

CLAYTON DIQUAT 200

MAPP 13942

A soluble concentrate containing 200g per litre (16.7% w/w) diquat as dibromide

For the pre-harvest desiccation of oilseed rape, peas to be harvested dry, potatoes, linseed, clover seed crops, field beans (for pigeon or stockfeed only) and lodged crops of barley and oats (for stockfeed only); for the basal leaf-stripping of hops; for weed control pre-emergence of potatoes, sugar beet and in ornamental plant production and around the subject plants of any edible or non-edible crop.



TOXIC

Toxic: danger of serious damage to health by prolonged exposure if swallowed
Harmful if swallowed
Toxic by inhalation
Irritating to eyes, skin and respiratory system
May cause sensitisation by skin contact



DANGEROUS FOR THE ENVIRONMENT

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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

IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL HERBICIDE/DESICCANT				
Crops or situation	Maximum individual dose of product	Maximum total dose of product	Maximum number of treatments	Latest time of application
Potato Weed control: and/or Desiccation:	2 l/ha 4 l/ha	2 l/ha 4 l/ha	- -	- -
Oilseed rape, combining pea (harvested dry), field bean (for animal feed), 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 transplanting
Around all edible crops Around all non edible crops	2 l/ha	-	-	-
Hops	1.8 l/ha	-	One per crop	-
Other specific restrictions This product must not be applied through ultra-low volume (ULV) or mist-blower equipment.				
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.				

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 AND FACE PROTECTION (FACESHIELD) when handling the concentrate.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND RUBBER BOOTS when applying by hand-held equipment.

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, gloves and eye/face protection.

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 ACCIDENT OR IF YOU FEEL UNWELL, seek medical advice immediately (show the label where possible).

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 STRAW OR HAULM FROM TREATED CROPS AS ANIMAL FEED OR BEDDING for at least four 4 days after last application.

Storage and disposal

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

KEEP OUT OF REACH OF CHILDREN.

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.

WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank, and dispose of safely.

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

Safety data sheet available for professional user on request.

This product is approved under the Plant Protection Products Regulations (as amended).

Approval holder: Clayton Plant Protection Ltd

Marketed by: Clayton Plant Protection (UK) Ltd.

Unit F10

Bracetown Business Park

CLONEE

Co. Meath

Ireland.

Tel: (00 353) 1 8210127

PROTECT FROM FROST

SHAKE THOROUGHLY BEFORE USE

Batch No:

Contents: **5 litres**

CORROSIVE LIQUID, N.O.S., (contains diquat dibromide) UN 1760, Class 8, Packing Group III
--

Conditions of Supply: all goods supplied by us are of high quality and we believe them to be correct but, as we cannot exercise control over their storage, handling, mixing or use, or 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 resellers 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.

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 CROPS BEFORE HARVEST

The time of application is crucial for each crop and must be when the majority of the crop is assessed to be naturally ripe - see specific instructions for each crop. Desiccation does not hasten ripening but acts as an aid to harvesting.

Clayton Diquat 200 is not suitable for use on crops of irregular growth; avoid use on crops in exposed sites. An alternative system of harvesting should be used in these situations as harvest losses might be increased by desiccation.

Do not apply Clayton Diquat 200 to immature crops as specific weights and seed germination will be impaired.

PRE-HARVEST DESICCATION OF OILSEED RAPE

Procedure

Erect crops: crops should be examined across the field and judged on readiness for spraying by the maturity of the seed down the seed head. The crop is fit for desiccation when 90% of the mid-section pods contain seeds that are reddish/dark brown. Seed in the lower pods will be riper, but the uppermost pods will contain seeds that are still mostly green but nevertheless show the initial signs of maturation. If in doubt consult your professional advisor.

Leaning crops: spray when all the seeds in the surface layer of pods are reddish/dark brown; underlying pods will be less mature but this is not crucial. If in doubt consult your professional advisor.

Application too early might reduce yield and quality of seed. Application too late can increase shattering. Do not desiccate thin standing crops on exposed sites; high winds following desiccation can increase pod shattering losses.

Spray the crop and weeds overall, once only. Direct combine normally 5-14 days after spraying when seed moisture is 12-15%.

Rate of application

3 l/ha in 250-500 l/ha water. Use the higher water volumes in dense, tall or lodged crops. Add an appropriate authorised alcohol ethoxylate adjuvant as per its recommendations.

PRE-HARVEST DESICCATION OF LINSEED

Do not use on crops for seed.

