

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

AMISTAR contains azoxystrobin, a broad spectrum fungicide from the strobilurin group. It has systemic, translaminar and protectant properties.

Azoxystrobin inhibits fungal respiration. Its mode of action is different from the action of other fungicidal groups. It should always be used in mixture with fungicides with other modes of action.

AMISTAR shows good crop safety, disease control and maintenance of green leaf area which result in significant yield benefits.

AMISTAR is best used as a protective treatment or during early stages of disease establishment. In cereals, the length of disease control is generally about four to six weeks during the period of active stem elongation, but can be more when applied at flag leaf/ear emergence.

AMISTAR is approved for application to wheat, barley, rye, triticale and oats up to the grain watery ripe stage, and to combining and vining peas, bulb onions, leeks, carrots, asparagus field beans, potatoes, oilseed rape, Brussels sprouts, cabbage, cauliflower, kale (winter greens), collards (spring greens), broccoli and calabrese (see Statutory area).

RESTRICTIONS

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

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

DISEASES CONTROLLED

Wheat

Leaf Spot (*Septoria tritici*)

Glume Blotch (*Leptosphaeria* (syn. *Septoria*) *nodorum*)

Yellow Rust (*Puccinia striiformis*)

Brown Rust (*Puccinia recondita*)

Ear Diseases (*Cladosporium*, *Alternaria*)

Can reduce the severity of Take-all (*Gaeumannomyces graminis* var. *Tritici*)

Barley

Net Blotch (*Pyrenophora teres*)

Brown Rust (*Puccinia hordei*)

Powdery Mildew (*Erysiphe graminis hordei*) – moderate

Leaf Blotch (*Rhynchosporium secalis*) – reduction

Can reduce the severity of Take-all (*Gaeumannomyces graminis* var. *Tritici*)

Oats

Crown Rust (*Puccinia coronata*)

Powdery Mildew (*Erysiphe graminis f.sp.avenae*) – moderate

F U N G I C I D E

Rye and Triticale

Brown Rust (*Puccinia recondita*)

Leaf Blotch (*Rhynchosporium secalis*) – reduction

Powdery Mildew (*Erysiphe graminis*) – moderate

Can reduce the severity of Take-all (*Gaeumannomyces graminis* var. *Tritici*)

Peas – Combining and Vining

Leaf and Pod Spot (*Ascochyta pisi*) – useful control

When AMISTAR is used to control Leaf and Pod Spot, some control of Grey Mould (*Botrytis cinerea*) and *Mycosphaerella* blight may be achieved.

Bulb Onions

Downy Mildew (*Peronospora destructor*)

Leeks

Leaf Rust (*Puccinia porri*)

Purple Blotch (*Alternaria porri*) – moderate

Carrots

Alternaria Leaf Blight (*Alternaria dauci*)

Powdery Mildew (*Erysiphe polygoni*)

Asparagus

Stemphylium (*Stemphylium botryosum*)

Rust (*Puccinia asparagi*)

Field Beans

Rust (*Uromyces viciae-fabae*)

Potatoes

For the reduction of soil-borne infections caused by:

Stem Canker and Black Scurf (*Rhizoctonia solani*)

Black Dot (*Colletotrichum coccodes*)

Oilseed rape

Dark Leaf and Pod Spot (*Alternaria* spp.)

Sclerotinia Stem Rot (*S. sclerotiorum*)

Brassicas

For moderate control of:

White Blister (*Albugo candida*)

Ring Spot (*Mycosphaerella brassicicola*)

Alternaria (*Alternaria brassicae* and *Alternaria brassicicola*)

CROP SPECIFIC INFORMATION

CROPS

AMISTAR can be used on all winter and spring crops of wheat and barley, oats, rye and triticale. It can also be used on combining and vining peas, onions, leeks, carrots, asparagus field beans, potatoes, oilseed rape, Brussels sprouts, cabbage, cauliflower, kale (winter greens), collards (spring greens), broccoli and calabrese.

