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

**Apparent** 

# Pendimethalin 440

## HERBICIDE

ACTIVE CONSTITUENT: 440g/L PENDIMETHALIN  
SOLVENT: 501g/L HYDROCARBON LIQUID

**GROUP 3 HERBICIDE**

For the control of wireweed, annual grasses (including ryegrass) and certain broadleaved weeds in various crops as shown in the DIRECTIONS FOR USE table

**IMPORTANT: Read this booklet before use.**

APVMA Approval No: 89253/124173

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## DIRECTIONS FOR USE

### Restrains

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

Pendimethalin 440 Herbicide.

Do NOT apply to a poorly prepared seedbed.

Do NOT use Apparent Pendimethalin 440 Herbicide mixed with atrazine on heavy clay soils.

Do NOT apply Apparent Pendimethalin 440 Herbicide where waterlogging is likely to occur.

### Pre-plant Application (Incorporated by the Sowing Process)

CROP	WEED CONTROLLED	STATE	RATE/TREATED HA
Barley and wheat (Including crops with undersown lucerne)	Annual Ryegrass ( <i>Lolium rigidum</i> ), Wireweed ( <i>Polygonum aviculare</i> ), Suppression of Wild Oats ( <i>Avena</i> spp.)	All States	1.35L/ha
Canola (Including crops with undersown lucerne)	Suppression only of Silver Grass ( <i>Vulpia</i> spp.)	Southern NSW, ACT, VIC, SA, WA, TAS only	1.35 to 2.25L/ha 1.5 to 2.25L/ha
Chickpeas, Faba Beans, Field Peas, Lentils, Lupins, Safflower Lupins	Annual Ryegrass ( <i>Lolium rigidum</i> ), Wireweed ( <i>Polygonum aviculare</i> ), Suppression only of Silver Grass ( <i>Vulpia</i> spp.), Suppression of Wild Oats ( <i>Avena</i> spp.)	Southern NSW, ACT, VIC, SA, WA, only WA only NSW, ACT, VIC, SA only	1.5 to 2.25L/ha 1.5L/ha plus simazine at 500gai/ha 1.5L/ha plus simazine at 1.5kgai/ha

### CRITICAL COMMENTS

#### Barley and wheat (Including crops with undersown lucerne):

Where full (double) incorporation is impractical and where the seedbed tilth is fine and free of large stones and trash, apply Apparent Pendimethalin 440 Herbicide up to 24 hours prior to sowing. Incorporate with the combine set to sow to a depth of 3-5cm. Use trailing harrows. (Refer to "Incorporation" under the heading General Instructions). In minimum till situations, only light incorporation will occur due to soil displaced by the points. Trailing harrows should be used to provide better incorporation and weed control. Avoid heavy trash situations which may result in uneven application and incorporation, leading to reduced weed control. Wheat and barley seed must be sown at least 1cm beneath the chemically treated band or reduced emergence may occur. Refer to "Cereal Seed Dressings" and "Weather Conditions at Planting" under GENERAL INSTRUCTIONS, for further information on emergence.

**CAUTION:** Ensure thorough incorporation to maximise safety to undersown lucerne.

**Canola (Including crops with undersown lucerne):** Apply Apparent Pendimethalin 440 Herbicide up to 24 hours prior to sowing. Ensure Apparent Pendimethalin 440 Herbicide is well incorporated. Sow canola with a seeding depth of 1-3cm, at the appropriate depth for conditions.

Canola seed can be placed within the treated band. Incorporate with the combine set to sow the seed below the chemical band. **DO NOT apply to canola post plant pre-emergence.**

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 Apparent Pendimethalin 440 Herbicide 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 that have poor structural characteristics or are poorly worked may result in insufficient and uneven incorporation and unsatisfactory weed control. Heavy soils that are cloddy or have a surface crust or surface seal should be avoided. Attempting to incorporate Apparent Pendimethalin 440 Herbicide when soils are very wet or very dry may also result in insufficient mixing and therefore poor weed control.

**CAUTION:** Ensure thorough incorporation to maximise safety to undersown lucerne.

Where full (double) incorporation is impractical and where the seedbed tilth is fine and free of large stones and trash, apply Apparent Pendimethalin 440 Herbicide or in the case of lupins Apparent Pendimethalin 440 Herbicide plus simazine up to 24 hours prior to sowing. Incorporate with the combine set to sow to a depth of 3-5cm. Use trailing harrows. (Refer to "Incorporation" under the heading General Instructions). Application to heavier soil types that have poor structural characteristics or are poorly worked may result in insufficient and uneven incorporation and unsatisfactory weed control. Heavy soils that are cloddy or have a surface crust or surface seal should be avoided.

Attempting to incorporate Apparent Pendimethalin 440 Herbicide when soils are very wet or very dry may also result in insufficient mixing and therefore poor weed control. Refer to "Weather Conditions at Planting" under GENERAL INSTRUCTIONS, for further information on emergence.

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 rate on light textured soils.