Procedure

Desiccate the crop when the seed capsules have matured evenly - when the seed capsules are dark brown and rattle and the seed within is light brown. Spray the crop and weeds overall, once only. The crop is usually fit for direct combine harvesting 10-20 days after spraying when seed moisture is below 14%.

Rate of application

3 l/ha in 300-500 l/ha water. Add an appropriate authorised alcohol ethoxylate adjuvant as per its recommendations.

CLOVER SEED CROPS

For the pre-harvest desiccation of crops to be combine-harvested direct.

Procedure

Spray approximately 3 days before the anticipated date of harvesting when the crop is mature. Apply evenly over the crop so that the crop and any weeds are covered with spray. Combine-harvest the crop as soon as it is sufficiently dry. Delay might result in regrowth.

Rate of application

2-3 l/ha in 200-500 l/ha water. Add an appropriate authorised alcohol ethoxylate adjuvant as per its recommendations.

DESICCATION OF PEAS TO BE HARVESTED DRY

Consult processors before using an adjuvant on crops grown on contract for human consumption. For crops intended for animal feed, add an appropriate authorised alcohol ethoxylate adjuvant as per its recommendations. The addition of an adjuvant will usually improve efficacy but might also increase staining of the pea sample.

Procedure

Crops should be examined across the field and judged on readiness for spraying by the maturity of the peas down the haulm. The crop is fit for desiccation when pods on mid-section haulm are yellow and contain peas which are pliable with an average moisture content of less than 45%. Peas in the lower pods will be riper, but the uppermost pods will still be in the early stages of maturation. If in doubt consult your professional advisor.

Application too early might affect yield and quality and cause stem collapse. Application too late might increase shattering of the earliest maturing pods.

Spray the crop and weeds overall, once only. Direct combine 7-10 days after spraying when fully desiccated.

Rate of application

2 l/ha in 200-500 l/ha water. If the crop is dense or particularly weedy increase to 3 l/ha.

PRE-HARVEST DESICCATION OF FIELD BEANS

Applicable only to crops intended for pigeon or stock feed.

Procedure

Spray when the crop is mature and the pods are brown/black and leathery.

Spray the crop and weeds overall, once only. Direct combine 4-7 days after spraying.

Rate of application

3 l/ha in 200-500 l/ha water. Add an appropriate authorised alcohol ethoxylate adjuvant as per its recommendations.

PRE-HARVEST DESICCATION OF LODGED BARLEY AND OATS

Applicable only to crops intended for stock feed.

Procedure

The crop must be naturally mature before spraying and otherwise ready for combining but for weed and secondary tiller growth and grain sprouting.

Spray the crop and weeds overall, once only. Provided that the previously green growth has been acceptably desiccated, combine harvest as soon as possible, usually 4 days or more after spraying. Delay in harvesting might result in regrowth of grass weeds.

Treated grain and straw may be fed to livestock from 4 days after spraying.

Rate of application

Common chickweed:
2 l/ha in 200-500 l/ha water.

Other broad-leaved weeds and cereal regrowth:
3 l/ha in 200-500 l/ha water.

Dense weed growth or heavy infestations of cleavers or common couch:
4 l/ha 200-500 l/ha water.

Add an appropriate authorised alcohol ethoxylate adjuvant as per its recommendations.

DESTRUCTION OF POTATO HAULM

DO NOT apply to potatoes under moisture stress - see **Soil moisture** and following section.

Procedure	Rate of application
Apply Clayton Diquat 200 to destroy the potato haulm and any green weed growth when the tubers have reached the optimum size or upon other considerations to terminate crop growth. Regrowth might occur if seed crops are desiccated too early. Haulm desiccants may damage tubers if applied during or shortly after dry periods. If soil moisture has been determined to be adequate (see Soil moisture), spray the crop and weeds overall. Ideally spray during bright weather and under low humidity. Light rain, mist or heavy dew if present or expected may accentuate the adverse effects of moisture stress and lead to tuber damage.	4 l/ha in 200-500 l/ha water. Use the higher water volume if the foliage is dense.
After spraying wait for at least 14 days before lifting to minimise tuber blight and to allow the skins to set.	DO NOT add an adjuvant. Clayton Diquat 200 may be applied to the potato crop at 2 l/ha for weed control (see WEED CONTROL IN ROW CROPS) and up to 4 l/ha for haulm destruction.

Soil moisture

Abrupt desiccation of potatoes whilst under moisture stress can lead to vascular browning "ringing" when a brown discoloration appears just below the skin. It is essential to ensure that soil moisture around the tubers is assessed in all parts of the field, particularly when soils vary within a field. Clayton Diquat must not be used to desiccate potato haulm if the crop is under moisture stress other than in accordance with following table. If in doubt as to the safety or otherwise of a proposed treatment seek professional advice.

