

Smart

Pro Grow 420 SC

CAUTION

KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

PEEL
HERE

FOLIAR FUNGICIDE

ACTIVE CONSTITUENTS: 210 g/L PROTHIOCONAZOLE
210 g/L TEBUCONAZOLE

Group **3** Fungicide

For the control of various diseases in wheat, barley, oats, triticale, canola and pyrethrum as specified in the DIRECTIONS FOR USE table



IMPORTANT:
READ THIS LEAFLET BEFORE USING THIS PRODUCT

Crop Smart
better crop protection

0518

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Contents: 5L to 110L

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DIRECTIONS FOR USE

RESTRAINTS

CEREALS AND CANOLA

DO NOT APPLY more than two applications of products containing prothioconazole or tebuconazole per cereal or canola crop.

PYRETHRUM

DO NOT APPLY more than one application of products containing prothioconazole or tebuconazole per pyrethrum crop.

DO NOT apply if heavy rain has been forecasted within 48 hours.

DO NOT apply to waterlogged soil.

DO NOT irrigate past the point of runoff for 48 hours after application.

SPRAY DRIFT RESTRAINTS

DO NOT apply by aircraft to pyrethrum crops.

DO NOT apply with spray droplets smaller than a **MEDIUM** spray droplet category as defined by the ASAE S572 Standard. Users **MUST ONLY USE** nozzles classified as suitable for delivering a **MEDIUM** spray droplet category according to the nozzle manufacturer's specifications.

DO NOT apply when wind speed is less than 3 or more than 20 km/h as measured at the application site.

DO NOT apply during surface temperature inversion conditions at the application site.

Users of this product **MUST make an accurate written record** of the details of each spray application within 24 hours following application and **KEEP** this record for a minimum of 2 years. The spray application details that must be recorded are: **1.** date and start and finish times of application; **2.** location address and paddock/s sprayed; **3.** full name of this product; **4.** amount used per hectare and number of hectares applied to; **5.** crop/situation and weed/pest; **6.** wind speed and direction during application; **7.** air temperature; **8.** nozzle brand, model and type and spray system pressure measured during application; **9.** name and address of person applying this product. (Additional record details may be required by the State or Territory where this product is used.)

MANDATORY NO-SPRAY ZONE

DO NOT apply if there are aquatic and wetland areas, including aquacultural ponds, surface streams and rivers downwind from the application area and within the **mandatory no-spray zones** shown in Tables A, B and C below.

Cereals

Table A – No-Spray Zones for Protection of the Aquatic Environment	
FOR AERIAL APPLICATION	
Wind Speed Range at Time of Application	Downwind Mandatory No-Spray Zone
	Fixed-Wing
From 3 to 20 kilometres per hour	80 metres
	Helicopter
From 3 to 20 kilometres per hour	60 metres
FOR GROUND APPLICATION	
From 3 to 20 kilometres per hour	10 metres

Canola

Table B – No-Spray Zones for Protection of the Aquatic Environment	
FOR AERIAL APPLICATION	
Wind Speed Range at Time of Application	Downwind Mandatory No-Spray Zone
	Fixed-Wing
From 3 to 20 kilometres per hour	180 metres
	Helicopter
From 3 to 20 kilometres per hour	120 metres
FOR GROUND APPLICATION	
From 3 to 20 kilometres per hour	5 metres

Pyrethrum

Table C – No-Spray Zones for Protection of the Aquatic Environment	
FOR GROUND APPLICATION	
Wind Speed Range at Time of Application	Downwind Mandatory No-Spray Zone
From 3 to 20 kilometres per hour	10 metres

