

## SAFETY PRECAUTIONS

### Operator protection:

WASH HANDS AND EXPOSED SKIN before meals and after work.

### Environmental protection:

Extreme care must be taken to avoid spray drift onto non-crop plants outside the target area.

Livestock must be kept out of treated areas for at least 7 days following treatment. IF RAGWORT IS PRESENT, FOLLOW THE GUIDANCE IN THE 'DIRECTIONS FOR USE'.

(Do not contaminate water with the product or its container/ Do not clean application equipment near surface water. Avoid contamination via drains from yards and roads.)

### Storage and disposal:

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.

This label is compliant with the CPA Voluntary Initiative Guidance.



# Dow Shield® 400

HERBICIDE

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Product Registration Number: MAPP 14984

GROUP 0 HERBICIDE

A soluble concentrate containing 400 g ae/litre (36% w/w) clopyralid (527 g/litre clopyralidolamine).

A foliar acting herbicide effective against a range of perennial and annual weeds, in particular THISTLES and MAYWEEDS, in a variety of crops.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

To avoid risks to man and the environment, comply with the instructions for use.

PROTECT FROM FROST.

READ DIRECTIONS FOR USE ON ATTACHED LEAFLET.

### Approval holder:

Corteva Agriscience UK Limited

CPC2 Capital Park, Fulbourn, Cambridge, CB21 5XE

Telephone: (01462) 457272

Technical Helpline: 0800 689 8899 or email: ukhotline@corteva.com

24 Hour Emergency Telephone Number: +44 (0) 161 884 1235

National Poisons Information Service: 111

NET CONTENTS : 2 LITRES e

Dow Shield® 400



### Warning

Very toxic to aquatic life with long lasting effects

Collect spillage

Dispose of contents / container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of a non-hazardous waste.

### Other Specific restriction:

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To avoid risks to human health and the environment, comply with the instructions for use.

### IMPORTANT INFORMATION.

#### FOR USE ONLY AS A PROFESSIONAL HERBICIDE

#### Situation :

Winter and spring wheat, barley, oats, sugar beet, red beet, fodder beet, mangels, swede, turnip, oilseed rape, linseed, Brussels sprout, cabbage, broccoli / calabrese, cauliflower, bulb onion, forage maize, grassland, ornamental plant production

#### Maximum Individual Dose: }

#### Maximum Total Dose: }

#### Latest Time of Application: }

#### Other Specific Restrictions: }

} Full details are given in the Important Information area on the attached leaflet

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.



## DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

### IMPORTANT INFORMATION.

FOR USE ONLY AS A PROFESSIONAL HERBICIDE

Crop/Situation	Maximum Individual Dose (litres product/ha)	Maximum Total Dose	Latest Time of Application
Oilseed rape	0.5 litre	0.75 litre product/ha/crop	Before flower buds visible from above the crop canopy
Linseed	0.25 litre	0.25 litre product/ha/crop	Before flower buds visible from above the crop canopy
Sugar beet, red beet, fodder beet, mangels, swede, turnip	0.5 litre	0.75 litre product/ha/crop	When crops meet between the rows (BBCH 39)
Bulb onion	0.5 litre	0.75 litre product/ha/crop	6 weeks before harvest
Broccoli/calabrese, cabbage, cauliflower	0.5 litre	0.75 litre product/ha/crop	6 weeks before harvest
Brussels sprout	0.5 litre	0.75 litre product/ha/crop	Up to and including 9 or more true leaves unfolded (BBCH19)
Forage maize	0.25 litre	0.25 litre product/ha/crop	Up to and including 9 or more true leaves unfolded (BBCH19)
Grassland	0.5 litre	0.5 litre product/ha/year	7 days before harvest or cutting for hay and silage
Winter and spring wheat, barley, oats	0.175 litre	0.175 litre product/ha/crop	Before 3rd node detectable stage
Ornamental plant production	0.5 litre	0.5 litre product/ha/year	-

### Other Specific Restrictions:

Do not use between the 31<sup>st</sup> August and 1<sup>st</sup> March.

