

benta 480 SL



5 L



A soluble concentrate containing 480 g/litre (40.3% w/w) bentazone as the sodium salt. Benta 480 SL is a herbicide for post emergence broad leaved weed control in potato, dwarf French, navy and runner beans, broad bean, field bean, peas, linseed and narcissi.
FOR USE ONLY AS A PROFESSIONAL AGRICULTURAL HERBICIDE

Safety Information

Danger

Harmful if swallowed

May cause an allergic skin reaction

Suspected of damaging the unborn child

Harmful to aquatic life with long lasting effects

When using do not eat, drink or smoke

Wear protective gloves/protective clothing

Store locked up

IF SWALLOWED: Immediately call a POISON CENTRE or

doctor/physician if you feel unwell

IF ON SKIN: Wash with plenty of soap and water

Dispose of contents/container to an authorised person.

Dispose of contents/container to a licensed hazardous waste

disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

To avoid risks to human health and the environment, comply with the instructions for use



PCS No. 06278

Batch number: See container

PROTECT FROM FROST

READ DIRECTIONS FOR USE ON ATTACHED LEAFLET

Authorisation holder and Marketing company:

Sharda Cropchem España S.L.
Edificio Atalayas Business Center,
Carril Condomina nº 3, 12th Floor,
30006 Murcia, Spain
Tel: +34 868 12 75 89

UFI: A3JD-GKX6-220A-5CCM

In the event of emergency, call the National Poisons Information Centre, Beaumont Hospital at 01 809 2166 or 01 837 9964



Sharda Cropchem

SHARDA CROPICHEM LIMITED
Domnic Holm 29th Road, Bandra (West)
Mumbai - 400050, India, Tel. +39 02 66101029

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.

WASH CONCENTRATE from skin or eyes immediately.

DO NOT BREATHE SPRAY.

WASH HANDS AND EXPOSED SKIN before meals and after work.

WHEN USING DO NOT EAT, DRINK OR SMOKE.

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

Environmental Protection

DO NOT CONTAMINATE SURFACE WATERS OR DITCHES with chemical or used container.

Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area.

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

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinse device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.

DIRECTIONS FOR USE

Crops	Maximum individual dose (L product/ Ha)	Maximum Total Dose (L product/ Ha)	Latest time of application
Broad bean, dwarf french bean, navy bean, runner bean	2.0	2.0	5 leaves unfolded (GS 15)
Field Bean	2.0	2.0	7 leaves unfolded (GS 17)
Vining pea, Combining pea	2.0	2.0	Before flower buds can be found enclosed in the terminal shoot (GS 39)
Potato (ware crops)	2.0	2.0	Before most of the crop has reached a height of 15 cm
Linseed	2.0	2.0	Before flower buds visible
Narcissi	2.0	2.0	Anytime except during flower bud formation/flowering

Other specific restrictions:

Do not apply by hand held equipment

When applied to narcissi/daffodils workers must not re-enter treated area for at least 3 days

Specific weeds controlled:

Susceptible: Cleavers, scentless mayweed, chickweed, shepherd's purse, field pennycress

Moderately susceptible: Fat-hen, fumitory, black bindweed

Resistant: Common field speedwell, field pansy

Restrictions/Warnings

- 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 Mixing and Application Section).
- 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 kg/hectare should be made.

Sequences/Tank mixes

Sequence with other spray chemicals:

- Do not apply insecticides within 7 days of treatment with BENTA 480 SL.
- BENTA 480 SL BEFORE a post emergence grass herbicide: leave an interval of at least 7 days between treatments.
- BENTA 480 SL 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 BENTA 480 SL 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 BENTA 480 SL 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 BENTA 480 SL or the recommended mixtures to peas.

- DO NOT treat forage pea varieties or mangetout.
- Restrictions relating to certain varieties of potatoes should be strictly observed.
- Check also all specific restrictions and warning relevant to potatoes.
- CONSULT PROCESSORS BEFORE USE.

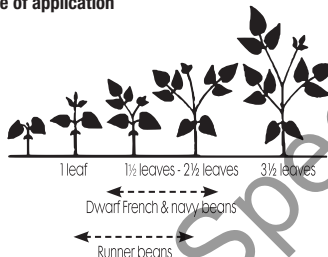
Application

- Do not overlap spray swaths.
- **Avoid spray drift onto neighbouring crops, particularly lettuce and sugar beet.**
- The recommended water volume is 100 to 450 litres/hectare. The lowest volume of 100 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.

CROPS

Dwarf French, Navy and Runner Beans

Time of application



Apply BENTA 480 SL in runner beans when the crop has between one and two trifoliate leaves and in dwarf French and navy beans as soon as the crop has two 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.

