



PROLINE®

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For use only as an agricultural fungicide for the control of stem-base, foliar and ear disease in winter and spring wheat (also reduction of the mycotoxin deoxynivalenol), durum wheat, triticale, winter rye, winter and spring barley, winter and spring oats and for disease control in winter oilseed rape.

An emulsifiable concentrate formulation containing 250 g/L (25% w/w) prothioconazole.

For professional use only

Authorisation holder:
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Milton Road
Cambridge
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contact Bayer CropScience Limited**
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Marketing company:
Bayer CropScience Ltd.
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The Atrium
Blackthorn Road
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Safety information

PROLINE

Contains 250 g/L (25% w/w) prothioconazole and N,N,-Dimethyl decanamide.



Warning

Causes serious eye irritation.
May cause respiratory irritation.
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 CENTER/doctor/physician.

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.

Contains 2-[2-(1-chlorocyclopropyl)-2-hydroxy-3-phenylpropyl]-2,4-dihydro-3H-1,2,4-triazole-3-thione. May produce an allergic reaction.

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

PCS No. 03786

IE85343068a rA5cd



SAFETY PRECAUTIONS

Operator Protection

If swallowed, seek medical advice immediately and show this container or label. In case of accident or if you feel unwell seek medical advice immediately (show label where possible).

Environmental Protection

Do not contaminate ponds, waterways or ditches with chemical or used 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 of 5 m to surface water bodies.

Storage and Disposal

Do not re-use container for any other purpose and dispose of safely.

Keep away from food, drink and animal feedingstuffs.

Keep out of reach of children.

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. Triple rinsed containers should be punctured to prevent re-use and may be disposed of by an authorised contractor.

PROTECT FROM FROST

STORE IN A COOL DRY PLACE

READ ALL INSTRUCTIONS CAREFULLY BEFORE USE



prolinesds

To access the **Safety Data Sheet** for this product scan the code or use the link below:

www.bayercropscience.ie/sds/proline.pdf

or alternatively contact your supplier

IE85394606a rA5d

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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.

Proline is a triazolinthione fungicide recommended for control of a wide range of diseases on winter and spring barley, winter and spring wheat, durum wheat, triticale, winter rye, winter and spring oats and for disease control in winter oilseed rape.

DISEASES CONTROLLED

CEREALS

	Wheat	Barley	Oats	Rye	Triticale
Eyespot (<i>Oculimacula</i> spp.)	R	R	R	R	R
<i>Septoria</i> leaf blotch (<i>Mycosphaerella graminicola</i>)	MC	–	–	MC	MC
Glume blotch (<i>Stagonospora nodorum</i>)	MC	–	–	MC	–
Powdery mildew (<i>Blumeria graminis</i>)	C	C	C	C	C
Yellow rust	C	C	–	–	C
Brown rust	MC	C	–	C	C
Crown rust	–	–	C	–	–
Tan spot	MC	–	–	–	–
<i>Fusarium</i> ear blight	MC	MC	–	–	–
<i>Rhynchosporium</i> leaf blotch	–	C	–	C	C
Net blotch	–	C	–	–	–
C = control MC = moderate control R = reduction					

Eyespot (*Oculimacula* spp.)

Proline reduces the incidence and severity of eyespot. Spray in the spring at the first sign of disease, from when the leaf sheaths begin to become erect until the 2nd node is detectable (GS 30-32).

***Septoria* Leaf Spot and Glume Blotch (*Mycosphaerella graminicola* and *Stagonospora nodorum*)**

Apply before disease is established in the crop.

To protect the upper leaves and ear apply Proline at full flag leaf emergence (GS 37) up to mid-flowering (GS 65). Where disease pressure remains high application may be repeated. Control levels may be enhanced by using robust rates of application.

Applications to upper leaves where *S. tritici* symptoms are present are likely to be less effective.

Powdery Mildew (*Blumeria graminis*)

Apply Proline at the first signs of disease. Where disease pressure remains high application may be repeated.

Yellow Rust (*Puccinia striiformis*)

Apply Proline at the first signs of disease. A second application may be made 2-3 weeks later if re-infection occurs. Applications made to established infections are likely to be less effective.

Brown Rust

Apply Proline at the first signs of disease. A second application may be made 2-3 weeks later if re-infection occurs. Applications made to established infections are likely to be less effective.

Crown Rust (*Puccinia coronata*)

Apply Proline at the first sign of disease. A second application may be made 2-3 weeks later if re-infection occurs. Applications made to established infections are likely to be less effective.

Tan Spot (*Pyrenophora tritici-repensis*)

Apply Proline at the first signs of disease in spring or early summer. Where disease pressure remains high application may be repeated.

