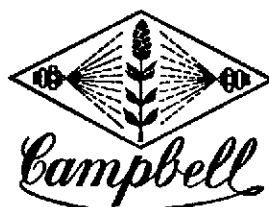


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**CAUTION**  
**KEEP OUT OF REACH OF CHILDREN.**  
**READ SAFETY DIRECTIONS BEFORE OPENING OR USING**



**CRONOS 440EC**  
**HERBICIDE**

GROUP	<b>D</b>	HERBICIDE
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**Active Constituent: 440g/L PENDIMETHALIN**  
**Solvent: 482 g/L LIQUID HYDROCARBON**

For the control of annual ryegrass and wireweed in wheat, barley and peas and annual grasses and certain broadleaf weeds in various crops as shown in the directions for use table.

CONTENTS: 5L  
25L  
110L  
200L  
1000L

**CAUTION: READ THE ATTACHED LEAFLET BEFORE OPENING OR USING  
THIS PRODUCT**

Distributed by:  
**Colin Campbell (Chemicals) Pty. Ltd.**  
5 Blackfriar Place  
WETHERILL PARK N.S.W  
PHONE: (02) 9725 2544



**RLP**  
**Approved**

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## STORAGE AND DISPOSAL:

Store in the closed original container in a dry well-ventilated area. Do not store for long periods in direct sunlight.

Triple rinse 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, 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 set up for this purpose clear of waterways, vegetation and roots. Empty containers and products should NOT be burnt.

**Refillable containers:** 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 eyes and skin. Avoid contact with eyes and skin. When preparing spray and using the prepared spray wear face shield or goggles and rubber gloves. If product in eyes wash it out immediately with water. After use and before eating drinking or smoking wash hands arms face thoroughly with soap and water. After each day's use wash gloves and face shield or goggles.

## 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 Safety Data Sheet which can be obtained from the supplier.

### CONDITIONS OF SALE

Agricultural, horticultural and pastoral preparations in their application involve varying factors such as differing conditions, soil, climate and methods of application over which the vendor does not have control, Whilst Colin Campbell (Chemicals) Pty. Ltd believes that all goods sold by it are true to label and are effective and safe for purpose indicated the company and the seller hereby expressly negate and exclude any express or implied condition, statement or warranty, statutory or otherwise, as to quality or fitness of any goods sold for any purpose or purposes whatsoever except such warranties and conditions, if any, as are implied by the Trade Practices Act 1974 (Commonwealth). The company and the seller accept no responsibility for any loss, harm or damage whatsoever suffered from the use of such goods for any purpose or purposes irrespective of whether or not the buyer was acting in reliance upon the advice recommendation or representation of the seller or any representative agent of employee of the company as to such use except in respect of breaches of conditions and warranties, if any, implied by the Trade Practices Act and in respect of such breaches the liability of the company and the seller shall be limited to the replacement of the goods or the supply of equivalent goods, or the payment of the cost of replacing the goods.

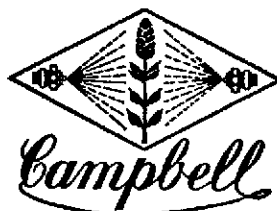
APVMA Approval Number: 69523/61006

Batch No:

Date of Manufacture:

**(BARCODE)**

**CAUTION**  
**KEEP OUT OF REACH OF CHILDREN.**  
**READ SAFETY DIRECTIONS BEFORE OPENING**



**CRONOS 440EC**  
**HERBICIDE**

**GROUP D HERBICIDE**

**Active Constituent: 440g/L PENDIMETHALIN**  
**Solvent: 499 g/L LIQUID HYDROCARBON**

For the control of annual ryegrass and wireweed in wheat, barley and peas and annual grasses and certain broadleaf weeds in various crops as shown in the directions for use table.

**THIS BOOKLET IS PART OF THE LABEL**

Distributed by:  
**Colin Campbell (Chemicals) Pty. Ltd.**  
5 Blackfriar Place  
WETHERILL PARK N.S.W  
PHONE: (02) 9725 2544

## DIRECTIONS FOR USE

### RESTRAINTS

Do NOT sow sensitive summer crops such as sorghum and millets within 12 months of application of CRONOS 440EC

Do NOT apply to a poorly prepared seedbed.

Do NOT use CRONOS 440EC mixed with atrazine on heavy clay soils.

Do NOT apply CRONOS 440EC where waterlogging is likely to occur.

### PRE PLANT INCORPORATED TREATMENT (DOUBLE INCORPORATION)

NOTE: For all crops listed in the double incorporation table below: Incorporate CRONOS 440EC into the soil within 24 hours of application. Refer to the Notes on Incorporation under the heading General Instructions. Where a range of application rates are provided, use the higher rate on heavy textured soils or those high in organic matter and the lower rate on light to medium textured soils. Application to soil types with poor structural characteristics or that are poorly worked may result in insufficient and uneven incorporation and, subsequently, less than satisfactory weed control. Heavy soils, which are cloddy or have a surface crust or surface seal, are to be avoided. Attempting to incorporate CRONOS 440EC when soils are very wet or very dry may also result in poor weed control due to insufficient mixing. Refer to the General Instructions, especially "Cereal Seed Dressings" and "Weather Conditions at Planting" for further information on emergence.

