

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

Havoc® Herbicide

ACTIVE CONSTITUENT: 240g/L CLETHODIM
SOLVENT: 655 g/L LIQUID HYDROCARBONS

GROUP	A	HERBICIDE
--------------	----------	------------------

For the control of certain grass weeds in beetroot, cabbage, canola, celery, chickpeas, cotton, faba beans, field peas, forestry, lentils, lettuce, lupins, mungbeans, non-bearing fruit trees, onions, ornamentals, peanuts, potatoes and soybeans as per the Directions for Use table.

IMPORTANT: READ THIS LEAFLET BEFORE USE.

Crop Care Australia Pty Ltd
 ACN 061 362 347
 Unit 15/16 Metroplex Avenue
 Murarrie QLD 4172
 Tel: (07) 3909 2000



APVMA Approval No.: 64796/0210

DIRECTIONS FOR USE:

RESTRAINTS:

- DO NOT apply without the addition of an adjuvant.
- DO NOT apply to plants that are stressed by moisture or temperature extremes.
- DO NOT apply if rain is expected within one hour of application.
- DO NOT apply Havoc Herbicide more than once to any one crop.

CROP	CROP GROWTH STAGE	WEEDS CONTROLLED	RATE	STAGE OF WEED GROWTH	STATE	CRITICAL COMMENTS	
Canola, Chickpeas, Faba beans, Field peas, Lentils*, Lupins*	Canola: DO NOT APPLY after flower buds become visible (green buds) Chickpeas: DO NOT APPLY beyond full flowering Faba beans: DO NOT APPLY beyond full flowering Field peas: DO NOT APPLY beyond full flowering Lentils: Apply up to the 7 node/early branching stage of crop growth Lupins: DO NOT APPLY after 80% of flowers have opened	Annual ryegrass (<i>Lolium rigidum</i>), Annual phalaris (<i>Phalaris minor</i>)	150-250mL/ha	2 leaf to fully tillered	Qld, NSW, ACT, Vic, Tas, SA, WA only	Always apply with Supercharge® at 1L/100L spray volume. The lower doses will provide effective control if applied under ideal conditions to weeds that are smaller, actively growing and free from temperature or water stress. See COMPATIBILITY AND CAUTIONS in GENERAL INSTRUCTIONS for mixture recommendations with insecticides, fungicides and other herbicides. *Application up to 7 node/early branching crop growth stage only. #NOT QLD	
		Barley grass (<i>Hordeum leporinum</i>), Brome grass (<i>Bromus diandrus</i>), Wild Oats (<i>Avena spp.</i>)	175-250mL/ha				
		Volunteer wheat (<i>Triticum aestivum</i>), Volunteer oats (<i>Avena sativa</i>)	200 [^] - 250mL/ha [^] (175-250mL/ha in WA only)	250mL/ha	2-5 leaf stage		Qld, NSW, ACT, only
		Volunteer barley (<i>Horedeum vulgare</i>)					
		Silver grass (<i>Vulpia bromoides</i>) - suppression only	250-500mL/ha	375mL/ha	5 leaf to fully tillered		Qld, NSW, ACT, Vic, WA, NT only
		Paradoxa grass (<i>Phalaris paradoxa</i>)	250-375mL/ha				
		Cotton (Qld, NSW and NT only), Peanuts, Mung beans, Soybeans	Cotton: DO NOT APPLY after full flowering (mid bloom) Peanuts: DO NOT APPLY after the pod fill stage of crop development	Barnyard grass (<i>Echinochloa spp.</i>), Blown grass (<i>Agrostis aveacea</i>), Crowsfoot grass (<i>Eleusine indica</i>),	250-375mL/ha		2-5 leaf stage
	375mL/ha			5 leaf to fully tillered			

(continued)

CROP	CROP GROWTH STAGE	WEEDS CONTROLLED	RATE	STAGE OF WEED GROWTH	STATE	CRITICAL COMMENTS
	<p>Mung beans: DO NOT APPLY after first flower buds are visible</p> <p>Soybeans: DO NOT APPLY after first flower buds are visible</p>	Feathertop Rhodes grass (<i>Chloris virgata</i>), Liverseed grass (<i>Urochloa panicoides</i>), Red sprangletop grass (<i>Leptochloa filiformis</i>), Seedling Johnson grass (<i>Sorghum halepense</i>), Summer grass (<i>Digitaria</i> spp.), Volunteer sorghum (<i>Sorghum</i> spp.)				(continued from previous page) See COMPATIBILITY AND CAUTIONS in GENERAL INSTRUCTIONS for mixture recommendations with insecticides, fungicides and other herbicides.

CROP	CROP GROWTH STAGE	RATE	STAGE OF WEED GROWTH	STATE	CRITICAL COMMENTS
Beetroot, Cabbage, Celery, Lettuce, Potatoes, Onions	Barnyard grass (<i>Echinochloa</i> spp.), Blown grass (<i>Agrostis aveacea</i>), Crowsfoot grass (<i>Eleusine indica</i>), Feathertop Rhodes grass (<i>Chloris virgata</i>), Liverseed grass (<i>Urochloa panicoides</i>), Paradoxa grass (<i>Phalaris paradoxa</i>), Red sprangletop grass (<i>Leptochloa filiformis</i>), Seedling Johnson grass (<i>Sorghum halepense</i>), Summer grass (<i>Digitaria</i> spp.), Volunteer sorghum (<i>Sorghum</i> spp.)	250-375mL/ha	2-5 leaf stage	All States	Always apply with Supercharge® at 1L/100L spray volume. The lower doses will provide effective control if applied under ideal conditions to weeds that are smaller, actively growing and free from temperature or water stress. Use a spray volume of 150L/ha when spraying dense grass populations.
	Annual ryegrass (<i>Lolium rigidum</i>), Annual phalaris (<i>Phalaris minor</i>)	375mL/ha	5 leaf to fully tillered		
	Barley grass (<i>Hordeum leporinum</i>), Brome grass (<i>Bromus diandrus</i>), Wild oats (<i>Avena</i> spp.)	150-250mL/ha	2 leaf to fully tillered		
	Volunteer wheat (<i>Triticum aestivum</i>), Volunteer oats (<i>Avena sativa</i>)	175-250mL/ha			
	Volunteer barley (<i>Hordeum vulgare</i>)	200 [^] - 250mL/ha [^] (175-250mL/ha in WA only)	2 leaf to fully tillered		
	Silver grass (<i>Vulpia bromoides</i>) - suppression only (not Qld, WA)	250mL/ha			
	Winter grass (<i>Poa annua</i>)	250-500mL/ha			
	Forestry, non-bearing fruit trees and ornamentals	Annual ryegrass (<i>Lolium rigidum</i>), Annual phalaris (<i>Phalaris minor</i>), Barley grass (<i>Hordeum leporinum</i>), Barnyard grass (<i>Echinochloa</i> spp.), Blown grass (<i>Agrostis aveacea</i>), Brome grass (<i>Bromus diandrus</i>), Crowsfoot grass (<i>Eleusine indica</i>), Feathertop Rhodes grass (<i>Chloris virgata</i>), Liverseed grass (<i>Urochloa panicoides</i>), Paradoxa grass (<i>Phalaris paradoxa</i>), Red sprangletop grass (<i>Leptochloa filiformis</i>), Seedling Johnson grass (<i>Sorghum halepense</i>), Silver grass (<i>Vulpia bromoides</i>) - suppression only (not QLD, WA), Summer grass (<i>Digitaria</i> spp.), Volunteer sorghum (<i>Sorghum</i> spp.), Volunteer wheat (<i>Triticum aestivum</i>), Volunteer oats (<i>Avena sativa</i>), Volunteer barley (<i>Hordum vulgare</i>), Winter grass (<i>Poa annua</i>)	500mL/ha		

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

WITHHOLDING PERIODS:

HARVEST:

CANOLA, CHICKPEAS, COTTON, FABA BEANS, FIELD PEAS, LENTILS, LUPINS, MUNG BEANS, PEANUTS, SOYBEANS: NOT REQUIRED WHEN USED AS DIRECTED.

FORESTRY: NOT REQUIRED WHEN USED AS DIRECTED.

BEETROOT, CABBAGE: DO NOT APPLY LATER THAN 7 DAYS BEFORE HARVEST.

ONIONS: DO NOT APPLY LATER THAN 14 DAYS BEFORE HARVEST.

LETTUCE, POTATOES: DO NOT APPLY LATER THAN 4 WEEKS BEFORE HARVEST.

CELERY: DO NOT APPLY LATER THAN 9 WEEKS BEFORE HARVEST.

GRAZING:

CANOLA, CHICKPEAS, FABA BEANS, FIELD PEAS, LENTILS, LUPINS, MUNG BEANS, PEANUTS, SOYBEANS: DO NOT GRAZE OR CUT FOR STOCK FEED FOR 21 DAYS AFTER APPLICATION.

COTTON: DO NOT GRAZE OR CUT COTTON FORAGE OR STUBBLE FOR STOCK FEED.

GENERAL INSTRUCTIONS

RESISTANT WEEDS WARNING

GROUP	A	HERBICIDE
--------------	----------	------------------

Havoc Herbicide is a member of the cyclohexanedione group of herbicides. Havoc Herbicide has the inhibition of acetyl coA carboxylase mode of action. For weed resistance management, Havoc Herbicide is a Group A Herbicide. Some naturally-occurring weed biotypes resistant to Havoc Herbicide and other Group A 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 will not be controlled by Havoc Herbicide or other Group A Herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Crop Care Australasia Pty Ltd accepts no liability for any losses that may result from the failure of Havoc Herbicide to control resistant weeds.

CLEANING SPRAY EQUIPMENT

Before using Havoc

Ensure that the recommended clean-out procedure for the previous product (particularly sulfonylurea herbicides) sprayed with the equipment was done properly.

After using Sequence

Empty the tank and drain the whole system. Thoroughly wash inside the tank using a pressure hose, drain the tank and clean all filters in the tank, pump line and nozzles. Use of a household detergent will aid in cleaning the equipment. Add detergent to the part-filled spray tank and thoroughly circulate through pumps, hoses and nozzles. Drain the system and thoroughly rinse twice with clean water.

Rinse water should be discharged onto a designated disposal area, or if this is unavailable, onto unused land away from desirable plants and water sources.

MIXING:

To ensure even mixing, half-fill the spray tank with clean water and add the required amount of product. Add spray additive and agitate thoroughly, then add the remainder of the water. Agitate again before spraying commences.

APPLICATION:

Ground Application

Havoc Herbicide should be applied with calibrated spray equipment producing MEDIUM spray droplets according to the ASAE S572 definition for the standard nozzles. Apply in a minimum of 50L of water per hectare. Use 150L/ha when spraying dense populations.

Aerial Application

Havoc Herbicide can be applied through aircraft fitted with boom or Micronair equipment. A spray volume of 20-30L/ha is recommended and equipment should be adjusted to produce MEDIUM spray droplets according to the ASAE S572 definition for the standard nozzles. Best results will be obtained when aerial applications are made in a light crosswind. Applications should not be made during temperature inversions or in conditions of very low relative humidity. Care should be taken to avoid drift damage to adjoining grass crops.

COMPATIBILITY:

Havoc Herbicide is compatible with the following grass herbicides: Targa*, Fusilade*, Exert, Verdict*, Sertin* and Correct*. (Refer to the Bayer Correct label for detail on adjuvant recommendations for that product). NOTE: In all situations where Havoc Herbicide is mixed with another grass herbicide, Havoc Herbicide should be used at the full label rate specified for the target weed species. Havoc Herbicide may also be applied in tank mixtures with one of the following products: Dominex Duo and Le-Mat*. Havoc Herbicide should not be applied in a tank mix with Brodal*, Basagran* or Blazer*. Apply as separate applications. Havoc is compatible with the following adjuvants: Supercharge®, Hasten*, Kwicken*, D-C-Trate and Uptake. For information on compatibility of products not listed, please refer to Crop Care Australasia Pty Ltd.

CAUTION:

Ornamentals and Trees - While Havoc Herbicide is generally selective to broadleaved plants (i.e. it is active against grasses), tests should always be made on a small number of plants not previously tested.

DO NOT use on Gymnosperms (pines, conifers, etc) unless a prior test has been conducted to check safety on the relevant species.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS:

DO NOT apply Havoc Herbicide if wind is likely to cause drift onto susceptible crops/plants, cropping lands or pastures. Havoc Herbicide should not be applied through misting equipment or any other method likely to cause excessive drift. Care should be taken to avoid damage to adjoining native grasses or grass crops.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT:

DO NOT contaminate streams, rivers or waterways with the product or used containers.

STORAGE AND DISPOSAL:

Store in the closed, original container in a dry, cool well-ventilated area out of direct sunlight. Protect from frost. 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 not available, bury the containers below 500mm 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.

STORAGE AND DISPOSAL (110L):

Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

SAFETY DIRECTIONS:

Harmful if swallowed. Will irritate the eyes and skin. When preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist, washable hat, elbow-length PVC gloves and face shield or goggles. If product in eyes, wash it out immediately with water. After use and before eating, drinking or smoking, wash hands arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

FIRST AID:

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126. If swallowed, DO NOT induce vomiting. Give a glass of water.

MATERIAL SAFETY DATA SHEET:

Additional information is listed in the Material SafetyData Sheet (MSDS), which can be obtained from your supplier or from the Crop Care website – www.cropcare.com.au

CONDITIONS OF SALE:

Crop Care Australasia Pty Ltd will not accept any responsibility whatsoever and howsoever arising and whether for consequential loss or otherwise in connection with the supply of these goods other than responsibility for the merchantable quality of the goods and such responsibilities mandatorily imposed by Statutes applicable to the sale or supply of these goods. To the extent allowed by such Statutes the liability of Crop Care Australasia Pty Ltd is limited to the replacement of the goods or (at the option of Crop Care Australasia) the refund of the price paid and where possible sufficient part of the goods to enable proper examination being returned to Crop Care Australasia Pty Ltd within thirty days of delivery.

In a Transport Emergency Dial 000 Police or Fire Brigade	SPECIALIST ADVICE IN AN EMERGENCY ONLY 1800 033 498 ALL HOURS – AUSTRALIA WIDE
---	---

® Havoc is a registered trademark of Nufarm Technologies USA Pty. Ltd.

* Other registered trademarks