CROP	STATE	DISEASE	RATE	CRITICAL COMMENTS
Barley	All States	Net form net blotch (<i>Pyrenophora teres</i> f. <i>teres</i>)	150 to 300 mL/ha	Monitor crops from mid tillering. On susceptible varieties apply at the first sign of disease development. Monitor and reapply within 14 to 21 days if conditions favour disease development.
		Spot form net blotch (<i>Pyrenophora teres</i> f. <i>maculata</i>)		Use the higher rates (up to 300 mL/ha) where conditions favour severe disease. Where lower rates are used apply with a suitable adjuvant (refer to Use of Adjuvant).
		Powdery mildew (<i>Blumeria graminis</i> f.sp. <i>hordei</i>)		Monitor crops from mid tillering. Use the higher rate in higher yielding crops where conditions favour disease development or susceptible varieties are grown.
		Leaf scald (<i>Rhynchosporium secalis</i>)		Monitor crops from mid tillering (earlier if no effective seed treatment has been applied). On susceptible varieties apply at the first sign of disease development. Monitor and reapply within 14 to 21 days if conditions favour disease development. Use the higher rates (up to 300 mL/ha) where conditions favour severe disease. Where lower rates are used apply with a suitable adjuvant (refer to Use of Adjuvant).
		Leaf rust (<i>Puccinia hordei</i>)		Monitor crops from late tillering. Apply at the first sign of disease development. Monitor and reapply within 14 to 21 days if conditions favour disease development. Use the higher rates (up to 300 mL/ha) where conditions favour severe disease, or disease is established in the lower canopy. Where lower rates are used apply with a suitable adjuvant (refer to Use of Adjuvant).
Oats	All States	Stem rust (<i>Puccinia graminis</i> f.sp. <i>avenae</i>)	300 mL/ha + adjuvant (refer to Use of Adjuvant)	Monitor crops from early stem elongation, and on susceptible varieties apply at the first sign of infection. Refer to General Instructions – Disease control in Oats , for potential risks associated with application to oats.
		Leaf rust (<i>Puccinia coronata</i> f.sp. <i>avenae</i>)		Monitor crops from early stem elongation, and on susceptible varieties apply at the first sign of infection. Refer to General Instructions – Disease control in Oats , for potential risks associated with application to oats.

	STATE	DISEASE	RATE	CRITICAL COMMENTS
Oats <i>Continued</i>	All States	Septoria blotch (<i>Phaeosphaeria avenaria</i>)	150 to 300 mL/ha	Monitor crops from early tillering and on susceptible varieties apply at the first sign of infection. Use the higher rate (up to 300 mL/ha) in higher yielding crops where conditions favour disease development or susceptible varieties are grown. Continue to monitor crops after application. Re-application may be required if conditions favour disease development. Where lower rates are used, apply with a suitable adjuvant (refer to Use of Adjuvant). Refer to General Instructions – Disease control in Oats , for potential risks associated with application to oats.
Wheat	All States	Stripe rust (<i>Puccinia striiformis</i>)	150 mL/ha to 300 mL/ha + adjuvant (refer to Use of Adjuvant)	Monitor crops from early stem elongation, and on susceptible varieties apply at the first sign of infection. Use the higher rate (up to 300 mL/ha) in higher yielding crops where conditions favour disease development or susceptible varieties are grown. Continue to monitor crops after application, re-application may be required if conditions favour disease development and initial application is made before the flag leaf has emerged.
		Stem rust (<i>Puccinia graminis tritici</i>)		Apply as a preventative spray at the first sign of flowering. Spray equipment must be set up to achieve good coverage of wheat heads. Use the higher rate (up to 300 mL/ha) in higher yielding crops where conditions favour disease development or susceptible varieties are grown.
		Leaf rust (<i>Puccinia recondita</i> f.sp. <i>tritici</i> , <i>Puccinia triticina</i>)		
		Fusarium head blight/head scab (<i>Fusarium graminearum</i>)		
		Yellow leaf spot (<i>Pyrenophora tritici-repentis</i>)	150 to 300 mL/ha	Monitor crops from late tillering and spray before disease has infected any of the top three leaves of the crop. Aim to protect the three top leaves of the plant from disease.
		Septoria nodorum-glume blotch (<i>Phaeosphaeria nodorum</i>)	150 to 300 mL/ha	Monitor crops from late tillering. Aim to protect the three top leaves of the plant from disease. Where lower rates are used apply with a suitable adjuvant (refer to Use of Adjuvant).
		Powdery mildew (<i>Blumeria graminis</i> f.sp. <i>tritici</i>)		Monitor crops from mid tillering. Apply at the first sign of disease development. Monitor and reapply within 14 to 21 days if conditions favour disease development. Use the higher rates (up to 300 mL/ha) where conditions favour severe disease, or disease is established in the lower canopy. Where lower rates are used apply with a suitable adjuvant (refer to Use of Adjuvant).
Triticale	All States	Stripe rust (<i>Puccinia striiformis</i>)	150 mL/ha to 300 mL/ha + adjuvant	Monitor crops from early stem elongation, and on susceptible varieties apply at the first sign of infection. Use the higher rate (up to 300 mL/ha) in higher yielding crops where conditions favour disease development or susceptible varieties are grown. Continue to monitor crops after application. Re-application may be required if conditions favour disease development and initial application is made before the flag leaf has emerged.

