

# Technical Information Sheet

**Whorl delivers robust control of broad-leaved weeds in winter cereals (wheat, durum wheat, spelt, barley, rye, triticale, oats and these crops under-sown with grass), and spring cereals (wheat, durum wheat, barley, rye, triticale, spelt and these crops under-sown with grass).**

## Key facts

|                              |                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Registration Number: | MAPP No. 17819                                                                                                                                                                                                                                                                                                                                                              |
| Active Ingredient:           | 280 g/litre fluroxypyr and 12.5 g/litre halauxifen-methyl (Arylex™) (HRAC Group 4 herbicides)                                                                                                                                                                                                                                                                               |
| Pack Size:                   | 5 litres                                                                                                                                                                                                                                                                                                                                                                    |
| Formulation:                 | Emulsifiable Concentrate (EC)                                                                                                                                                                                                                                                                                                                                               |
| Maximum Individual Dose:     | 0.5 l/ha from 1 <sup>st</sup> February (winter wheat, durum wheat, barley, rye, triticale, spelt and these crops under-sown with grass)<br>0.5 l/ha from 1 <sup>st</sup> March (spring wheat, durum wheat, barley, rye, triticale spelt and these crops under-sown with grass)<br>0.25 l/ha from 1 <sup>st</sup> February winter oats and winter oats under-sown with grass |
| Maximum Total Dose:          | 0.5 l/ha cereals, except winter oats<br>0.25 l/ha winter oats                                                                                                                                                                                                                                                                                                               |
| Application Timing:          | 1 <sup>st</sup> February to 30 <sup>th</sup> June (GS13 up to and including GS45) winter cereals except oats<br>1 <sup>st</sup> March to 30 <sup>th</sup> June (GS13 up to and including GS45) spring cereals<br>1 <sup>st</sup> February to 31 <sup>st</sup> May (GS13 up to and including GS32) winter oats                                                               |
| Water Volumes:               | 100-400 l/ha. For under-sown cereal crops use a minimum water volume of 150 l/ha.                                                                                                                                                                                                                                                                                           |
| Recommended Adjuvants:       | Non-ionic wetters and methylated seed oils                                                                                                                                                                                                                                                                                                                                  |
| Spray Quality:               | Medium as defined by BCPC                                                                                                                                                                                                                                                                                                                                                   |
| Nozzles:                     | Flat Fan, Variable Pressure Flat Fan, Pre-Orifice, Air Inclusion, Airtec                                                                                                                                                                                                                                                                                                    |
| Buffer Zone:                 | 5m reducible buffer zone (1m dry ditches)                                                                                                                                                                                                                                                                                                                                   |
| Rainfastness:                | 1 hour                                                                                                                                                                                                                                                                                                                                                                      |

## Key benefits

- Provides robust weed control irrespective of the weather or weed growth pattern – if you can travel it will work
- Wide range of following crop options
- No cultivations required before sowing most crops
- Robust weed control: chickweed, cleavers, fumitory, fat hen, dead-nettle, poppy and cranesbill
- Excellent multi-way compatibility including: ACCase graminicides, ALS graminicides, PGRs, fungicides and trace elements

## Following crops

In the autumn following application: White mustard, peas, broad beans, field beans, OSR, phacelia, ryegrass, cereals, vegetable brassicas as transplants.

In spring following application: no crop restrictions.

Ploughing is recommended prior to drilling maize, alfalfa, soybean and clover.

## Winter oats and cereals undersown with grass

Whorl is approved for use on winter oats and cereals under-sown with grass. Whorl can be used on winter oats at a rate of 0.25 l/ha and can be applied up to the 31<sup>st</sup> May, or up to and including GS32 of the crop.

For cereals under-sown with grass, the use rate is 0.5 l/ha, except for winter oats where the use rate is 0.25 l/ha. Applications should be made when the grasses have 5 leaves unfolded (GS15) and the weeds are actively growing. Whorl **must not** be applied to crops under-sown with clover.

## Winter cereals except oats

Where no residual herbicide has been applied, use Whorl at 0.375-0.5 l/ha for robust control of a range of BLW species. Larger weeds will require higher use rates. Please check the label regarding maximum weed size and susceptibility ratings. Some weeds may get too large to be adequately controlled.

To complete the spectrum against difficult species such as the *Umbelliferae*, growers should consider tank mixing with a sulfonylurea herbicide such as Ally Max SX.

Where a residual herbicide has been applied, or you are targeting smaller weeds, Whorl at 0.375 l/ha will be sufficient. Complete the weed spectrum by tank mixing with a sulfonylurea or phenoxy herbicide, when required.

