

D50[®]

GROUP**4****HERBICIDE**

Contains 500 g/l (42.7% w/w) 2,4-D as the Dimethylamine salt - Soluble Concentrate.
For the control of broad-leaved weeds in cereals and grassland.

IMPORTANT INFORMATION

FOR USE ONLY AS A PROFESSIONAL HERBICIDE

Crops	Maximum Individual Dose	Max No of treatments	Latest time of application
Winter wheat and rye	2.5 L/ha	1 per crop	Before first node detectable
Winter barley, winter oats, spring wheat and spring barley	2.0 L/ha	1 per crop	Before first node detectable
Listed cereals undersown with grass and/or clover	1.0 L/ha	1 per crop	Before first node detectable
Agricultural grassland	3.3 L/ha	1 per year	-
Amenity grassland and managed amenity turf	3.3 L/ha	3 per year	-

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.

Additional Safety Phrase:

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

Safety Information

DANGER

**Harmful if swallowed.
Causes serious eye damage.
Very toxic to aquatic life with long lasting effects.**

Do not eat, drink or smoke when using this product

Wear protective gloves/eye protection/face protection

If in eyes, rinse cautiously with water for several minutes, remove contact lenses if present and easy to do so, continue rinsing

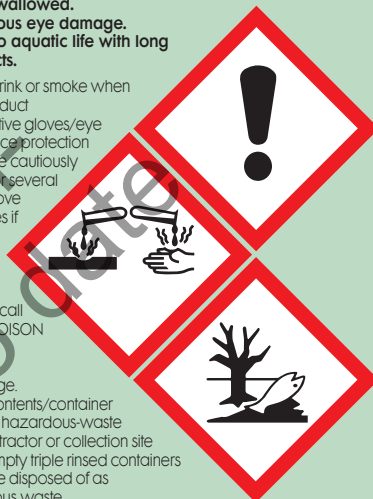
Immediately call a doctor or POISON CENTER

Rinse mouth.
Collect spillage.

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

CONTAINS 2,4-D. May produce an allergic reaction.

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



PCS No. 05532

UFI: FHOQ-3JIP-8GAM-NTPQ

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**PROTECT FROM FROST
FOR PROFESSIONAL USE ONLY**

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 **Nufarm**
Grow a better tomorrow

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.

RESTRICTIONS

D50 is active at low concentrations. DO NOT spray in windy conditions as the spray drift may cause damage to neighbouring crops. The following crops are particularly susceptible: Beet, Brassicae (e.g. turnips, swedes, oilseed rape), onions, and most market garden crops including lettuce, cucumber and tomatoes under glass, pears and vines.

WASH EQUIPMENT thoroughly with water and wetting agent or liquid detergent immediately after use. Spray out, fill with clean water and leave over night. Spray out again before storing or using for another product. Traces of product can cause harm to susceptible crops sprayed later.

D50 may be applied to grassland or turf that has been established for a minimum of 12 months.

DO NOT apply during rain or if rain is expected.

DO NOT roll or harrow within a few days before or after applying D50.

DO NOT apply immediately before or after sowing any crop.

DO NOT plant succeeding crops within 3 months of applying D50

DO NOT mow or roll turf or amenity grassland for four days before or after application. The first four mowings after treatment must be composted for at least 6 months before use.

DO NOT treat cereals, grass or turf suffering from stress caused by drought, disease or other adverse factors, such as freezing conditions.

Ragwort is an 'injurious weed' and those who permit it to grow unchecked on their land are liable for prosecution under the Weeds Act (1959) – UK only

Agricultural grassland destined for hay or silage in the spring, should be sprayed in the preceding autumn.