CROP	WEEDS CONTROLLED	STATE	RATE/TREATED HA	CRITICAL COMMENTS
Cotton	See Weed Table A	Qld and NSW only	2.25 L	Use a combine with trailing harrows and chain or offset or tandem discs or Lilliston cultivators, set to work to a depth of 2-5cm. Subsequent planting operations in irrigated cotton may remove the CRONOS 440EC treated soil from hills leaving an untreated band over the row, requiring further application of CRONOS 440EC or other herbicides in that band. When seedbed is rough, a second incorporation is necessary. CRONOS 440EC may be applied by aerial or ground spraying. In the Macquarie area, only apply by air when ground is too wet for ground application.
Soybeans, peanuts, navy beans, cow peas, mung beans and pigeon peas.		Qld, NSW, NT, Vic and SA only	1.90 to 2.25 L	
Sunflowers		Qld, NSW, Tas, Vic & SA only		
Wheat and barley	Annual ryegrass ( <i>Lolium rigidum</i> ), wireweed ( <i>Polygonum aviculare</i> ). Suppression only of wild oats.	All States	900mL	Use weighted harrows at 8-13 km/hr followed by a cross working with a combine set at to work at a depth of 2-5cm at 8-13 km/hr. Wheat and barley seed must be sown approximately 1cm beneath the chemically treated band or reduced emergence may occur. If wild oats are expected to be a problem use a wild oat herbicide.
Field peas	Annual ryegrass ( <i>Lolium rigidum</i> ), wireweed ( <i>Polygonum aviculare</i> ).	Southern NSW, Vic, Tas SA and WA only.	1.5 L	Use weighted harrows at 8-13km/hr followed by a cross working with a combine set work at a depth of 2-5 cm at 8-13 km/hr. Seed should be sown below the chemical band. Use cover harrows behind the combine. Use a wild oat herbicide if wild oats are expected to be a problem.
Chickpeas, faba beans, safflower and lupins	Suppression only of wild oats ( <i>Avena</i> spp.)	Qld, northern NSW and Tas* only	1.9 to 2.5L	*Lupins: In Tasmania, use only on the species <i>Lupinus angustifolius</i> . DO NOT use on <i>L. albus</i> .

**PRE PLANT APPLICATION (INCORPORATED DURING SOWING)**

CROP	WEEDS CONTROLLED	STATE	RATE/TREATED HA	CRITICAL COMMENTS
Wheat and barley	Annual ryegrass ( <i>Lolium rigidum</i> ), wireweed ( <i>Polygonum aviculare</i> ).  Suppression only of wild oats ( <i>Avena</i> spp.)	All States	1.4 L	<b>All Crops (except canola):</b> When full (double) incorporation is impractical and where the seedbed tilth is fine and free of large stones and trash, apply CRONOS 440EC, or in the case of lupins, CRONOS440EC plus simazine, up to 24 hours prior to sowing. Incorporate with the combine set to sow a depth of 3-5 cm. Use trailing harrows. (Refer to "Incorporation" under the heading "General Instructions"). Wheat and barley seed must be sown at least 1 cm beneath the chemically treated band or reduced emergence may occur. If wild oats are expected to be a problem use a wild oat herbicide.
Canola	Annual ryegrass ( <i>Lolium rigidum</i> ), wireweed ( <i>Polygonum aviculare</i> ).  Suppression only of wild oats ( <i>Avena</i> spp.)	Southern NSW, Vic, Tas, SA and WA only	1.4 to 2.25L	<b>Canola:</b> Apply CRONOS 440EC up to 24 hours prior to sowing. Incorporate with the combine set to sow the seed below the chemical band. Use the higher rates on medium to heavy textured soils and the lower rates on light textured soils. NOTE: Development in waterlogged conditions after the application of CRONOS 440EC may retard the emergence of canola. If wild oats are expected to be a problem use a wild oat herbicide. Application to heavier soil types which may have poor structural characteristics or are poorly worked may result in insufficient and uneven incorporation and unsatisfactory weed control. Heavy soils, which are cloddy or have a surface crust or surface seal should be avoided. Attempting to incorporate CRONOS 440EC when soils are very
	Suppression only of Silver grass ( <i>Vulpia</i> spp)		1.5 to 2.25L	
Chickpeas, faba beans, safflower, lupins and field peas	Annual ryegrass ( <i>Lolium rigidum</i> ), wireweed ( <i>Polygonum aviculare</i> ).  Suppression only of wild oats ( <i>Avena</i> spp. and silvergrass* ( <i>Vulpia</i> spp.)	Southern NSW, Vic, SA, and WA only	1.5 to 2.25 L	wet or very dry may also result in poor weed control due to insufficient mixing.
Lupins		WA only	1.5 L/ha plus simazine at 500g ai/ha	If wild oats are expected to be a problem use a wild oat herbicide. Use the higher rates on medium to heavy textured soils and the lower rates on light textured soils.
		NSW, Vic and SA only	1.5 L/ha plus simazine at 1.5 kg ai/ha	

**POST PLANT PRE-EMERGENCE SURFACE TREATMENT (OVERALL OR BAND SPRAYING): NON-MECHANICAL INCORPORATED**

CROP	WEEDS CONTROLLED	STATE	RATE/TREATED HA	CRITICAL COMMENTS
Cotton	See Weed Table B	Qld and NSW only	3.4 L	Where incorporation prior to sowing is impractical and where the seedbed tilth is fine and free of large stones and trash, CRONOS 440EC should be applied within 48 hours after sowing.
Sunflowers		Qld, NSW and SA only		Where incorporation prior to sowing is impractical and where the tilth seed bed is fine and free of large stones and trash, CRONOS 440EC should be applied after sowing and before the emergence of the crop and weeds. Where fat hen or blackberry nightshade is expected to be a major problem, pre-plant incorporation. Refer to the relevant section under the heading "General Instructions".
Maize		Qld, NSW and NT only		Use CRONOS 440EC after planting and before emergence of crop and weeds, especially where grasses are expected to be the major problem. DO NOT incorporate. Avoid application in dry weather as this may cause pruning of aerial roots and lodging. Refer to the relevant section under the heading "General Instructions".
	See Weed Table C	Qld, NSW and NT only	2.25 L/ha plus atrazine at 1.0 kg ai/ha	Where thornapple, Noogoora burr, Bathurst burr, caltrop, paddy melon or mintweed are expected to be the major problems, CRONOS 440EC should be applied in a tank mix combination with atrazine after planting and before the emergence of crop and weeds. Do NOT incorporate this mixture. Follow directions on atrazine label carefully. This treatment should not lead to soil residue problems with atrazine as the application rate is low. Do NOT use Argo 440EC mixed with atrazine on heavy clay soils as weed control may not be adequate. Refer to the section on "Incorporation" under the heading "General Instructions".