For use on ornamentals applications must only be via directed sprays only to target weed foliage. Livestock must be kept out of the treated areas for at least 7 days following treatment. IF RAGWORT IS PRESENT, FOLLOW THE GUIDANCE IN THE "DIRECTIONS FOR USE"

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DOW SHIELD 400 herbicide is a solution concentrate formulation of clopyralid, a foliar acting herbicide which is also translocated into roots, rhizomes and stolons. DOW SHIELD 400 is particularly active on weeds of the Compositae family e.g. annual and perennial thistles and mayweeds.

## GENERAL WARNING

### ALL CROPS

Do not use any plant material treated with DOW SHIELD 400 for composting or mulching.

Do not use manure from animals fed on crops treated with DOW SHIELD 400 for composting.

### ALL CROPS (EXCLUDING CEREALS AND LINSEED)

DOW SHIELD 400 residues in plant tissues (including manure and digestate) which have not completely decayed may affect succeeding susceptible crops. If treated crop remains have not fully decayed by the time of planting following crops then avoid planting: peas, beans and other legumes; carrots and other umbellifers; potatoes; lettuce and other compositae; glasshouse and protected crops.

To avoid risk to field crops following application of DOW SHIELD 400 to crops other than cereals, do not plant susceptible autumn-sown crops (e.g. winter beans) in the same year as treatment with DOW SHIELD 400. Where susceptible crops are to be planted in spring, do not apply DOW SHIELD 400 later than the end of July of the previous year.

Chop and incorporate all treated plant remains in the early autumn (or as soon as possible after harvest) to release any residues into the soil, where they are more quickly broken down. Following good agronomic practice ensure that stubble and straw (including farmyard manure) and other treated plant remains have completely decayed before planting susceptible crops.

### CEREALS AND LINSEED STRAW:

Straw from cereals and linseed sprayed with DOW SHIELD 400 may contain residues which could damage certain crops. To avoid such risk:

### CEREALS:

Field Crops: Bale and cart away the straw. Where straw is chopped and incorporated do not plant winter beans in the same year as treatment with DOW SHIELD 400.

Glasshouse Crops: Straw from treated crops should not be used or supplied for use as straw in compost, poultry litter, manure or spent mushroom compost for any glasshouse crop.

Straw from treated crops may be used for strawing down strawberries.

### LINSEED:

Bale and cart away the linseed straw. Where linseed straw is chopped and incorporated do not plant winter beans in the same year as treatment with DOW SHIELD 400.

### NOTES

For best results apply DOW SHIELD 400 when the weeds are actively growing. Control of mayweeds may be reduced if they are suffering from drought stress at the time of application.

Control of creeping thistle and other perennial weeds may be impaired by cultivations either before or within a period of two weeks after application of DOW SHIELD 400.

In common with good spraying practice DOW SHIELD 400 should not be applied when the crop is damp or when rainfall is expected within six hours.

Do not spray when crops are under stress from cold, drought, pest damage, nutrient deficiency etc.

Consult processors before using on crops for processing.

Contract agents should be consulted before using on crops grown for seed.

Do not apply to crops undersown with clover or other legume containing mixtures.

DOW SHIELD 400 is not subject to vapour drift, but do not spray in windy weather and avoid drift onto susceptible crops (e.g. seed potatoes).

Take care to avoid drift onto crops and non-target plants outside the target area.

Wash spraying equipment thoroughly with water and a liquid detergent immediately after use. Spray out. Fill with clean water and leave overnight. Spray out again before storing or using another product, particularly where changing over from herbicides to insecticides. Traces of DOW SHIELD 400 can cause harm to susceptible crops (e.g. seed potatoes) sprayed later.

DOW SHIELD 400 should be applied in tank mix with other products only if any requirement or restrictions on the other product label do not conflict with the requirements or restrictions of DOW SHIELD 400. Tank mixes should not be allowed to stand in the tank and agitation should be maintained at all times.

### MIXING

Fill the spray tank half full with water and add the required amount of DOW SHIELD 400 mixing well, then complete filling. If using a tank mix, the other products should be mixed with the water first following the label instructions, and DOW SHIELD 400 added last. The spray mix must be agitated continuously until application is complete.

