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

Precept®

SELECTIVE HERBICIDE

Active Constituents: **25 g/L PYRASULFOTOLE**
125 g/L MCPA as the 2-ETHYLHEXYL ESTER
Crop Safener: **6.25 g/L MEFENPYR-DIETHYL**

GROUP	H	I	HERBICIDE

For the post-emergent control of certain broadleaf weeds in wheat, barley, oats, cereal rye and triticale as specified in the DIRECTION FOR USE table and General Instructions

GENERAL INSTRUCTIONS

Precept is a selective phenoxy and pyrazolone (phenyl pyrazolyl ketone) group herbicide. It is predominantly a foliar herbicide with limited activity via the soil. Precept 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.

Adjuvant/Crop Oil/Surfactant/Wetting agent

Spray grade liquid ammonium sulfate or a recommended crop oil must be used in conjunction with Precept or Precept tank mixtures with other products in cereals. Recommended adjuvants include spray grade liquid ammonium sulphate at 500 grams active ingredient/ha (e.g. Assist® (1.0 L/ha), Boost® (1.0 L/ha), Liase® (1.2 L/ha)); or the crop oil Hasten® (1% v/v). Consult Bayer CropScience Pty. Ltd. for information on other adjuvants.
DO NOT use non-ionic surfactants, e.g. BS 1000® unless tankmixing with Wildcat® 110.
When tankmixing with Achieve® use Supercharge® at 0.75% v/v as the adjuvant. When tank mixing with Atlantis®, Cheetah® Gold, Decision®, Hoegrass® 500, Hussar® or Tristar® Advance use Hasten at 1% v/v. When tank mixing with Decision, Uptake at 0.5% v/v may also be used. When tank mixing with Topik use Hasten at 0.5% v/v. When tankmixing with Wildcat 110 use BS 1000 at 0.25% v/v as the adjuvant. DO NOT use BS 1000 or a wetting agent when Precept is applied alone or with any other product other than Wildcat 110 as reduced efficacy or speed of kill may result. Refer to "Wetting agent/adjuvant recommendation with compatible products" for further information.

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 Precept Selective Herbicide directly into the spray tank. Add other relevant compatible herbicides, then adjuvant or crop oil as recommended. Complete filling the tank with agitators in motion. Agitation must continue before and during spraying.

Sprayer 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 100 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), however in the case of advanced weeds (greater than 4 leaf at application), heavy weed density (causing shading of weeds) or heavy crop canopy (causing shading of weeds), it is recommended that a spray volume in the range 70 – 150 L water/ha is used as adequate coverage is critical to ensure control. 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 – The application of Precept by aircraft is currently not recommended.
Misters – DO NOT apply Precept through a mister.

No spray zones –

DO NOT apply within 20 metres when there are livestock, pasture or any land that is producing feed for livestock downwind from the application area.

Sprayer Clean Up

The sprayer must be thoroughly decontaminated before being used again to spray crops other than winter 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.
Fill the boom tank with water, rinse and repeat this procedure (i.e. fill and rinse the tank twice) then remove and clean all filters (inline and nozzle) separately. This will provide an effective cleaning technique for Precept

Selective Herbicide. This should be done immediately after spraying is finished to prevent dried residues adhering to the tank/lines/filters.
A boom cleaner may be used when cleaning.
When a tank mixture of Precept with a compatible product has been used, more rigorous cleaning of the sprayer may be required than when using Precept alone. Refer to the compatible product label for appropriate instructions in this event.

Time of Day
Optimum performance of Precept occurs when it is applied in warmer temperatures with good light intensity. To maximise efficacy apply Precept during the day. Apply prior to 1 hour before sunset, particularly if followed by low overnight temperatures.

COMPATIBILITY

Observe the more rigorous of the recommended crops and crop safety restrictions for the Precept and companion herbicide labels when tank mixing.
When mixing with other herbicides increased crop effects may occur. Under normal growing conditions this should not result in any yield loss.