**Pre-plant Incorporation (Double Incorporation):**

**Note:** For all crops listed in the double incorporation table below:

Incorporate Apparent Pendimethalin 440 Herbicide 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 is 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 type characteristics or that are poorly worked may result in insufficient or 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 Apparent Pendimethalin 440 Herbicide 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	WEED CONTROLLED	STATE	RATE/TREATED HA
Cotton	See Weed Table A	QLD, NSW only	2.25L/ha
Soybeans, Peanuts, Navy Beans, Cow Peas, Mung Beans, Pigeon Peas		QLD, NSW, NT only	1.9 to 2.5L/ha
Sunflowers		QLD, NSW, VIC SA only	
Wheat and Barley	Annual ryegrass ( <i>Lolium rigidum</i> ), Wireweed ( <i>Polygonum aviculare</i> ), Suppression of Wild Oats ( <i>Avena</i> spp.)	All States	900mL/ha
Field Peas		Southern NSW, VIC, TAS, SA, WA only	1.5L/ha
Chickpeas, Faba Beans, Lupins, Safflower		QLD, northern NSW, TAS* only	1.9 to 2.5L/ha

CRITICAL COMMENTS
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 Apparent Pendimethalin 440 Herbicide from hills leaving an untreated band over the row, requiring a further application of Apparent Pendimethalin 440 Herbicide or other herbicides in that band. When the seedbed is rough, a second incorporation is necessary. Apparent Pendimethalin 440 Herbicide may be applied by aerial or ground rig. In the Macquarie Valley area, only apply by air when ground is too wet for ground application.
Use weighted harrows at 8-13km/hour followed by a cross working with a combine set to work at a depth of 2-5cm at 8-13 km/hour. 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.
Use weighted harrows at 8-13km/hour followed by a cross- working with a combine set to work at a depth of 2-5cm at 8-13km/hour. 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. <b>*Lupins:</b> In Tasmania, use only on the species <i>Lupinus angustifolius</i> . <b>DO NOT</b> use on <i>Labus</i> . Where full (double) incorporation is impractical and where the seedbed tilth is fine and free of large stones and trash, apply Apparent Pendimethalin 440 Herbicide or in the case of lupins Apparent Pendimethalin 440 Herbicide plus simazine up to 24 hours prior to sowing. Incorporate with the combine set to sow to a depth of 3-5cm. Use trailing harrows. (Refer to "Incorporation" under the heading General Instructions). Application to heavier soil types that have poor structural characteristics or are poorly worked may result in insufficient and uneven incorporation and unsatisfactory weed control. Heavy soils that are cloddy or have a surface crust or surface seal should be avoided. Attempting to incorporate Apparent Pendimethalin 440 Herbicide when soils are very wet or very dry may also result in insufficient mixing and therefore poor weed control. Refer to "Weather Conditions at Planting" under GENERAL INSTRUCTIONS, for further information on emergence. 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 rate on light textured soils.

CROP	WEED CONTROLLED	STATE	RATE/TREATED HA
Wheat and Barley	Annual ryegrass ( <i>Lolium rigidum</i> ), Wireweed ( <i>Polygonum aviculare</i> ), Suppression of Wild Oats ( <i>Avena</i> spp.) Suppression only of Silver Grass ( <i>Vulpia</i> spp.)	All States	1.4L/ha
Canola (Including crops with undersown lucerne)		Southern NSW, VIC, TAS, SA, WA	1.4 to 2.25L/ha
		only	1.5 to 2.25L/ha
Chickpeas, Faba Beans, Safflower, Lupins, Field Peas		Southern NSW, VIC, SA, WA only	1.5 to 2.25L/ha
Lupins	and Wild Oats ( <i>Avena</i> spp.)	WA only	1.5L/ha plus 560g/ha simazine 900 WG or 1L/ha flowable simazine
		NSW, VIC, SA only	1.5L/ha plus 1.7kg/ha simazine 900WG or 3L/ha flowable simazine

CRITICAL COMMENTS
<p><b>All crops (except canola):</b> Where full (double) incorporation is impractical and where the seedbed tilth is fine and free of large stones and trash, apply Apparent Pendimethalin 440 Herbicide, or in the case of lupins Apparent Pendimethalin 440 Herbicide plus simazine, up to 24 hours prior to sowing. Incorporate with the combine set to sow to a depth of 3-5cm. Use trailing harrows. (Refer to "Incorporation" under the heading General Instructions). Wheat and barley seed must be sown at least 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.</p> <p>Refer to Critical Comments on previous page plus:</p> <p><b>Canola:</b> Apply Apparent Pendimethalin 440 Herbicide up to 24 hours prior to sowing. Ensure Apparent Pendimethalin 440 Herbicide is well incorporated. Sow canola with a seeding depth of 1-3cm, at the appropriate depth for conditions. Canola seed can be placed within the treated band.</p> <p>Use the higher rates on medium to heavy textured soils and the lower rates on light textured soils. <b>NOTE:</b> Development in waterlogged conditions after the application of Apparent Pendimethalin 440 Herbicide 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 that have poor structural characteristics or are poorly worked may result in insufficient and uneven incorporation and unsatisfactory weed control. Heavy soils that are cloddy or have a surface crust or surface seal should be avoided. Attempting to incorporate Apparent Pendimethalin 440 Herbicide when soils are very wet or very dry may also result in insufficient mixing and therefore poor weed control.</p> <p><b>CAUTION:</b> Ensure thorough incorporation to maximise safety to undersown Lucerne. Use the lower rate when canola is undersown with Lucerne.</p> <p><b>DO NOT apply to canola post plant pre-emergence.</b></p>

#### POST-PLANT PRE-EMERGENCE APPLICATION (OVERALL BAND SPRAYING): NON-MECHANICAL INCORPORATION

CROP	WEED CONTROLLED	STATE	RATE/TREATED HA
Cotton	See Weed Table B	QLD, NSW only	3.4L/ha
Sunflowers		QLD, NSW, SA only	
Maize		QLD, NSW, NT only	3.4L/ha
	See Weed Table C		2.25L/ha plus 1.1kg/ha atrazine 900WG or 2L/ha flowable atrazine

CRITICAL COMMENTS
<p>Where incorporation prior to sowing is impractical and where the seedbed tilth is fine and free of large stones and trash, Apparent Pendimethalin 440 Herbicide should be applied within 48 hours after sowing.</p> <p>Where incorporation prior to sowing is impractical and where the seedbed tilth is fine and free of large stones and trash, Apparent Pendimethalin 440 Herbicide should be applied within 48 hours after sowing and before the emergence of the crop and weeds.</p> <p>Where Fat Hen or Blackberry Nightshade is expected to be a major problem, pre-plant incorporation is preferred. Refer to the relevant sections under the heading "Incorporation" in "General Instructions".</p> <p>Use Apparent Pendimethalin 440 Herbicide after planting and before emergence of crop or weeds, especially where grasses are expected to be the major problem. DO NOT incorporate. Avoid application in dry weather; this may cause pruning of aerial roots and lodging. Refer to the relevant sections under the heading "Incorporation" in "General Instructions".</p> <p>Apparent Pendimethalin 440 Herbicide should be applied in a tank mix combination with atrazine after planting and before the emergence of crop and weeds, where Thornapple, Noogoora Burr, Bathurst Burr, Caltrop, Paddy Melon or Mintweed are expected to be a major problem.</p> <p>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 Apparent Pendimethalin 440 Herbicide mixed with atrazine on heavy clay soils, as weed control may not be adequate. Refer to the relevant sections under the heading "Incorporation" in "General Instructions".</p>

CROP	WEED CONTROLLED	STATE	RATE/TREATED HA
Broad Beans	Poppies, Wireweed ( <i>Polygonum aviculare</i> )	TAS only	3L/ha
Carrots	See Weed Table D	QLD, NSW, VIC, SA, TAS, WA only	1.5 to 2.25L/ha
	Weed Table D plus Wild Radish ( <i>Raphanus raphanistrum</i> ) and Sowthistle ( <i>Sonchus oleraceus</i> )		1.5L/ha plus linuron at 1.0kg ai/ha
Processing Peas	See Weed Table D	QLD, VIC only	1.5 to 3L/ha
		TAS only	3L/ha
French Beans		QLD, TAS only	2.25 to 3L/ha
Onions	Hogweed (Wireweed) ( <i>Polygonum aviculare</i> )	TAS only	0.56 to 0.75L/ha
			0.75 to 1.5L/ha
		NSW, ACT, VIC, SA, WA only	
			0.56 to 0.75L/ha (See Critical comments)

CRITICAL COMMENTS
<p><b>MINIMUM PLANTING DEPTH:</b></p> <p><b>Carrots:</b> 15mm. <b>Processing peas and French beans:</b> 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 seedbed. Apply Apparent Pendimethalin 440 Herbicide to a fine seedbed 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 25mm of spray irrigation or rainfall applied within one day of application for optimum performance. Do NOT disturb the soil by rolling or harrowing after Apparent Pendimethalin 440 Herbicide has been applied. Do NOT apply where heavy rainfall or irrigation is likely to lead to water logging. Do NOT use Apparent Pendimethalin 440 Herbicide on soils with an organic matter content above 6% as inconsistent weed control will occur.</p> <p><b>FRENCH BEANS:</b> For use in the Lockyer and Fassifern 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> <p>Apply in conjunction with other herbicides as advised by a qualified crop adviser to ensure that an adequate level of weed control is achieved in adverse conditions.</p> <p><b>Pre-Emergence:</b> Do NOT use on sandy soils.</p> <p><b>MINIMUM PLANTING DEPTH:</b> 15mm. Apply from immediately after sowing until just prior to emergence. Apply Apparent Pendimethalin 440 Herbicide 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 to 25mm of spray irrigation within one day of application. DO NOT exceed 0.56L/ha if soil conditions are wet and cold.</p> <p><b>Post-Emergence:</b> Apply Apparent Pendimethalin 440 Herbicide from the first true leaf until the 3 leaf stage. Repeat applications may be made after the 1 leaf up to the 3 leaf stage providing total usage of Apparent Pendimethalin 440 Herbicide on crop does not exceed 2.25L/ha. Avoid applying Apparent Pendimethalin 440 Herbicide to areas where water logging is likely to occur.</p> <ul style="list-style-type: none"> <li>• Apply in conjunction with other herbicides as advised by a qualified crop adviser to ensure that an adequate level of weed control is achieved in adverse conditions.</li> <li>• Depth of sowing is critical. Onions must be sown to a depth of at least 15mm with press wheels or rollers behind the planter to ensure coverage and compaction.</li> <li>• DO NOT disturb the soil by rolling or harrowing after application.</li> <li>• For optimum performance, incorporate with spray irrigation within a day of planting. However, DO NOT water heavily (no more than 12mm irrigation) for at least 5 days after application.</li> <li>• AVOID application to areas where water logging is likely to occur.</li> <li>• DO NOT apply if heavy rain is likely within a week of application, as crop damage may result.</li> <li>• DO NOT exceed 0.75L/ha if soil conditions are wet and cold.</li> <li>• DO NOT apply more than 3 times per season.</li> <li>• DO NOT apply more than 3L/ha per season.</li> </ul> <p><b>Light/Sandy soils</b> DO NOT apply pre-emergence.</p> <p><b>Application to moist soil is best</b> Apply 0.56 to 0.75L/ha post emergence at the 4-5 leaf stage, with 1-2 further applications of 0.56 to 0.75L/ha as needed throughout the season. (Approx. 3-4 weeks apart).</p>