### SPRAY QUALITY

Apply DOW SHIELD 400 as a MEDIUM spray as defined by the BCPC system.

### ANNUAL WEED SUSCEPTIBILITY

Weed susceptibility to the most commonly recommended rates of DOW SHIELD 400 are given in the weed tables below. For further details of rates, timings, etc, please refer to the individual crop sections.

Weed	Growth Stage	
	0.25 litre/ha	0.5 litre/ha
<b>Susceptible: Good kill</b>		
Corn marigold	2 leaf	4 leaf
Creeping thistle (from seed)	4 leaf	6 leaf
Groundsel	6 leaf	10 leaf
Pineappleweed	4 leaf	8 leaf
Scented mayweed	4 leaf	8 leaf
Scentsless mayweed	4 leaf	8 leaf
Smooth sow-thistle	2 leaf	4 leaf
<b>Moderately Susceptible: Moderate kill, strong suppression of survivors</b>		
Black-bindweed	1 leaf	2 leaf
<b>Moderately Resistant: Poor kill but useful suppression</b>		
Pale persicaria	1 leaf	2 leaf
Redshank	1 leaf	1 leaf

### PERENNIAL WEED SUSCEPTIBILITY

Control by 0.25 litre/ha + 0.5 litre/ha programme.

Creeping thistle	S
Perennial sow-thistle	MS
Dandelion	S
Spear thistle	S
White clover (10 cm diameter)	MS

S = Susceptible; Complete or near complete kill

MS = Moderately Susceptible; Good kill under favourable conditions

DOW SHIELD 400 applied in the 0.25 litre/ha + 0.5 litre/ha programme will also give some suppression of young plants of amphibious bistort and colt's-foot.

### OILSEED RAPE

#### AUTUMN SOWN OILSEED RAPE

DOW SHIELD 400 can be applied to all varieties of autumn sown oilseed rape in the spring from the two fully expanded leaf stage but before the flower buds are visible above the crop canopy.

#### Perennial Weed Control

For the control of creeping thistle apply DOW SHIELD 400 at 0.5 litre in 200 to 250 litres of water per hectare at the weed rosette stage (up to 30 cm across).

#### Annual Weed Control

For annual weeds apply DOW SHIELD 400 at 0.25 litre/ha in the spring. In competitive crops of oilseed rape mayweeds up to 10 cm in diameter will be well controlled by DOW SHIELD 400 at 0.25 litre/ha. Apply in a water volume of 200-400 litres/ha.

#### SPRING SOWN OILSEED RAPE

DOW SHIELD 400 can be applied to all varieties of spring sown oilseed rape for the control of annual weeds or creeping thistle. For annual weeds apply DOW SHIELD 400 at 0.25 litre in 200 to 250 litres of water per hectare. For creeping thistle apply DOW SHIELD 400 at 0.25 litre/ha at the rosette stage followed by a second application three to four weeks later of 0.5 litre in 200 to 250 litres of water per hectare.

#### SUGAR BEET, RED BEET, FODDER BEET AND MANGELS

##### CONVENTIONAL VOLUMES

For the control of annual weeds apply 0.25 litre in 200 to 250 litres of water per hectare. For the control of creeping thistle apply 0.25 litre in 200 to 250 litres of water per hectare at the rosette stage, followed by a second application of 0.5 litre in 200 to 250 litres of water per hectare three to four weeks later.

##### Use Alone

DOW SHIELD 400 may be used alone from the fully expanded cotyledon stage of the crop.

##### Compatibility

DOW SHIELD 400 at 0.25 litre/ha is compatible with the following products at the rate recommended by the manufacturers.

	Minimum Crop Size	Notes
Goltix Flowable + Cropspray 11E	First true leaves 10 mm long	Improves control of thistles and black-bindweed

##### LOW DOSE PROGRAMME

##### Compatibility

DOW SHIELD 400 at 0.25 litre in 80 to 100 litres of water per hectare may be applied as part of the sequential low dose programme with the following products.

	Minimum Crop Size	Notes
Goltix Flowable + Cropspray 11E	First true leaves 10 mm long	Improves control of thistles and black-bindweed

DOW SHIELD 400 can be included once at any stage of the programme with the other herbicides provided the products are used according to manufacturers' instructions. To complete control of creeping thistle a second application of DOW SHIELD 400 alone at 0.5 litre/ha in 200 to 250 litres of water per hectare should be made 3 to 4 weeks later.

#### CONTROL OF VOLUNTEER POTATO

DOW SHIELD 400, when used for the control of volunteer potato will give good stunting and loss of vigour to the potato. The control of green foliage will not be complete but the reduction in vigour will significantly reduce the competitive threat posed to the crop from this weed. As well as the reduction in vigour there can be a substantial reduction in number and weight of any daughter tubers that are produced. Any daughter tubers that are formed by a potato plant subsequent to the application of DOW SHIELD 400 can have reduced viability and loss of vigour.

Reduction or partial control of volunteer potato can be achieved by the use of Betanal Flow + Nortron Flo + DOW SHIELD 400 at 1.75 + 0.6 + 0.25 litres/ha respectively as a two spray programme.

##### Timing

The application timing of DOW SHIELD 400 is dependent upon the size of the potato. For best results it is recommended that the following timings are adhered to:

- The first application should be made when the volunteer potato shoots are between 5 and 10 cm tall providing the sugar beet crop is at the sizes stated above.
- The second application should then be made when the volunteer potato is between 10 and 20 cm tall. The size of potato for this second application is that of an untreated potato, for an accurate guide to when this stage is reached it is advisable to leave a small area of untreated potato in the field. Typically the second application will be 7 to 14 days after the first.

Applications of DOW SHIELD 400 should in all cases be completed before the end of June.

When applying DOW SHIELD 400 for the control of volunteer potato the total amount applied to the crop should not exceed 0.5 litre/ha (i.e. 2 applications of 0.25 litre/ha).

##### Note

Varieties of potatoes with particularly vigorous growth habits exhibit reduced sensitivity to DOW SHIELD 400 thus results may be less reliable than on other less vigorous varieties.

#### BRASSICA CROPS

DOW SHIELD 400 may be applied to all types and varieties of cabbage, broccoli, calabrese, Brussels sprouts, cauliflower, swede and turnip in the spring. For the control of annual weeds apply DOW SHIELD 400 at 0.25 litre in 200 to 250 litres of water per hectare.

For the control of creeping thistle apply DOW SHIELD 400 at 0.25 litre/ha for the first application at the rosette stage, followed by a second application three to four weeks later of 0.5 litre in 200 to 250 litres of water per hectare.

Application should only be made to direct drilled brassica crops after they have reached the two true leaf expanded stage. Transplanted crops can be treated once they are growing strongly and are fully established. Some chlorosis or leaf distortion may occur in crops with a reduced coating of leaf wax (eg due to soil acidity).

##### Compatibility

DOW SHIELD 400 when used at 0.5 litre/ha should not be tank mixed for use on any brassica crop.

Do not use DOW SHIELD 400 in any tank mixture on early varieties of F1 hybrid Brussels sprouts.

#### ONIONS

DOW SHIELD 400 may be applied to spring or autumn sown bulb onions in the spring. For annual weeds apply 0.25 litre in 200 to 250 litres of water per hectare. For the control of creeping thistle apply DOW SHIELD 400 at 0.25 litre/ha for the first application followed by a second application three to four weeks later of 0.5 litre in 200 to 250 litres of water per hectare.

DOW SHIELD 400 at 0.25 litre/ha should only be applied to onions after they have reached the two true leaf stage.

Extreme caution must be taken when applying DOW SHIELD 400 to onions particularly at the higher rate. The possibility of crop effects (chlorosis, leaf distortion and/or leaf prostration) will be reduced by observing the following:

DOW SHIELD 400 should only be applied to onions which have an adequate wax layer.

