

DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be carefully read in order to obtain safe and successful use of this product.

GENERAL INFORMATION

CALARIS contains mesotrione and terbuthylazine. The uptake is through both the leaves and the root system, thus combining contact action with residual weed control. The product controls a broad spectrum of annual broad-leaved weeds and certain grasses. Young weeds are most susceptible to CALARIS.

Crops

For use only as a herbicide for the control of weeds in forage and grain maize. Forage and grain maize may be sprayed any time from the two to eight leaf stage. **DO NOT USE** on maize seed crops or on sweetcorn varieties.

Spray Timing

Always inspect crop and weed growth stage immediately before spraying.

For best results treat young weed seedlings. See weed control tables for application details.

Weather

For the best results CALARIS should be applied when the weeds are actively growing i.e. in warm humid weather with adequate soil moisture. Treatment in poor growing conditions or in dry soil may give less reliable control.

Do not spray when the crop foliage is wet.

AGRICULTURAL PRACTICE

It is not recommended to spray crops suffering from stress e.g. when in very cold or drought conditions, or when wide temperature fluctuations are expected or excessive rainfall is expected to follow application. Under these adverse conditions mild to moderate chlorosis may be observed on sprayed leaves. This effect is usually transient and does not affect yield.

Take extreme care to avoid drift onto all plants outside the target area, otherwise damage will result.

Ensure that spray swaths are matched accurately and do not overlap.

RESISTANCE MANAGEMENT

CALARIS contains two active ingredients with different modes of action. Mesotrione is a triketone which disrupts development of plant pigments (4-HPPD inhibitor); terbuthylazine is a triazine which inhibits photosynthesis (photosystem II inhibitor). Weed control can be reduced if strains of individual weed species develop that are less sensitive to a specific herbicide, or herbicide group.

CALARIS, a formulated mixture of two active ingredients with two different modes of action, will reduce the likelihood of resistance development. There is no known cross resistance between mesotrione or terbuthylazine, or the groups of herbicides to which each belongs.

Furthermore, at the present time, triketones (e.g. mesotrione) are not approved in crops other than forage and grain maize. There is no similar mode of action in herbicides for other crops and therefore crop rotation will also delay the onset of any resistance to this active ingredient. Where continuous forage and grain maize is grown, the use of CALARIS for more than two seasons should be avoided.

HERBICIDE

RESTRICTIONS

Treatment must not be applied on sands or very light soils.

Residual weed control will be reduced on soils with more than 10% organic matter.

WEED CONTROL

Rate of use

CALARIS contains an adjuvant system and the addition of an adjuvant or a tank mix wetting agent is not recommended.

The recommended dose rate is 1.0 to 1.5 litres per hectare depending on the type of weeds present. CALARIS should be applied after crop emergence, the preferred forage and grain maize crop stage is when 2–6 leaves have been formed.

ANNUAL BROAD-LEAVED WEEDS	DOSE RATE L/HA	WEED GROWTH STAGE
Fat hen	1.0	Emergence to first flowers visible
Common chickweed	1.0	Emergence to start of flowering
Black nightshade	1.0	Emergence to 6 leaves
Scented mayweed	1.0	Emergence to 8 leaves
Field pansy	1.0	Emergence to 6 leaves
Black bindweed	1.0	Emergence to 10 leaves
Redshank	1.0	Emergence to 8 leaves
Pale persicaria	1.0	Emergence to 8 leaves
*Knotgrass	1.0	Emergence to 8 leaves
Shepherd's purse	1.0	Emergence to flowering
Bur-marigold	1.0	Emergence to 6 leaves
Red-deadnettle	1.0	Emergence to 4 leaves
Hemp nettle	1.0	Emergence to 4 leaves
Common field speedwell	1.0	Emergence up to 4 leaves
Green field speedwell	1.0	Emergence up to 4 leaves
Field penny-cress	1.0	Emergence to flowering leaves
Common orache	1.0	Emergence to 8 leaves
Forget-me-not	1.0	Emergence to 4 leaves

* Knotgrass is moderately resistant to treatment

ANNUAL GRASSES	DOSE RATE L/HA	WEED GROWTH STAGE
Barnyard grass	1.5	Emergence up to mid tillering
Annual meadow-grass	1.5	Emergence up to mid tillering
Crabgrass	1.5	Emergence up to 3 leaves

APPLICATION

Good spray cover is essential and care should be taken to ensure that the sprayer has a matched set of nozzles, the machine is correctly calibrated and adjusted to the correct height above the crop.