Mix partner	Mix rate	Critical comments
Broad leaf herbicides		
Ally®	5 g	Precept at 1.0 L/ha as a mix partner. See additional comments when tank-mixing compatible products.
Lontrel® 750 SG	40 or 60 g/ha	No loss of efficacy or adverse crop effects
Annual ryegrass herbicides		
Atlantis®	Label rates	Precept at 1.0 L/ha as a mix partner - Atlantis will provide suppression of annual ryegrass only.
Achieve®	Label rates	Precept at 1.0 L/ha as a mix partner - some reduction in efficacy and the speed of action of these products may occur.
Cheetah® Gold	Label rates	
Decision®	Label rates	
Hoegrass® 500	Label rates	
Tristar® Advance	1.5 L/ha	
Axial®	300 mL/ha plus Adigor at 0.5% v/v	Physically compatible.
Wild oat herbicides		
Achieve	Label rates	Precept at 1.0 L/ha as a mix partner - some reduction in efficacy and the speed of action of these products may occur.
Atlantis	Label rates	
Cheetah Gold	Label rates	
Topik®	Label rates	
Wildcat® 110	Label rates	
Hussar®	200 g/ha	
Tristar Advance	1.5 L/ha	
Axial	300 mL/ha plus Adigor at 0.5% v/v	Physically compatible.
Insecticides		
Le Mat® 290 SL	100 mL/ha	These insecticides are physically compatible with Precept, but have not been tested for biological compatibility.
Fastac® Duo	240 mL/ha	
Decis® Options	500 mL/ha	
Dimethoate	85 mL/ha	
Bulldock® Duo	1.0 L/ha	
Lorsban® 500 EC	900 mL/ha	
Fungicides		
Folicur® 430 SC	290 mL/ha	Note: With Folicur 430 SC and Amistar Extra, constant agitation is required or irreversible settling will occur. All fungicides listed here are physically compatible with Precept, but have not been tested for biological compatibility.
Amistar® Extra	up to 800 mL/ha	
Bayleton® 125 EC	1.0 L/ha	
Tilt® Extra	500 mL/ha	
Opus® 125 SC	500 mL/ha	

Wetting agent/adjuvant recommendation with compatible products

Precept mix-partner	Recommended surfactant/adjuvant	Critical comments
Achieve	Supercharge 0.75% v/v	DO NOT use BS1000 or a non-ionic wetting agent when Precept is applied alone or with any other product other than Wildcat 110 as reduced efficacy or speed of kill may result.
Ally	Hasten 1% v/v	
Atlantis	Hasten 1% v/v	
Cheetah Gold	Hasten 1% v/v	
Decision	Hasten 1% v/v or Uptake 0.5% v/v	
Hoegrass 500	Hasten 1% v/v	
Hussar	Hasten 1% v/v	
Tristar Advance	Hasten 1% v/v	
Topik	Hasten 0.5% v/v	
Wildcat 110	BS1000 0.25% v/v	

For advice on the compatibility of other products, contact the manufacturer, Bayer CropScience Pty. Ltd.

Crop Safety

Precept Selective Herbicide generally shows good crop selectivity when used as directed. The following will help minimise crop effects.

Selective crops

- DO NOT apply to crops undersown with legumes or to broadleaf pastures.
- DO NOT apply to any crop other than wheat, barley, oats, cereal rye or triticale.
- DO NOT apply to hay crops unless boom overlap growth reduction is accepted.
- DO NOT apply Ally plus Precept in oats.

Recommended growth stage

- Precept Selective Herbicide contains MCPA 2-ethylhexyl ester. Wheat, oat, triticale and cereal rye should be at minimum 3 leaf stage (Z13 growth stage), before application of Precept Selective Herbicide. Barley should be at minimum 5 leaf stage (Z15 growth stage), before application of Precept Selective Herbicide. Consult your local agronomist for the latest advice on varieties which require later growth stage applications to avoid the effects of MCPA.
- DO NOT apply later than Z31 (first node).

