

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

Atlantis[®]

SELECTIVE HERBICIDE

Active Constituent: 30 g/L MESOSULFURON-METHYL
Crop Safener: 90 g/L MEFENPYR-DIETHYL
Solvent: 711 g/L HYDROCARBON LIQUID

GROUP B HERBICIDE

For the post-emergent control of wild oats and annual phalaris, and suppression of brome grass, barley grass and annual ryegrass in wheat.

GENERAL INSTRUCTIONS

Atlantis is a selective sulfonylurea herbicide. It is predominantly a foliar herbicide with less activity via the soil. Atlantis will not reliably control weeds that emerge after spraying. Results are best under good growing conditions and application to weeds or crop under stress should be avoided.

Resistant Weeds Warning

Atlantis Selective Herbicide is a member of the sulfonylurea group of herbicides and has the inhibitor of ALS mode of action. For weed resistance management Atlantis is a Group **B** herbicide. Some naturally-occurring weed biotypes resistant to Atlantis, and other Group **B** herbicides, may exist through normal genetic variability in any weed population. These resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by Atlantis or other Group **B** herbicides.

Do not rely exclusively on Atlantis for weed control. Use as part of an integrated weed management program involving herbicides with other modes of action and non-chemical methods of control. CropLife Australia resistance management strategies are available from your local agricultural chemical supplier. Refer to these strategies for details of how to manage the build up of resistant weeds on your farm.

Since occurrence of resistant weeds is difficult to detect prior to use Bayer CropScience Pty. Ltd. accepts no liability for any losses that may result from the failure of Atlantis to control resistant weeds.

Use of Surfactant / Wetting Agent

It is recommended that Atlantis be applied with the addition of BS 1000[®] bio-degradable surfactant at 0.25% v/v, or when used for brome grass or barley grass suppression, add Hasten[®] spray adjuvant at 1% v/v.

The suitability of other non-ionic wetting agents or oil based adjuvants should be confirmed with Bayer CropScience prior to mixing with Atlantis.

Note: Crop effects (discolouration and slowed development) may be increased with the use of Hasten spray adjuvant, however under normal growing conditions this should not result in any yield loss.

Crop Safety

- Do not apply to any crop other than wheat.
- Do not apply to the wheat variety Brookton
- Westonia wheat may show reduced tolerance to Atlantis in some situations, especially during a dry finish to the season. Ensure adequate crop nutrition and that crop is at least the 3 leaf (Z13) stage at application.
- Wheat should be at the 3 leaf stage (Z13 growth stage), or more advanced, before application of Atlantis.
- Do not apply to wheat that is physically damaged (e.g. by hail, wind, insect attack).
- Some crop yellowing and growth retardation may occur within 5 weeks of application. Growth retardation will be increased if the crop is affected by root disease (e.g. cereal cyst nematode, rhizoctonia, take-all (haydie)), nutritional stress, waterlogging, drought stress, excessively cold conditions or previous herbicide treatment.
- Application to very dry sandy soils followed by soaking rainfall may cause significant crop effects.
- Crop damage will be increased in highly alkaline soils (soil pH > 8.5 as determined by soil in water suspension).
- Do not apply to crops not actively growing due to cold and wet conditions or drought stress.
- Do not overlap when spraying or double spray corners.

Crop Rotation Recommendations

Minimum re-cropping intervals apply for all crops following Atlantis application.

The application of a Group B herbicide in the crop following Atlantis use may result in increased crop effects. Consult the manufacturer of Atlantis for advice in these situations.

Rainfall of less than 250 mm following Atlantis use will result in extended re-cropping intervals for winter crops sown the following season.

Patchy rain, with extended dry periods may also result in extended recropping intervals, even when rainfall exceeds 250 mm. If in doubt, seek specialist advice.

Rainfall of less than 500 mm following Atlantis use may result in extended re-cropping intervals for summer crops sown in the following year.

Use on soils with a pH greater than 8.5 (soil in water) has not been extensively tested and is not recommended. For advice on crops not listed below, contact your local reseller or Bayer CropScience representative.

CROP	MINIMUM RECROPPING INTERVAL	NOTES/COMMENTS
Winter crops		
wheat	1 day	
barley	9 months	
oats	9 months	
triticale	9 months	
faba beans	11 months	
canola	9 months	
chickpeas	9 months	
lentils	11 months	
lucerne, sub clover	21 months	In soils of pH > 8.0 (1:5 water suspension) and under low rainfall conditions some slight discolouration may occur, however establishment and growth through the season is generally not affected
	9 months	In soils of pH < 8.0 (1:5 water suspension) and under conditions where good seasonal rainfall has occurred between spraying and sowing (i.e. more than 250 mm)
lupins	9 months	
medic	21 months	
peas	9 months	
vetch	9 months	
Summer crops		
cotton	12 months	
maize	12 months	
mungbeans	12 months	
sorghum	12 months	
soybeans	12 months	
sunflowers	12 months	

Application

Ensure that complete and even spray coverage of all weeds is achieved.

Mixing

Half fill the spray tank with water, then with agitators in motion, add the correct amount of Atlantis directly into the spray tank. Add other relevant compatible herbicides, then wetting agent or crop oil as recommended. Complete filling the tank with agitators in motion. Agitation must continue before and during spraying.

Equipment

Ground Sprayers

Standard boom sprayers only are recommended and must be fitted with by-pass or mechanical agitation. It is recommended that 50 to 80 L water/ha is applied with a droplet size of 200 to 300 microns (application as a FINE/MEDIUM spray as defined by ASAE S572 Standard). The use of flat fan nozzles is recommended. Nozzles creating coarse or very coarse spray qualities have not been thoroughly investigated at this time and cannot be recommended. Contact your Bayer CropScience representative for advice before applying this product through such nozzles.

Aircraft

Do not apply Atlantis by aircraft.

Sprayer Clean Up

The sprayer must be decontaminated before being used to spray crops other than cereals.

Ensure that the following operation is carried out in an area that is clear of waterways, desirable vegetation and tree roots, and preferably in an area where drainings can be contained.

1. Drain sprayer completely and wash out tank, boom and hoses with clean water.
2. Drain again.
3. Fill the tank with clean water and add 300 mL of chlorine bleach (containing 4% chlorine) per 100 L of water with agitation running.
4. Flush some bleach solution through booms and hoses and allow remainder to agitate in tank for 10 minutes.
5. Remove nozzles and filters and leave to soak in a bleach solution of 500 mL per 10 L of water while tank cleaning is in progress.
6. Drain tank and repeat the procedure of flushing with bleach solution.
7. Flush the tank, boom and hoses with clean water.

Compatibility

MIX PARTNER	GENERAL NOTES/ COMMENTS
Zinc-based foliar fertilisers	Must not be mixed with Atlantis as a loss of efficacy can occur.
Lontrel®	Atlantis may be mixed with Lontrel. Use BS 1000 at 0.25% v/v or Hasten at 1% v/v as recommended for the weeds being controlled.
Chlorpyrifos-based formulations	Must not be mixed with Atlantis as unacceptable crop effects may occur.
Dimethoate (maximum of 500 mL/ha)	It is recommended that BS 1000 at 0.25% v/v be used when mixing with Dimethoate. The use of crops oils has not been adequately investigated. If spraying brome grass more reliable suppression will be obtained if Atlantis is applied alone and the adjuvant Hasten is used.
Tigrex® (maximum of 500 mL/ha)	BS 1000® at 0.25% v/v must be used when mixing Tigrex. Do not apply with a crop oil as excessive crop damage may occur. If spraying brome grass more reliable suppression will be obtained if Atlantis is applied alone and the adjuvant Hasten is used.
Jaguar® (maximum of 500 mL/ha)	Grass weed control may be adversely affected and the level of chlorosis and slowed crop growth may be increased. BS 1000 at 0.25% v/v must be used when mixing Jaguar. Do not apply with a crop oil as excessive crop damage may occur. If spraying brome grass more reliable suppression will be obtained if Atlantis is applied alone and the adjuvant Hasten is used.
Buctril® MA (maximum of 1.0 L/ha)	It is recommended that BS 1000 at 0.25% v/v be used when mixing with Buctril MA. The use of crops oils has not been adequately investigated. If spraying brome grass more reliable suppression will be obtained if Atlantis is applied alone and the adjuvant Hasten is used.
L. V. E. MCPA (maximum of 500 mL/ha)	It is recommended that BS 1000 at 0.25% v/v be used when mixing with L. V. E. MCPA. The use of crops oils has not been adequately investigated. If spraying brome grass more reliable suppression will be obtained if Atlantis is applied alone and the adjuvant Hasten is used.
other insecticide products	For advice on mixing consult Bayer CropScience.

For advice on mixing with other products please contact your local Bayer CropScience representative.

PRECAUTIONS

Re-entry Period

Do not allow entry into treated areas until the spray has dried. When prior entry is necessary and if exposure to the treated crop is likely, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Very toxic to aquatic plants and algae. DO NOT contaminate streams, rivers or waterways with the chemical or used container.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands, pastures, waterways or wetlands. **DO NOT apply within 3 metres of non-target vegetation or waterbodies.**

Undersown Clovers and Medics

DO NOT apply to crops undersown with legumes.

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 bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Do not re-use container for any other purpose.

SAFETY DIRECTIONS

Will damage the eyes. Will irritate the skin. Avoid contact with eyes and skin. When preparing spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow-length PVC gloves and goggles. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use wash gloves, goggles and contaminated clothing.

FIRST AID

If poisoning occurs contact a doctor or Poisons Information Centre (telephone 13 11 26). If swallowed, do NOT induce vomiting. Give a glass of water.

MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet, which can be obtained from www.bayercropscience.com.au.

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, Bayer CropScience Pty Ltd accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions.

APVMA Approval No.: 54252/1107

Atlantis[®], Buctril[®], Jaguar[®] and Tigrex[®] are Registered Trademark of Bayer.

FOR 24 HOUR SPECIALIST ADVICE
IN EMERGENCY ONLY
PHONE 1800 033 111

DIRECTIONS FOR USE**Restraints**

DO NOT use if rainfall or irrigation is to occur within 8 hours of application.

DO NOT apply to crops undersown with legumes.

DO NOT apply to wheat before the 3-leaf stage (Z13).

DO NOT apply without surfactant/wetting agent, as detailed under 'Use of Surfactant/Wetting Agent' in the General Instructions

DO NOT apply to paddocks where there is a high risk of weeds resistant to Group B herbicides.

DO NOT apply to the wheat variety Brookton

Note

Atlantis is a sulfonylurea herbicide. Atlantis will substantially reduce the growth of many weeds rather than give complete plant kill. Refer to the critical comments in the Directions for Use Table below, for directions on specific weeds.

CROP	WEED	WEED STAGE	RATE /ha	CRITICAL COMMENTS
Wheat	Brome grass (great brome, <i>Bromus diandrus</i>)	1 leaf to 3 leaf, 1 tiller (Z11 to Z13,21)	330 mL	Suppression of brome grass. Will substantially reduce the growth of brome grass and its ability to compete with the crop and will reduce seed set but may not give a significant reduction in plant numbers. Apply generally within 4 to 7 weeks after sowing. Apply when the <u>majority</u> of brome grass is at the 1 leaf to 3 leaf, 1 tiller stage (Z11 to Z13,21). Efficacy on larger plants that may have emerged before the crop may be poor. Do not use for suppression of dense brome grass populations (>150 plants/m ²). Suppression of brome grass may be improved with the use of Hasten at 1% v/v. Refer to 'Use of Surfactant/Wetting Agent' under General Instructions.
	Annual ryegrass (<i>Lolium rigidum</i>)	1 leaf to 3 leaf, 1 tiller (Z11 to Z13,21)		Suppression of annual ryegrass. Will substantially reduce the growth of ryegrass and its ability to compete with the crop and will reduce seed set but may not give a significant reduction in plant numbers. Apply generally within 4 to 7 weeks after sowing. Do not use for control of dense annual ryegrass populations (>200 plants/m ²).
	Barley grass (<i>Hordeum leporinum</i>)	1 to 4 leaf, 2 tillers (Z14, 22)		Suppression of barley grass. Will substantially reduce the growth of barley grass and its ability to compete with the crop and will reduce seed set but may not give a significant reduction in plant numbers. Apply generally within 4 to 7 weeks after sowing. Apply when the <u>majority</u> of barley grass is less than the early tillering stage (Z14,22). Efficacy on larger plants may be poor. Suppression of barley grass may be improved with the use of Hasten at 1% v/v. Refer to 'Use of Surfactant / Wetting agent' under General Instructions.
	Wild oats (<i>Avena</i> spp.)	1 leaf to 3 leaf, 1 tiller (Z11 to Z13,21)		Apply generally within 4 to 7 weeks after sowing. Do not use for control of dense wild oat populations (>150 plants/m ²). Application to wild oats at more advanced growth stages or to dense populations will result in suppression of wild oats only. Growth of wild oats and the ability to compete with the crop will be reduced but plants numbers may not be significantly reduced.
	Annual phalaris, paradoxa grass (<i>Phalaris paradoxa</i> only)	1 leaf to 3 leaf, 1 tiller (Z11 to Z13,21)		Apply generally within 4 to 7 weeks after sowing. Do not use for control of dense phalaris populations (>300 plants/m ²). Other phalaris species may not be adequately controlled with Atlantis.

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

WITHHOLDING PERIODS

Harvest: DO NOT HARVEST FOR 8 WEEKS AFTER APPLICATION

Grazing/Stockfood: DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 4 WEEKS AFTER APPLICATION