## Spring cereals

Use Whorl at a minimum of 0.375 l/ha for robust weed control of difficult spring weeds such as fumitory. Activity on polygonum species may be boosted by tank mixing with a sulfonylurea herbicide such as Harmony M SX.

Whorl may also be tank mixed with ACCase graminicides for grass weed control.

For late season cleaver control only, the use rate of Whorl may be reduced to 0.25 l/ha.

## Adjuvants

If applied alone, and growing conditions are hard and slow the addition of an adjuvant may be beneficial. If applied in tank mix with products that have a good wetting system and under good growing conditions, then there is no need for an additional adjuvant. Recommended adjuvants include non-ionic wetters and methylated seed oils.

For product label, tank mix compatibility and more information on Whorl please see:

<https://www.corteva.com/uk/tools-and-advice/tank-mix.html>

**Key:**  
Label weeds in **bold**. # – <50% control, \*improved control with an adjuvant. TL – true leaves, B4 - before  
Non-Label weeds listed as an indication of the effect that would be expected to be achieved based on limited data - these are not recommendations; just an indication of what effects might be achieved.

|  |                               |
|--|-------------------------------|
|  | Susceptible                   |
|  | Moderately susceptible        |
|  | Tolerant/Moderately resistant |

## Weed spectrum

| Weed                    | 0.375 l/ha           | 0.5 l/ha                    |
|-------------------------|----------------------|-----------------------------|
| <b>Black bindweed*</b>  | S up to 10 cm        | <b>S up to 15 cm</b>        |
| Black nightshade        | -                    | S up to 4TL                 |
| Bur chervil             | T                    | T                           |
| Charlock                | T                    | T                           |
| <b>Chickweed*</b>       | S up to 25 cm        | <b>S up to flowering</b>    |
| <b>Cleavers</b>         | S up to B4 flowering | <b>S up to B4 flowering</b> |
| Clover                  | -                    | S up to 4TL                 |
| Corn spurrey            | -                    | S up to 2TL                 |
| <b>Cranesbill*</b>      | <b>S up to 5 cm</b>  | S up to 10 cm               |
| Docks (seedling)        | -                    | S up to 4TL/up to 5 cm      |
| <b>Fat hen</b>          | <b>S up to 15 cm</b> | S up to 25 cm               |
| Field pennycress        | S up to 10 cm        | S up to 10 cm               |
| Fool's parsley          | -                    | S up to 4TL                 |
| Forget-me-not           | MS up to 10 cm       | S up to 5 cm                |
| <b>Fumitory*</b>        | <b>S up to 20 cm</b> | S up to B4 flowering        |
| Groundsel               | T                    | MS                          |
| <b>Hemp-nettle</b>      | S up to 10 cm        | <b>S up to B4 flowering</b> |
| Henbit dead-nettle      | S up to flowering    | S up to flowering           |
| Knotgrass*              | MS                   | MS                          |
| Marigold                | MS                   | MS                          |
| Mayweed                 | T                    | T                           |
| Nettle (small)          | S                    | S                           |
| Orache                  | MS                   | MS                          |
| Pale persicaria*        | MS                   | MS                          |
| Pansy                   | T                    | T                           |
| <b>Poppy*</b>           | S up to 10 cm        | <b>S up to 10 cm</b>        |
| <b>Red dead-nettle</b>  | <b>S up to 18 cm</b> | S up to B4 flowering        |
| Redshank*               | S up to 3TL          | S up to 3TL                 |
| Scarlet pimpernel       | MS                   | S up to flowering           |
| Shepherd's needle       | T                    | T                           |
| <b>Shepherd's purse</b> | S up to 10 cm        | <b>S up to B4 flowering</b> |
| Speedwell (CF)          | T                    | S up to 4TL/MS >4TL         |
| Speedwell (IL)          | MS up to 2TL         | S up to 4TL/MS >4TL         |
| Vol beans               | S up to 8TL          | S up to B4 flowering        |
| Vol borage              | -                    | S up to 2TL                 |
| Vol linseed             | -                    | S up to 10 cm               |
| Vol oilseed rape        | T                    | T                           |
| Vol peas                | S up to 8TL          | S up to B4 flowering        |
| Vol potatoes*           | T                    | MS up to 20 cm              |
| Weed beet#              | T                    | T                           |
| Wild carrot             | MS up to 4TL         | S up to 4TL                 |
| Wild radish (runch)     | T                    | T                           |