SOIL TEXTURE (85) System	MAXIMUM ACCEPTABLE SOIL MOISTURE DEFICIT			OR	MINIMUM RAIN OR IRRIGATION REQUIREMENT
	Early or Seed	Canning	Ware*		
Sands Very Light soils Light soils Stony Light soils Stony Medium soils Stony Heavy soils	33 mm	Do not use	50 mm		13 mm within 2 days before spraying. Soil must be moist at tuber depth.
Medium soils Heavy soils	50 mm	Do not use	66 mm		13 mm within 5 days before spraying. Soil must be moist at tuber depth.
Organic soils >10% Peaty soils Peats Peaty loams	66 mm	50 mm	83 mm		13 mm within 5 days before spraying. Soil must be moist at tuber depth.

* Ware crops still growing vigorously when due for desiccation should be regarded as though they were early or seed crops.

Varietal tolerance to drought

Accurate assessment of the soil moisture deficit is important before treating any variety of potato but it becomes more critical when desiccating a less drought tolerant variety. The drought tolerance rating has not been determined for all varieties.

HOPS

Removal of basal regrowth and leaf stripping.

Procedure	Rate of application
Spray the leaves on the lower 90cm of stem in July after the vines have climbed to the top wire. Point the spray nozzles downwards. Do not treat crops under stress, especially drought stress. Do not treat when there is heavy dew or moisture on the leaves as crop damage might result.	1.8 litres in at least 1000 litres water/ha.

WEED CONTROL IN ROW CROPS

Use	Procedure	Rate of application
Sugar beet and bulbs For the control of chickweed before planting or before crop emergence.	Make the seedbed as per usual practice then allow 2-4 weeks, according to conditions, for weeds to grow. The weed covered seedbed may then be sprayed 1-3 days (see note) before sowing or planting OR the weed covered seed bed may be drilled and then sprayed 1-3 days (see note) before the crop emerges. Note: on soils classed as Sands or Peats (Soil Texture 85 System), spray at least 3 days before drilling or planting or crop emergence.	2 litres in 200-500 litres water/ha. Add an appropriate authorised alcohol ethoxylate adjuvant as per its recommendations. An appropriate compatible herbicide may be required in tank-mixture to widen the weed spectrum.
Potatoes For the control of chickweed in early or main crop potatoes prior to crop emergence.	The final cultivations should be conducted to leave firm, rounded ridges. Spray seed crops and crops from small 'seed' wholly pre-emergence. Spray early crops before 10% crop emergence and main crops before 40% crop emergence, provided always that no plant is more than 15cm high. Do not treat crops of dubious health or under stress from any cause, especially warm dry weather.	
Established edible or non-edible row crops For the control of chickweed.	Treat before weeds exceed 7.5cm (3") height and repeat as required. Spray inter-row or around plants using spray guards to prevent any contact of the spray with the crop.	

MIXING AND USE

Shake the product container thoroughly before opening.

For application by conventional tractor drawn/mounted or knapsack hydraulic sprayer only. Use a clean water source; water with dissolved salts or suspended mineral or organic matter can inhibit full efficacy. Half-fill the spray tank with clean water. Add the measured amount of Clayton Diquat 200 to the water in the spray tank under agitation. Add the authorised adjuvant if it is to be included. Top up the spray tank with water to the required level. Agitate thoroughly before use and keep under agitation until the tank is empty.

Apply the spray mixture as a MEDIUM spray (BCPC definition) at 2-3 bar (30-45 psi). High spray volumes are best applied through twin spray booms or twin outlet nozzles. Spray out immediately after mixing. Take extreme care to avoid spray drift; spray drift can severely damage neighbouring crops and plants. Do not spray during windy weather.

WEATHER

Apply Clayton Diquat 200 to dry foliage when rain is not imminent. After application the product becomes rainfast about 15 minutes after the leaves have dried.

WEED RESISTANCE

Diquat and paraquat are both bipyridilium group herbicides. Strains of annual meadow-grass and American willowherb resistant to paraquat have been found in hop gardens and top and soft fruit orchards. Clayton Diquat 200 may not give full control of these weeds where strains of weeds resistant to paraquat occur.

AFTER USE

Immediately after use, thoroughly clean the sprayer with water and a cleaning agent recommended for the cleaning of spraying machines. Susceptible crops can be damaged by traces of diquat left in the sprayer.