CROP	STATE	DISEASE	RATE	CRITICAL COMMENTS
Canola	All States	Blackleg (<i>Leptosphaeria maculans</i>)	375 to 450 mL/ha	Apply at the 4 to 6 leaf crop stage of blackleg susceptible varieties (blackleg ratings of MS or lower) or in situations of high blackleg risk (refer to General Instructions – Disease control in Canola). Will reduce lodging and stem canker from blackleg. A follow up application may be required at green bud stage in high disease risk situations or where an effective blackleg seed treatment has not been used.
		Sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)		Apply Smart Pro Grow between 20 and 50% (full bloom) flowering. For best results apply as a preventative application at 20-30% flowering prior to significant disease expression (refer to General Instructions – Disease control in Canola). Good coverage throughout the entire canopy is essential. Using a water rate at the higher end of the range (i.e. 100 L/ha for ground application and 30 L/ha for aerial application) will improve spray coverage. Apply the higher rate (450 mL/ha) under high
Pyrethrum	Victoria, Tasmania	Ray blight (<i>Phoma ligulicola</i>) and sclerotinia crown rot (<i>Sclerotinia minor</i> and <i>S. sclerotiorum</i>)	1.0 L/ha	Apply as part of a preventative spray program at flowering. Apply in rotation with other control measures, under direction of pyrethrum advisers. The addition of an adjuvant is not required in pyrethrum.

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION

WITHHOLDING PERIODS

Canola: Harvest - **NOT REQUIRED WHEN USED AS DIRECTED**
Grazing - **DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 14 DAYS AFTER APPLICATION**

Cereals: Harvest – **DO NOT HARVEST FOR 5 WEEKS AFTER APPLICATION**
Grazing – **DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 14 DAYS AFTER APPLICATION**

Pyrethrum: Harvest and Grazing – **NOT REQUIRED WHEN USED AS DIRECTED**

A MANDATORY NO-SPRAY ZONE IS REQUIRED FOR PROTECTION OF THE ENVIRONMENT. REFER TO RESTRAINTS.

GENERAL INSTRUCTIONS Foliar

diseases on cereal crops

Monitor the crop regularly for symptoms of disease. Generally spray at the first sign of disease, although this will depend on factors such as expected weather conditions and the particular crop variety resistance. Refer to Directions for Use for particular disease recommendations. Up to two sprays of Smart Pro Grow may be applied per season to the crop. Ensure good coverage of all susceptible plant parts.

Disease control in oats

Caution: Application of tebuconazole (present in Smart Pro Grow) to some varieties of oats may result in early senescing and bronzing of leaves.

Varieties most at risk may also exhibit this trait under various stress conditions not related to fungicide sprays.

Mitika variety of oats has been identified as being susceptible to this condition when tebuconazole is applied,

although other varieties may also be susceptible.

The potential disease control to be achieved by using Smart Pro Grow in Mitika oats should be weighed against the risk of crop damage.

