S = susceptible, MS = moderately susceptible, R = resistant, - = insufficient information

Specific weed situations

Early germinating weeds

For best control, apply SHOTPUT® between the cotyledon to one true leaf stage.

Black bindweed is best controlled at the cotyledon to 2 true leaf stage. It is less sensitive to pre-emergence treatments.

Late germinating weeds, including black-bindweed

A post-emergence application may be made to listed safe main crop varieties before leading shoots reach 15cm. Efficacy of SHOTPUT on black bindweed is improved with post emergence applications.

Perennial grasses

If the potato crop follows grass, then either a suitable herbicide and/or cultivations should be used to kill the sward in the autumn. Following weeds can then be controlled using SHOTPUT post-emergence on recommended maincrop varieties. SHOTPUT will suppress common couch when applied post emergence up to the two-leaf stage.

CROP SPECIFIC INFORMATION

Traditional Method

Overall application (not incorporated) pre-emergence to recommended earlies varieties and pre- or post-emergence to recommended maincrop varieties. Persistence and residual activity and weed control may be less than the listed susceptibilities in maincrops grown on all soil types and earlies grown on all soil types except very light and light soils.

Pre-crop emergence applications

Potato & soil type*	Rate
Earlies (first and second):	
Very light, light, medium & heavy soils:	*0.75 kg/ha*
Second earlies:	
Peaty & organic soils:	*0.75 kg/ha*
Maincrop:	
Very light, light, medium, heavy, peaty & organic soils:	*0.75 kg/ha*

Post-emergence application

Listed maincrop varieties:	
All soils:	0.35 kg/ha or 0.5 kg/ha #

See Specific Timings and Application Methods below.

* Soil Classification ADAS 85 system.

Do not use SHOTPUT on potatoes grown in sand soils.

Water volumes

Traditional method:

Use a minimum of 200 litres of water per hectare using a Medium Quality spray (as defined by BCPC). Where the soil is cloddy, it is advisable to increase the volume of water.

For post-emergence application use a minimum of 130 litres of water per hectare and a Fine Quality spray (as defined by BCPC).

Application

Apply pre- or post-emergence to the soil surface. Even coverage of both sides of the ridge is important. Care should be taken in particular with post-emergence applications where the crop is sheltering the weeds; it is essential that the spray penetrates the canopy. Do not apply SHOTPUT in windy conditions.

Filters should be at least size 80 mesh. Filters finer than 80 mesh should not be used.

Specific timings and application methods

Incorporation of SHOTPUT into the soil

On soils containing greater than 10% organic matter and on mineral soils under dry conditions, SHOTPUT should be incorporated at a rate of 0.75kg/ha into the top 10-15 cm of soil during the final cultivation. This gives increased activity and is especially advantageous for those varieties which cannot be treated post-emergence. This method is particularly useful to increase activity on soils with more than 10% organic matter.

Pre-planting: On soils containing greater than 10% organic matter and on mineral soils in dry conditions, apply 0.75kg/ha of SHOTPUT, incorporating into the top 10-15 cm of soil during the final cultivation. Suitable cultivators are rotary harrows, rotary cultivators or spring tine harrows. A suitable granular nematicide may be incorporated into the soil at the same time, in accordance with the manufacturer's recommendations. After planting, ridging up should occur as soon as possible. It is important that ridges do not incorporate untreated soil which would allow weeds to establish. A final ridging up may be made, before the crop meets across the rows.

For recommended maincrop potatoes grown in two-row beds only, a follow-up post-emergence treatment of up to 0.5 kg/ha of SHOTPUT may be applied. This will give useful control of late germinating weeds in the furrows.

Post-planting: Place the tubers in shallow ridges and apply 0.75kg/ha of SHOTPUT. Before the crop emerges, incorporate by cultivating shallowly while at the same time ridging up. The cultivator should be fitted with suitable ridging bodies. In the case of second early varieties this application may only be made on soils containing more than 10% organic matter.

A further application of up to 0.5 kg/ha of SHOTPUT will be needed to control later germinating weeds. The second application may also be applied post-emergence before the leading shoots of the potatoes are 15 cm long.

Post-emergence applications

This method is for use on recommended maincrop varieties only. The method is only recommended until the weeds reach the cotyledon stage. If weeds are beyond this stage control may be reduced.

Rate of Use: On recommended varieties only, make 1 application at 0.35-0.5 kg/ha.