Agronomic and environmental factors

- Some crop yellowing and growth retardation may occur within 2 to 5 weeks of application. Where Precept Selective Herbicide up to 2.0 L/ha is applied, any effects will be negligible and rapidly dissipate except in areas of boom overlap. In boom overlap areas, growth retardation may occasionally remain until spring. Grain yield will not be compromised.
- Growth retardation and discolouration may 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.
- DO NOT apply to cereals that are physically damaged (e.g. by hail, wind, insect attack).
- Do not apply to crops not actively growing, e.g. due to cold and wet conditions or drought stress.
- Crop effects (discolouration and slowed rate of growth) may be increased when Ally is tank mixed with Precept at 1.0 L/ha plus Hasten at 1% v/v. Under normal growing conditions this should not result in any yield loss. Observe crop safety restrictions on the Ally label.

Crop Rotation Recommendations

Minimum re-cropping intervals apply for all crops following Precept Selective Herbicide application.
To reduce the potential of recropping symptoms, cultivate prior to sowing.
Recropping intervals are dependent on the rate of product applied. Areas that receive double rates (boom overlaps) may show symptoms of damage in sensitive crops. This is generally restricted to discolouration (bleaching) of the crop but may also result in biomass reduction or reduced yields in some situations.

For advice on crops not listed below, contact the manufacturer, Bayer CropScience Pty. Ltd.

Rainfall –winter recrop
For crops listed as requiring a 9 month recropping interval, rainfall of less than 250 mm following use of Precept may result in an extended recropping interval.
Patchy rain, with extended dry periods may also result in an extended recropping interval, even when rainfall exceeds 250 mm. If in doubt, seek specialist advice.

Rainfall –summer recrop
Rainfall of less than 125 mm following Precept may result in extended re-cropping intervals. Patchy rain, with extended dry periods may also result in extended re-cropping intervals, even when rainfall exceeds 125 mm. If in doubt, seek specialist advice.

pH
Application to soils with a pH greater than 8.4 (soil in water) has not been tested and is not recommended.
Recropping intervals may be reduced on acid soils (pH < 7).

Tank Mixture With Other Herbicides
In the event that a tank mixture of Precept and another herbicide has been used, the longer recrop interval of the tank mix products should be observed for the crop in question.

Crop – winter sown	**Recropping Interval – alkaline soil**	**Precept rate applied**
wheat, barley, oat, triticale	3 weeks	up to 2.0 L/ha
canola, clover*, chick pea, faba bean*, field pea, lucerne, lupin, vetch	9 months	1.0 L/ha
canola, chick pea, field pea, lucerne, lupin, vetch		2.0 L/ha**
lentil, medic Recropping interval not determined, not suitable to recrop in the same season on failed crop following treatment with Precept on alkaline soils. Ongoing investigation. For further advice, contact the manufacturer, Bayer CropScience Pty. Ltd.	recropping interval not yet available	

For winter recrops transient biomass reduction or discolouration may occur where recropped following Precept application. When used as directed grain yield is not compromised where transient biomass reduction or discolouration occurs.
* Where Precept at 1.0 L/ha is applied, recrop areas that receive double rates (boom overlaps) may show increased symptoms of damage in crops such as clover and faba bean. This is generally restricted to discolouration (bleaching) of the crop but may also result in biomass reduction or reduced yields in some situations.
**Where Precept at 2.0 L/ha is applied, recrop areas that receive double rates (boom overlaps) may show increased symptoms of damage in crops such as canola, field pea, lupin and vetch. This is generally restricted to discolouration (bleaching) of the crop but may also result in biomass reduction or reduced yields in some situations.

