



CLAYTON BARITONE

A water soluble granule containing (87% w/w) bentazone as the sodium salt. A herbicide for post-emergence broad-leaved weed control in spring and winter field beans, broad, dwarf French, navy and runner beans, peas, linseed, narcissi and potatoes. **MAPP 19568**

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

 	<p>Clayton Baritone : A water soluble granule containing (87% w/w) bentazone as the sodium salt</p> <p>Signal Word : Danger Harmful if swallowed. May cause an allergic skin reaction. Causes serious eye damage.</p> <p>Precautionary Statements Wear protective gloves and eye/face protection. Avoid breathing dust. IF ON SKIN (or hair): Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician. 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</p> <p>To avoid risks to human health and the environment, comply with the instructions for use.</p>
<p>Approval Holder :- Clayton Plant Protection Ltd., Bracetown Business Park, Clonee, Dublin 15. Ireland. Tel: (00 353) 1 8210127 Email: info@claytonpp.com www.claytonpp.com Marketing company in UK. Clayton Plant Protection UK Ltd. Contact details as above.</p>	<p>Contents: 3 Kg</p> <p>Batch No:</p> <p>PROTECT FROM FROST SHAKE THOROUGHLY BEFORE USE</p> <p>UN no. (not applicable)</p>

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.

IMPORTANT INFORMATION : FOR USE ONLY AS AN AGRICULTURAL/ HORTICULTURAL HERBICIDE			
Crops	Maximum individual dose	Maximum total dose (per crop)	Latest time of application
Beans Phaseolous species (Dwarf French beans, Runner beans, Navy beans)	1.1 kg/ha	1.1 kg/ha	BBCH 17 (7 leaves unfolded)
Beans Vicia faba species (Broad beans and winter/spring beans)	1.1 kg/ha	1.1 kg/ha	BBCH 17 (7 leaves unfolded)
Peas Combining and vining peas	1.1 kg/ha	1.1 kg/ha	Before BBCH 39 (before flower buds can be found enclosed on the terminal shoot)
Linseed	1.1 kg/ha	1.1 kg/ha	BBCH 29 Before enclosed bud visible in leaf axis (BBCH 31)
Potatoes	1.1 kg/ha	1.1 kg/ha	BBCH 19 (9 leaves of main stem unfolded) or before shoots exceed 15 cm in height #
Narcissi	1.1 kg/ha	1.1 kg/ha	Not applicable*

* This product must not be applied to ornamental plant production (narcissi) during flower bud formation.
whichever comes first
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, FACE PROTECTION (FACE SHIELD) AND SUITABLE RESPIRATORY PROTECTIVE EQUIPMENT 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 that they provide an equal or higher standard of protection.

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 or drinking and after work

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.

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.

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

DO NOT RE-USE CONTAINER for any purpose.

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.

Clayton Baritone is a herbicide for post-emergence broad-leaved weed control in spring and winter field beans, broad, dwarf French, navy and runner beans, peas, linseed, narcissi and potatoes.

Weed control

The best weed control will be achieved if crops are sprayed when weeds are small and actively growing, provided the crop is within the correct growth stages, see below. It is essential to achieve full cover of all weed surface areas, especially the growing point. Therefore adjust spray volumes and pressures according to the size and density of the weed populations and crop cover. It is preferable to use the split dose if conditions are likely to be very warm, sunny or humid, if foliage is tender or if a sensitive variety is to be treated (see Section 4.2). Where weeds classed as moderately susceptible form an important part of the weed population, the split dose will only give acceptable control if the weeds are cotyledon only. If true leaves are present, a single application of 1.1 kg/hectare should be made.

Sequences/Tank mixes

Sequence with other spray chemicals:

Do not apply insecticides within 7 days of treatment with Clayton Baritone.

Clayton Baritone **BEFORE** a post-emergence grass herbicide :- leave an interval of at least 7 days between treatments.

Clayton Baritone **AFTER** a post-emergence grass herbicide :- leave an interval of 14 days and carry out a leaf wax test where relevant.

Weather conditions

Do not apply Clayton Baritone or any of the recommended mixtures to any crop that may have been subjected to stress conditions, such as herbicide or disease injury, excessive acidity/ alkalinity, trace element deficiency, drought, waterlogging, widely fluctuating temperatures, or physical damage to the foliage as caused by abnormal wind, rain, hail or frost.

Do not spray under **HOT SUNNY CONDITIONS** when temperatures are at or above 21°C, particularly during the mid-day period. When the above conditions occur, spraying should be delayed until the evening. This is particularly important when there has been a change to hot sunny weather following a cool cloudy period.

Do not spray if rain or frost is expected, nor if the foliage is wet. A minimum period of 6 hours free from rain is required after application.

Do not apply Clayton Baritone during periods of drought or unseasonably cold weather as unsatisfactory weed control may result.

Crops

Check varietal tolerance of varieties before using. A satisfactory leaf wax test using crystal violet marker dye, must be carried out before applying Clayton Baritone or the recommended mixtures to peas.

DO NOT treat forage pea varieties or mange-tout.

DO NOT use on first early or seed crop potatoes.

Restrictions relating to certain varieties of potatoes should be strictly observed. Check also all specific restrictions and warnings relevant to potatoes.

CONSULT PROCESSORS BEFORE USE.

Application

Do not overlap spray swaths.

Avoid spray drift onto neighbouring crops, particularly lettuce and sugar beet.

The recommended water volume is 150 – 400 litres/hectare. The lowest volume of 150 litres/ hectare can only be used when weeds are no larger than cotyledon stage, weed density is low to moderate and crop shielding is negligible.

WASH EQUIPMENT thoroughly immediately after use. Fill the tank with clean water and leave overnight.

Spray out before storage or using other products.

Traces of the product may cause damage to susceptible crops sprayed later.

Susceptibility ratings

Weed Name	Clayton Baritone 1.1 kg/ha		Clayton Baritone Split dose: 0.55 + 0.55 kg/ha	
	Weed susceptibility rating	Maximum susceptible growth stage of target weed	Weed susceptibility rating	Maximum susceptible growth stage of target weed
Amaranth, Common	MR	Up to 6 lvs	MR	Up to 2 lvs
Black-bindweed	MS	Up to 2 lvs	-	-
Charlock	S	Up to 6 lvs	S	Up to 2 lvs
Chickweed, Common	S	Up to 6 lvs	S	Up to 2 lvs
Cleavers	MS	Up to 6 lvs	MS	cotyledons
Dead-nettle, Red	MR	Up to 6 lvs	MR	cotyledons
Fat-Hen	MR	Up to 2 lvs	MR	cotyledons
Mayweed spp	S	Up to 6 lvs	S	Up to 2 lvs
Nightshade, Black	S	Up to 6 lvs	S	Up to 2 lvs
Penny-cress, Field	S	Up to 6 lvs	S	Up to 2 lvs
Persicaria, Pale	S	Up to 6 lvs	-	-
Radish, Wild	MS	Up to 6 lvs	-	-
Redshank	S	Up to 4 lvs	S	Up to 2 lvs
Shepherd's-purse	S	Up to 6 lvs	S	Up to 2 lvs

S: Susceptible, MS: Moderately Susceptible, MR: Moderately Resistant

Crop Specific Information

Dwarf French, Navy and Runner Beans

Time of Application

Apply Clayton Baritone in runner, dwarf French and navy beans when the crop has between two and seven trifoliate leaves. Crop selectivity is partly dependent on adequate leaf wax formation. When conditions which reduce leaf wax occur the application should be delayed by at least 5 to 7 days to await recovery.

Clayton Baritone may cause transient scorch, which can be prolonged with applications later than the three trifoliate leaf stage. A range of varieties has been tested for tolerance. However if unsure, growers should check a small area in the first instance or consult their supplier/advisor.

Method of Application

Clayton Baritone can be applied either by a conventional single dose or preferably by a split dose treatment.

Spring and Winter Field Beans and Broad Beans

Clayton Baritone can be used alone or following a pre-emergence herbicide providing the crop is not adversely affected. Crop selectivity is partly dependent on adequate leaf wax formation. Frost, wet conditions, physical damage, disease or previous sprays can all reduce leaf wax and when this occurs application should be delayed by at least 5 to 7 days to await recovery.

Methods of Application:

Clayton Baritone can be applied either by a conventional single dose or by a split dose treatment. The correct crop and weed growth stages are given in the following table. See also Section – Application.

The single dose is usually the preferred treatment for the winter bean crop due to overwintered weeds being more advanced.

The split dose is the preferred method in spring field beans provided that the weed and crop stage are suitable.

Rates and Timing–Field and Broad Beans

Crop	Application method	Rate kg/hectare	Crop stage	Weed stage
Spring and winter Field Beans, Broad Beans	Split dose ¹	0.55 kg/ha followed by 0.55 kg/ha	2 to 7 leaf pairs, max. height 15 cm	cotyledon to 2 leaves only (optimum cotyledon)
	Single dose ²	1.1 kg/ha	2 to 7 leaf pairs, max. height 15 cm BroadBeans ² : optimum crop stage is 3 to 4 leaf pairs	cotyledon to 6 leaves (optimum 2 leaves)

Important notes:

¹ If conditions are conducive to increased herbicide activity and crop scorch, e.g. warm sunny conditions, tender foliage or more sensitive variety, then the 0.55/0.55 kg/hectare split should be used.