For further information on oat tolerance contact Crop Smart.

Disease control in canola

Blackleg

Higher blackleg risk can be expected in higher rainfall districts (above 500 mm annual rainfall), where crops are grown within 500 m of a previous year's stubble and in later sown crops (May to August). Other factors will also increase the risk of blackleg infection, including the intensity of canola cropping in a district, rainfall before sowing and the frequency of growing the same canola cultivar. Consult industry guidelines for more detailed assessment of blackleg risk in specific situations. Up to two sprays of Smart Pro Grow may be applied per season to the crop.

Sclerotinia

Smart Pro Grow is most effective when application is made prior to conditions conducive to sclerotinia infection. Infection and disease development are most conducive in warmer winter or spring conditions with extended periods of leaf wetness due to rainfall, dew and high humidity. Sclerotinia is most likely to develop where day temperatures are warmer coinciding with a saturated soil profile and rainfall events. Refer also to industry guidelines for advice on conditions under which sclerotinia are most likely to develop.

Control of sclerotinia stem rot is more effective in crops which have a uniform flowering. Uneven flowering (e.g. caused by staggered germinations) makes optimum spray timing difficult and two sprays may be required in these crops.

Generally a single application of Smart Pro Grow at 20 to 30% flowering will control sclerotinia in crops with a short flowering interval. Crops with an extended flowering period may require a second application prior to 50% flowering (full-bloom) to adequately control sclerotinia if conditions late in the season are conducive to development of disease.

Length of protection may be reduced in bulky crops where coverage is difficult and where there is growth dilution of the fungicide. For optimum protection, application should be directed to obtain coverage on petals, leaves and stems.

Disease control in pyrethrum

Apply only as instructed by the pyrethrum adviser.

Fungicide Resistance Warning

Smart Pro Grow is a member of the DMI group of fungicides. For fungicide resistance management the product is a

Group **3** fungicide. Some naturally occurring individual fungi resistant to the product and other Group **3** fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungal population if these fungicides are used repeatedly. These resistant fungi will not be controlled by this product and other Group **3** fungicides, thus resulting in a reduction in efficacy and possible yield loss. Since the occurrence of resistant fungi is difficult to detect prior to use, Crop Smart accepts no liability for any losses that result from failure of this product to control resistant fungi.

Export of treated produce

Growers should note that MRLs or import tolerances do not exist in all markets for produce treated with Smart Pro Grow. If you are growing produce for export, please check with Crop Smart for the latest information on MRLs and import tolerances before using Smart Pro Grow.

Mixing

Prior to pouring, shake container vigorously, then add the required quantity of Smart Pro Grow 420 SC to water in the spray vat with agitators in motion. Add the required amount of adjuvant if necessary and mix thoroughly.

Application

Ground:

Wheat, barley, oats and triticale: Apply product using a spray volume of 70 – 100 L/ha and a MEDIUM spray quality as defined by the ASABE S572 Standard.

Canola: Apply product using a spray volume of 60 – 100 L/ha and a MEDIUM spray quality as defined by the ASABE S572 Standard.

Pyrethrum: Apply product using a spray volume of 250 L/ha or above and a MEDIUM spray quality as defined by the ASABE S572 Standard.

Aerial: (not pyrethrum) Apply product using a minimum spray volume of 20 L/ha and a MEDIUM spray quality as defined by the ASABE S572 Standard.

Compatibility

For information on compatibility please contact Crop Smart Pty Ltd.

USE OF ADJUVANT

Depending on the disease that is to be treated in the crop, some benefit in efficacy may be gained from addition of an appropriate adjuvant to the spray mixture.

Follow these guides when deciding on the addition of an adjuvant to the tank mixture prior to spraying.