BENTA 480 SL may cause transient scorch, which can be prolonged with applications later than the three trifoliate leaf stage.

Varietal Tolerances

The following varieties can be safely treated:

Dwarf French Beans

Catch +
Flevaro
Kingreen
Laguna
Lasso

Magnum +
Masai
Nerina
Nomad
Paulista

Safari
Sigma
Tasman
Ursus
Yukon

Navy Beans

Purley King

Revenge

Torpedo

Runner Beans

Achievement

Emergo

Enorma

+ These varieties are recommended on the basis of limited (2 years) data.

For the approval status and tolerance of any variety not mentioned above, consult the Processors and Growers Research Organisation.

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Spring and Winter Field Beans and Broad Beans

BENTA 480 SL 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:

BENTA 480 SL 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 4.2 Application.

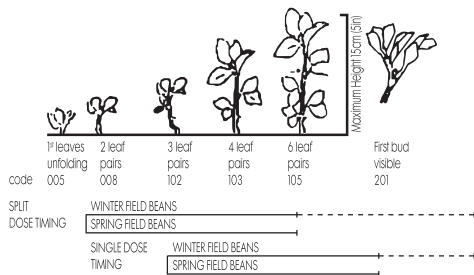
The single dose is usually the preferred treatment for the winter bean crop due to overwintered weeds being more advanced. The split dose is the preferred method in spring field beans provided that the weed and crop stage are suitable.

Rates and Timing Field and Broad Beans

Crop	Application method	Rate l/ hectare	Crop stage (see diagram)	Weed stage
Spring Beans and Broad Beans	Split dose: (a)	1 l/ha followed by 1l/ha	2 to 7 leaf pairs, max. height 15 cm Optimum crop stage is 5-10 cm	cotyledon to 2 leaves only. (optimum cotyledon)
	Single (b) dose:	2 l/ha	3 to 7 leaf pairs, max. height 15 cm Broad Beans: 3 to 4 leaf pairs only. Optimum stage for both crops → as for split dose.	cotyledon to 6 leaves (optimum 2 leaf)
Winter Beans (applied in the spring)	Split dose:	as spring beans	2 leaf pairs up to and including 7 leaf pair stage Optimum crop stage is 5 to 15 cm	cotyledon to 2 leaves only. (optimum cotyledon)
	Single dose:	as spring beans	3 leaf pairs up to and including 7 leaf pair stage Optimum stage as for split dose	cotyledon to 6 leaves. (optimum 2 leaf)

Important notes:

- (a) If conditions are conducive to increased herbicide activity and crop scorch, e.g. warm sunny conditions, tender foliage or a more sensitive variety, then the 1/1 L/hectare split should be used.
(b) Broad beans are more sensitive than field beans. The split dose treatment is always preferable to the single dose in this crop.



Varietal tolerances: The following varieties can be treated:

Spring Field Beans

Quattro + Victor
Maris Bead Titch
Varieties in **bold** may exhibit more leaf scorch than others but are not highly sensitive.
+ These varieties are recommended on the basis of limited (2 years) data.

For the approval status and tolerance of any variety not mentioned above, consult the Processors and Growers Research Organisation.

Winter Field Beans: All varieties tested so far have shown good tolerance.

Broad Beans

Danko Listra
Medes
Talia

Varieties in **bold** have shown more sensitivity to BENTA 480 SL.

Use only the split dose treatments on these varieties.

For the approval status and tolerance of any variety not mentioned above, consult the Processors and Growers Research Organisation. 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.

Warnings

Avoid overlapping spray bouts

Do not apply on crops earlier than the 2 leaf pair stage or crops more than 15 cm tall (except winter beans) or if flower buds are visible.

Peas

BENTA 480 SL 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 BENTA 480 SL or BENTA 480 SL mixtures, 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 BENTA 480 SL from when the peas have three nodes (3 fully expanded leaves) until before the flower buds can be found enclosed in the terminal shoot. The optimum timing is when the majority of weeds have germinated but are still at the seedling stage.

Rate of Application

BENTA 480 SL alone Apply 2 l/ha

Varietal Tolerances

The following varieties can be safely treated

Green Peas (Vining Peas)

Ambassador	Jaguar +	Tristar
*Avola (Spring)	Markado	Wavorex
Balmoral +	Misty	Winner
Barle	Samish +	Zamira +
Bikini	Snake +	
Cabree +	*Span	

Varieties in **bold** are slightly sensitive. Slight scorch may result from treatment with BENTA 480 SL + Tropotox.

+ These varieties are recommended on the basis of limited (2 years) data.

* Particular care should be taken to ensure treating these early maturing varieties at the correct growth stage, because they flower at an earlier node than later maturing varieties. They should not be treated after the fifth expanded leaf stage.

For the approval status and tolerance of any variety not mentioned above, consult the Processors and Growers Research Organisation.

Combining Peas

Bunting	Flare +	Nitouche +
Eagle +	Jackpot +	

+ These varieties are recommended on the basis of limited (2 years) data.

DO NOT treat the varieties Caroubt de Mousanne, Conquest, Danielle, Dinos, Filby, Fonado, Printana, Sherbourne, Turon, Santa ar Vedette.

DO NOT treat forage pea varieties or mangetout.

For the approval status and tolerance of any variety not mentioned above, consult the Processors and Growers Research Organisation.

Linseed

Since linseed offers poor weed competition, weed control is important, especially in the early growth stages.

BENTA 480 SL 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 2.5 to 30 cm tall, but before the flower buds are visible.

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 7.5 to 20 cm tall.

Methods of Application

BENTA 480 SL 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 BENTA 480 SL is recommended.

Time of Application

Apply BENTA 480 SL at or after flowering but not during flower bud formation. If required, BENTA 480 SL 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

BENTA 480 SL can be applied either by a conventional single dose or by a split dose treatment.

Varietal Tolerances

The following varieties have been successfully treated:

Buxton	Golden Harvest	Snowball
Carlton	Larianti	
Fortune	Scarlet Elegance	

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

Potatoes

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 BENTA 480 SL 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 BENTA 480 SL 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 crop 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

BENTA 480 SL can be applied either by a conventional single dose or preferably by a split dose treatment.

Potatoes - Varietal Tolerances

The following maincrop and second early varieties can be treated either with BENTA 480 SL:

Ailsa *#	Estima *#	Premiere *#
Ambo #	Hermes *#	Record
Anna *#	King Edward *	Romano
Atlantic *#	Marfona +	Rooster *#
Ausonia	Maris Piper	Saturna #
Balmoral *#	Maris Peer +	Saxon #
Brodick #	Nadine	Shula #
Cara	Navan #	Symfonia *#
Carlingford +*#	Obelix #	Vekaro
Costella +	Pentland Crown	Vekaro
Cultra #	Pentland Dell	Vanessa
Desiree *	Pentland Scire	Wilja +
Erntestolz #	Picasso #	

+ second early varieties

These varieties have shown more foliage scorch than others. Particular attention should be paid to the crop stage and factors affecting crop tolerance.

These varieties are recommended on the basis of limited (2 years) data.

DO NOT treat the following varieties: Bintje, Fianna, Lady Rosetta, Morag, Morena, Rode Pipo, Russett Burbank, Sante, Shepody, Stemster and Stroma.

DO NOT treat very early varieties or propagation crops.

Factors Affecting Crop Tolerance

BENTA 480 SL 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 BENTA 480 SL.

Mixing and Application

Mixing

Half fill the spray tank with clean water and start the agitation. Pour in the required amount of BENTA 480 SL. Add the remainder of the water and continue agitation until spraying is completed. When tank mixes are to be used, each product should be added separately to the spray tank.

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. Therefore **ADJUST SPRAY VOLUMES AND PRESSURES ACCORDING TO THE SIZE AND DENSITY OF THE WEED POPULATIONS AND CROP COVER.**

BENTA 480 SL can be applied as a single dose in all recommended crops or as a split dose to 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 to 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: 1.0 L/hectare followed by 1.0 L/ hectare.

The recommended water volume is 100-220 litres/hectare. The lowest volume of 100 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 BENTA 480 SL is recommended as a single application in this text, it should be applied at 2 l/hectare.

When applied alone or in mixture with other products, the recommended water volume is 220-450 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, 330-450 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

Tank Mixes

Provided that all product recommendations are followed, BENTA 480 SL can be used in two way mix

with a suitable adjuvant for use as directed in dwarf French beans and Tropotox® (PCS No. 03525), for use as directed in peas. See relevant sections for definition of formulations covered.

Apart from the above permitted products, used as directed, no other products should be tank mixed with BENTA 480 SL or severe crop damage can result.

All tank mixes should be used immediately after mixing.

Sequences

Do not apply insecticides within 7 days of treatment with BENTA 480 SL.

BENTA 480 SL BEFORE a post emergence grass herbicide: leave an interval of at least 7 days between treatments.

BENTA 480 SL AFTER a post emergence grass herbicide: leave an interval of 14 days and carry out a leaf wax test where relevant.

CONDITIONS OF SUPPLY

All goods supplied by us are of high grade and we believe them to be suitable but, as we cannot exercise control over their storage, handling, mixing or use or the 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 re-sellers 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.