Crop – summer sown	**Recropping Interval – alkaline soil**	**Precept rate applied**
maize, sorghum	8 weeks	up to 2.0 L/ha
cotton, lucerne, mung bean, soybean, sunflower Recropping interval not determined, not suitable to recrop in the same season on failed crop treated with Precept. Ongoing investigation. For further advice, contact the manufacturer, Bayer CropScience Pty. Ltd.	recropping interval not yet available	

For summer recrops transient biomass reduction or discolouration may occur where recropped the year of Precept application. When used as directed grain yield is not compromised where transient biomass reduction or discolouration occurs.
***Where Precept at 2.0 L/ha is applied, recrop areas that receive double rates (boom overlaps) may show increased symptoms of damage. This is generally restricted to discolouration (bleaching) of the crop but may also result in biomass reduction in some situations.

Resistant Weeds Warning
Precept Selective Herbicide contains members of the pyrazolone (pyrasulfotole) and phenoxy (MCPA) groups of herbicides. Precept is a herbicide which inhibits 4-hydroxyphenylpyruvate dioxygenase (4-HPPD) and also acts by disruption of plant cell growth. For weed resistance management Precept is a Group **H** and Group **I** herbicide. Some naturally-occurring weed biotypes resistant to Precept, and other Group **H** and Group **I** herbicides, may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by Precept or other Group **H** and Group **I** herbicides.
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 Precept to control resistant weeds.

Do not rely exclusively on Precept 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.

Weed control – effect of climate
Activity of Precept Selective Herbicide will be reduced if weeds are stressed. Optimum results will be obtained if good temperature, good light intensity and good soil moisture exists at application.

Rainfast period
DO NOT use if rainfall or irrigation is to occur within 2 hours of application.

Temperature
DO NOT apply to frost affected weeds or if frosts are imminent.
The use of Precept Selective Herbicide at 2.0 L/ha may provide better control of weeds during frosty periods.

Weed density
For reliable control good contact must be made with each plant. High weed density may cause shading of plants lower in the weed canopy. In dense weed or crop stands a follow up application of a suitable herbicide may be required to control remaining plants.
DO NOT use the 1.0 L/ha rate for the control of dense wild radish populations (>75/m^2). For dense wild radish populations, increasing the rate to 2.0 L/ha will give good control in most situations. Because high weed density may cause shading of weeds lower in the plant canopy a follow up application of a suitable herbicide may be required to control plants remaining after an application of Precept.
Where crop or weed density is high, water volume should be increased.

Weed emergence after application
Precept Selective Herbicide will not reliably control following germinations of weeds. A follow up application of a suitable herbicide may be required to control remaining plants or plants that emerge after application. The use of Precept Selective Herbicide at 2.0 L/ha will provide better control of weed emergence following application.

Weed stage
Apply when weeds are actively growing. In most situations the rate specified for each weed size will give satisfactory control. Under certain conditions such as:
* high crop or weed density
* later germinations
* abnormal weed growth including early flowering
- higher rates of Precept Selective Herbicide up to 2.0 L/ha may be required.

Precept Selective Herbicide may not effectively control:
* regrowth of suppressed weeds;
* transplanted weeds;
* weeds growing under stress from previous herbicide applications.

PRECAUTIONS
Re-entry Period: Do not allow entry into treated areas until spray has dried. When prior entry is necessary 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
Highly toxic to algae and aquatic plants.
DO NOT contaminate streams, rivers or waterways with this product or used containers.
DO NOT apply under weather conditions or from spraying equipment that could be expected to cause spray to drift onto wetlands, natural surface waters, neighbouring properties or other sensitive areas.

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 and MCPA volatilization onto nearby susceptible plants/crops, cropping lands or pastures.

STORAGE AND DISPOSAL
Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight.
(20 L containers)
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 empty container for any other purpose.
(110 L returnable containers)
If tamper evident seals are broken prior to initial use then the integrity of the contents cannot be assured.
Empty container by pumping through dry-break connection system. Do not attempt to breach the valve system or the filling point, or contaminate the container with water or other products. Ensure that the coupler, pump, meter and hoses are disconnected, triple rinsed and drained after each use. When empty, or contents no longer required, return the container to the point of purchase. This container remains the property of Bayer CropScience Pty Ltd.

