



D-Quat®

Contains 200 g/l (16.7% w/w) diquat as the dibromide salt in a soluble concentrate

MAPP No. 14833

For the desiccation of potato haulm prior to harvest, linseed, oilseed rape, clover seed crops, peas harvested dry, dried broad beans, field beans and weed growth in lodged barley and oats destined for stock feeding; for weed control in ornamental bulbs, sugar beet and around all edible and non-edible crops.

<p>HARMFUL IF SWALLOWED VERY TOXIC BY INHALATION IRRITATING TO RESPIRATORY SYSTEM AND SKIN MAY CAUSE SENSITISATION BY SKIN CONTACT DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED EXPOSURE IF SWALLOWED VERY TOXIC TO AQUATIC ORGANISMS MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT</p> <p>PROTECT FROM FROST</p> <p>SAFETY PRECAUTIONS OPERATOR PROTECTION Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment: WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES when handling the concentrate and contaminated surfaces. WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) when applying by vehicle-mounted equipment. However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection. Wear suitable protective clothing and gloves. TAKE OFF IMMEDIATELY all contaminated clothing. WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of gloves. WASH CONCENTRATE from skin or eyes immediately. WHEN USING DO NOT EAT, DRINK OR SMOKE. DO NOT BREATHE SPRAY. WASH HANDS AND EXPOSED SKIN before eating and drinking and after work. IN CASE OF INSUFFICIENT VENTILATION WEAR SUITABLE RESPIRATORY EQUIPMENT. IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, seek medical advice immediately (show the label where possible).</p> <p>Environmental protection 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. HARMFUL TO LIVESTOCK. Keep all livestock out of treated areas for at least 24 hours after treatment. DO NOT USE TREATED STRAW OR HAULM AS ANIMAL FEED OR BEDDING for at least 4 days after last application.</p> <p>Storage and disposal KEEP LOCKED UP AND OUT OF THE REACH OF CHILDREN. KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS. KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place. This material and its container must be disposed of in a safe way. DO NOT RE-USE CONTAINER for any purpose. 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 the container safely. To avoid risks to man and the environment, comply with the instructions for use. Safety data sheet available for professional user on request. The Control of Substances Hazardous to Health Regulations (COSHH) may apply to the use of the product at work. This product is approved under the Plant Protection Products Regulations (as amended).</p>	<p>Contains diquat; may produce an allergic reaction</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="893 940 1125 1220">  <p>VERY TOXIC</p> </div> <div data-bbox="1141 940 1372 1220">  <p>DANGEROUS FOR THE ENVIRONMENT</p> </div> </div>
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IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL HERBICIDE AND DESICCANT
See Statutory Area on attached leaflet for the following:
Crop or situation, Maximum individual dose of product, Maximum total dose of product, Maximum number of treatments, Latest time of application, Other Specific Restrictions
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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FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL HERBICIDE AND DESICCANT				
Crop or situation	Maximum individual dose of product	Maximum total dose of product	Maximum number of treatments	Latest time of application
Potato	4 l/ha	5 l/ha per crop	-	-
Oilseed rape Combining pea, harvested dry Dried broad bean Field bean Red clover, seed crop White clover, seed crop Linseed	3 l/ha	-	One per crop	-
Barley, for animal feed Oats, for animal feed	4 l/ha	-	One per crop	-
Ornamental plant production Sugar beet	2 l/ha	-	One per crop	Before crop emergence or before transplanting
Around all edible crops Around all non edible crops	2 l/ha	-	-	-
Other specific restrictions This product must not be applied through ultra low volume (ULVA) or mistblower equipment.				
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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.

DESICCATION OF POTATO HAULM

Cultural considerations	Time of application & spraying recommendations	Rate of application
<p>Desiccate the haulm when the tubers have grown to the required size or upon other management criteria being reached.</p> <p>Pre-harvest interval Wait at least 14 days after completion of spraying before lifting to allow the skins to set, most particularly if blight is present.</p> <p>See SOIL MOISTURE See POTATO VARIETIES</p>	<p>Desiccate the haulm employing either a single spray or two sprays 5-7 days apart. The two spray method may be preferred when the haulm and/or weed growth is dense. Achieve good spray cover of haulm and weeds by ensuring accurate spraying machine set-up and by employing a spray volume matched to the density of the vegetation. Ideally spray under bright conditions with low humidity. DO NOT spray if light rain, mist or heavy dew is present or expected as this may cause crop damage.</p> <p><u>Single spray</u> Spray evenly over the crop and weeds when all conditions are judged suitable.</p> <p><u>Two spray method</u> Apply the first spray when all conditions are judged suitable with the aim of causing substantial dieback of the haulm. Use a higher dose where the crop is more vigorous or has yet to start senescing. Apply the second spray about 5-7 days after the first spray when substantial haulm dieback should have occurred thus allowing more complete penetration of the second spray to the lower stem surfaces.</p>	<p>DO NOT add any wetting agent or other adjuvant to any spray</p> <p><u>Single spray</u> 4 litres in 200-400 litres water/ha.</p> <p><u>Two spray method</u> <i>First spray</i> 1-2 litres in at least 200 litres water/ha. <i>Second spray</i> 2-4 litres in at least 200 litres water/ha.</p> <p>The total dose must not exceed 5 L/ha per year</p>

SOIL MOISTURE

Desiccation of potatoes whilst under moisture stress may cause tuber damage primarily observed as a brown staining of the vascular ring, commonly referred to as "ringing", just below the skin.