WEEDS CONTROLLED

WEED SUSCEPTIBILITY TABLE CEREALS

Weeds	Rate/ha	Level of control
Black Mustard (<i>Brassica nigra</i>) Charlock (<i>Sinapis arvensis</i>)	0.7 L	S (Cotyledon-Early flower-bud)
Fat-Hen (<i>Chenopodium album</i>) Field Pennycrest (<i>Thlaspi arvense</i>) Hairy Tare (<i>Vicia hirsute</i>) Treacle Mustard (<i>Erysimum cheiranthoides</i>) White Mustard (<i>Sinapis alba</i>)	1.4 L	S (Cotyledon-Early flower-bud)
Shepherds Purse (<i>Capsella bursa-pastoris</i>) Small Nettle (<i>Urtica urens</i>) Wild Radish (<i>Raphanus raphanistrum</i>)	1.4 L	S (Cotyledon-8 ETL)
Corn Buttercup (<i>Ranunculus arvensis</i>)	1.4 L	S (Cotyledon-2 ETL) or MR (4 ETL-Early flower-bud)
Common Orache (<i>Atriplex patula</i>) Common Poppy (<i>Papaver rhoeas</i>) Field Forget-me-not (<i>Myosotis arvensis</i>) Prickly Sowthistle (<i>Sonchus asper</i>) Smooth Sowthistle (<i>Sonchus oleraceus</i>) Wild Turnip (<i>Brassica rapa</i>)	1.4 L	MS (Cotyledon-2 ETL) or MR (4 ETL-Early flower-bud)

Black-bindweed (<i>Polygonum convolvulus</i>) Black nightshade (<i>Solanum nigrum</i>), Bugloss (<i>Lycopsis arvensis</i>) Common Chickweed (<i>Stellaria media</i>) Common field-speedwell (<i>Veronica persica</i>) Common fumitory (<i>Fumaria officinalis</i>) Common Mouse-ear (<i>Cerastium holosteoides</i>) Dove's-foot Crane's-bill (<i>Geranium molle</i>) Field Gromwell (<i>Lithospermum arvense</i>) Green Field speedwell (<i>Veronica agrestis</i>) Groundsel (<i>Senecio vulgaris</i>) Ivy-leaved Speedwell (<i>Veronica hederifolia</i>) Knotgrass (<i>Polygonum aviculare</i>) Pale Persicaria (<i>Polygonum lapathifolium</i>) Redshank (<i>Polygonum persicaria</i>) Scarlet Pimpernel (<i>Anagallis arvensis</i>) Shepherd's-needle (<i>Scandix pecten-veneris</i>) Sun spurge (<i>Euphorbia helioscopia</i>) Viper's-bugloss (<i>Echium vulgare</i>) Wall speedwell (<i>Veronica arvensis</i>)	1.4 L	MR (Cotyledon-2 ETL) or R (4 ETL-Early flowerbud)
Common Orache (<i>Atriplex patula</i>) Common Poppy (<i>Papaver rhoeas</i>) Smooth Sowthistle (<i>Sonchus oleraceus</i>)	2.0 L	S (Cotyledon-4 ETL) or MR (6 ETL-Early flower-bud)
Knotgrass (<i>Polygonum aviculare</i>) Scentless Mayweed (<i>Tripleurospermum maritimum</i>)	2.0 L	MR (Cotyledon-2 ETL) or R (4 ETL-Early flowerbud)
Creeping Thistle† (<i>Cirsium arvense</i>)	2.0 – 2.5 L	S (Cotyledon-Early flower-bud)

S = Susceptible / MS = Moderately Susceptible / R = Moderately Resistant / R = Resistant
ETL = Expanded True Leaves / † = aerial growth only

