

Herbicide

Challenge[®] PLUS

A pre-emergence herbicide for use against a range of annual grasses and broad leaved weeds in winter wheat and winter barley.

A suspension concentrate formulation containing 450 g/L aclonifen, 30 g/L diflufenican and 90 g/L flufenacet.

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

Bayer CropScience Ltd, PO Box 1582, Cambridge, CB1 0FE
Telephone: 01223 226500

**For 24 hour emergency
information contact
Bayer CropScience Ltd**

**Telephone:
0330 678 3382 (24 hr)**

National Poisons Information
Centre UK: 0344 892 0111
(medical professionals only)

National Poisons Information
Centre Dublin: +353 1 809 2166



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GROUP 12 | 15 | 32 HERBICIDES

MAPP 21008 H



CHALLENGE PLUS**UFI: DHM0-20F5-500C-0DC1**

Contains 450 g/L aclonifen, 30 g/L diflufenican and 90 g/L flufenacet
 Also contains: 1,2- benzisothiazol-3(2H)-one, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, and 2-methyl-3(2H)-isothiazolone.

**Warning**

Suspected of causing cancer

May cause an allergic skin reaction

Very toxic to aquatic life with long lasting effects

Wear protective gloves/protective clothing/eye protection/face protection

IF exposed or concerned: call a POISON CENTRE or doctor/physician

Collect spillage

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

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

IMPORTANT INFORMATION FOR USE ONLY AS A PROFESSIONAL HERBICIDE

Crops:	Wheat (winter), barley (winter)
Maximum individual dose:	Wheat (winter): 1.85 L product/ha Barley (winter): 1.0 L product/ha
Maximum number of treatments:	One per crop
Latest time of application:	Before emergence
Aquatic buffer zone distance:	Wheat (winter): 12 metres Barley (winter): 6 metres
Other specific restrictions:	This product must not be applied via hand-held equipment. The concentration of Challenge Plus in the spray solution must not exceed 1%.

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.



To access the **Safety Data Sheet** for this product scan the code or use the link below:
<https://cropscience.bayer.co.uk/our-products/herbicides/challenge-plus>
 or alternatively contact your supplier

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SAFETY PRECAUTIONS

Operator Protection

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

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when handling the concentrate.

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

WHEN USING DO NOT EAT, DRINK OR SMOKE.

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

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.

To protect aquatic organisms, respect an unsprayed buffer zone to surface water bodies as specified for the crop. HORIZONTAL BOOM SPRAYERS MUST BE FITTED WITH THREE STAR DRIFT REDUCTION TECHNOLOGY. Low drift spraying equipment must be operated according to the specific conditions stated in the official three star rating for that equipment as published on HSE Chemicals Regulation Division's website. Maintain three star operating conditions until 30 m from the top of the bank of any surface water bodies.

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within the distance specified for the crop to the top of the bank of a static or flowing water body, or within 1 m of the top of a ditch which is dry at the time of application. Aim spray away from water. NOTE: BUFFER ZONES OF MORE THAN 5 M CANNOT BE REDUCED UNDER THE LOCAL ENVIRONMENT RISK ASSESSMENT FOR PESTICIDES (LERAP) SCHEME.

The statutory buffer zone must be maintained and the distance recorded in Section A of the LERAP record form. The LERAP record form must be kept available for three years.

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

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 container safely.

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.

RESTRICTIONS

DO NOT treat undersown cereals or those due to be undersown.

Adverse crop effect (paling, chlorosis, reduction in vigour and biomass reduction) may occur when there is very wet weather before and after application, particularly on crops grown on light, free-draining soils or where soils become waterlogged. These effects are typically transient in nature and will normally have no adverse effect on crop yield.

Avoid use on waterlogged soils or on crops subject to temporary waterlogging by heavy rainfall, as there is a risk of transitory chlorosis and biomass reduction.

DO NOT use on sands or very light soils (ADAS 85 classification) or very stony or gravelly soils as there is a risk of crop damage.

DO NOT treat broadcast crops as uncovered seed may be damaged.

DO NOT soil incorporate.

Avoid spraying during periods of prolonged or severe frosts as sharp or severe frosts following application may cause transitory discoloration or scorch from which the crop will normally recover.

DO NOT use on soils containing more than 10% organic matter.

DO NOT disturb the soil after application (e.g. by harrowing or rolling).

HERBICIDE RESISTANCE MANAGEMENT

Strains of some annual grasses (e.g. black-grass, wild-oats and Italian rye-grass) have developed resistance to herbicides which may lead to poor control. When herbicides with the same mode of action are used repeatedly over several years in the same field, selection of resistant biotypes can take place. These can propagate and may become dominating. A weed species is considered to be resistant to a herbicide if it survives a correctly-applied treatment at the recommended dose. A strategy for preventing and managing such resistance should be adopted. This should include integrating herbicides with a programme of cultural control measures. Guidelines have been produced by the Weed Resistance Action Group and copies are available from the AHDB, CropLife UK, your distributor, crop adviser or product manufacturer.