Preparation of the spray

Shake the CALARIS container before opening.

Half-fill the spray tank with clean water, add the required amount of CALARIS and agitate while filling the tank. On emptying the container, RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing 3 times. Add washings to sprayer at time of filling and dispose of container safely. Continue agitation during spraying.

Volume of water

Even coverage of the weeds is essential.

Use in a recommended 200 to 300 litres (maximum) of water per hectare. **The lower rate is preferable** but the higher volume may be necessary where there are dense or well developed weed populations.

Application methods

Apply through a conventional field crop sprayer using a pressure of 2–3 bars. Ensure the sprayer is correctly calibrated before use.

Do not leave spray liquid in the sprayer for long periods (i.e. overnight).

Apply using a medium quality spray (BCPC) at a pressure of at least 2 bar. Apply through conventional crop spraying equipment.

After Use

It is important to wash equipment thoroughly after use to remove all traces of CALARIS as even small amounts may cause damage to crops. Rinse inside of tank with clean water using at least one tenth of the spray tank volume. After flushing through pump and spray lines, drain and repeat procedure.

Disposal of spray tank washings should be in accordance with local, state or national legislation.

Perform superficial cleaning of spray equipment in the field. Application liquids and their residues, products and their residues, emptied containers or packs as well as cleaning and rinsing fluids must not be allowed to enter watercourses. This also applies to indirect introduction through the sewage system, farmyard and road drains or rainwater and wastewater pipes.

FOLLOWING CROPS**Autumn**

Winter wheat (including durum wheat), winter barley and ryegrass can follow a forage or grain maize crop treated with CALARIS, provided the land is ploughed or cultivated to a depth of 150 mm and 12 weeks or more have elapsed after spraying. If prolonged drought has occurred, this period should be extended to 14 weeks and mouldboard ploughing is recommended.

Deep ploughing (greater than 15 cm) followed by cultivation is necessary before drilling winter oilseed rape, again 12 (or 14) weeks should have elapsed after application.

Spring

After ploughing or cultivation to a depth of 150 mm, maize, ryegrass, spring wheat and spring barley may be sown in the spring following application of CALARIS. Do not sow any other crop at this time.

PROTECT FROM FROST.

SHAKE WELL BEFORE USE.

HERBICIDE

SAFETY PRECAUTIONS

(a) Operator protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following Personal Protective Equipment:

WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate.

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

(b) Environmental protection

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m of the top of the bank of any static or flowing water body, unless a Local Environment Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 m of the top of a ditch which is dry at the time of application. DO NOT ALLOW DIRECT SPRAY from hand-held sprayers to fall within 1 m of the top of the bank of any static or flowing water body. Aim spray away from water.

This product qualifies for inclusion within the Local Environment Risk Assessment for Pesticides (LERAP) scheme. Before each spraying operation from a horizontal boom sprayer, either a LERAP must be carried out in accordance with CRD's published guidance or the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for three years.

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.

(c) Storage and disposal

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

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 safely.

DO NOT RE-USE CONTAINER FOR ANY PURPOSE.

CALARIS



HARMFUL

Contains 330 g/l terbuthylazine and 70 g/l mesotrione as a suspension concentrate.

HARMFUL IF SWALLOWED.

VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.



DANGEROUS FOR THE ENVIRONMENT

Keep out of reach of children.

Keep away from food, drink and animal feeding stuffs.

When using do not eat, drink or smoke.

This material and its container must be disposed of in a safe way.

Use appropriate containment to avoid environmental contamination.

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

THE (COSHH) CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS MAY APPLY TO THE USE OF THIS PRODUCT AT WORK

IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL HERBICIDE

For use on: Forage maize, Grain maize

Maximum individual dose: 1.5 litres/hectare

Maximum number of treatments: 1 per crop

Latest time of application: 8 leaves unfolded (GS18)

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.

Syngenta Crop Protection UK Limited, CPC4, Capital Park, Fulbourn, Cambridge CB21 5XE
Tel: Cambridge (01223) 883400

In case of toxic or transport emergency ring 01484 538444 any time