WINTER & SPRING WHEAT, WINTER & SPRING BARLEY

Timing

Always inspect crops to assess disease development immediately before spraying. Best results will be achieved from applications made in the earliest stages of disease development or as a

protectant treatment following a disease risk assessment or the use of appropriate decision support systems.

For protection against ear diseases (*Cladosporium* and *Alternaria*) apply AMISTAR at ear emergence.

When used to control the listed foliar diseases, AMISTAR applied at the first or second node stage of the crop can reduce the severity of Take-all infection.

Rate of use

1.0 litre per hectare.

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

Tank mixing

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

Resistance Management

Use AMISTAR 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 foliar applications of QoI-containing products to any cereal crop.

There is significant risk of widespread QoI resistance occurring in *Septoria tritici* populations in the UK. Failure to follow resistance management action may result in reduced levels of disease control.

Strains of barley powdery mildew resistant to QoI's are common in the UK.

Disease control may be reduced if strains of other pathogens less sensitive to azoxystrobin develop.

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

Users should refer to current FRAG-UK guidelines for QoI compounds.

RYE, TRITICALE, WINTER AND SPRING OATS**Timing**

Always inspect crops to assess disease development immediately before spraying. Best results will be achieved from applications made in the earliest stage of disease development or as a protectant treatment following a disease risk assessment or the use of appropriate decision support systems.

When used to control the listed foliar diseases in rye and triticale, AMISTAR applied at the first or second node stage of the crop can reduce the severity of Take-all infection.

Rate of use

1.0 litre per hectare.

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

Resistance Management

Use AMISTAR 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 foliar applications of QoI-containing products to any cereal crop.

F U N G I C I D E

There is significant risk of widespread QoI resistance occurring in *Septoria tritici* populations in the UK. Failure to follow resistance management action may result in reduced levels of disease control.

Disease control may be reduced if strains of other pathogens less sensitive to azoxystrobin develop.

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

Users should refer to current FRAG-UK guidelines for QoI compounds.

PEAS – COMBINING AND VINING

Timing

AMISTAR should always be used at the first sign of disease infection or when a predictive assessment shows conditions favourable for disease development. For optimum disease control apply AMISTAR before infection or as soon as disease is first seen in the crop. Always inspect crops to assess disease development immediately before spraying. Best results will be achieved from applications made in the earliest stage of disease development or as a protectant treatment following a disease risk assessment or the use of appropriate decision support systems.

Rate of use

1.0 litre per hectare.

A second treatment may be required if disease pressure remains high – especially in combining peas.

Peas for processing

Where a crop of peas is destined for processing, consult your processor before treating with AMISTAR. (One year's results indicate that no taints were detected on quick frozen, canned, vining or canned combining peas).

Crop safety

AMISTAR shows good crop safety on combining and vining peas. Before applying ensure the crop is free from any stress caused by environment or agronomic effects. Check wax level if necessary using the Crystal Violet test.

Resistance Management

To avoid the likelihood of resistance developing, application of AMISTAR should be made with due regard to current FRAG-UK guidelines for QoI compounds. Do not make more than two applications of AMISTAR to crops of combining and vining peas.

BULB ONIONS, LEEKS AND CARROTS

Timing

Before applying AMISTAR, ensure the crop is free from any stress caused by environmental or agronomic effects. For optimum disease control AMISTAR should be used at the first sign of disease infection or preferably preventatively when a predictive assessment shows conditions favourable for disease development. Always inspect crops to assess disease development immediately before spraying. Best results will be achieved from applications made in the earliest stage of disease development or as a protectant treatment following a disease risk assessment or the use of appropriate decision support systems.

Rate of use

1.0 litre per hectare.

Bulb onion

- For optimum downy mildew control in bulb onions a 7 to 10 day spray interval should be maintained.
- Applications to established downy mildew infection are unlikely to give reliable control.