CROP	WEED CONTROLLED	STATE	RATE/TREATED HA
Onions (cont)	Hogweed (Wireweed) ( <i>Polygonum aviculare</i> )	NSW, ACT, VIC, SA, WA only	0.75 to 1.5L/ha (See Critical comments)
Sugarcane	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. <i>Hamil</i> and c.v. <i>Guinea</i> ), Green Summer Grass ( <i>Brachiaria subquadriflora</i> )	QLD, NSW, WA only	2.25 to 3.4L/ha
	Blue Top (Blue Billygoat Weed) ( <i>Ageratum houstonianum</i> )		2.25L/ha plus 1.7kg/ha atrazine 900WG or 3L/ha flowable atrazine or 1.7kg/ha diuron 900WG or 3L/ha flowable diuron
	Barnyard Grass ( <i>Echinochloa</i> spp.), Blackberry Nightshade ( <i>Solanum nigrum</i> ), Blue Top (Blue Billygoat Weed) ( <i>Ageratum houstonianum</i> ), Common sida ( <i>Sida rhombifolia</i> ), Giant/black Pigweed ( <i>Trianthema portulacastrum</i> ), Glossy Nightshade ( <i>Solanum americanum</i> ), Green Amaranth ( <i>Amaranthus viridis</i> ), <i>Ipomoea</i> spp., Liverseed Grass ( <i>Urochloa panicoides</i> ), Milkweed (Mexican Fire Plant) ( <i>Euphorbia heterophylla</i> ), Pigweed ( <i>Portulaca oleracea</i> )	QLD, NSW, WA only	2.25L/ha plus 400mL/ha imazapic

CRITICAL COMMENTS
<p><b>Heavy/High organic matter soils. Application to moist soil is best.</b></p> <p>Apply 0.75 to 1.5L/ha pre-emergence within 2 days of planting. Apply to a fine, firm seed bed free of ridges, clods and trash.</p> <p><b>For furrow irrigated crops, application to a dry seed bed, followed by irrigation within 5 days is optimal.</b></p> <p>An application of 0.75 to 1.5L/ha post emergence may be made at the 2 leaf stage. (Application at this stage may cause yellowing of onions).</p> <p>Apparent Pendimethalin 440 Herbicide should be applied as soon as possible after planting and before weed emergence. Consolidation (cutaway operation) of the planting furrow prior to application, to prevent soil movement into the base of the drill, is recommended.</p> <p>Expect poor grass control in soils that contain a high percentage of organic matter. Refer to the relevant sections under the heading "Incorporation" in "General Instructions".</p> <p>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.</p> <p><b>NOTE</b></p> <p><b>INCORPORATION:</b> Under dry conditions or where some cultivation is expected after application Apparent Pendimethalin 440 Herbicide should be thoroughly incorporated by finger rakes to a shallow depth. In subsequent tillage operations, cultivation depth should not exceed the depth of incorporation.</p> <p><b>WATER INCORPORATION:</b> Incorporate using 12 to 25mm of spray irrigation or when suitable rainfall is expected 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 Apparent Pendimethalin 440 Herbicide, resulting in the movement of soil from the top to the bottom of the planting drill, weed control will be reduced. For other broadleaved weeds higher rates of atrazine or diuron can be tank mixed with Apparent Pendimethalin 440 Herbicide - see the relevant atrazine or diuron labels for details.</p> <p><b>TANK MIXTURES: Read and follow all label directions including restraints, spray drift restraints, mandatory no-spray zones, critical comments, withholding periods, regional use restrictions and safety directions for the tank mix products.</b></p> <p>Incorporate into the soil either by overhead irrigation, rainfall or mechanical incorporation, to a depth of 5cm. Incorporate as soon as possible and within 3-5 days after application. Read all directions for use in sugarcane on the imazapic label.</p>

CROP	WEED CONTROLLED	STATE	RATE/TREATED HA
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, NT only	2.25L/ha plus propanil at 1.8kgai/ha

#### POST-PLANT AND FLUSHING

CROP	WEED CONTROLLED	STATE	RATE/TREATED HA
Combine sown rice and pasture sod sown rice	As above plus suppression of Annual Sedges ( <i>Cyperus</i> spp.)	QLD, NSW, NT only	2.25 or 3.4L/ha plus 800mL/ha paraquat 250

#### PRE-TRANSPLANT TREATMENT

CROP	WEED CONTROLLED	STATE	RATE/TREATED HA
Transplanted broccoli, cabbage and cauliflower	See Weed Table D	All States	1.5 to 2.25L/ha
	See 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 paviflora</i> ), Sowthistle, ( <i>Sonchus oleraceus</i> ), Dwarf Amaranth ( <i>Amaranthus macrocarpus</i> ), Green Amaranth ( <i>Amaranthus viridis</i> ), Winter Grass ( <i>Poa annua</i> ), Annual Nettles ( <i>Urtica</i> spp.)		1.5 to 1.9L/ha plus 9L/ha Ramrod® SC
Transplanted lettuce	See Weed Table D	QLD, NSW, VIC, SA, WA only	1.5 to 3L/ha

CRITICAL COMMENTS
Apply this tank mixture up to the 2 leaf stage of Barnyard Grass and 1 leaf stage of Silvertop, either by ground rig in 70-100L/ha or by aircraft in 25-30L/ha total spray volume. <b>WATER MANAGEMENT:</b> Flush immediately after sowing to enable a good even germination of rice and to ensure the soil surface is sealed. Apply a second flush or permanent flood after 2 days but not later than 5 days after the application. 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. <b>RICE STAGE:</b> After the first flushing irrigation, the stage of rice at application of this tank mixture is not critical. Timing should be based on the stage of weed growth and water management. However, DO NOT apply to rice in a weakened condition as a result of soil salts, moisture stress, over-watering, or any other cause. Some transient leaf burn of the rice may result after the application but no long term effects will result. Rice seed should be covered with at least 1cm of water after the first flushing irrigation before Apparent Pendimethalin 440 Herbicide plus propanil is applied to germinating rice seed.

CRITICAL COMMENTS
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, Silvertop and Sedges, before rice emergence. Apply by ground rig in 70-100L/ha of water total spray volume. <b>WATER MANAGEMENT:</b> Flush immediately after sowing to enable a good even germination of rice. The soil surface must be sealed by a flushing irrigation or rainfall before the application of Apparent Pendimethalin 440 Herbicide plus paraquat. Apply a second flush or permanent flood after 1 day but not later than 5 days after the application of Apparent Pendimethalin 440 Herbicide plus paraquat. 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. <b>RICE STAGE:</b> After the first flushing irrigation, Apparent Pendimethalin 440 Herbicide plus paraquat must be applied before rice emergence. Do NOT apply to rice in a weakened condition from causes such as soil salts, moisture stress, over-watering, or any other cause.

CRITICAL COMMENTS
Apply Apparent Pendimethalin 440 Herbicide to a firm seedbed free of ridges, clods and trash between 2-7 days before transplanting. Use the higher rates on heavier textured soils or those with higher organic matter content. For optimum performance incorporate with 12 to 25mm of spray irrigation (or rainfall expected within one day) and ensure minimal mechanical disturbance to the seedbed at transplanting. DO NOT apply after transplanting, as damage will occur. DO NOT apply where water logging is likely to occur after transplanting or crop stunting will result. DO NOT use Apparent Pendimethalin 440 Herbicide on soils with an organic matter content above 6% as inconsistent weed control will occur. Ramrod® SC may be tank mixed with Apparent Pendimethalin 440 Herbicide prior to transplanting <b>or</b> applied separately after transplanting.

**PERENNIAL CROPS**

CROP	WEED CONTROLLED	STATE	RATE/TREATED HA
Avocados, bananas, citrus, deciduous fruits, grapevines, lychees macadamia nut, mangoes, nuts	Dwarf Amaranth ( <i>Amaranthus macrocarpus</i> ), Green Amaranth ( <i>Amaranthus viridis</i> ), Annual Ryegrass, ( <i>Lolium rigidum</i> ), Asthma Plant ( <i>Euphorbia hirta</i> ), Barnyard Grass, ( <i>Echinochloa</i> spp.), Chickweed ( <i>Stellaria media</i> ), Crowsfoot Grass ( <i>Eleusine indica</i> ), Deadnettle ( <i>Lamium amplexicaule</i> ), Fat Hen ( <i>Chenopodium album</i> ), Summer Grass ( <i>Setaria</i> spp.), Pigweed ( <i>Portulaca oleracea</i> ), Prickly Lettuce ( <i>Lactuca serriola</i> ), Sowthistle ( <i>Sonchus oleraceus</i> ), Summer Grass, ( <i>Digitaria anguinalis</i> ), Winter Grass ( <i>Poa annua</i> ), Wireweed (( <i>Polygonum aviculare</i> )	All States	6.75 to 9L/ha
	As above plus Prairie Grass ( <i>Bromus unioloides</i> ), Spotted Medic ( <i>Medicago arabica</i> )		9L/ha
Deciduous fruits, nuts, grapevines, citrus	Asthma Plant ( <i>Euphorbia hirta</i> ), Summer Grass ( <i>Digitaria anguinalis</i> ), Barnyard Grass ( <i>Echinochloa</i> spp.), Crowsfoot Grass ( <i>Eleusine indica</i> ), Pigeon Grass ( <i>Setaria</i> spp.), 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 Amaranth ( <i>Amaranthus macrocarpus</i> ), Green Amaranth ( <i>Amaranthus viridis</i> ), Fat Hen ( <i>Chenopodium album</i> ), Wireweed ( <i>Polygonum aviculare</i> ), Prickly Lettuce ( <i>Lactuca serriola</i> ), Deadnettle ( <i>Lamium amplexicaule</i> )		6.75 to 9L/ha
	As above plus Stinking Roger ( <i>Tagetes minuta</i> ), Cobbler's Pegs ( <i>Bidens pilosa</i> ), Curious Weed ( <i>Schkuhria pinnata</i> )		6.75L/ha plus 900g/ha simazine 900WG or 1.6L/ha flowable simazine
	As above plus Calltrop ( <i>Tribulus terrestris</i> )		9L/ha plus 1.1kg/ha simazine 900WG or 2L/ha flowable simazine

CRITICAL COMMENTS
<p>Do NOT apply Apparent Pendimethalin 440 Herbicide to grapevines after bud swell.</p> <p><b>PRECAUTION:</b> Apparent Pendimethalin 440 Herbicide or Apparent Pendimethalin 440 Herbicide 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.</p> <p>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 Apparent Pendimethalin 440 Herbicide to avoid contact with roots. Apparent Pendimethalin 440 Herbicide must be incorporated by a minimum of 5mm 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, Pendimethalin 440 Herbicide should be tank mixed with a knockdown herbicide at the recommended rate.</p> <p>Crop damage and/or reduced weed control may occur if Apparent Pendimethalin 440 Herbicide is not incorporated successfully. If insufficient rainfall follows within 10 days of application the product must be incorporated over the whole surface area treated through the use of overhead sprinklers or by mechanical means, using appropriate equipment to avoid root damage. Drip irrigation is inadequate for this purpose.</p> <p>A minimum of 5-10mm of rain or sprinkler irrigation is normally required to incorporate Apparent Pendimethalin 440 Herbicide into the soil. 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, Apparent Pendimethalin 440 Herbicide should be tank mixed with a knockdown herbicide at the recommended rate.</p> <p>A minimum of 5-10mm of rain or sprinkler irrigation is normally required to incorporate Apparent Pendimethalin 440 Herbicide into the soil. 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, Apparent Pendimethalin 440 Herbicide should be tank mixed with a knockdown herbicide at the recommended rate.</p> <p>Use of simazine could lead to crop damage on vines younger than 3 years of age. Refer to the simazine label.</p> <p>Do NOT apply tank mixtures of Apparent Pendimethalin 440 Herbicide plus simazine to alkaline soils.</p>



Established lucerne seed crops only	Summer Grass ( <i>Digitaria anguinalis</i> ), Fat Hen ( <i>Chenopodium album</i> ) As above plus Pigeon Grass ( <i>Setaria</i> spp.)	NSW, SA only	2.25L/ha 3.4L/ha
<b>CROP</b>	<b>WEED CONTROLLED</b>	<b>STATE</b>	<b>RATE/TREATED HA</b>
Eucalypt forestry plantations	Amaranth ( <i>Amaranthus</i> spp.), Annual Ryegrass, ( <i>Lolium rigidum</i> ), Asthma Plant ( <i>Euphorbia hirta</i> ), Barnyard Grass, ( <i>Echinochloa</i> spp.), Chickweed ( <i>Stellaria media</i> ), Crowfoot Grass ( <i>Eleusine indica</i> ), Deadnettle ( <i>Lamium amplexicaule</i> ), Fat Hen ( <i>Chenopodium album</i> ), Pigeon Grass ( <i>Setaria</i> spp.), Pigweed ( <i>Portulaca oleracea</i> ), Prickly Lettuce ( <i>Lactuca serriola</i> ), Stagger weed ( <i>Stachys arvensis</i> ), Sowthistle ( <i>Sonchus oleraceus</i> ), Summer Grass, ( <i>Digitaria anguinalis</i> ), Winter Grass ( <i>Poa annua</i> ), Wireweed ( <i>Polygonum aviculare</i> )	All States	6.75 to 9L/ha
Pyrethrum Pre-emergence crops	See Weed Table D	TAS only	1.5 to 2.25L/ha
Pyrethrum Post-emergence crops			1.5 to 3.75L/ha
Pyrethrum –newly transplanted “splits”	Seedling docks ( <i>Rumex</i> spp.) Suppression of the following weeds is also obtained: Capeweed ( <i>Arctotheca calendula</i> ),		3.75L/ha
Established pyrethrum (one year old or greater)	<i>Erodium</i> spp. (Storks bill), Spear Thistle ( <i>Cirsium vulgare</i> )		
Teatree ( <i>Melaleuca alternifolia</i> )	Weed Table B plus Dwarf Amaranth ( <i>Amaranthus macrocarpus</i> ), Green Amaranth ( <i>Amaranthus viridis</i> ), Annual Ryegrass ( <i>Lolium rigidum</i> ), Barnyard Grass ( <i>Echinochloa</i> spp.), Chickweed ( <i>Stellaria media</i> ), Crowfoot Grass ( <i>Eleusine indica</i> ), Deadnettle ( <i>Lamium amplexicaule</i> ), Fat Hen ( <i>Chenopodium album</i> ), Pigeon Grass ( <i>Setaria</i> spp.), Pigweed ( <i>Portulaca oleracea</i> ), Prickly Lettuce ( <i>Lactuca serriola</i> ), Sowthistle ( <i>Sonchus oleraceus</i> ), Summer Grass, ( <i>Digitaria anguinalis</i> ), Winter Grass ( <i>Poa annua</i> ), Wireweed ( <i>Polygonum aviculare</i> )	NSW, QLD, SA, NT only	3.4 to 6.75L/ha