² Broad beans are more sensitive than field beans. The split dose treatment is always preferable to the single dose in this crop.

Processors must be consulted before use in broad beans.

Crop Effects – Field and Broad Beans

Slight crop scorch can occur after spraying. This is seen as a blackening of leaf margins, particularly on older leaves – all subsequent new leaves being unaffected. A temporary vigour check may also occur under some conditions. These effects generally have no influence on yield. They can, however, be more pronounced when applications are made beyond the optimum growth stage, particularly when the single dose is used and/or adverse weather conditions prevail. A range of varieties has been tested for tolerance. However, if unsure, growers should check a small area in the first instance or consult their supplier or adviser for an up to date list of tolerant varieties.

Warnings

Avoid overlapping spray bouts. Do NOT apply on crops earlier than the 2 leaf pair stage or crops more than 15 cm tall or if flower buds are visible.

Peas

Clayton Baritone may be used following pre-emergence broad-leaf herbicides provided that the crop is undamaged and showing no adverse symptoms of herbicide application. Avoid application to crops which are under stress from physical damage or disease, or other factors.

A satisfactory leaf wax test using crystal violet marker dye must be performed before applying Clayton Baritone on peas, particularly with early drillings which tend to have less leaf wax. Slight scorch of the leaf margins and/or hormonal twisting may occur shortly after spraying but the crop will soon recover; yield and maturity will not be adversely affected.

Time of Application

Apply Clayton Baritone from when the peas have two nodes (2 fully expanded leaves) until before the flower buds can be found enclosed on the terminal shoot (equivalent to BBCH 39). The optimum timing is when the majority of weeds have germinated but are still at the seedling stage.

Rate of Application

Single application: apply Clayton Baritone at 1.1 kg/ha

Split application: apply Clayton Baritone at 0.55 kg/ha followed by 0.55 kg/ha

Varietal Tolerances

DO NOT treat the varieties Carouby de Mausanne, Conquest, Danielle, Dinos, Filby, Fonado, Printana, Sherbourne, Turon, Santa or Vedette.

DO NOT treat forage pea varieties or mange-tout. A range of varieties has been tested for tolerance, however if unsure, growers should check a small area in the first instance or consult their supplier or adviser for an up to date list of tolerant varieties.

Linseed

Since linseed offers poor weed competition, weed control is important, especially in the early growth stages. Clayton Baritone may be used alone or following pre-emergence herbicides, provided that the crop is showing no adverse symptoms.

Time of Application

Apply when the crop is between 2 leaf stage and before flower buds are visible (up to and including BBCH 29). The optimum timing is when the majority of weeds have germinated and are still in the seedling stage. As a guide, this is usually when the crop is between 7½–20 cm tall.

Methods of Application

Clayton Baritone can be applied either by a conventional single dose or by a split dose treatment.

Narcissi

A weed control programme of a suitable pre-emergence herbicide followed by Clayton Baritone is recommended.

Time of Application

Apply Clayton Baritone at or after flowering but not during flower bud formation. If required, Clayton Baritone may be applied at any time after crop emergence except during flower bud formation. For optimum control weeds should be at the cotyledon to seedling stage.

Methods of Application

Clayton Baritone can be applied either by a conventional single dose or by a split dose treatment.

Varietal Tolerances

Selectivity has been satisfactory over many varieties. However, because there is such a large range, growers are advised to check a small area in the first instance.

Potatoes

Clayton Baritone is a post-emergence treatment for use in maincrop and second early potatoes. It may be used alone or following a pre-emergence herbicide in a programme of weed control provided the crop is undamaged and showing no adverse symptoms of herbicide application. Some leaf-yellowing or slight scorch may occur under certain conditions (see 'Varietal Tolerances' and 'Factors Affecting Crop Tolerance'). These effects are transient, only being present on leaves exposed to the spray. All subsequent growth is unaffected and yields are not adversely affected, provided that applications are within the following guidelines.

Do not irrigate for at least 24 hours following application. In dry conditions irrigation prior to Clayton Baritone application can be beneficial to ensure that weeds are actively growing. However, foliage must be dry before application.

Avoid overlapping spray bouts.

Time of Application

Apply Clayton Baritone from second leaf of main stem unfolded when the majority of weeds have emerged and are at the cotyledon to seedling stage, but before most of the crops has reached a height of 15 cm.

Application when the crop is taller than 15 cm is not recommended because foliage scorch can be increased leading to a possible check to the crop vigour and yields. Weeds can also be shielded from the spray by crop foliage with later applications.

Methods of Application

Clayton Baritone can be applied either by a conventional single dose or preferably by a split dose treatment. See Section – Application.

Varietal Tolerances

Variety Safe To Treat

Ambo Ausonia Brodick Cara Costella Cultra Erntestolz Marfona Maris Peer Maris Piper Nadine Navan Obelix Pentland Crown Pentland Dell Pentland Squire Record Romano Saturna Saxon Shula Valor Vekaro Vanessa Wilja

Borderline*

Ailsa Anna Atlantic Balmoral Carlingford Desiree Estima Harmony Hermes Innovator King Edward Melody Picasso Premiere Rooster Symphonia

Do Not Treat

Bintje Cabaret Charlotte Fianna Fontane Lady Rosetta Markies Morag Morene Rode Pipo Russett Burbank Sante Shepody Stemster Stroma

*Some varieties have shown more foliage scorch than others. Particular attention should be paid to the crop stage and factors affecting crop tolerance. Some varieties are recommended on the basis of limited (2 years) data. If in doubt, seek advice from your supplier or agronomist.

DO NOT treat seed crops or first early varieties.

Factors Affecting Crop Tolerance Clayton Baritone should not be applied to potatoes under hot, sunny conditions when temperatures are at or above 21°C, particularly during the mid-day period. When these conditions are encountered, spraying should be delayed until evening. It should be noted that in general, crop foliage is more sensitive when there is a sudden change to hot, sunny weather following a cool, cloudy period. This sensitivity diminishes after approximately three days. Crop tolerance will also be reduced if the crop is under stress, e.g. from such factors as physical damage (as from high wind), heavy rain or hail, virus diseases, blackleg, nematodes, Rhizoctonia, excessive soil alkalinity or acidity, or frost either shortly before or after treatment. Wet foliage is prone to scorch by Clayton Baritone.

Mixing and Application

Mixing

Half fill the spray tank with clean water and start the agitation. Pour in the required amount of Clayton Baritone. Add the remainder of the water and continue agitation until spraying is completed.

Application

All applications should be made as a FINE spray, as defined by BCPC, unless the highest water volumes are used when FINE or MEDIUM sprays are permissible. It is essential to achieve full cover of all weed surface areas, especially the growing point. ADJUST SPRAY VOLUMES AND PRESSURES ACCORDING TO THE SIZE AND DENSITY OF THE WEED POPULATIONS AND CROP COVER.

Clayton Baritone can be applied as a single dose or as a split dose in all recommended crops.

The split dose will control susceptible weeds from cotyledon up to 2 true leaves while the single dose is effective on weeds up to 4–6 true leaf stage. The split dose method has generally given better weed control and enhanced crop safety over the conventional single dose, but if weeds are larger than 2 true leaves, it is necessary to use the single dose method.

Timing of Split Dose

The optimum timing for the first application is when the first flush of weeds are at the cotyledon stage. The second follow-up dose should be applied within 7 to 10 days of the first dose, depending on the control achieved by the initial dose or the appearance of the second weed flush. See individual sections below for crop growth stage limitations.

A maximum of two applications may be made: 0.55 kg/hectare followed by 0.55 kg/hectare.

The 0.55 kg/0.55 kg/hectare split is preferable if conditions are likely to be very warm, sunny or humid, if foliage is tender or if a sensitive variety is to be treated. The recommended water volume is 150–220 litres/hectare. The lowest volume of 150 litres/hectare can only be used when weeds are no larger than cotyledon stage, weed density is low to moderate and crop shielding is negligible.

Single Dose and Mixtures

Where Clayton Baritone is recommended as a single application in this text, it should be applied at 1.1 kg/hectare. When applied alone, the recommended water volume is 220–400 litres/hectare.

The lowest volume of 220 litres/hectare should only be used when all the following conditions apply:

- weeds at cotyledon to 2 leaves only
- weed density is low to moderate
- crop shielding is negligible

Flat fan or high pressure hollow cone nozzles are suitable under these conditions.

For other situations, 330–400 litres/hectare is recommended, preferably applied through flat fan nozzles only, operating at an optimum pressure of approximately 3–3.5 bar, in order to produce a fine penetrating spray.

Compatibility

For details of compatibilities contact your supplier or agronomist.

Note: *(not part of the authorised label text)*

With many products there is a general risk of resistance developing to the active ingredients. For this reason a change in activity cannot be ruled out. It is generally impossible to predict with certainty how resistance may develop because there are so many factors influencing this. We therefore have to exclude liability for damage or loss attributable to any such resistance that may develop. To help minimise any loss in activity the recommended rate of use should in all events be adhered to.

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