Processing

Where a crop is destined for processing, consult your processor before treating with AMISTAR.

Resistance Management

Use AMISTAR 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.

To avoid the likelihood of resistance developing, application of AMISTAR should be made with due regard to current FRAG-UK guidelines for QoI compounds. Do not apply more than a total of three applications when used in mixture with a fungicide from a different cross resistance group, as part of a programme. Do not apply more than a total of two applications if AMISTAR is used as a solo product.

ASPARAGUS (OUTDOOR)

Timing

Always inspect crops to assess disease development immediately before spraying. Best results will be achieved from applications made in the earliest stages of disease development or as a protectant treatment following a disease risk assessment or the use of appropriate decision support systems.

Earliest time of application: After commercial cutting.

AMISTAR may only be applied after the harvest season (i.e. after commercial cutting). Where a new 'bed' is established, do not treat within three weeks of transplanting out the crowns.

The application interval between subsequent treatments should be 8 to 12 days.

Latest time of application: Until the end of September or before crop senescence, whichever is sooner.

AMISTAR shows good crop safety on asparagus. Before applying ensure the crop is free from any stress caused by environmental or agronomic effects.

Rate of Use

1.0 litre per hectare.

Resistance Management

AMISTAR contains azoxystrobin a member of the QoI cross resistance group. AMISTAR should be used preventatively and should not be relied on for its curative potential. Disease control may be reduced if strains of pathogens less sensitive to azoxystrobin develop.

To avoid the likelihood of resistance developing, application of AMISTAR should be made with due regard to current FRAG-UK guidelines for QoI compounds. Use AMISTAR in mixture with a fungicide from a different cross-resistance group, as part of a programme. Do not apply more than a total of two applications of AMISTAR.

FIELD BEANS

Timing

Before applying AMISTAR, ensure the crop is free from any stress caused by environmental or agronomic effects. Always inspect crops to assess disease development immediately before spraying. Best results will be achieved from applications made in the earliest stages of

F U N G I C I D E

disease development or as a protectant treatment following a disease risk assessment or the use of appropriate decision support systems.

A second treatment may be required if disease pressure remains high.

Rate of Use

1.0 litre per hectare.

Resistance Management

To avoid the likelihood of resistance developing, application of AMISTAR should be made with due regard to current FRAG-UK guidelines for QoI compounds. Do not make more than two applications of AMISTAR to crops of field beans. Use AMISTAR 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.

POTATOES**Timing**

AMISTAR must be applied as either an overall and incorporated application made prior to planting or as an in-furrow application made at the time of planting.

Where AMISTAR is applied as an overall and incorporated treatment, apply the product as an overall spray on the entire area to be planted. Apply as a coarse quality spray preferably through air-induction nozzles, the nozzles to be mounted 50 cm above the soil. Immediately after application AMISTAR should be incorporated into the soil to a depth of approximately 15 cm and then the potato crop should be planted. Planting should occur on the same day as application.

Where AMISTAR is applied as an in-furrow application, it is important to direct the spray into the planting furrow and not onto the seed tuber. Application should be made using 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 so as to spray the soil as it closes around the planted tuber.

Rate Of Use

For overall and incorporated application made prior to planting: 6.0 litres per hectare

OR

For in-furrow application made at planting: 3.0 litres per hectare

With both methods of treatment, a maximum of one application per crop should be made.

Advisory Information

With in-furrow application, always target the soil and not the seed tuber in order to minimise any possible delay in emergence. Wherever possible, use properly chitted seed or cold-stored seed which has not started to sprout. Using seed which has just broken dormancy may well result in emergence delays.

Using AMISTAR 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.

Effects of soil type

Do not use AMISTAR on high organic matter soils as the product will not be effective.

Potatoes for processing

Where a crop of potatoes is destined for processing, consult processors before treating with AMISTAR.