Certain conditions will reduce the layer of protective wax; these include previous chemical applications, drought stress, periods of low night/high day temperatures or rapid growth caused by high nitrogen regimes and irrigation, etc.

Do not apply DOW SHIELD 400 to onions at temperatures above 20°C or when under stress.

#### FORAGE MAIZE

DOW SHIELD 400 can be applied to all varieties of forage maize after the three leaf expanded stage. For annual weeds apply 0.25 litre in 200 to 250 litres of water per hectare.

#### GRASSLAND

DOW SHIELD 400 can be applied to all species and varieties of grass in established leys or permanent pastures following removal of any livestock.

As an overall treatment, DOW SHIELD 400 should be applied at 0.5 litre/ha in a water volume of 300 to 400 litres/ha.

Application should be made when weeds are actively growing at the 15 to 30 cm rosette stage. If grass has been cut for hay or silage, treat at least 2 to 3 weeks after cutting when sufficient regrowth has occurred.

##### NOTE

Exclude livestock from treatment and do not allow livestock to graze treated grassland for at least 7 days following treatment. Where ragwort is present users should consult the Code of Practice on How to Prevent the Spread of Ragwort. Ragwort plants sprayed with this herbicide are more palatable and contain higher levels of toxins. Animals should be excluded from treated areas until any ragwort has completely recovered or died and there is no visible sign of the dead weed. Do not include treated ragwort in hay or silage crops.

#### LINSEED FOR OIL

DOW SHIELD 400 can be applied to all varieties of linseed in the spring from the two leaf expanded stage but before the flower buds are visible. For the control of annual weeds apply 0.25 litre in 200 to 250 litres of water per hectare.

#### CEREALS (WINTER AND SPRING WHEAT, BARLEY, OATS)

DOW SHIELD 400 at 0.175 litre/ha added to Starane Hi-Load HL will improve control of corn marigold, groundsel, pineappleweed, scented mayweed, scentless mayweed and smooth sowthistle.

Recommended water volume is 200 litres/ha.

DOW SHIELD 400 can be applied in the spring from the 2 leaf stage (Zadoks 12) up to and including the second node detectable stage (Zadoks 32).

#### ORNAMENTAL PLANT PRODUCTION

DOW SHIELD 400 can be applied as a directed spray on ornamental trees and shrubs, but all spray or drift contact with leaves, buds, suckers, or green stems of the crop must be avoided using a shielded or hooded sprayer if necessary.

Do not apply DOW SHIELD 400 within the root zone of species of the family Compositae (eg *Senecio* spp) or Papilionaceae (eg *Laburnum*, *Genista*, *Cytisus* spp).

Apply DOW SHIELD 400 at 0.5 litre in 200 litres of water per hectare at the optimum time for control of target weeds (creeping thistle at the rosette stage up to 30 cm across).

#### COMPATIBILITY

For the latest advice on tank mixes please contact Corteva Agriscience.

#### COMPANY ADVISORY INFORMATION

The following information does not form part of the product label under the UK Plant Protection Products Regulations and provides additional advice on product use at the discretion of Corteva Agriscience

#### TRADEMARK ACKNOWLEDGEMENTS

DOW SHIELD, STARANE are trademarks of Corteva Agriscience and its affiliated companies. All other brand names used in this document are trademarks of other manufacturers in which proprietary rights may exist.

#### CORTEVA AGRISCIENCE CONDITIONS OF SUPPLY

All goods supplied by us are of high grade and we believe them to be suitable but, as we cannot exercise control over their storage, handling, mixing or use, or the weather conditions before, during or after application which may affect the performance of the goods, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded. No responsibility will be accepted by us or re-sellers for any failure in performance, damage or injury whatsoever arising from their storage, handling, application or use. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in the use of such goods.

To access the Safety Data Sheet for this product scan the QR code or use the weblink below:



<https://www.corteva.co.uk/content/dam/dpagco/corteva/eu/gb/en/files/sds/DOW-SHIELD-400-SDS.pdf>

Alternatively contact your supplier

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(Do not contaminate water with the product or its container/ Do not clean application equipment near surface water. Avoid contamination via drains from yards and roads.)

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