WEED SUSCEPTIBILITY TABLE AGRICULTURAL GRASSLAND

Weeds	Rate/ha	Comments
Autumn hawkbit (<i>Leontodon autumnalis</i>), Creeping buttercup (<i>Ranunculus repens</i>) ¹ , Plantains (<i>Plantago</i> spp.)	2.8L	Susceptible (Consistently good control, both shoots and roots)
Cat's ear (<i>Hypochaeris radicata</i>), Common knapweed (<i>Centaurea nigra</i>), Common nettle (<i>Urtica dioica</i>), Creeping thistle (<i>Cirsium arvense</i>) [†] , Curled dock (<i>Rumex crispus</i>) [†] , Daisy (<i>Bellis perennis</i>), Dandelion (<i>Taraxacum officinale</i>), Meadow buttercup (<i>Ranunculus acris</i>) [†] , Self-heal (<i>Prunella vulgaris</i>), Spear thistle (<i>Cirsium vulgare</i>), Soft rush (<i>Juncus effusus</i>) [†]	2.8L	Moderately Susceptible (Aerial growth usually killed and a useful measure of long-term control obtained under suitable conditions)
Common ragwort (<i>Senecio jacobaea</i>) ¹ , Field Bindweed (<i>Convolvulus arvensis</i>) ²	3.3 L	Moderately Susceptible (Aerial growth usually killed and a useful measure of long-term control obtained under suitable conditions)

Broad-leaved dock (<i>Rumex obtusifolius</i>)*, Bulbous buttercup (<i>Ranunculus bulbosus</i>) ^o , Common ragwort (<i>Senecio jacobaea</i>) ^o , Common sorrel (<i>Rumex acetosa</i>)*, Dwarf thistle (<i>Cirsium acule</i>), Hard rush (<i>Juncus inflexus</i>), Horsetails (<i>Equisetum</i> spp.) ³ , Meadowsweet (<i>Filipendula ulmaria</i>), Perennial sow-thistle (<i>Sonchus arvensis</i>), Sheep's sorrel (<i>Rumex acetosella</i>)*, Wild onion (<i>Allium vineale</i>), Yarrow (<i>Achillea millefolium</i>), Yellow rattle (<i>Rhinanthus minor</i>)	2.8 L	Moderately Resistant (Variable effect on aerial growth, appreciable long-term control unlikely)
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F treat in spring or early summer.

t treat at early flower bud stage.

P treat in the autumn on new leaf or in the spring.

P treat either pre-flowering in May or any time after defoliation, when growing vigorously (use 1.6 l/ha on seedling Dock spp.).

P treat before flowering and cut 4 weeks after (or before) treatment to improve control.

b treat before flowering when the flowering shoot is developing rapidly and seedlings & rosettes are growing strongly.

t treatment will normally kill plants at all stages of growth up to the early bud stage. For best levels of control, treat in April - June when rosettes are growing strongly but before flower buds are well formed.

P In order to obtain maximum effect in the year after treatment, spraying should be delayed until the shoots are well developed.

b treat when growing well in May or early June. Top growth is removed or considerably reduced for the season of treatment. In grassland for hay or silage, shoot kill may be obtained by using 2.0 l/ha two weeks before cutting.

**WEED SUSCEPTIBILITY TABLE
AMENITY GRASSLAND & MANAGED AMENITY TURF**

Weed	Rate/ha	Comments
Creeping buttercup (<i>Ranunculus repens</i>) Mouse-ear hawkweed (<i>Hieracium pilosella</i>) Plantains (<i>Plantago</i> sp.) Thrift (<i>Armeria maritima</i>)	2.8 L	Susceptible (Consistently killed by one application)
Common ragwort (<i>Senecio jacobaea</i>)	3.3 L	Moderately Susceptible (Sometimes killed by one application, but may require a further application to give complete control.)