Resistance Management

The risk of resistance developing to AMISTAR in *Rhizoctonia solani* (Black scurf and Stem canker) is considered to be very low. The resistance risk is higher for *Colletotrichum coccodes* (Black dot) and to minimise this potential risk, tubers from crops treated with AMISTAR should not be used for seed. AMISTAR should only be used in potato crops, which adhere to good rotation practices.

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

WINTER AND SPRING OILSEED RAPE**Timing**

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

A second treatment may be required if disease pressure remains high.

Sclerotinia – AMISTAR should be applied as a protectant spray during flowering. The optimum timing is early flowering to mid flowering (GS60–GS65).

Alternaria – Apply AMISTAR 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.

Note: an application of AMISTAR against *Sclerotinia* will significantly limit the development of *Alternaria*.

Rate Of Use

1.0 litre per hectare.

Resistance Management

To avoid the likelihood of resistance developing, application of AMISTAR should be made with due regard to current FRAG-UK guidelines for QoI compounds. Do not make more than two applications of AMISTAR to crops of oilseed rape. Use AMISTAR 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.

BRUSSELS SPROUTS, CABBAGE, CAULIFLOWER, KALE (WINTER GREENS), COLLARDS (SPRING GREENS), BROCCOLI AND CALABRESE**Timing**

Before applying AMISTAR, ensure the crop is free from any stress caused by environmental or agronomic effects. Always inspect crops to assess disease development immediately before spraying. Best results will be achieved from applications made in the earliest stage of disease development or as a protectant treatment following a disease risk assessment or the use of appropriate decision support systems.

A second treatment may be required if disease pressure remains high. A minimum interval of 12 days must be observed between applications to brassicae.

Rate Of Use

1.0 litre per hectare

F U N G I C I D E**Resistance Management**

To avoid the likelihood of resistance developing, application of AMISTAR should be made with due regard to current FRAG-UK guidelines for QoI compound. Do not apply more than a total of two applications of AMISTAR to any brassica crop.

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 AMISTAR 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).

Volume of water and spraying

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

Cereals, peas, bulb onions, leeks, carrots, field beans and oilseed rape:

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.

Asparagus:

For conventional tractor mounted crop spraying equipment, apply in at least 600 litres of water per hectare using a medium quality spray (BCPC) at a pressure of at least 2 bar.

For hand-held spraying equipment, apply in at least 200 litres of water per hectare.

Potatoes:

For overall and incorporated application, use 200–400 litres of water per hectare. Apply only as a medium/coarse spray using either Pre-Orifice or Air-Induction nozzles. The type of nozzle used for soil acting herbicides should be suitable. During application, care should be taken to avoid drift onto any adjacent crops.

For in-furrow application, use between 50–150 litres of water per hectare. Apply using specialist in-furrow application equipment. Contact Syngenta Crop Protection for further details on suitable manufacturers of these sprayers.

Brussels sprouts, cabbage, cauliflower, kale (winter greens), collards (spring greens), broccoli and calabrese:

Apply in at least 300 litre of water per hectare.

AFTER SPRAYING

Thoroughly wash out sprayer according to manufacturer's guidelines and dispose of washing and clean containers according to DEFRA Code of Practice and local water authority guidelines.

COMPANY ADVISORY INFORMATION

This information is not part of the approved label under the Plant Protection Product Regulations (2003) but provides additional Company advice on the product use.

GOOD FIELD PRACTICE

As part of our Product Stewardship policy, Syngenta Crop Protection recommend the following precautions should also be observed:

- Wear appropriate clothing – coveralls and protective gloves, when handling the concentrate.

AGRICULTURAL PRACTICE

INTEGRATED CROP MANAGEMENT

Laboratory data indicate that when used as directed AMISTAR has no adverse effects on the following beneficial species.