SAFETY DIRECTIONS
Corrosive, will damage eyes. May irritate the skin. Avoid contact with eyes and skin. If product in eyes, wash it out immediately with water. When opening the container and preparing spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length chemical resistant gloves and goggles. Wash hands after use.

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. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

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.: 60897/0108

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 2 hours of application.
DO NOT apply to frost affected weeds or if frosts are imminent.
DO NOT apply without adjuvant/crop oil[#].
[#] See **'Use of Adjuvant/Crop Oil'** under 'General Instructions'.

Note

Precept is a phenoxy (Group I) and pyrazolone (which inhibits 4-HPPD - Group H) herbicide. Precept 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 and further information in the General Instructions for directions.

CROP	WEED	STATE	WEED STAGE	RATE L/ha	CRITICAL COMMENTS
Comments critical to the use of Precept Selective Herbicide are listed alphabetically under General Instructions preceding this Directions for Use table. These instructions include but are not limited to the important adjuvant/surfactant/wetting agent recommendation, application requirements (sprayers, time of day), compatibility, crop safety, crop rotation recommendations, resistant weeds warning, weed control – effect of climate, weed density, weed emergence after application and weed stage. It is important that all parts of General Instructions are read in conjunction with the Direction for Use table.					
Wheat, **oats**, **cereal rye**, **triticale**, 3 leaf (Z13) to first node (Z31); **barley**, 5 leaf (Z15) to first node (Z31)	Capeweed (*Arctotheca calendula*)	All States	2 to 5 leaf	1.0 + 60 g/ha Lontrel® SG	-
	Canola, volunteer (*Brassica napus*)		2 to 8 leaf	1.0	-
	Chickpea, volunteer (*Cicer arietinum*)		2 leaf to 5 node	1.0 + 60 g/ha Lontrel SG	-
	Deadnettle (*Lamium amplexicaule*)		2 to 6 leaf	1.5	-
	Faba bean, volunteer (*Vicia faba*)		2 leaf to 5 node	1.0 + 60 g/ha Lontrel SG	-
	Field pea (*Pisum sativum*)		2 leaf to 5 leaf	1.0	Under good conditions Precept at 1.0 L/ha will provide satisfactory control of field pea.
			2 leaf to 8 node	1.0 + 40 g/ha Lontrel SG	-
	Indian hedge mustard (*Sisymbrium orientale*)		2 to 8 leaf	1.0	-
	Lupin, volunteer (*Lupinus* spp.)		2 to 8 leaf	1.0	-
	Medic, volunteer (*Medicago* spp.)		2 to 4 leaf	2.0 L/ha **or** 1.0 L + 60 g/ha Lontrel SG	-
	Sowthistle (*Sonchus oleraceus*)		2 to 8 leaf	1.0	-
	Sub clover, volunteer (*Trifolium subterraneum*)		2 to 6 leaf	1.0 + 60 g/ha Lontrel SG	-
	Wild radish (*Raphanus raphanistrum*)		2 to 4 leaf	1.0 or 2.0	Use the 1.0 L/ha rate for low density wild radish populations (< 75/m^2). For dense wild radish populations, increasing the rate to 2.0 L/ha will give good control in most situations. Because high weed density may cause shading of weeds lower in the plant canopy a follow up application of a suitable herbicide may be required to control plants remaining after an application of Precept.
			up to 8 leaf	2.0	
	Wild turnip (*Brassica tournefortii*)		2 to 8 leaf	1.0	-
	Wireweed (*Polygonum aviculare*)		2 to 8 leaf	1.0	-

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

WITHHOLDING PERIODS

Harvest **NOT REQUIRED WHEN USED AS DIRECTED**

Grazing/Stockfood

Wheat, oats, triticale and cereal rye:

DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 2 WEEKS AFTER APPLICATION

Barley: **DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 4 WEEKS AFTER APPLICATION**