CROP	WEEDS CONTROLLED	STATE	RATE/TREATED HA	CRITICAL COMMENTS
Carrots	See Weed Table D	NSW, Qld, Vic, Tas, SA and WA only	1.5 to 2.25 L	<p><b>MINIMUM PLANTING DEPTH:</b> Carrots: 45mm Processing peas and French beans: 30mm Seed should be sown with press wheels or rollers behind the planter in order to ensure coverage of the seed and compaction of the seeds bed. Apply CRONOS 440EC to a fine firm seed bed free of ridges, clods and trash within 2 days after sowing. Use the higher rates on heavier textured soils or those with a higher organic matter content. Incorporate with 12 to 25 mm of spray irrigation or rainfall applied within one day of application for optimum performance. DO NOT disturb the soil by rolling or harrowing after CRONOS 440EC has been applied. Do NOT apply where heavy rainfall or irrigation is likely to lead to water logging. Do NOT use CRONOS 440EC on soils with an organic matter content above 6% as inconsistent weed control will occur.</p>
	Weed Table D plus wild radish ( <i>Raphanus raphanistrum</i> ), sowthistle ( <i>Sonchus oleraceus</i> )		1.5 L/ha plus linuron at 1 kg ai/ha	
Processing peas	See Weed Table D	Qld, Vic only	1.5 to 3L	<p><b>FRENCH BEANS:</b> For use in the Lockyer and Fassisfern Valleys only. DO NOT apply to French beans sown during the autumn, winter or early spring or which are likely to be stressed by cold weather.</p>
		Tas only	3L/ha	
French Beans	See Weed Table D	Qld only	2.25 to 3L	
Onions	Hogweed (Wireweed) ( <i>Polygonum aviculare</i> )	Tas only	0.56 to 0.75L	<p>Apply in conjunction with other herbicides as advised by a qualified crop advisor to ensure an adequate level of weed control is achieved in adverse conditions.</p> <p>Pre-emergence: DO NOT use on sandy soils.</p> <p><b>MINIMUM PLANTING DEPTH: 15mm</b> Apply from immediately after sowing until just prior to emergence. Apply CRONOS 440EC to a fine, firm seedbed free of clods and trash. Use the higher rates on heavy textured soils or those with a high organic matter content. For optimum performance, incorporate with 12-25mm of spray irrigation within one day of application. DO NOT exceed 0.56L/ha if soil conditions are wet and cold.</p>
			0.75 to 1.5L	<p>Post-emergence: Apply CRONOS 440EC from the first true leaf to the 3-leaf stage. Repeat applications may be made after the 1-leaf up to the 3-leaf stage providing total usage of CRONOS 440EC does not exceed 2.25L/ha. Avoid applying CRONOS 440EC to areas where waterlogging is likely to occur.</p>

**POST PLANT PRE-EMERGENCE TREATMENT (INCORPORATED OR NON-INCORPORATED)**

CROP	WEEDS CONTROLLED	STATE	RATE/TREATED HA	CRITICAL COMMENTS
Sugar cane	Summer grass ( <i>Digitaria ciliaris</i> ), awnless barnyard grass ( <i>Echinochloa colona</i> ), crowfoot grass ( <i>Eleusine indica</i> ), Guinea grass ( <i>Panicum maximum</i> c.v Hamil and c.v Guinea), green summer grass ( <i>Brachiaria subquadrifera</i> )	Qld, NSW and WA only	2.25 to 3.4L	CRONOS 440EC should be applied as soon as possible after planting and before weed emergence. However consolidation (cutaway operation) of the planting furrow prior to application to prevent soil movement into the base of the drill is recommended. Expect poor grass control in soils which contain a high percentage of organic matter. (Refer to "Incorporation" under "General Instructions".) Use the higher rate where longer weed control is required or where incorporation by irrigation or rainfall is likely to be delayed more than 5 days. <b>NOTE:</b> INCORPORATION: Under dry conditions or where some cultivation is expected after application, CRONOS 440EC should be thoroughly incorporated using finger rakes to a shallow depth. In subsequent tillage operations, cultivation depth should not exceed the depth of incorporation. WATER INCORPORATION: Incorporate using 12 to 25mm of spray irrigation or rainfall within 10 days of application. The area should not be disturbed by cultivation for the expected duration of weed control where this method of application is used. If excessive irrigation or rainfall occurs after the application of CRONOS 440EC resulting in the movement of soil from the top to the bottom of the planting drill, weed control will be reduced. For other broadleaf weeds higher rates of atrazine or diuron can be tank mixed with CRONOS 440EC- see relevant atrazine or diuron labels for details.  <b>TANK MIXTURES : Read and follow all label directions including restraints, spray drift restraints, mandatory no-spray zones, critical comments, withholding periods, regional use instructions and safety directions for the tank mix products.</b>
	Blue top (blue billygoat weed) ( <i>Ageratum houstonianum</i> )		2.25 L/ha plus atrazine at 1.5kg ai/ha or diuron at 1.5kg ai/ha	