Disease	Addition of adjuvant	
	Smart Pro Grow 420 SC 150 mL/ha	Smart Pro Grow 420 SC 300 mL/ha
Barley		
Net form net blotch	Yes	Not required
Spot form net blotch	Yes	Not required
Powdery mildew	Not required	Not required
Leaf scald	Yes	Not required
Leaf rust	Yes	Not required
Oats		
Stem rust	N/A	Yes (BS 1000 only)
Leaf rust	N/A	Yes (BS 1000 only)
Septoria blotch	Yes	Not required
Wheat		
Stripe rust	Yes	Yes (BS 1000 only)
Stem rust	Yes	Yes (BS 1000 only)
Leaf rust	Yes	Yes (BS 1000 only)
Yellow leaf spot	Not required	Not required
Septoria nodorum – glume blotch	Yes	Not required
Powdery mildew	Yes	Not required
Fusarium head blight/head scab	Yes	Yes (BS 1000 only)
Triticale		
Stripe rust	Yes	Yes (BS 1000 only)
Canola	Smart Pro Grow 420 SC 375 mL/ha	Smart Pro Grow 420 SC 450 mL/ha
Blackleg and sclerotinia stem rot	Not required	Not required
Pyrethrum	Smart Pro Grow 420 SC 1.0 L/ha	
Ray blight	Not required	

Note: Adjuvant is not required for use of Smart Pro Grow 420 SC on canola or pyrethrum.

Suitable Adjuvants	Comments
BS 1000 0.25%	Can be used at all rates of Smart Pro Grow 420 SC for ground and aerial
Hasten® 1% Rocket® 1% Kwickin® 1% D-C-Trate® Advance 1% D-C-Trate 1% Uptake® 0.5%	For use with Smart Pro Grow 420 SC at 150 mL/ha only. Do not use with Smart Pro Grow 420 SC at rates above 150 mL/ha. Do not use for aerial application.

PRECAUTIONS

Re-entry Period

Do not enter treated areas until the spray has dried, unless wearing cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical-resistant gloves. Clothing must be laundered after each day's use.

FUNGICIDE RESISTANCE WARNING

GROUP	3	FUNGICIDE
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Smart Pro Grow 420 SC Fungicide is a member of the DMI group of fungicides. For fungicide resistance management the product is a Group 3 fungicide. Some naturally occurring individual fungi resistant to the product and other Group 3 fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungal population if these fungicides are used repeatedly. These resistant fungi will not be controlled by this product or other Group 3 fungicides, thus resulting in a reduction in efficacy and possible yield loss. Since the occurrence of resistant fungi is difficult to detect prior to use, Crop Smart Pty Ltd accepts no liability for any losses that may result from the failure of this product to control resistant fungi.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Very toxic to aquatic life. DO NOT contaminate streams, rivers, drains or waterways with the chemical or used containers. A spray drift minimisation strategy should be employed at all times. Spray drift may occur under adverse meteorological conditions or from certain spraying equipment. Do not allow spray to drift onto sensitive areas including, but not limited to, susceptible plants/crops, cropping land, pasture, natural streams, rivers, wetlands, waterways or human dwellings.

Integrated pest management – where IPM is practiced: Smart Pro Grow 420 SC Foliar Fungicide may have adverse effects on some non-target beneficial insects such as predatory mites.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight.

Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product. Do not re-use empty container for any other purpose.

REFILLABLE containers (110L): Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

SAFETY DIRECTIONS

May irritate eyes. Avoid contact with eyes. When opening the container, mixing and loading and preparing spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), and elbow length chemical resistant gloves. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing). Wash hands after use. After each day's use wash gloves, and contaminated clothing.

FIRST AID

If poisoning occurs contact a doctor or Poisons Information Centre (Telephone Australia 13 11 26).

ADDITIONAL USER SAFETY INFORMATION

WARNING: May cause birth defects.

SAFETY DATA SHEET

Additional information is listed in the Safety Data Sheet.

EXCLUSION OF LIABILITY

This product must be used strictly as directed, and in accordance with all instructions appearing on the label and in other reference material. So far as it is lawfully able to do so, Crop Smart Pty Ltd accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions

