



DEFEND

GROUP

11

FUNGICIDE

Product registration number:
USI:SE00-V04G-D00D-CC25



DEFEND is a suspension concentrate containing 250g/litre of azoxystrobin.

A broad spectrum foliar fungicide with systemic, translaminar and protectant properties for use on wheat, barley, oilseed rape and potato.

Warning:

Very toxic to aquatic life with long lasting effects.

Do not breathe spray.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product. Avoid release to the environment.

Collect spillage.

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

For professional use only

PCS No: 07034 IUFI: SE00-V04G-D00D-CC25



Authorisation Holder

Sinon EU GmbH,
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Marketing Company

IN CASE OF TOXIC OR TRANSPORT EMERGENCY
RING +49-40-6599 5039 ANYTIME

PROTECT FROM FROST. SHAKE WELL BEFORE USE

5 l5Les

FOR USE ONLY AS AN AGRICULTURAL FUNGICIDE

SAFETY PRECAUTIONS

Operator protection

Engineering control of operator exposure must be used where reasonably practicable.

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

WASH SPLASHES from skin or eyes immediately.

DO NOT BREATHE SPRAY.

WASH HANDS AND EXPOSED SKIN before meals and after work.

Environmental protection

Avoid drift on to non-target plants.

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 organism, respect an unsprayed buffer zone of 5m to surface water bodies.

Aim spray away from water.

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.

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.

IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL FUNGICIDE, as directed below:

CROPS	MAXIMUM INDIVIDUAL DOSE	MAXIMUM NUMBER OF TREATMENTS PER CROP	LATEST TIME OF APPLICATION
Wheat (winter and spring)	1 L/ha	2	35 days before harvest
Barley (winter and spring)	1 L/ha	2	35 days before harvest
Oilseed Rape (winter and spring)	1 L/ha	2	21 days before harvest
Potatoes (in- furrow)	3 L/ha	1	Apply at planting

GENERAL INFORMATION

DEFEND contains azoxystrobin, a broad spectrum fungicide from the strobilurin (QoI) group. It has systemic, translaminar and protectant properties.

It should always be used in mixture with fungicides with other modes of action and is best applied as a protectant treatment or at an early stage of disease development.

DEFEND is approved for application to winter and spring wheat, winter and spring barley, winter and spring oilseed rape, and potatoes.

RESTRICTIONS

Some apple varieties are highly sensitive to DEFEND. As a precaution DEFEND should not be applied when there is a risk of spray drift on to neighbouring apple crops. Spray equipment used to apply DEFEND to other crops should not be used to treat apples.

Apply DEFEND under good growing conditions with adequate soil moisture. Avoid poor growing conditions which may give less reliable results.

Do not use DEFEND on potato seed crops

Professional use only

Other Specific Restrictions

To reduce the risk of resistance developing on target diseases the total number of applications of products containing QoI fungicides made to any cereal crop must not exceed two.

A minimum interval of 14 days must be observed between applications to wheat, barley and oilseed rape.

DISEASES CONTROLLED

Wheat

Yellow rust (*Puccinia striiformis*),
Brown rust (*Puccinia recondita*),
Glume blotch (*Leptosphaeria nodorum*),
Sooty moulds (*Cladosporium* spp., *Alternaria* spp.)

Barley

Net blotch (*Pyrenophora teres*)-Moderate control
Brown rust (*Puccinia hordei*)

Oilseed Rape

Sclerotinia stem rot (*Sclerotinia sclerotiorum*)
Alternaria dark leaf and pod spot (*Alternaria* spp)

Potatoes

Reduction of:
Stem canker and black scurf (*Rhizoctonia solani* = *Thanatephorus cucumeris*)
Black dot (*Colletotrichum coccodes*)

MIXING AND SPRAYING

Ensure that the sprayer is clean and correctly set to give an even application at the required volume. Half-fill the spray tank with clean water and start agitation. Shake the container and add the required amount of DEFEND to the sprayer using a filling device (e.g. induction bowl or closed transfer unit) or by direct addition to the sprayer tank.

Wash out containers thoroughly, preferably using an integrated pressure rinsing device, or manually rinse three times. Add washings to the sprayer at the time of filling. Complete filling to the required volume and continue to agitate throughout the spraying operation. Do not leave the spray liquid in the sprayer for long periods (such as during meal breaks or overnight).

Cereals and oilseed rape – foliar spray:

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

Apply in at least 200 litres of water per hectare. In dense crops, increase the water volume to 250–300 litres per hectare to improve coverage.

Potatoes – in furrow soil treatment:

Apply using specialist in-furrow application equipment. Use between 50–150 litres of water per hectare. Direct the spray into the planting furrow and not onto the seed tuber. Use two nozzles per row – one at the front of the planting share and directed down into the furrow and the second, at the rear of the share and directed to spray the soil as it closes around the seed tuber.

CROP SPECIFIC INFORMATION

WINTER and SPRING WHEAT, WINTER and SPRING BARLEY

DEFEND is best applied before or very shortly after the appearance of disease symptoms i.e. as a protectant treatment. For protection against ear diseases (e.g. *Cladosporium* and *Alternaria*) apply DEFEND at ear emergence.

Always inspect crops to assess disease development immediately before spraying. Use a disease risk assessment or an appropriate decision support system to determine when applications should be made.

Rate of use: 1.0 litre per hectare.

The maximum number of applications to any cereal crop is two.

Tank mixing

On cereal crops, DEFEND must always be used in mixture with another product, recommended for control of the same target disease(s) that contains a fungicide from a different cross resistance group. The other product must be applied at a dose that will give robust control.

Resistance Management

DEFEND contains *azoxystrobin*, a member of the QoI cross resistance group. DEFEND should be used preventatively and should not be relied on for its curative potential. Use DEFEND as part of an Integrated Crop Management (ICM) strategy incorporating other methods of control, including where appropriate other fungicides with a different mode of action. You must not apply more than two applications of QoI-containing products to any cereal crop.

Users should refer to current FRAC guidelines for QoI compounds.

WINTER and SPRING OILSEED RAPE

DEFEND is best applied before or very shortly after the appearance of disease symptoms i.e. as a protectant treatment.

Timing: Before applying DEFEND, ensure the crop is free from any stress caused by environmental or agronomic effects. Best results will be achieved from applications made as protectant treatments following a disease risk assessment or the use of appropriate decision support systems.

Rate of use: 1.0 litre per hectare.

The maximum number of applications to any oilseed rape crop is two.

Sclerotinia – DEFEND should be applied as a protectant spray during early flowering to mid flowering (GS60–GS65).

Alternaria – Apply DEFEND as a protective spray at early pod formation when the first ten pods are longer than 4 cm, before they become knobbly and not later than the time the first spots are seen on the pods.

Resistance Management

Do not make more than two applications of DEFEND to crops of oilseed rape. Where appropriate include other fungicides with a different mode of action in the disease control programme.

To avoid the likelihood of resistance developing, applications of DEFEND should be made with due regard to current FRAC guidelines for QoI compounds.

Use DEFEND as part of an Integrated Crop Management (ICM) strategy incorporating where appropriate other methods of control, including other fungicides with different modes of action.

POTATOES

DEFEND is applied as an in-furrow application made at the time of planting (see above).

Target the soil and not the seed tuber to minimise delays in emergence.

Use chitted or cold-stored seed which has not started to sprout. Emergence delays can occur if the seed tuber has started to sprout before planting.

Use of other seed treatments on the seed tubers prior to planting can delay the speed of emergence.

DEFEND is less effective on high organic matter soils.

Consult processors before treatment in crops destined for processing.

Using DEFEND following earlier applications of imazalil, pencycuron or imazalil/pencycuron is likely to lead to a check in the speed of crop emergence. Effects are usually, but not always, outgrown.

Rates of use:

***In-furrow treatment:* 3.0 litres per hectare at planting**

Only one application per crop should be made.

Resistance Management

The risk of resistance developing to DEFEND in *Rhizoctonia solani* (Black scurf and Stem canker) and *Colletotrichum coccodes* (Black dot) is considered to be very low. To minimise this risk, tubers from crops treated with DEFEND should not be used for seed. DEFEND should only be used in potato crops that are grown in effective rotations.

To avoid the likelihood of resistance developing to QoI compounds used to control potato late blight, application of DEFEND should be made according to current FRAC guidelines for control of blight with QoI compounds. If an application of DEFEND is made, no more than two further QoI treatments should be applied sequentially as the first sprays against blight before using an alternative product.