**POST PLANT AND FLUSHING: ARGO 440EC TANK MIXTURES**

CROP	WEEDS CONTROLLED	STATE	RATE/TREATED HA	CRITICAL COMMENTS
Combine sown rice	Barnyard grass ( <i>Echinochloa</i> spp.), silvertop grass (brown beetle grass) ( <i>Diplachne reptatrix</i> ), starfruit ( <i>Damasonium minus</i> )	Qld, NSW and NT only	2.25 L/ha plus propanil at 1.8 kg ai/ha.	<p>Apply this tank mixture up to the 2 leaf stage of barnyard grass and 1 leaf stage silvertop. Apply by ground rig in 70-100 L/ha or by aircraft in 25-30 L/ha total spray volume. <b>WATER MANAGEMENT:</b> Flush immediately after sowing to enable good even germination of rice. the soil surface must be sealed by a flushing irrigation or rainfall before the application of CRONOS 440EC plus propanil. To assist in the control of barnyard grass, permanent water should be applied as soon as the rice can tolerate it and levels maintained for optimum growth of rice.</p> <p><b>RICE STAGE:</b> After the first flushing irrigation the stage of rice at application of CRONOS 440EC plus propanil is not critical and timing should be based on the stage of weed growth and water management. However DO NOT apply to rice in a weakened condition from causes such as soil salts, moisture stress, overwatering, or any other cause. Some transient leaf burn of the rice may result after application but no long term effects will result. Rice seed should be covered with at least 1 cm of water after the first flushing irrigation before CRONOS 440EC plus propanil is applied to germinating rice seed.</p>
Combine sown rice and pasture sod sown rice	As above plus suppression of Annual Sedges ( <i>Cyperus</i> spp)	Qld, NSW and NT only	2.25 to 3.4 L/ha plus paraquat at 200 g ai/ha	<p>Use the higher rate when sowing into pasture sod sown rice for annual sedge control or when more than 10 days is expected between treatment and permanent water. Apply up to the 3 leaf stage of barnyard grass, silver top and sedges, before rice emergence. Apply by ground rig in 70-100 L/ha of water total spray volume. <b>WATER MANAGEMENT:</b> Flush immediately after sowing to enable a good germination of rice. The soil surface must be sealed by a flushing irrigation or rainfall before the application of CRONOS 440EC plus paraquat. Apply a second flush or permanent flood after 1 day but not later than 5 days after the application of CRONOS 440EC plus paraquat. To assist in the control of barnyard grass, permanent water should be applied as the rice can tolerate it and levels maintained for optimum growth of rice.</p> <p><b>RICE STAGE:</b> After the first flushing irrigation, CRONOS 440EC plus paraquat must be applied before rice emergence. Do NOT apply top rice in a weakened condition</p>

				from causes such as soil salts, moisture stress over watering or any other cause.
<b>PRE-TRANSPLANT TREATMENT</b>				
<b>CROP</b>	<b>WEEDS CONTROLLED</b>	<b>STATE</b>	<b>RATE/TREATED HA</b>	<b>CRITICAL COMMENTS</b>
Transplanted cabbage, cauliflower and broccoli	See Weed Table D	Qld, NSW, Tas, Vic, SA, WA only	1.5 to 2.25 L	Apply CRONOS 440EC to a firm seedbed free of ridges, clods and trash between 7 and 2 days before transplanting. Use the higher rates on heavier textured soils or those with a higher organic matter content. For optimum performance, incorporate with 12 to 25 mm of spray irrigation (or when rainfall is expected within one day) and ensure minimal mechanical disturbance to the seed bed at transplanting. <b>DO NOT</b> apply after transplanting as damage will occur. <b>DO NOT</b> apply where water logging is likely to occur after transplanting or crop stunting will result. <b>DO NOT</b> use CRONOS 440EC on soils with an organic matter above 6% as inconsistent weed control will occur. Ramrod® may be tank mixed with CRONOS 440EC prior to transplanting or applied separately after transplanting.
	Weed Table D plus wild radish ( <i>Raphanus raphanistrum</i> ), Indian hedge mustard ( <i>Sisymbrium orientale</i> ), turnip weed ( <i>Rapistrum rugosum</i> ) wild turnip ( <i>Brassica tournefortii</i> ), potato weed ( <i>Galinsoga parviflora</i> ), sowthistle ( <i>Sonchus oleraceus</i> ), dwarf amaranthus ( <i>Amaranthus macrocarpus</i> ), green amaranthus ( <i>Amaranthus viridis</i> ), winter grass ( <i>Poa annua</i> ), annual nettles ( <i>Urtica</i> spp.)		1.5 to 1.9 L/ha plus 9 L/ha Ramrod® SC	
Transplanted lettuce	See Weed table D	Qld, NSW, Vic, SA, WA only	1.5 to 3L	® Registered trademark of Monsanto Company USA.

**PERENNIAL CROPS**

CROP	WEEDS CONTROLLED	STATE	RATE/ TREATED HA	CRITICAL COMMENTS
Avocadoes, bananas, citrus, deciduous fruits, grapevines, lychees, macadamia nut, mangoes, nuts	Dwarf amaranth, green amaranth, annual ryegrass, asthma plant ( <i>Euphorbia hirta</i> ), banyard grass, chickweed ( <i>Stellaria media</i> ), crowsfoot grass, deadnettle ( <i>Lamium amplexicaule</i> ), fat hen ( <i>Chenopodium album</i> ), pigeon grass, pigweed ( <i>Portulaca oleracea</i> ), prickly lettuce ( <i>Lactuca serriola</i> ), sowthistle, summer grass, winter grass, wireweed	All States	6.75 to 9 L	Do NOT apply CRONOS 440EC to grape vines after bud swell. PRECAUTION: CRONOS 440EC or CRONOS 440EC plus simazine is likely to affect the emergence and growth of green manure crops such as oats or beans between rows of trees or vines, if they are sown into the treated band within 12 months of application. Use the higher rate on medium to heavy textured soils and the lower rate on light textured soils. Use a directed spray avoiding spray contact with green bark, fruit and foliage. If applied to freshly transplanted trees or vines, soils should be compacted prior to application of CRONOS 440EC to avoid contact with roots. CRONOS 440EC must be incorporated by a
	As above plus prairie grass ( <i>Bromus unioloides</i> ) and spotted medic ( <i>Medicago arabica</i> )		9L	
Deciduous fruits, nuts, grape vines and citrus	Asthma plant, Summer grass ( <i>Digitaria sanguinalis</i> ), banyard grass ( <i>Echinochloa spp</i> ), crowsfoot grass ( <i>Eleusine indica</i> ), pigeon grass ( <i>Setaria spp</i> ), winter grass ( <i>Poa annua</i> ), annual ryegrass ( <i>Lolium rigidum</i> ), chickweed ( <i>Stellaria media</i> ), sowthistle ( <i>Sonchus oleraceus</i> ), pigweed ( <i>Portulaca oleracea</i> ), dwarf amaranthus ( <i>Amaranthus macrocarpus</i> ), green amaranthus ( <i>Amaranthus viridis</i> ), fat hen ( <i>Chenopodium alba</i> ), wireweed ( <i>Polygonum aviculare</i> ), prickly lettuce ( <i>Lactuca serriola</i> ), deadnettle ( <i>Lamium amplexicaule</i> )	All States	6.75 to 9 L	minimum of 5 mm of rainfall or spray irrigation as soon as possible but no later than 10 days after application or weed control may be reduced. For best results, soil surface should be free of weeds, surface litter and clods at the time of application. If small weeds are present at the time of application, CRONOS 440EC should be tank mixed with a knockdown herbicide at the recommended rate.
Deciduous fruits, nuts grape vines and citrus	As above plus stinking roger ( <i>Tagetes minuta</i> ), cobbler's pegs ( <i>Bidens pilosa</i> ), curious weed ( <i>Schkuhria pinnata</i> )	All States	6.75L/ha plus simazine at 800 g ai/ha	
	As above plus caltrop ( <i>Tribulis terrestris</i> )		9 L/ha plus simazine at 1 kg ai/ha	

CROP	WEEDS CONTROLLED	STATE	RATE/TREATED HA	CRITICAL COMMENTS
Established lucerne seed crops only	Summer grass ( <i>Digitaria sanguinalis</i> ), fat hen ( <i>Chenopodium album</i> )	NS W and SA only	2.25 L	During the spring months prior to irrigation the lucerne stand should be grazed down hard to produce a low trash soil surface. Apply CRONOS 440EC and incorporate treatment by 12-25 mm of spray irrigation or rainfall within one day of application.
	As above plus pigeon grass ( <i>Setaria</i> spp.)		3.4 L	
Pyrethrum- newly transplanted "splits"	Seedling docks ( <i>Rumex</i> spp.)  Useful suppression of the following weeds is also obtained: capeweed ( <i>Arctotheca calendula</i> ), <i>Erodium</i>	Tas only	3.75 L	Apply immediately following transplanting before emergence of weeds. Repeat applications in any one year should only be made according to advice from crop advisers. Use lower rates on light soils. This product should be used in combination with other registered herbicides as recommended by crop advisers.
Established pyrethrum (one year old or greater)	spp. (stork's bill), Spear thistle ( <i>Cirsium vulgare</i> )			Apply in autumn or spring prior to weed germination. Note existing weeds must be controlled with a knock down herbicide as CRONOS 440EC will not control these weeds. Repeat applications in any one year should only be made according to advise from crop advisers. This product should be used in combination with other registered herbicides as recommended by crop advisers.
Teatree	Weed Table B plus: Dwarf amaranth, green amaranth, annual ryegrass, banyard grass, chickweed ( <i>Stellaria media</i> ), crowsfoot grass, deadnettle ( <i>Lamium amplexicaule</i> ), fat hen ( <i>Chenopodium album</i> ), pigeon grass, pigweed ( <i>Portulaca oleracea</i> ), prickly lettuce ( <i>Lactuca serriola</i> ), sowthistle, summer grass, winter grass, wireweed	NS W, Qld, SA and NT only	3.4 to 6.75L	DO NOT tank mix with simazine as crop damage may result, For best results the soil surface should be free of weeds, surface litter and clods at time of application.  PRE-TRANSPLANTING: Apply 7 to 2 days prior to transplanting seedlings. Use the higher rates on heavier textured soil or soils with higher organic matter. Mechanical disturbances should be minimised during planting to optimise performance. Avoid contact of treated soil with seedling roots. POST-PLANTING: Apply immediately following planting and pre-emergence of weeds. If applied to freshly planted trees, soils should be compacted prior to application of CRONOS 440EC to avoid contact with the roots. Weed control may be reduced if rainfall or irrigation does not occur within 10 days of application. Flood irrigation may reduce control.

**ESTABLISHED TURF**

CROP	WEEDS CONTROLLED	STATE	RATE/TREATED HA	CRITICAL COMMENTS
Turf warm season species: Kikuyu, couch, salt water couch, buffalo grass, bahia grass and Zoysia grass turf	Summer grass crowsfoot (crab grass) winter grass	All States	3.4 L/ha or 34mL/100 m <sup>2</sup>	Incorporate by 10-15 mm of spray irrigation or when rainfall is expected, within one day of application. Apply once every 10 weeks from early September to the end of February.
Queensland blue couch, hybrid couch cv tifdwarf			2.25 L/ha or 22.5mL/100m <sup>2</sup>	
Turf cool season species: Kentucky blue grass			3.4 L/ha or 34 mL/100m <sup>2</sup>	The product should be incorporated by 10-15 mm of spray irrigation or rainfall as soon as possible within one day of application.
Perennial ryegrass, bent grass			2.25 L/ha or 22.5mL/100m <sup>2</sup>	Do NOT make more than one application of CRONOS 440EC per year to control weeds in perennial ryegrass and bent grass.

**IRRIGATION CHANNELS**

Cotton irrigation banks, channels and drains	Barnyard grass ( <i>Echinochloa</i> spp), silvertop grass (brown beetle grass) ( <i>Diplachne reptatrix</i> )	Qld and NSW only	3.4 to 6.75 L	Use the lower rate when short term control is required. Apply in late winter or early spring after regrading or clearing channels. The soil should be loose and free of large clods. If 25-50 mm of rainfall has not fallen within 14 days of application the channel should not be filled with water and allowed to stand for 1 day. The water in the channel should then be drained off and used to pre-irrigate cotton fields. DO NOT use water in channel to irrigate or pre-irrigate susceptible crops.
			4.5 L/ha plus diuron at 8.1 kg ai/ha	Use this mixture where long term control is required or a broader weed spectrum is present. See diuron label for details. Water in the channel should NOT be used to irrigate or pre-irrigate susceptible crops. <b>TANK MIXTURES : Read and follow all label directions including restraints, spray drift restraints, mandatory no-spray zones, critical comments, withholding periods, regional use instructions and safety directions for the tank mix products.</b>

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

**WITH-HOLDING PERIOD : NOT REQUIRED WHEN USED AS DIRECTED**

**WEED TABLE A**

**IN SOYBEANS, PEANUTS, NAVY BEANS, COTTON, SUNFLOWERS,  
COW PEAS, MUNG BEANS, PIGEON PEAS- with pre-plant  
incorporated treatment (double incorporation).**

The following weeds are controlled:

Barnyard grass	<i>Echinochloa</i> spp	Red Flinders grass	<i>Iseilema vaginiflorum</i>
Native millet	<i>Panicum decompositum</i>	Queensland Blue grass	<i>Dichanthium sericeum</i>
Early spring grass	<i>Eriochloa</i> sp.	Pepper grass	<i>Panicum whitei</i>
Pale pigeon grass	<i>Setaria glauca</i>	Pigweed	<i>Portulaca oleracea</i>
Weeping love grass	<i>Eragrostis parviflora</i>	Common heliotrope	<i>Heliotropium europeum</i>
Stink grass	<i>Eragrostis cilianensis</i>	Dwarf amaranth	<i>Amaranthus macrocarpus</i>
Crowsfoot grass	<i>Eleusine indica</i>	Scarlet pimpernel	<i>Anagallis arvensis</i>
Mossman River grass	<i>Cenchrus echinatus</i>	Fathen	<i>Chenopodium album</i>
Liverseed grass	<i>Urochloa panicoides</i>	Crested goosefoot	<i>Chenopodium cristatum</i>
Small burr grass	<i>Tragus australianus</i>	Mexican clover (white eye)	<i>Richardia brasiliensis</i>
Paspalidium (Brigalow grass)	<i>Paspalidium</i> sp.	Wireweed	<i>Polygonum aviculare</i>
Button grass	<i>Dactyloctenium radulans</i>	Green amaranth	<i>Amaranthus viridis</i>

Useful suppression of the following weeds is also obtained.

Peppergrass	<i>Lepidium</i> spp	Mintweed	<i>Salvia reflexa</i>
Stagger weed	<i>Stachys arvensis</i>	Blackberry nightshade	<i>Solanum nigrum</i>
Common verbena	<i>Verbena officinalis</i>	Caltrop	<i>Tribulus terrestris</i>

**WEED TABLE B**

**IN COTTON, SUNFLOWERS, TEA TREE AND MAIZE - with post-plant  
pre-emergence surface treatment (ARGO 440EC ALONE)**

The following weeds are controlled:

Barnyard grass	<i>Echinochloa</i> spp	Red Flinders grass	<i>Iseilema vaginiflorum</i>
Native millet	<i>Panicum decompositum</i>	Queensland Blue grass	<i>Dichanthium sericeum</i>
Early spring grass	<i>Eriochloa</i> sp.	Pepper grass	<i>Panicum whitei</i>
Pale pigeon grass	<i>Setaria glauca</i>	Pigweed	<i>Portulaca oleracea</i>
Weeping love grass	<i>Eragrostis parviflora</i>	Common heliotrope	<i>Heliotropium europeum</i>
Stink grass	<i>Eragrostis cilianensis</i>	Dwarf amaranth	<i>Amaranthus macrocarpus</i>
Crowsfoot grass	<i>Eleusine indica</i>	Scarlet pimpernel	<i>Anagallis arvensis</i>
Mossman River grass	<i>Cenchrus echinatus</i>	Crested goosefoot	<i>Chenopodium crisatum</i>
Liverseed grass	<i>Urochloa panicoides</i>	Mexican clover (white eye)	<i>Richardia brasiliensis</i>
Small burr grass	<i>Tragus australianus</i>	Wireweed	<i>Polygonum aviculare</i>
Paspalidium (Brigalow grass)	<i>Paspalidium</i> sp.	Green amaranth	<i>Amaranthus viridis</i>
Button grass	<i>Dactyloctenium radulans</i>		

Useful suppression of the following weeds is also obtained.

Peppergrass	<i>Lepidium</i> spp	Caltrop	<i>Tribulus terrestris</i>
Stagger weed	<i>Stachys arvensis</i>	Common sowthistle	<i>Sonchus oleraceus</i>
Common verbena	<i>Verbena officinalis</i>	Mintweed	<i>Salvia reflexa</i>

**WEED TABLE C**  
**IN MAIZE - with post-plant pre-emergence surface treatment of**  
**CRONOS 440EC plus tank mix with atrazine.**

The following weeds are controlled in addition to those controlled by CRONOS 440EC alone:

Bathurst burr	<i>Xanthium spinosum</i>	Paddy melon	<i>Cucumis</i> sp.
Noogoora burr	<i>Xanthium pungens</i>	Mintweed	<i>Salvia reflexa</i>
Thornapple	<i>Datura</i> sp.	Caltrop	<i>Tribulus terrestris</i>

The following weeds are not controlled by CRONOS 440EC or the mixture with atrazine:

Nut grass	<i>Cyperus rotundus</i>	Bindweed	<i>Convolvulus</i>
Wandering jew	<i>Commelina</i> sp.		

**WEED TABLE D**  
**IN CARROTS, ONIONS, PROCESSING PEAS, FRENCH BEANS, TRANSPLANTED**  
**CABBAGE, CAULIFLOWER, BROCCOLI AND LETTUCE - with pre-emergence**  
**surface treatment after planting or before transplanting as directed and**  
**incorporated by spray irrigation.**

Shepherd's purse	<i>Capsella bursa-pastoris</i>	Prickly lettuce	<i>Lactuca serriola</i>
Awnless barnyard grass	<i>Echinochloa colona</i>	Fat hen	<i>Chenopodium album</i>
Wireweed	<i>Polygonum aviculare</i>	Green fat hen	<i>Chenopodium murale</i>
Bittercress	<i>Coronopus didymus</i>	Bladder ketmia	<i>Hibiscus trionum</i>
Deadnettle	<i>Lamium amplexicaule</i>	Chickweed	<i>Stellaria media</i>
Pigweed	<i>Portulaca oleracea</i>		

Useful suppression only of the following weeds at the lower rates. Higher rates or tank mixtures are required for complete control (see directions for use table).

Common sowthistle	<i>Sonchus oleraceus</i>	Annual nettles	<i>Urtica</i> spp
Indian hedge mustard	<i>Sisymbrium orientale</i>	Fumitory	<i>Fumaria</i> spp.
Turnip weed	<i>Rapistrum rugosum</i>	Blackberry nightshade	<i>Solanum nigrum</i>
Wild radish	<i>Raphanus raphanistrum</i>	Winter grass	<i>Poa annua</i>

**GENERAL INSTRUCTIONS:**

CRONOS 440EC Herbicide is a selective herbicide for the control of most annual grasses and certain broadleaf weeds. CRONOS 440EC controls weeds by inhibiting seedling development; it will not control established weeds. For best results, seedbeds should be free of weeds, trash and clods at the time of application. Soils containing a high percentage of organic matter can result in poor control. It is recommended that application to soils containing a high percentage of organic matter (greater than 6%) be avoided. Crop injury may result if cold, wet weather follows planting or if CRONOS 440EC is applied to a poorly prepared seedbed. With the return of favourable growing conditions (warm weather), the crop will usually recover and resume normal growth.

CRONOS 440EC will stain (yellow) any objects it contacts. Keep all objects etc that are not to be stained well clear of the product and spray.



**MIXING:**

Put half the required volume of water in spray tank and start agitation. When using CRONOS 440EC alone, add CRONOS 440EC to partially filled tank and then add the remainder of the water. Mix thoroughly.

When using CRONOS 440EC in tank mixes with products such as atrazine or diuron, mix these products as indicated on the relevant label and add the CRONOS 440EC last, then complete filling of tank. Maintain good agitation at all times until spraying is completed. If the spray mixture is allowed to settle, through agitation is essential to re-suspend the mixture before spraying is resumed. Note that when tank mixing CRONOS 440EC with paraquat and glyphosate herbicides, the CRONOS 440EC should be thoroughly mixed in the spray tank first, before adding a paraquat or glyphosate product.

**APPLICATION METHOD:**

***Ground application:***

Use conventional sprayers with either mechanical or by-pass agitation. Flat fan nozzles should be used. Spray equipment should be correctly calibrated to ensure proper application. If applying CRONOS 440EC in tank mix combination with atrazine or diuron, nozzle screens must be no finer than 50 mesh. Apply the recommended quantity of CRONOS 440EC in 50-200 litres of water per hectare. When pre-emergence surface treatment is used, the higher rates of water are recommended.

***Aerial Application:***

For use on pre-plant soybeans, cotton, sunflowers, peanuts, navy beans, cow peas, mung beans, pigeon peas and post-plant, post flushed combine sown rice only.

Apply the recommended quantity of CRONOS 440EC in 25-60 litres of water per hectare. It is essential that the equipment is correctly calibrated and an even spray pattern is obtained. It is essential that markers be used and an accurate swath width is maintained. DO NOT apply if wind speed is greater than 16 km/hour. Always spray with a cross wind in accordance with recommended flying practice.

***Incorporation:***

- (a) CRONOS 440EC works best if thoroughly mixed with soil either mechanically or by irrigation or rainfall. The aim of incorporation is to produce an even band of herbicide to intercept germinating weed seeds.
- (b) Post-plant pre-emergence surface applications of CRONOS 440EC alone or as a tank mixture are most effective in controlling weeds when adequate rainfall occurs or irrigation is applied 7-10 days after treatment to achieve incorporation. If no rain is received within 7-10 days, light mechanical incorporation is required for optimum weed control, except on maize, carrots and rice.
- (c) Maize is tolerant to CRONOS 440EC either alone or in mixtures with atrazine if the seed germinates below the chemically treated band. Maize, carrots and rice are NOT tolerant to CRONOS 440EC if it is in direct contact with the seed.

**Cereal seed dressings:**

Some fungicidal seed dressings can shorten coleoptile length and this can affect emergence particularly if seed is sown too deep. When these cereal seed dressings are used in CRONOS 440EC treated area it is very important to ensure there is good seed depth control and to sow just below (1cm) the chemically treated band. Consult your local Department of Agriculture Agronomist for further advice.

**Weather conditions at planting:**

Crop injury may result if cold weather follows planting. With the return of favourable growing conditions (warm weather), crops usually recover and resume normal growth. In cereals, prolonged cold wet conditions during germination and emergence can result in wheat or barley coleoptiles remaining in the treated band for an extended period. This can reduce emergence.

**RESISTANT WEED WARNING:**

GROUP	<b>D</b>	HERBICIDE
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CRONOS 440EC Herbicide is a member of the dinitroaniline group of herbicides. CRONOS 440EC has the inhibition of tubulin formation mode of action. For weed resistance management CRONOS 440EC is a Group D herbicide. Some naturally occurring weed biotypes resistant to CRONOS 440EC and other Group D herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weeds population if these herbicides are used repeatedly. These resistant weeds will not be controlled by CRONOS 440EC or other Group D herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Colin Campbell (Chemicals) Pty Ltd accepts no liability for any losses that may result from the failure of CRONOS 440EC to control resistant weeds.

**COMPATIBILITY:**

Physical compatibility of CRONOS 440EC has been tested with the following herbicides:

Atrazine, diuron, simazine, proetryne, floumeturon, flumeturon plus prometryne, ametryne, paraquate, propanil, linuron, glyphosate and Ramrod SC. If tank mixing, observe the directions under mixing.

**FOLLOWING CROPS:**

In the event of crop failure the soil should be cultivated to a minimum depth of 15cm to ensure any residues are evenly dispersed throughout the soil.

If a maize crop fails due to weather conditions or some other reason, maize can be replanted the same year without adverse effects but seeding depth must be below retilled area.

The following crops may be sown after a minimum interval of 2 months after application of CRONOS 440EC:

Carrots, parsnips, parsley, celery, potatoes, peas, French beans, transplanted Brassicas, transplanted lettuce, transplanted tomatoes, transplanted capsicums.

The following crops may be sown after a minimum interval of 5 months after application of CRONOS 440EC:

Turnips, lettuce, radish, Brussels sprouts, cabbage, cauliflower, broccoli, onions, leeks, sweet corn, pumpkins, squash, melons, cucumbers.

The following crops may be sown after a minimum interval of 12 months after application of CRONOS 440EC:

Redbeet (beetroot), spinach, silverbeet, poppy.

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

DO NOT apply under meteorological conditions or from spraying equipment which could be expected to cause spray to drift onto nearby susceptible plants, adjacent crops, crop lands or pastures.

**PROTECTION OF WILDLIFE, FISH, CRUSTACEA AND ENVIRONMENT:**

Do NOT contaminate dams, rivers, drains or streams with chemical or used containers.

**STORAGE AND DISPOSAL:**

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

Triple rinse or (preferably) pressure rinse containers before disposal. Add rinsings to spray tank. Do NOT dispose of undiluted chemicals on site.

Break, crush, puncture and bury empty containers in a local authority landfill. If not available bury the containers below 500 mm in a disposal pit specifically set up for this purpose clear of waterways, vegetation and roots. Empty containers and products should NOT be burnt.

**SAFETY DIRECTIONS:**

Harmful if swallowed. Will irritate eyes and skin. Avoid contact with eyes and skin. When preparing spray and using the prepared spray wear face shield or goggles and rubber gloves. If product in eyes wash it out immediately with water. After use and before eating drinking or smoking wash hands arms face thoroughly with soap and water. After each day's use wash gloves and face shield or goggles.

**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 Safety Data Sheet which can be obtained from the supplier.

CONDITIONS OF SALE

Agricultural, horticultural and pastoral preparations in their application involve varying factors such as differing conditions, soil, climate and methods of application over which the vendor does not have control, Whilst Colin Campbell (Chemicals) Pty. Ltd believes that all goods sold by it are true to label and are effective and safe for purpose indicated the company and the seller hereby expressly negate and exclude any express or implied condition, statement or warranty, statutory or otherwise, as to quality or fitness of any goods sold for any purpose or purposes whatsoever except such warranties and conditions, if any, as are implied by the Trade Practices Act 1974 (Commonwealth). The company and the seller accept no responsibility for any loss, harm or damage whatsoever suffered from the use of such goods for any purpose or purposes irrespective of whether or not the buyer was acting in reliance upon the advice recommendation or representation of the seller or any representative agent or employee of the company as to such use except in respect of breaches of conditions and warranties, if any, implied by the Trade Practices Act and in respect of such breaches the liability of the company and the seller shall be limited to the replacement of the goods or the supply of equivalent goods, or the payment of the cost of replacing the goods.

APVMA Approval Number: 69523/61006

Batch No:

Date of Manufacture: