

CLAYTON DENT 480

MAPP 15546

Contains 480 g/l (40.3 % w/w) bentazone as the sodium salt in a soluble concentrate

For the post-emergence control of many annual broad-leaved weeds in the peas, beans, linseed, potatoes and ornamental plant production (narcissi).



HARMFUL

Harmful if swallowed
May cause sensitisation by skin contact

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

Crop	Maximum individual dose of product	Maximum number of applications	Latest time of application
Field bean (winter) Dwarf French bean (for navy bean)	3 l/ha	One per crop or Two per crop as split dose - see other specific restrictions	Up to and including 7 leaf pair stage
Dwarf French bean Runner bean Linseed	3 l/ha	One per crop or Two per crop as split dose - see other specific restrictions	Before the flower buds are visible
Broad bean	3 l/ha	One per crop or Two per crop as split dose - see other specific restrictions	Single dose – before the 5 pairs of leaves stage Split dose - before the crop exceeds 15 cm in height and before the 7 leaf pair stage
Field bean (spring)	3 l/ha	One per crop or Two per crop as split dose - see other specific restrictions	Before the crop exceeds 15 cm in height and before the 7 leaf pair stage
Combining pea Vining pea	3 l/ha	One per crop	Before flower buds can be found enclosed in the terminal shoot.
Potato	3 l/ha	One per crop or Two per crop as split dose - see other specific restrictions	Before the shoots exceed 15 cm in height
Ornamental plant production (narcissi)	3 l/ha	One per crop or Two per crop as split dose - see other specific restrictions	-
Other specific restrictions 1. A maximum of 3 litres product per hectare per crop must not be exceeded for split doses. 2. This product must not be applied to ornamental plant production (narcissi) during flower bud formation.			
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) AND SUITABLE PROTECTIVE GLOVES when handling the concentrate.

WEAR SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces.

However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.

Wear suitable gloves.

Avoid contact with skin.

WASH CONCENTRATE from skin or eyes immediately.

DO NOT BREATHE SPRAY.

WHEN USING DO NOT EAT, DRINK OR SMOKE.

WASH HANDS AND EXPOSED SKIN before eating and drinking and after work.

IF YOU FEEL UNWELL, seek medical advice immediately (show 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.

Storage and disposal

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

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

KEEP OUT OF REACH OF CHILDREN.

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.

**Clayton Plant Protection (UK) Ltd.,
Unit F10, Bracetown Business Park
Clonee, Co. Meath
Ireland.**

Tel: (00 353) 1 8210127

Contents: **5 litres**

PROTECT FROM FROST

Batch No:

Permit holder:

Clayton Plant Protection Ltd.

Address as above

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

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.

ACTIVITY

Clayton Dent 480 is a post-emergence contact herbicide, effective against annual broad-leaved weeds up to 5 cm high or across (see WEED CONTROL). Provided that application is within the permitted growth stages, best weed control is obtained when the weeds are small and growing actively under warm, moist conditions. There is no residual soil activity.

WINTER AND SPRING FIELD BEANS AND BROAD BEANS

Tolerant varieties of winter beans: current NIAB recommended varieties may be treated.

Tolerant varieties of spring beans: Alfred, Gobo, Maris Bead, Troy.

Note: most varieties are tolerant when treated under ideal conditions.

Tolerant varieties of broad beans: Beryl, Brunette, Greeny, Jade, Metissa, Statissa, Threefold White. Medes and Optica are tolerant but only to the split dose treatment.

Treatment stages	Dose rate	Remarks
Winter beans: in the spring from 3 pairs of true-leaves to before the flower buds become visible.	All-in-one dose: 3 l/ha in 330-450 l/ha water.	Use Clayton Dent 480 as a follow-up treatment to an approved pre-emergence residual treatment. The all-in-one dose is preferred for winter beans where weeds tend to be larger (max. 50 mm high or across) and hardened.
	2:1 split dose: 2 l/ha followed by 1 l/ha 7-10 days later	Split doses are preferred for spring and broad beans, provided the weeds are small (max 1-2 true-leaves) as these are kinder to the crop.
Spring beans: at 3-6 pairs of true-leaves inclusive and before 15 cm height	1:1 split dose: 1.5 l/ha followed by 1.5 l/ha 7-10 days later	If the crop has soft new leaves and the weather is warm, moist and sunny, use the 1:1 split dose. Generally split doses are recommended only for low-moderate weed populations and when the crop canopy is open.
	Apply each split dose in 225 l/ha water. Do not mix with adjuvants.	Leaf wax must be sound before application; check by the crystal violet test especially after the use of a pre-emergence herbicide. Crop vigour may be temporarily reduced following treatment. Leaf margins may become black after application but new leaves should develop normally with no or only marginal effect upon yield in consequence. These effects may be more marked if application is made later than the optimum growth stage, 5-10 cm height for spring beans and 5-15 cm for winter beans. The split dose treatments do not check the crop so much and splitting the dose is recommended for broad beans and spring field beans if the weeds are not too advanced. Most often with winter field beans the weeds are too advanced and hardened, having over-wintered, for the split treatment to be fully successful.
Broad beans: at 3-4 pairs of true-leaves inclusive and before 15 cm height. Split doses may be applied up to 6 pairs of true-leaves.		

POTATOES

Tolerant varieties: Cara, Maris Piper, Romano.

Treat ware crops only. Do not treat any first early varieties or the following intolerant varieties: Bintje, Lady Rosetta, Morag, Pipo, Rode, Russet, Burbank, Shepody.

Treatment stage	Dose rate	Remarks
After completion of all cultivations and final ridging but before the shoots reach 15 cm height.	All-in-one dose: 3 l/ha in 330-450 l/ha water.	Use Clayton Dent 480 as a follow-up treatment to an approved pre-emergence residual treatment e. DO NOT apply in sequence with other herbicides in a post-emergence programme.
	2:1 split dose: 2 l/ha followed by 1 l/ha 7-10 days later	The all-in-one dose is recommended if weeds tend to be advanced (max. 50 mm high or across).
	1:1 split dose: 1.5 l/ha followed by 1.5 l/ha 7-10 days later	Split doses are to be preferred provided the weeds are small (max 1-2 true-leaves) as these are kinder to the crop. If the crop has soft new leaves and the weather is warm, moist and sunny, use the 1:1 split dose. Generally split doses are recommended only for low-moderate weed populations and when the crop canopy is open.
	Apply each split dose in 225 l/ha water.	Crop vigour may be temporarily reduced following treatment. Leaves may become scorched or yellowed after application but recovery should be complete normally with no effect upon yield. Authorised adjuvant oil may be added to the mixture to increase the control of fat-hen, especially during dry weather, but this may increase the risk of crop scorch or yellowing. Use 2 l/ha authorised adjuvant oil with a single application or 1-1.5 l/ha with split dose applications – see also GENERAL CONDITIONS.

COMBINING PEAS

Tolerant varieties: Arena, Ascona, Baroness, Bohatyr, Bunting, Guido, Maro, Orb, Princess, Progreta, Radley, Rex, Solara.

VINING PEAS

Tolerant varieties: Bikini, Cash, Dark Skinned Perfection, Harrier, Hurst Green Shaft, Jof, Johnsons Freezer, Markado, Polar, Polo, Puget, Rampart, Scout, Small Sieve Freezer, Stampede, Trek, Tristar.

PICKING PEAS

Tolerant varieties: Holiday

KNOWN INTOLERANT VARIETIES/NOT RECOMMENDED – ALL TYPES

Do not treat the following varieties: Asunta, Carouby de Mausanne, Cobalt, Conquest, Danielle, Darfon, Dinos, Filby, Fonado, Kodiak, Lambado, Masterfon, Micro, Minado, Minnow, Revolution, Santa, Sherbourne, Turon, Vedette, Winner.

Do not treat forage peas or mange-tout.

Treatment stage	Dose rate	Remarks
After most of the weeds have emerged and are still small (no more than 5 cm high or across) and from the 3 fully expanded leaves stage of the crop to before the flower buds are found enclosed in the terminal shoot.	3 l/ha in 330-450 l/ha water.	Clayton Dent 480 may be applied as a follow-up treatment to an approved pre-emergence residual treatment.
	The dose may be applied in tank-mixture with 3.75 l/ha MCPB (MAPP 14450) provided that the variety is tolerant of both products.	Leaf wax must be sound before application; check with the crystal violet test. Crop vigour may be temporarily reduced following treatment and leaf margins may become scorched possibly with epinastic effects also. Normally yield is not affected. Do not apply within 7 days of any other treatment. Do not apply with adjuvant oil.

DWARF FRENCH BEANS

Tolerant varieties: Flo, Frigor, Groffy, Labrador, Montano, Nassau, Nerina, Prevato.

NAVY BEANS

Tolerant varieties: Purley King

RUNNER BEANS

Tolerant varieties: Enorma, Kelvedon Wonder, Kelvedon Marvel, Streamline.

DWARF FRENCH BEANS, NAVY BEANS, RUNNER BEANS

Tolerant varieties *and varieties of intermediate tolerance (in italics)*

Dwarf French beans: Flo, Frigor, Groffy, Kent, Labrador, Maestro, Modus, Montano, Nassau, Romil, *Acapulco, Arena, Boreal, Brio, Cascade, Clyde, Flevoro, Larissa, Lasso, Lit, Masai, Maxima, Narbonne, Nerina, Optimus, Palermo, Prevato, Provider (Dark Seeded), Taverna, Tilla, Valja, Varlon, Verto*

Navy beans: Purley King

Runner beans: Enorma, Kelvedon Marvel, Kelvedon Wonder

Treatment stages	Dose rate	Remarks
Dwarf French beans: at 2 trifoliolate leaves	All-in-one dose: 3 l/ha in 330-450 l/ha water.	Use Clayton Dent 480 as a follow-up treatment to an approved pre-emergence treatment.
Navy beans: at 2 trifoliolate leaves	2:1 split dose: 2 l/ha followed by 1 l/ha 7-10 days later.	The all-in-one dose may be used where weeds tend to be larger (max 50 mm high or across), but provided the weeds are small (max 1-2 true-leaves), the split doses are to be preferred, as these are kinder to the crop. Generally split doses are recommended only for low-moderate weed populations and when the crop canopy is open. Leaf wax must be sound before application. Crop vigour may be temporarily reduced following treatment, more so after the full-dose treatment. Leaf margins may become scorched after application but new leaves should develop normally with no or only marginal effect upon yield in consequence. However visible leaf scorch might be more prolonged after an application later than 3 trifoliolate leaves. Authorised adjuvant oil may be included at 2 l/ha or 1-1.5 l/ha with the split dose applications to dwarf French beans to enhance control of fat-hen, but do not apply with adjuvant oil if the weather is warm (c. 20°C) - see also GENERAL CONDITIONS. DO NOT use with adjuvant oil on runner beans or navy beans.
Runner beans: at 1-2 trifoliolate leaves	1:1 split dose: 1.5 l/ha followed by 1.5 l/ha 7-10 days later.	
	Apply each split dose in 225 l/ha water.	

LINSEED

Current NIAB recommended varieties may be treated.

Treatment stage	Dose rate	Remarks
After most of the weeds have emerged and are still small and when the crop is at least 3 cm high but before the flower buds are visible.	All-in-one dose: 3 l/ha in 330-450 l/ha water. 2:1 split dose: 2 l/ha followed by 1 l/ha 7-10 days later each in 225 l/ha water. 1:1 split dose: 1.5 l/ha followed by 1.5 l/ha 7-10 days later each in 225 l/ha water.	The all-in-one dose may be used where weeds tend to be larger (max 50 mm high or across), but provided the weeds are small (max 1-2 true-leaves), the split doses are to be preferred, as these are kinder to the crop. If the crop has soft new leaves and the weather is warm, moist and sunny, use the 1:1 split dose. Generally split doses are recommended only for low-moderate weed populations and when the crop canopy is open.
Early control of weeds is essential.		Crop vigour may be temporarily reduced following treatment. Avoid overlapping spray swaths.
	Do not mix with adjuvants.	

NARCISSI

Varieties: users should test treat a small number or area of all new or unaccustomed varieties to satisfy for themselves the safety of the treatment before applying to the bulk of the crop. The treatment of miniature narcissi is not recommended.

Treatment stage	Dose rate	Remarks
Shortly after flowering	<i>Larger weeds up to 5 cm high or across:</i> 3 l/ha in 330-450 l/ha water. <i>Small weeds from cotyledon to 2 expanded true-leaves stage:</i> Either: 3 l/ha in 330-450 l/ha water. Or: 1 st spray: 1.5 l/ha in 225 l/ha water 2 nd spray: 1.5 l/ha in 225 l/ha water	These treatments may follow an approved pre-emergence treatment. Do not add adjuvant oil to the spray mixture. An application may temporarily reduce crop vigour, more so after the full-dose application. The split dose treatments do not check the crop so much and splitting the dose is recommended if the weeds are not too advanced. Apply the second spray of a split treatment 7-10 days after the first.

For further information on the approval status for use on any other variety please consult your Distributor.

GENERAL CONDITIONS APPLYING TO ALL RECOMMENDED USES

- * Treat only vigorous, healthy crops growing under good soil and weather conditions.
- * Do not treat diseased crops or crops suffering pest attack.
- * Do not apply during cold or frosty weather.
- * Do not treat crops suffering herbicide damage, drought or other stress.
- * Delay application if rain is likely within 6-8 hours; at least 12 hours without rainfall is preferable; apply only to dry foliage; do not irrigate for at least 24 hours.
- * Do not apply when the temperature will exceed 21°C on the day of spraying as this may cause crop damage; spray later in the day when cooler.
- * During warm weather do not use with adjuvant oil, when otherwise allowable.

SINGLE DOSE versus SPLIT DOSE TREATMENTS

Situation	Single dose 3 l/ha	Split dose 2 l/ha + 1 l/ha	Split dose 1.5 l/ha + 1.5 l/ha
Susceptible weeds at cotyledon to 2 expanded true-leaves	-	***	***
Less susceptible weeds at cotyledon to 2 expanded true-leaves	***	-	-
Susceptible weeds at up to 5 cm high or across	***	-	-
Marginal weather at the upper limits – bright sunshine, very warm or humid	-	-	***
Soft crop foliage	-	-	***
Marginal varietal tolerance	-	-	***

*** = preferred option

APPLICATION OF OTHER PESTICIDES

Do not apply any other treatment within 7 days before or after Clayton Dent 480. The integrity of the leaf wax of field beans and peas should be tested, using the crystal violet test, before applying Clayton Dent 480 after the use of any potentially leaf wax reducing pesticide, e.g. a graminicide.

SPRAY APPLICATION

Apply Clayton Dent 480 as a FINE spray (BCPC) in the recommended volume of water. Use sufficient water to enable complete penetration of the crop to ensure thorough even coverage of the weeds and their growing points. Avoid spray drift out of the area being treated. Do not spray in windy weather. Avoid overlapping spray swaths.

SPRAY MIXING

Add the required quantity of Clayton Dent 480 to the bulk of the water in the spray tank under agitation. Add the authorised adjuvant oil or other tank-mix product separately if required for the current application. Top up the spray tank with water and keep under constant agitation before, during and until completion of spraying. Thoroughly clean all equipment after use.

COMPATIBILITY

Clayton Dent 480 is compatible in tank-mix with one of the approved products listed below. When tank-mixing Clayton Dent 480 with a partner follow the Directions for Use and Precautions of the partner product together with those of this label. Keep under constant agitation and use immediately after mixing.

Active ingredient	MAPP/ADJ	Associated crop or use
MCPB	14450	Peas
Adjuvant oil	ADJ 0530	Dwarf French beans, potatoes

PROCESSED CROPS

Processors should be consulted before treating crops in which they have an interest.

FOLLOWING CROPS

Any following crop may be sown or planted after a recommended application of Clayton Dent 480. Due consideration must also be given to the restrictions imposed by other products that might have been used in the same programme.

CLEANING OF EQUIPMENT

Thoroughly clean all equipment immediately after use with water and a wetting agent. Flush out the cleaning solution with at least two fillings of clean water. Traces of herbicide can damage susceptible crops.

WEED CONTROL

The control of broad-leaved weeds by recommended treatments of Clayton Dent 480 under good conditions is given:

	3 l/ha Clayton Dent 480 at cotyledon to 2 expanded true-leaves	3 l/ha Clayton Dent 480 at 5 cm high or across	3 l/ha Clayton Dent 480 plus MCPB at 5 cm high or across *
Black-bindweed	S	MS	S
Charlock	S	S	S
Chickweed, common	S	S	S
Cleavers	S	S	S
Crane's-bill, cut-leaved	S	S	S
Dead-nettle, red	S	MS	MS
Fat-hen	S	MS	S
Forget-me-not, field	S	S	S
Fumitory, common	S	MS	S
Groundsel	S	MS	S
Knotgrass	MR	R	MS
Marigold, corn	S	S	S
Mayweed spp.	S	S	S
Mustard, white	S	S	S
Nettle, small	S	S	S
Nightshade, black	S	S	S
Orache, common	S	MS	S
Penny-cress, field	S	S	S
Persicaria, pale	S	S	S
Pimpernel, scarlet	S	S	S
Poppy, common	S	MS	MS
Radish, wild	S	S	S
Redshank	S	S	S
Shepherd's purse	S	S	S
Speedwell spp.	MR	R	R
Spurrey, corn	S	S	S

S = susceptible

MS = moderately susceptible

R = resistant

* The recommended mixture with 3.75 l/ha MCPB (MAPP 14450) for use in peas only.

The addition of adjuvant oil, when allowable, improves the control of fat-hen in particular.