Bulbous buttercup (<i>Ranunculus bulbosus</i>) Cats-ear (<i>Hypochaeris radicata</i>) Common chickweed (<i>Stellaria media</i>) Common ragwort (<i>Senecio jacobaea</i>) Common sorrel (<i>Rumex acetosa</i>) Curled dock (<i>Rumex crispus</i>) Daisy (<i>Bellis perennis</i>) Dandelion (<i>Taraxacum officinale</i>) Dwarf thistle (<i>Cirsium acule</i>) Hawkbits (<i>Leontodon</i> sp.) Heath bedstraw (<i>Galium saxatile</i>) Marsh pennywort (<i>Hydrocotyle vulgaris</i>) Sea-milkwort (<i>Glaux maritima</i>) Sheep's sorrel (<i>Rumex acetosella</i>) Smooth hawk's-beard (<i>Crepis capillaris</i>) Stork's-bills (<i>Erodium</i> sp.).	2.8 L	Moderately Susceptible (Sometimes killed by one application, but may require a further application to give complete control.)
Common mouse-ear (<i>Cerastium holosteoides</i>) Creeping cinquefoil (<i>Potentilla reptans</i>) Lesser celandine (<i>Ranunculus ficaria</i>) Procumbent pearlywort (<i>Sagina procumbens</i>) Selfheal (<i>Prunella vulgaris</i>) Silverweed (<i>Potentilla anserina</i>) Yarrow (<i>Achillea millefolium</i>).	2.8 L	Moderately Resistant (Some effect from one application, but often requires further applications to give adequate control.)

treatment will normally kill plants at all stages of growth up to the early bud stage. For best levels of control, treat in April - June when rosettes are growing strongly but before flower buds are well formed.

CROP SPECIFIC INFORMATION

Rate of Application

Cereals

Crop	Maximum Dose
Winter Cereals: Wheat or Rye Barley or Oats	2.5 litres per hectare 2.0 litres per hectare
Spring Cereals: Wheat or barley Oats	2.0 litres per hectare Not recommended

Undersown Cereals

For cereals undersown with grass and/or clover but not lucerne. DO NOT spray with D50 before undersowing. Experience has shown that when weeds and cereals form a canopy undersown crops may be safely treated using not more than 1.0 litre per hectare at low volume. Clovers should have developed two to three true leaves before spraying. Red Clovers may be damaged.

Grassland (non-amenity uses)

Do not treat where clovers or other legumes are an important part of the sward.

Grassland may be treated with 2.8-3.3 litres per hectare of D50 according to the weeds present. Recommended rates are given in the weed susceptibility table for grassland. Clovers will receive a check. Top dressing ten days before treatment is recommended to assist kill of weeds and subsequent recovery of the sward.

Amenity Grassland and Managed Amenity Turf

Amenity grassland and managed amenity turf may be treated with 2.8-3.3 litres per hectare of D50. The expected levels of control are detailed in the weed susceptibility table for amenity uses. Clovers will receive a check. Top dressing ten days before treatment is recommended to assist kill of weeds and subsequent recovery of the sward.

TIME OF APPLICATION

Spray weeds when the crop is actively growing. In general annual weeds are more susceptible at the seedling stage and perennials when the flower bud is forming.

Timing of cereal spray must be determined by the stage of the crop growth.

Winter cereals

Spray in the spring from the leaf sheaf erect stage but before the first node detectable stage.

Spring cereals

Spray from the five-leaf fully expanded stage but before the first node detectable stage.

Grassland, Amenity Grassland and Managed Amenity Turf

Spray perennial weeds during their period of maximum growth, usually when the flower buds are beginning to form. The responses of perennial weeds to treatments are variable often only the aerial parts are killed but suppression may also occur. The recovery of weeds will be reduced if the crop is growing vigorously at the time of treatment. A maximum of 3 applications per year are permitted. There must be an interval of at least 28 days between separate D50 treatments.

Resistance Management

When herbicides with the same mode of action are used repeatedly over several years in the same field, selection of resistant biotypes can take place. These can propagate and may become dominating. A weed species is considered to be resistant to a herbicide if it survives a correctly applied treatment at the recommended dose. A strategy for preventing and managing such resistance should be adopted. This should include integrating herbicides with a programme of cultural control measures.

CONDITIONS OF SALE

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 and 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, and 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. Our staff or agents cannot vary these conditions 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 refer to the Nufarm website at <https://www2.nufarm.com/uk/>