Key aspects of the Challenge Plus Resistance Management Strategy are:

- ALWAYS follow WRAG guidelines for preventing and managing herbicide resistant weeds

- DO NOT use Challenge Plus as a stand-alone treatment for black-grass control. Use other effective herbicides with alternative modes of action in the same crop and/or in the rotation.
- DO NOT use Challenge Plus as the sole means of grass weed or broad-leaved weed control in successive crops
- ALWAYS use grass and broad-leaved weed herbicides with alternative modes of action throughout the cropping rotation
- ALWAYS monitor weed control effectiveness and investigate any odd patches of poor grass or broad-leaved weed control. If unexplained, contact your agronomist who may consider a resistance test appropriate.

WEEDS CONTROLLED

Challenge Plus is absorbed through both the shoot and the roots of emerging seedlings as they grow through the layer of herbicide applied pre-emergence to the soil surface. Susceptible weeds can emerge, but these will become chlorotic, their growth will be retarded leading ultimately to death. After pre-emergence application do not disrupt the herbicide layer. Any form of mechanical cultivation or disruption of the soil surface by any other method will reduce the level of weed control provided.

WEED SUSCEPTIBILITY TO CHALLENGE PLUS

Weed:	Susceptibility at 1.85 L/ha	Susceptibility at 1.5 L/ha	Susceptibility at 1.0 L/ha
Grass Weeds:			
Black-grass	MS Pre & Post-em up to GS 11	MR Pre & Post-em up to GS 12	-
Meadow-grass, Annual	-	-	S Pre & Post-em. up to GS 14
Broad-leaved weeds:			
Chickweed, Common	-	-	S Pre & Post-em. up to GS 16
Cleavers, Common	MS Pre-em.	MR Pre-em.	-
Mayweed, Scented	-	-	S Pre-em & MS Post-em. up to GS 12

Established perennial grasses and broad leaved weeds growing from rootstocks will not be controlled by Challenge Plus. Speed of activity can be slow and is dependent on temperature and growing conditions. Activity can be slow under cool conditions and the final level of weed control may take some time to appear. Some soil moisture is required for Challenge Plus to be activated. Moist soil at and after application is required to give the best results. Best results will be obtained if rain falls within 7 days of application. Residual control may be reduced under prolonged dry conditions. Effectiveness using three star drift reduction technology may be reduced.

CROP SPECIFIC INFORMATION

Good weed control depends on burying any trash or straw before or during seedbed preparation.

Seed beds must have a firm, fine tilth. Loose or cloddy seed beds must be consolidated otherwise crop damage may result due to inadequate seed cover. For pre-emergence treatments, seed should be covered with a minimum of 32 mm of settled soil.

Use at a rate of 1.0, 1.5 or 1.85 litres of product/ha according to weeds present and growth stage. Apply via a horizontal boom sprayer in 200 300 litres of water per hectare as a **MEDIUM** spray (BCPC category). Use the higher volume where weed foliage is dense. A spray pressure of at least 2 bars is advised. Good, even spray coverage of soil and weeds is essential. Take extreme care to avoid overlapping spray swaths or damage may occur. To prevent damage, extreme care must be taken to avoid drift onto neighbouring crops.

Crop thinning, chlorosis or stunting of the crop may be observed, particularly where applications are made to crops grown on light free draining soils. This effect is transitory in nature and there will normally be no adverse impact on grain yield.

FOLLOWING CROPS and CROP FAILURE

Crops which can be established in the autumn following harvest of a treated cereal crop:

Winter wheat, winter barley and winter oilseed rape, where soil is ploughed or cultivated to at least 10 cm and soil is thoroughly mixed before planting

Crops which can be established in the spring following harvest of a treated cereal crop:

Spring wheat, spring barley, spring oilseed rape, sugar beet, field beans, maize, soybean and sunflower, where soil is ploughed or cultivated to at least 10 cm and soil is thoroughly mixed before planting.

In the event of crop failure, for any reason, an interval of 30 days must elapse between application of Challenge Plus and establishment of winter wheat or winter barley.

Spring wheat, spring barley, spring oats, field beans, field peas or maize can be established after an interval of 4 months has elapsed between an application of Challenge Plus and replacement crop establishment. An interval of 5 months should elapse between treatment and subsequent sowing of linseed, spring oilseed rape or potatoes. Plough before sowing linseed, spring oilseed rape or potatoes.

Where Challenge Plus and other products containing diflufenican are applied to successive cereal crops, levels of diflufenican (DFF®) will build up in the soil. Ploughing or cultivation, with complete inversion of the furrow, must take place before planting any following non-cereal crop. Even where ploughing or cultivation is carried out there may still be a risk of damage to following crops of onions, leek and related species, or clover. As a precaution, users who rent out their land to growers of these crops should not use DFF-containing products in successive years before renting out the land

MIXING

Shake the container well before use. Half fill the spray tank with clean water and add the required amount of Challenge Plus. Wash out the container and add the washings to the spray solution, before topping up with clean water. Maintain continuous agitation of spray solution during mixing and loading and until spraying is complete. Do not leave the sprayer filled with the spray solution standing for long periods. Wash out the sprayer thoroughly after use using a wetting agent or proprietary tank cleaner with two rinses.

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