Ear Disease Complex (*Fusarium* ear blight and sooty moulds)

Apply Proline soon after ear emergence until the end of flowering (GS59-69). Control of ear diseases can result in cleaner, brighter ears. Through the reduction of ear blight, Proline effectively reduces the level of the *Fusarium* mycotoxin deoxynivalenol (DON) in wheat

grain. However, where *Fusarium* levels are high, the reduction achieved may not always be sufficient to ensure that DON levels fall below the statutory limit.

Leaf Blotch (*Rhynchosporium secalis*)

Apply Proline in spring at the first signs of disease. For severe infections a second application may be necessary 2-3 weeks later.

Net Blotch (*Pyrenophora teres*)

Apply Proline at the first signs of disease in spring/early summer. For severe infections, a second application 2-3 weeks later will give most effective control when conditions remain favourable for disease development.

WINTER OILSEED RAPE

	Oilseed rape
Light leaf spot	MC
<i>Phoma</i> leaf spot/stem canker	C
<i>Sclerotinia</i> stem rot	C
C = control MC = moderate control	

Proline can also be used on all varieties of spring oilseed rape but crop safety has not been fully established.

Light Leaf Spot

Apply Proline in autumn/winter (usually late October to early December) protectively. Follow up spray(s) may be required in early spring from the onset of stem elongation, depending on disease development.

***Phoma* Leaf spot/Stem Canker**

Apply Proline in autumn at the first sign of disease. Repeat application in late autumn/winter, if disease symptoms reoccur.

***Sclerotinia* stem rot (*Sclerotinia sclerotiorum*)**

Apply Proline at early to full flower.

RESISTANCE STRATEGY

Repeated application of Proline alone should not be used on the same crop against a high risk pathogen such as cereal powdery mildew. Tank-mixtures or alternation with fungicides having a different mode of action (e.g. morpholines) have been shown to protect against the development of resistant forms of disease.

Take all precautionary measures to reduce the selection pressure for insensitive *Septoria tritici* strains (e.g. tank-mix with product having a different mode of action which is active against *Septoria*). Consult your advisor for up to date guidance regarding current resistance status and a strategy for preventing and managing resistance in the cereal and oilseed rape pathogens listed on the label.

The Fungicide Resistance Action Committee (FRAC) produces recommendations that may be consulted for additional information.

Strains of light leaf spot resistant to azole fungicides are known to exist. To avoid development of resistance apply product protectively in response to disease forecasts. Where possible, when light leaf spot is present, avoid the use of azole based fungicides when targeting other diseases such as *Sclerotinia* at mid flowering.

CAUTION: The possible development of disease strains resistant to Proline cannot be excluded or predicted. Where such resistant strains occur, Proline is unlikely to give satisfactory control.

CROPS

Proline may be used on all commercial varieties of winter and spring barley, winter and spring wheat, durum wheat, triticale, winter rye, winter and spring oats and winter oilseed rape.

RATE OF USE

Crop	Maximum individual dose	Maximum total dose per season	Latest time of application
Winter and spring wheat, durum wheat, winter rye and triticale	0.8 litres product per hectare	2.4 litres product per hectare per season	Before grain milky ripe stage (GS 71)
Winter and spring barley, winter and spring oats	0.8 litres product per hectare	1.6 litres product per hectare per season	Before beginning of flowering (GS 61)
Winter oilseed rape	0.7 litres product per hectare	1.4 litres product per hectare per season	Up to a pre-harvest interval of 56 days

Method of application: Tractor mounted/trailed sprayer

A spray pressure of 2-3 bar is recommended. Apply Proline in 100-300 litres per hectare water. Apply as a medium spray quality.

Apply Proline in 100 to 300 litres of water per hectare. The higher spray volumes are recommended where the crop is dense or disease pressure / risk is high to ensure good penetration to the lower leaves and stem bases. Disease control may be compromised by reducing water volumes, where good spray coverage is difficult to achieve.

Mixing

Thoroughly shake the pack before use.

Add the required quantity of Proline to the half-filled spray tank with the agitation system in operation and then fill to the required level.

Continue agitation at all times during spraying and stoppages until the tank is completely empty. Spray immediately after mixing.

General

Sprayers should be thoroughly cleaned before use, and filters and jets checked for damage and blockages.

Boom height should be adjusted to ensure even coverage of the crop, particularly at later

growth stages. The correct height is one at which the spray from alternate nozzles meets just above the crop, in dense crops, at later growth stages, higher water volumes should be used.

Spray equipment should be thoroughly cleaned with detergent after use.

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