostat box and swipe this mixture onto the area the work first began.
16. Boom covers are supplied for use when the WeedSwiper is being transported to:
    a) Prevent damage occurring to the pads
    b) Protect the environment from unintentional contact with contaminated pads

J B Edlington & Co. Ltd. reserves the right to alter specification and prices without prior notice.

ATV, tractor mounted and trailed models are available, as are various boom widths. The WeedSwiper technology can also be added onto existing suitable equipment, e.g. crop sprayer booms, SPV's, excavators, etc.

An optional LGP trailer is available to enable towing behind: ATV's, Landrovers, pick-up trucks, etc.

Enquiries for bespoke units to exactly suit the customers needs are always welcome.

As this application technology is constantly evolving, please feel free to discuss any proposals to treat a weed species, or to use a chemical product, not mentioned within these guidance notes. We strongly advise adhering to these guidelines.

Due to the extensive variability of field circumstances, weather conditions, etc.
J B Edlington & Co Ltd can offer no warranty whatsoever on these procedures.

For further information regarding the WeedSwiper range of equipment or its uses please contact:

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