MORECS is the Meteorological Office Rainfall and Evaporation Calculation System and should be used to identify periods of high soil moisture stress. MORECS gives a calculated Soil Moisture Deficit (SMD).

Barclay D-Quat MUST NOT be applied with Soil Moisture Deficits (SMD) in excess of those in the following table unless the specified amounts of rain or irrigation have been received or applied within the specified time scale.

Soil Texture (85 System)	Minimum Rain or Irrigation requirement	OR Maximum Permissible Soil Moisture Deficit		
		Early or seed crop	Canning crop	Ware crop*
Sands Very light soils Light soils All stony soils (including stony medium and stony heavy soils)	13 mm within 2 days before spraying. Soil must be moist at tuber depth.	32 mm	Do not use.	50 mm
Medium soils Heavy soils	13 mm within 5 days before spraying. Soil must be moist at tuber depth.	50 mm	Do not use.	64 mm
Organic soils (>10% OM) Peaty soils Peats Peaty loams	13 mm within 5 days before spraying. Soil must be moist at tuber depth	64 mm	50 mm	83 mm

* If ware crops are immature or show excess vigour at the time of spraying, treat them as though an Early/Seed Crop.

Before any or each application of Barclay D-Quat all areas of the field must be physically examined and the soil must be judged as moist before the treatment may be applied. The soil may be judged moist and the crop suitable for treatment if the soil within 5 cm of all tubers, including the deepest tubers, is moist. Seek professional advice in cases of doubt.

POTATO VARIETIES

The haulm of all varieties of potato may be desiccated with Barclay D-Quat, but it is important to ensure that the conditions specified under SOIL MOISTURE are followed when treating any variety, especially the less drought tolerant varieties. Varieties in the NIAB listings of potato varieties with a drought tolerance rating of 5 or below are at most risk of vascular discoloration.

USE OF WETTERS OR OTHER ADJUVANTS

DO NOT add a wetter or other adjuvant for the desiccation of potato haulm. This product is to be used only in accordance with the Directions for Use and instructions given on the label provided with this pack. Use in any other circumstances is entirely at user's risk.

OTHER CROP DESICCATION USES

Important: Crops must be at the recommended stage of maturity at the time of treatment as desiccation does not advance maturity, but acts as a harvesting aid only. Desiccation too early may lead to pinched samples of low specific weights and reduced germination.

DESICCATION OF OILSEED RAPE (prior to direct combining)

Cultural considerations	Time of application & spraying recommendations	Rate of application
<p>Treatment of uneven, diseased or thin crops is not recommended, especially if grown in exposed fields, as losses due to shattering may be excessive.</p> <p>Direct combine the crop 7-14 days after spraying as soon as the seed moisture content is 12-15%.</p>	<p>Desiccate when 90% of the pods in the middle section of the stem of erect crops are yellow and the seed within is reddish/dark brown. The seed of the lower pods will appear dark brown/black, whilst the seed of the uppermost pods will be turning in colour with up to half the seeds still of green appearance. If the crop is leaning, desiccate when the seed in the exposed surface pods is reddish/dark brown and the seed in the majority of the underlying pods is turning in colour. Correct timing is essential for best results; premature desiccation may reduce yield and sample quality, whilst delayed desiccation may lead to excessive pod shatter. Spray once only and achieve good cover of the pods.</p>	<p>3 l/ha in 200-500 l/ha water.</p> <p>Add an authorised alcohol ethoxylate adjuvant (not an organo silicone) at its recommended rate.</p> <p>Use higher water volumes for dense growth, in particular tall or lodged crops.</p>

DESICCATION OF DRY HARVEST PEAS

Cultural considerations	Time of application & spraying recommendations	Rate of application
<p>Correct timing is essential for best results; premature desiccation may reduce yield and sample quality and/or lead to collapse of the haulm, whilst desiccation too late may annul the timeliness advantages of desiccation and add to the risk of shattering of the earliest pods.</p> <p><i>Consult the processor before treating a crop grown on contract.</i></p>	<p>Desiccate when the crop is mature with an overall seed moisture content of less than 45%. At this stage the pods in the middle section of the stem are yellow and the seed within is firm, whilst the upper pods are beginning to dry out or to turn yellow and the seed within splits under light finger pressure. Bottom pods are yellow/brown with seeds within quite hard.</p> <p>Spray once only and achieve good cover of the haulm.</p> <p>Direct combine 7-10 days after spraying.</p>	<p>Average conditions: 2 l/ha</p> <p>Dense or weedy crops: 3 l/ha</p> <p>Apply in 200-500 l/ha water.</p> <p>For peas for processing for human consumption consult your processor before adding any wetter or adjuvant.</p> <p>Treated haulm may be fed to livestock from 4 days after spraying.</p>

DESICCATION OF FIELD BEANS AND DRY HARVEST BROAD BEANS

Time of application & spraying recommendations	Rate of application
Desiccate when the crop is mature and the pods are brown/black and leathery. Direct combine 7-10 days later.	3 l/ha in 200-500 l/ha water. Add an authorised alcohol ethoxylate adjuvant (not an organo silicone) at its recommended rate.

DESICCATION OF LODGED BARLEY AND OATS (for stock feeding only)

Time of application & spraying recommendations	Rate of application
Spray when the crop is normally mature for combining. Combine as soon as practicable after complete desiccation, provided that 4 days have elapsed since spraying. Delay in harvesting may result in re-growth of grass weeds.	Most situations: 3 l/ha Dense weed growth or when cleavers or common couch are dominant: 4 l/ha Apply in 200-500 l/ha water with an authorised alcohol ethoxylate adjuvant (not an organo silicone) at its recommended rate. Treated grain and straw may be safely fed to livestock from 4 days after spraying. TREATED BARLEY AND OATS must be used for stock feed only

DESICCATION OF LINSEED

Time of application & spraying recommendations	Rate of application
Desiccate when 95% of the capsules are brown and the seed is loose within. Direct combine 10-20 days after spraying when seed moisture is below 14%. Always use a sharp knife on the combine and cut the crop as high as possible; just below the level of branching of the capsule clusters of the shortest stems. Aim to combine in bright sunny conditions, or when there is a drying wind.	3 l/ha Apply in 300-500 l/ha water with an authorised alcohol ethoxylate adjuvant (not an organo silicone) at its recommended rate.

DESICCATION OF RED AND WHITE CLOVER SEED CROPS

Time of application & spraying recommendations	Rate of application
Spray evenly over the crop and weeds when the crop is judged about mature for harvesting. Combine harvest as soon as practicable after complete desiccation, normally about 3 days after application.	2-3 l/ha Apply in 200-500 l/ha water with an authorised alcohol ethoxylate adjuvant (not an organo silicone) at its recommended rate. 2l/ha may be used on less dense crops Clover straw and trash may be fed to livestock from 4 days after spraying

WEED CONTROL USES

To control certain annual weeds, listed below, at up to their 4 true-leaves stage:

Chickweed, common

Situation	Timing, cultural & spraying recommendations	Rate of application
To control listed weeds, pre-emergence or pre-planting of sugar beet.	Prepare the seedbed in the usual way and allow weeds to emerge. Then EITHER: spray the weedy seedbed and drill or plant not less than 24 hours later with as little soil disturbance as possible; OR: drill the weedy seedbed and spray just before the crop emerges. <i>Important: spraying must precede drilling or planting on SANDS* and PEATS* by at least 3 days.</i>	2l/ha in 200-500 l/ha water with an authorised alcohol ethoxylate adjuvant (not an organo silicone) at its recommended rate.
To control listed weeds in ornamental bulbs.	Spray whilst the shoots are 12 mm below the soil surface. Do not use on SANDS*.	
To control listed weeds around any edible or non-edible crop.	Spray whilst weeds are still small. Use a sprayer with guards to prevent contact between spray and crop. Repeat as required.	

* Soil Texture (85 System)

FURTHER INSTRUCTIONS AND INFORMATION FOR ALL USES

This product is to be used only in accordance with the Directions for Use and instructions given on the label provided with this pack. Use in any other circumstances is entirely at the risk of the user.

Weather

Barclay D-Quat is rainfast within 15 minutes of application; rainfall after this period will not reduce effectiveness.

Mixing

Half fill the spray tank with clean water and start the re-circulation system. Pour the required quantity of Barclay D-Quat into the spray tank. Top up the spray tank with more clean water to the required level. Agitate thoroughly before use.

Application (BCPC definitions)

Apply as a MEDIUM spray at 2-3 bar (30-45 psi) by conventional hydraulic ground-operated sprayer. Operate equipment to achieve maximum spray cover of the intended target crop and/or weeds. DO NOT apply through ultra low volume (ULVA) or mistblower equipment. - Extreme care should be taken to avoid spray drift. Do not leave mixed spray standing in the spray tank for long periods e.g. over mealtimes.

Weed resistance

Diquat is a bipyridilium group herbicide. Strains of annual meadow-grass and American willowherb resistant to bipyridilium herbicides have been found in top and soft fruit orchards. Barclay D-Quat may not give full control of these weeds where such resistant strains of weeds occur.

Care of sprayer

Immediately after each days use with Barclay D-Quat, wash out the sprayer thoroughly with clean water and a wetting agent recommended for the cleaning of sprayers, according to standard cleaning procedures.