Timing: Application should be carried out at or before early cotyledon stage of the weeds until the most advanced shoots of the potatoes are 15 cm long.

SHOTPUT should be used pre-emergence on crops destined for use as seed.

Temporary plastic mulches

Using the traditional method of application, early potatoes may be treated with SHOTPUT and covered with plastic mulches. Since effective control of weeds by SHOTPUT is dependent on soil moisture, it is important that crops are well irrigated before the mulch is applied. Application should also be made to well-prepared, clod-free ridges. If using this method on mineral soils with a high organic matter content the residual activity of SHOTPUT may be reduced. This may result in inadequate weed control.

MIXING AND APPLICATION

For use by tractor mounted/trailed sprayer only.

Add half the required amount of water to the spray tank and begin agitation. Add the recommended quantity of SHOTPUT. On emptying the container, RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling, through the filter basket, and dispose of container safely. Maintain agitation throughout the filling, travelling and spraying operations. Dilute solutions should be sprayed immediately. After spraying, thoroughly clean the sprayer using a recognised decontaminant.

Crops should not be re-entered until spray residues are dry.

For information on tank mixes, consult ADAMA Agricultural Solutions UK Ltd, your agronomist or your distributor.

COMPANY ADVISORY SECTION

This section is not part of the Product Label under the Plant Protection Products Regulations and provides additional advice on product use at the discretion of ADAMA Agricultural Solutions UK Ltd.

DISCLAIMER/CONDITIONS OF SUPPLY

The specified properties of our products and the mode of application stated on this label have been established on the basis of research and experience. Products conform to specification at the time of delivery but, as we exercise no control over their subsequent storage, handling, mixing or use or the weather conditions before, during and after application, all of which may affect the performance of the products, no responsibility or liability will be accepted by us or our re-sellers for any failure in performance, damage or injury to person or property whatsoever arising from the storage, handling, application or use of the products. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in or make recommendations concerning the use of such products. We recommend you contact your dealer to request advice on the suitability of this product for any new and/or unusual growing methods or for new varieties not listed on this label.

SHOTPUT®

ADAMA

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HERBICIDE | Water dispersible granule | MAPP 15968

Ingredients

- Metribuzin ..... 70% w/w

Crops

A residual herbicide for control of weeds in potatoes.

Warning

Very toxic to aquatic life with long lasting effects.
Contains (disodium maleate). May produce an allergic reaction.
Keep out of reach of children.
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.

IMPORTANT INFORMATION

FOR PROFESSIONAL USE ONLY AS AN AGRICULTURAL HERBICIDE

Crops:	Potato – earlies	Potato - maincrop
Maximum individual dose:	0.75 kg/hectare	0.75 kg/hectare pre-emergence AND/OR 0.5 kg/hectare post-emergence
Maximum total dose:	0.75 kg/hectare per crop	1.25 kg/hectare per crop (maximum 0.5 kg/ hectare applied post-emergence)
Latest time of application:	Pre-emergence	Before the shoots of potatoes reach 15cm in length

Other specific restrictions:
A minimum of 21 days must be observed between applications.
A maximum total dose of 0.35 kg active substance/hectare/season (0.5 kg Shotput/ hectare/season) may be applied post-emergence of the crop.
Do not apply via hand-held 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.

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GROUP 5 HERBICIDE

Scan for Safety Data Sheet

Or use the weblink : https://bit.ly/3EFhFYM Alternatively, contact your supplier.

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The Voluntary Initiative

This label is compliant with the Voluntary Initiative Guidance.

LERAP B

5kg

SHOTPUT® is a water dispersible granule formulation containing 70% w/w metribuzin. It is a residual herbicide for control of weeds in potatoes.

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.

GENERAL INFORMATION

SHOTPUT® is both a contact and residual herbicide. It can be used to control weeds in named varieties pre-emergence and in certain varieties post-emergence. A list of varieties which may be treated is summarized below. For the latest information, please consult ADAMA Agricultural Solutions UK Ltd representatives.

SHOTPUT should not be used if a previously applied residual herbicide still remains in the soil. This is especially significant on organic soils.

RESTRICTIONS

Avoid drift as SHOTPUT may damage sensitive crops especially sugar beet, brassicas and lettuce.

Do not apply SHOTPUT to crops suffering from disease, stress or nutrient deficiencies or that are cold, waterlogged or grown in acidic conditions.

Care should be taken to avoid spray overlap, as crop damage may occur which may not be outgrown.