Earthworm (*Eisenia fetida*); Bees (*Apis* and *Bombus* spp.); Parasitic Wasps (*Trichogramma cacoeciae*, *Aphidis* spp. and *Encarsia formosa*); Aphid Predators (*Coccinella septempunctata*, *Chrysoperia carnea*, *Episyrphus balteatus*); Predatory mites (*Phytoseiulus persimilis*, *Amblyseius degenerans*); Spider (*Pardosa* spp.); Predatory bugs (*Macrolophus caliginosus*, *Orius laevigatus*); Carabid Beetle (*Poecilus cupreus*).

RESISTANCE MANAGEMENT

AMISTAR contains azoxystrobin a member of the QoI cross resistance group. AMISTAR should be used preventatively and should not be relied on for its curative potential. Disease control may be reduced if strains of pathogens less sensitive to azoxystrobin develop.

Use AMISTAR 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.

To avoid the likelihood of resistance developing, application of AMISTAR should be made with due regard to current FRAG-UK guidelines for QoI compound.

This product is to be used only in accordance with the recommendations and instructions given on the labels provided with this pack.

PROTECT FROM FROST.

SHAKE WELL BEFORE USE.

F U N G I C I D E

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 and contaminated surfaces when treating potato crops.

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.

(b) 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.

The LERAP scheme applies only when AMISTAR is used in potatoes at the 6 litres/ha rate of use (overall spray incorporated into the soil)

To protect aquatic organisms respect an unsprayed buffer zone to surface water bodies in line with LERAP requirements.



This product qualifies for inclusion within the Local Environmental Risk Assessment for Pesticides (LERAP) Scheme. Before each spraying operation at the **6.0 litres/ha rate** of use only, from a horizontal boom sprayer, either a LERAP must be carried out in accordance with CRD published guidance or the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for inspection for three years.

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m of the top of the bank of a static or flowing waterbody, unless a Local Environmental 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 a static or flowing waterbody. Aim spray away from water.

(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.

AMISTAR

**DANGEROUS
FOR THE
ENVIRONMENT**

Contains 250 g/litre (23.1% w/w) of azoxystrobin as a suspension concentrate

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

Keep out of the 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 manner.

Use appropriate containment to avoid environmental contamination.

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

F U N G I C I D E

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/HORTICULTURAL FUNGICIDE

Crops	Maximum individual dose (l/ha)	Maximum number of treatments (per crop)	Latest time of application
Wheat, barley, rye, triticale and oats	1	2	Up to and including watery ripe stage (GS71)
Peas – combining	1	2	36 days before harvest
Peas – vining	1	2	14 days before harvest
Bulb onions	1	4	14 days before harvest
Leeks	1	4	21 days before harvest
Carrots	1	4	10 days before harvest
Asparagus (outdoor)	1	3	Before senescence
Field beans	1	2	35 days before harvest
Brussels sprout, cabbage, cauliflower, kale (winter greens), collards (spring greens), broccoli and calabrese – all outdoor	1	2	14 days before harvest
Potato	6	1	Pre-planting, as overall or incorporated treatment
	<u>OR</u> 3	1	At planting, applied as an in-furrow treatment
Winter and spring oilseed rape	1	2	21 days

Other Specific Restrictions:

- * To reduce the risk of resistance developing in target diseases the total number of applications of product containing Qol fungicides made to any cereal crop must not exceed two.
- * A minimum interval of 12 days must be observed between applications to brassicae.
- * Applications to Brussels sprout, broccoli/calabrese, cauliflower, cabbage, kale and collards must only be made to developed crop canopy and not before the following growth stages:
 - For Brussels sprout: BBCH 35 – side shoots formed, main shoot has reached 50% of the height typical for the variety.
 - For broccoli/calabrese and cauliflower: BBCH 35 – main shoot has reached 50% of the expected height typical for the variety or prior to curd initiation.
 - For cabbage: BBCH 41 – heads begin to form; the two youngest leaves do not unfold.
 - For kale and collards: BBCH 35 - main shoot has reached 50% of the height typical for the variety.

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.