HERBOXONE

PEEL BACK FOR DIRECTIONS FOR USE LEAFLET

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 barley (spring), barley (winter), oats (winter), rye (winter), wheat (spring), wheat (winter), undersown cereals, amenity grassland, grassland and managed amenity turf

MAPP 13958

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

To access the Safety Data Sheet for this product, scan the QR code or use the weblink below.
http://headland-ag.co.uk/image/catalog/MSDS%20Herboxone.pdf
Alternatively, contact your supplier.

HERBOXONE - A soluble concentrate containing 500 g/L 2,4-D

DANGER

Harmful if swallowed.
Caused serious eye damage.

Wash thoroughly after handling.
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.
IF SWALLOWED: Call a POISON Center or a doctor/physician if you feel unwell.
Rinse mouth.
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean 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.

IMPORTANT INFORMATION
FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL HERBICIDE:

Crop	Max Individual Dose	Max No of Treatments	Latest Time of Application
Winter wheat and rye	2.5 l/ha	1 per crop	Before 1st node detectable
Winter barley, winter oats, spring wheat and spring barley	2.0 l/ha	1 per crop	Before 1st node detectable
Listed cereals undersown with grass and/or clover	1.0 l/ha	1 per crop	Before 1st node detectable
Grassland	3.3 l/ha	1 per year	---
Amenity grassland, 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.

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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

Herboxone 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) and most market garden crops including lettuce 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 overnight. Spray out again before storing or using for another product. Traces of product can cause harm to susceptible crops sprayed later.

Herboxone 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 Herboxone.
DO NOT apply immediately before or after sowing any crop.
DO NOT plant succeeding crops within 3 months of applying Herboxone.
DO NOT mow or roll turf or amenity grassland for 4 days before or after application. The first 4 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 to prosecution under the Weeds Act 1959.
Agricultural grassland destined for hay or silage in the spring should be sprayed the previous autumn.

CROP SPECIFIC INFORMATION

Rate of Application

Cereals

Apply Herboxone in 100-1000 litres of water per hectare using any standard high or low volume sprayer. Recommended rates are given in the weed susceptibility table for cereals below. It is important not to exceed the maximum safe dose as follows:

Crop	Maximum Dose
Winter Cereals:	
Wheat or Rye	2.5 litres per hectare
Barley or Oats	2.0 litres per hectare
Spring Cereals:	
Wheat or barley	2.0 litres per hectare

Undersown Cereals

For cereals undersown with grass and/or clover but not lucerne. **DO NOT** spray with Herboxone 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 form an important part of the sward. Grassland may be treated with 2.8 - 3.3 litres per hectare of Herboxone according to the weeds present. Recommended rates are given in the weed susceptibility table for grassland below. 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 sprayed with 2.8 - 3.3 l/ha of Herboxone. The expected levels of weed 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 treatments with Herboxone.

Note: 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 dominant. A weed species is considered to be resistant to a herbicide if it survives a correctly timed treatment at the recommended rate. A strategy for preventing and managing such resistance should be adopted. This should include integrating herbicides with a programme of cultural control measures. Guidelines have been produced by the Weed Resistance Action Group and copies are available from HGCA, CPA, your distributor, crop advisor or manufacturer.

WEED SUSCEPTIBILITY TABLE - CEREALS

Weeds	Rate/ha	Level of Control
Black Mustard, Charlock	0.7 l	S (Cotyledon – Early flower bud)
Fat-Hen, Field Penny-cress, Hairy Tare, Treacle Mustard, White Mustard	1.4 l	S (Cotyledon – Early flower bud)
Shepherd's-purse, Small Nettle, Wild Radish	1.4 l	S (Cotyledon – 8 ETL)
Corn Buttercup	1.4 l	S (Cotyledon – 2 ETL) or MR (4 ETL – Early flower-bud)
Common Orache, Common Poppy, Field Forget-me-not, Prickly Sow-thistle, Smooth Sowthistle, Wild Turnip	1.4 l	MS (Cotyledon – 2 ETL) or MR (4 ETL – Early flower bud)
Black-bindweed, Black nightshade, Bugloss, Common Chickweed, Common field-speedwell, Common Fumitory, Common Mouse-ear, Dove's-foot Crane's-Bill, Field Gromwell, Green Field Speedwell, Groundsel, Ivy-leaved speedwell, Knotgrass, Pale Persecaria, Redshank, Scarlet Pimpernel, Shepherd's-Needle, Sunspurge, Viper's-bugloss, Wall speedwell,	1.4 l	MR (Cotyledon – 2 ETL) or R (4 ETL – Early flowerbud)
Common Orache, Common Poppy, Smooth Sow-thistle	2.0 l	S (Cotyledon – 4 ETL) or MR (6 ETL – early flower bud)
Knotgrass, Scentless Mayweed	2.0 l	MR (Cotyledon – 2 ETL) or R (4 ETL – Early flower-bud)
Creeping Thistle†	2.0 – 2.5 l	S (Cotyledon – Early flower bud)

S = Susceptible
MS = Moderately susceptible
MR = Moderately resistant
R = Resistant
ETL = Expanded True Leaves
† = Aerial growth only

WEED SUSCEPTIBILITY TABLE – AGRICULTURAL GRASSLAND

Weeds	Rate/ha	Comments
Autumn hawkbit, Creeping buttercup (1), Plantains	2.8 l	Susceptible – consistently good control of both shoots and roots
Cat's ear, Common Knapweed, Common Nettle, Creeping Thistle (2), Curled dock (4), Daisy, Dandelion, Meadow buttercup (1), Self-heal, Spear thistle, Soft rush (5)	2.8 l	Moderately susceptible – Aerial growth usually killed and a useful measure of long-term control obtained under suitable conditions.
Common ragwort (7), Field bindweed (9)	3.3 l	Moderately susceptible – Aerial growth usually killed and a useful measure of long-term control obtained under suitable conditions.
Broadleaved dock (4), Bulbous buttercup (3), Common ragwort (6), Common Sorrel (4), Dwarf thistle, Hard rush, Horsetails (8), Meadowsweet, Perennial sow-thistle, Sheep's sorrel (4), Wild onion, Yarrow. Yellow rattle	2.8 l	Moderately resistant – Variable effect of aerial growth, appreciable long-term control unlikely.

1 Treat in spring or early summer
2 Treat at early flower bud stage
3 Treat in the autumn or on new leaf in the spring
4 Treat either pre-flowering in May or any time after defoliation when growing vigorously (use 1.6 l/ha on seedling dock species).
5. Treat before flowering and cut 4 weeks before or after treatment to improve control.
6 Treat before flowering when flower shoot is developing rapidly and seedlings and rosettes are growing strongly
7. 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.
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.
8. Threat 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.
9. In order to obtain maximum effect in the year after treatment, spraying should be delayed until the shoots are well developed.

WEED SUSCEPTIBILITY TABLE – AMENITY GRASSLAND AND MANAGED AMENITY TURF

Weeds	Rate/ha	Comments
Creeping buttercup, Mouse-eared hawkweed, Plantains, Thrift	2.8 l	Susceptible – consistently killed by one application
Common ragwort [1]	3.3 L	Moderately Susceptible (Sometimes killed by one application, but may require a further application to give complete control.)
Bulbous buttercup, Cats-ear, Common chickweed, Common ragwort, Common sorrel, Curled dock, Daisy, Dandelion, Dwarf thistle, Hawkbits, Heath bedstraw, Marsh pennywort, Sea-milkwort, Sheep's sorrel, Smooth hawk's-beard, Stork's-bill	2.8 l	Moderately susceptible – sometimes killed by one application but may require a further application to give complete control.
Common mouse-ear, Creeping cinquefoil, Lesser celandine, Procumbent pearlwort, Self-heal, Silverweed, Yarrow	2.8 l	Moderately resistant – some effect from one application but often requires further applications to give adequate control.

[1] 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.

SAFETY PRECAUTIONS

a Operator Protection
Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:
SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACE SHIELD) when handling the concentrate.
WEAR SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces.
WEAR SUITABLE PROTECTIVE CLOTHING (IMPERMEABLE COVERALLS) AND SUITABLE PROTECTIVE GLOVES when applying by hand-held equipment.
However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.
IF YOU FEEL UNWELL, seek medical advice (show label where possible).
WHEN USING DO NOT EAT, DRINK OR SMOKE.
WASH CONCENTRATE from skin or eyes immediately.
WASH HANDS AND EXPOSED SKIN before meals and after work.

b Environmental Protection
KEEP LIVESTOCK OUT of treated areas for at least two weeks 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.
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.
Avoid spray drift onto adjacent plants.

c Storage and Disposal
DO NOT re-use this container for any other purpose
KEEP OUT OF REACH OF CHILDREN
KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.
KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.
WASH OUT CONTAINER THOROUGHLY, and dispose of safely.

TERMS AND CONDITIONS OF SUPPLY, SALE OR USE
All goods supplied by Headland Agrochemicals Ltd. are high grade and we believe them to be suitable for the purpose for which we expressly supply them: but as we cannot exercise any control over their mixing, use or 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 our Associate Companies for any damage or injury whatsoever arising from their storage, handling, re-application or use. These conditions cannot be varied by our staff, our agents or the re-sellers of the product whether or not they supervise or assist in the use of such goods.