SOIL TYPES AND CONDITIONS

Do not use SHOTPUT on sands. Do not use SHOTPUT pre-emergence on Maris Piper in very light soils and do not treat this variety post-emergence.

Tubers should be planted in a moist, clod-free bed with a good tilth with well-rounded ridges. After planting, no further improvements should be required to the soil tilth; further cultivations will increase weed germination and reduce the effectiveness of SHOTPUT.

The soil should be moist when spraying. Dry conditions may reduce the effectiveness of SHOTPUT. The residual activity of SHOTPUT may be reduced on peaty and organic soils and on mineral soils with high organic matter content.

WEATHER

Yellowing of foliage may occur as a result of treatment, which is more frequent if spraying is carried out less than 3 days after cool, cloudy weather and particularly if a sudden change to hot sunny conditions occurs at the time of spraying. The crop should outgrow this yellowing.

In conditions of high sunlight intensity and high daytime temperatures, spraying should be carried out in the evening. On gravelly or stony soils damage may occur particularly if heavy rain falls soon after application.

FOLLOWING CROPS

Before drilling or planting the next crop, the soil must be mould-board ploughed to a depth of at least 15 cm. It is recommended that ploughing takes place as soon as possible after lifting and definitely before the end of December.

The following intervals must be observed between application of SHOTPUT and drilling or planting the following crops:

Cereals, rye-grass, winter beans:	16 weeks
All crops except lettuce and radish:	The following spring
Lettuce and radish:	These crops should not be grown in the year after SHOTPUT treatment.

Contact ADAMA Agricultural Solutions UK Ltd in the event of crop failure due to poor growing conditions.

RESISTANCE

SHOTPUT contains metribuzin a triazinone belonging to HRAC group 5

Always follow WRAG guidelines for preventing and managing herbicide resistant weeds.

Maximise the use of cultural control measures wherever possible (e.g. crop rotation, ploughing, stale seedbeds, delayed planting, etc.)

Use tank mixes or sequences of herbicides with different modes of action within individual crops.

Copies of the guidelines may be obtained from your distributor, crop advisor or product manufacturer.

For further advice on resistance management, contact your agronomist or specialist advisor.

POTATO VARIETIES

Not all varieties of potato may be safely treated with SHOTPUT. For the latest list of potato varieties which may be treated with SHOTPUT contact ADAMA Agricultural Solutions UK Ltd

Varieties which may be treated:

First earlies. pre-emergence:	Alcmaria. Arran Comet. Ostara. Maris Bard. Pentland Javelin. Ulster Sceptre. Orla.
Second earlies. pre-emergence:	Ausonia. Estima. Marfona. Maris Peer. Nadine.Wilja
Maincrop. pre-emergence:	Maris Piper*. Asterix. Markies. Mayan Gold. Melody. Roost-er. Shannon. Vales Sovereign.
Maincrop. pre- and post-emergence:	Cara. Desiree. King Edward. Kingston. Pentland Crown. Pentland Dell. Pentland Squire. Record. Romano. Claret. Isle of Jura. Vales Everest. Vivaldi.

*not on Sands or Very Light soils.

WEEDS CONTROLLED

Perennial broad-leaved weeds and grasses are not controlled by SHOTPUT.

* Post-emergence weed control up to 1 expanded true leaf is recorded in the table; however most annual broad-leaved weeds will be controlled beyond this stage.

Species	Pre-emergence	Post-emergence* 0.35-0.5 kg/ha
Annual Meadowgrass	S	S
Black-bindweed	MS	S
Blackgrass	S	MS
Black Nightshade	R	MS
Bugloss	S	S
Charlock	S	S
Cleavers	R	R
Common chickweed	S	S
Common fumitory	S	S
Common orache	S	S
Common poppy	S	S
Corn marigold	-	MS
Corn spurrey	S	S
Fat-hen	S	S
Field forget-me-not	S	S
Field pansy	S	MS
Field pennycress	S	S
Groundsel	S	S
Henbit dead nettle	S	S
Hemp-nettle	S	-
Knotgrass	S	MS
Mayweed spp.	S	S
Pale persicaria	S	S
Red dead nettle	S	S
Redshank	S	S
Scarlet pimpernel	S	S
Shepherd's purse	S	S
Small nettle	S	S
Speedwell spp	S	S
Sun spurge	S	-
Volunteer oil-seed rape	S	S
Wild radish	S	S