During the spring months prior to irrigation, the lucerne stand should be grazed down hard to produce a low trash soil surface. Apply Apparent Pendimethalin 440 Herbicide and incorporate treatment by 12-25mm of spray irrigation or when rainfall is expected within one day of application.
<b>CRITICAL COMMENTS</b>
<b>PRE-PLANTING:</b> Apply 7 to 2 days prior to transplanting. Use the higher rate on heavier textured soils or soils with high organic matter. Mechanical disturbance should be minimised during planting to optimise performance. <b>POST-PLANTING:</b> Apply immediately following planting. Before emergence of weeds. Repeat applications may be made as directed sprays to provide pre- emergence control of weeds. Emerged weeds should be controlled with carefully directed applications of a non-selective herbicide or over- the-top application of a selective herbicide. If applied to freshly transplanted trees, soil should be compacted prior to application to avoid contact with roots. Weed control may be reduced if rainfall or irrigation does not occur within 10 days of application. Flood irrigation may reduce control.
Apply Apparent Pendimethalin 440 Herbicide to seedbed within 10 days of sowing, prior to pyrethrum emergence. Apply at the lower rates on sandy soils. Incorporate with 12-25mm of rainfall or irrigation within 1 day of application for optimum performance.
Apply Apparent Pendimethalin 440 Herbicide prior to weed germination at any stage or pyrethrum growth from 2 true leaf stage to pre-flowering, as advised by qualified crop advisor. Seek advice from qualified crop advisor before applying follow-up applications in any one year. Incorporate with 12-25mm of rainfall or irrigation within 1 day of application for optimum performance.
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.
Apply in autumn or spring prior to weed germination. Note existing weeds must be controlled with a knockdown herbicide, as Apparent Pendimethalin 440 Herbicide will not control these weeds. Repeat applications in any one year should only be made according to advice from crop advisers. This product should be used in combination with other registered herbicides as recommended by crop advisers.
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 the time of application. <b>PRE-TRANSPLANTING:</b> Apply 7 to 2 days prior to transplanting seedlings. Use the higher rates on heavier textured soils or soils with higher organic matter. Mechanical disturbance should be minimised during planting to optimise performance. Avoid contact of treated soil with seedling roots. <b>POST-PLANTING:</b> Apply immediately following planting and pre-emergence of weeds. If applied to freshly transplanted trees, soils should be compacted prior to application of Apparent Pendimethalin 440 Herbicide to avoid contact with 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	WEED CONTROLLED	STATE	RATE/TREATED HA
TURF WARM SEASON SPECIES. Bahia Grass, Buffalo Grass, Couch, Kikuyu, Salt Water Couch and Zoysia Grass Turf	Summer Grass, ( <i>Digitaria anguinalis</i> ), Crowsfoot (Crab Grass), Winter Grass ( <i>Poa annua</i> )	All States	3.4L/ha or 34mL/100m <sup>2</sup>
Queensland Blue Couch, Hybrid Couch c.v. Tiidwarf			2.25L/ha or 22.5mL/10m <sup>2</sup>
TURF COOL SEASON SPECIES. Kentucky Blue Grass			3.4L/ha or 34mL/100m <sup>2</sup>
Bent Grass, Perennial Ryegrass			2.25L/ha or 22.5mL/100m <sup>2</sup>

**IRRIGATION CHANNELS**

SITUATION	WEED CONTROLLED	STATE	RATE/TREATED HA
Cotton Irrigation Banks, Channels and Drains	Barnyard Grass ( <i>Echinochloa</i> spp.), Silvertop Grass (Brown Beetle Grass) ( <i>Diplachne reptatrix</i> )	QLD, NSW only	3.4 to 6.75L/ha
			4.5L/ha plus 9kg/ha diuron 900WG or 16.2L/ha flowable diuron

**NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL  
UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION  
WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED**

**CRITICAL COMMENTS**

Incorporate by 10-15mm 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.

The product should be incorporated by 10-15mm of spray irrigation or rainfall as soon as possible within one day of application.

Apply Apparent Pendimethalin 440 Herbicide only once per year to control weeds in Perennial Ryegrass and Bent Grass.

**CRITICAL COMMENTS**

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 25-50mm of rainfall has not fallen within 14 days of application the channel should 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.

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.

**TANK MIXTURES:** Read and follow all label directions including restraints, spray drift restraints, mandatory no-pray zones, critical comments, withholding periods, regional use restrictions and safety directions for the tank mix products.

WEED TABLE A

<b>IN COTTON, COW PEAS, MUNG BEANS, NAVY BEANS, PEANUTS, PIGEON PEAS, SOYBEANS, SUNFLOWERS - with pre-plant incorporated treatment (double incorporation)</b>			
<b>The following weeds are controlled:</b>			
<b>Barnyard Grass</b>	<i>Echinochloa</i> spp.	<b>Native Millet</b>	<i>Panicum decompositum</i>
<b>Button Grass</b>	<i>Dactyloctenium radulans</i>	<b>Pale Pigeon Grass</b>	<i>Setaria glauca</i>
<b>Common Heliotrope</b>	<i>Heliotropium europeum</i>	<b>Paspalidium</b>	<i>Paspalidium</i> spp.
<b>Crested Goosefoot</b>	<i>Chenopodium cristatum</i>	<b>Pepper Grass</b>	<i>Panicum whitei</i>
<b>Crowsfoot Grass</b>	<i>Eleusine indica</i>	<b>Pigweed</b>	<i>Portulaca oleracea</i>
<b>Dwarf Amaranth</b>	<i>Amaranthus macrocarpus</i>	<b>Queensland Blue Grass</b>	<i>Dichanthium sericeum</i>
<b>Early Spring Grass</b>	<i>Eriochloa</i> spp.	<b>Red Flinders Grass</b>	<i>Iseilema vaginiflorum</i>
<b>Fat Hen</b>	<i>Chenopodium album</i>	<b>Scarlet Pimpernel</b>	<i>Anagallis arvensis</i>
<b>Green Amaranth</b>	<i>Amaranthus viridis</i>	<b>Small Burr Grass</b>	<i>Tragus australianus</i>
<b>Liverseed Grass</b>	<i>Urochloa panicoides</i>	<b>Stink Grass</b>	<i>Eragrostis cilianensis</i>
<b>Mexican Clover</b>	<i>Richardia brasiliensis</i>	<b>Weeping Love Grass</b>	<i>Eragrostis parviflora</i>
<b>Mossman River Grass</b>	<i>Cenchrus echinatus</i>	<b>Wireweed</b>	<i>Polygonum aviculare</i>
<b>Useful suppression of the following weeds is also obtained:</b>			
<b>Blackberry Nightshade</b>	<i>Solanum nigrum</i>	<b>Mintweed</b>	<i>Salvia reflexa</i>
<b>Caltrop</b>	<i>Tribulus terrestris</i>	<b>Peppercress</b>	<i>Lepidium</i> spp.
<b>Common Verbena</b>	<i>Verbena officinalis</i>	<b>Stagger Weed</b>	<i>Stachys arvensis</i>

WEED TABLE B

<b>IN COTTON, SUNFLOWERS, MAIZE and TEA TREE - with post-plant pre-emergence surface treatment (Apparent Pendimethalin 440 Herbicide alone)</b>			
<b>The following weeds are controlled:</b>			
<b>Barnyard Grass</b>	<i>Echinochloa</i> spp.	<b>Pale Pigeon Grass</b>	<i>Setaria glauca</i>
<b>Button Grass</b>	<i>Dactyloctenium radulans</i>	<b>Paspalidium</b>	<i>Paspalidium</i> spp.
<b>Common Heliotrope</b>	<i>Heliotropium europeum</i>	<b>Pepper Grass</b>	<i>Panicum whitei</i>
<b>Crested Goosefoot</b>	<i>Chenopodium cristatum</i>	<b>Pigweed</b>	<i>Portulaca oleracea</i>
<b>Crowsfoot Grass</b>	<i>Eleusine indica</i>	<b>Queensland Blue Grass</b>	<i>Dichanthium sericeum</i>
<b>Dwarf Amaranth</b>	<i>Amaranthus macrocarpus</i>	<b>Red Flinders Grass</b>	<i>Iseilema vaginiflorum</i>
<b>Early Spring Grass</b>	<i>Eriochloa</i> spp.	<b>Scarlet Pimpernel</b>	<i>Anagallis arvensis</i>
<b>Green Amaranth</b>	<i>Amaranthus viridis</i>	<b>Small Burr Grass</b>	<i>Tragus australianus</i>
<b>Liverseed Grass</b>	<i>Urochloa panicoides</i>	<b>Stink Grass</b>	<i>Eragrostis cilianensis</i>
<b>Mexican Clover</b>	<i>Richardia brasiliensis</i>	<b>Weeping Love Grass</b>	<i>Eragrostis parviflora</i>
<b>Mossman River Grass</b>	<i>Cenchrus echinatus</i>	<b>Wireweed</b>	<i>Polygonum aviculare</i>
<b>Native Millet</b>	<i>Panicum decompositum</i>		
<b>Useful suppression of the following weeds is also obtained:</b>			
<b>Caltrop</b>	<i>Tribulus terrestris</i>	<b>Mintweed</b>	<i>Salvia reflexa</i>
<b>Common Sowthistle</b>	<i>Sonchus oleraceus</i>	<b>Peppercress</b>	<i>Lepidium</i> spp.
<b>Common verbena</b>	<i>Verbena officinalis</i>	<b>Stagger Weed</b>	<i>Stachys arvensis</i>

WEED TABLE C

<b>IN MAIZE with post-plant pre-emergence surface treatment of Apparent Pendimethalin 440 Herbicide plus tank mix with atrazine.</b>			
<b>The following weeds are controlled in addition to those controlled by Apparent Pendimethalin 440 Herbicide alone:</b>			
<b>Bathurst Burr</b>	<i>Xanthium pinosum</i>	<b>Noogoora burr</b>	<i>Xanthium pungens</i>
<b>Caltrop</b>	<i>Tribulus terrestris</i>	<b>Paddy Melon</b>	<i>Cucumis</i> spp.
<b>Mintweed</b>	<i>Salvia reflexa</i>	<b>Thornapple</b>	<i>Datura</i> spp.
<b>The following weeds are not controlled by Apparent Pendimethalin 440 Herbicide or the mixture with atrazine:</b>			
<b>Bindweed</b>	<i>Convolvulus</i> spp.	<b>Nut Grass</b>	<i>Cyperus rotundus</i>
<b>Wandering Jew</b>	<i>Commelina</i> spp.		

WEED TABLE D

<b>IN CARROTS, 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.</b>			
<b>The following weeds are controlled :</b>			
<b>Awnless Barnyard Grass</b>	<i>Echinochloa colona</i>	<b>Green Fat Hen</b>	<i>Chenopodium murale</i>
<b>Bittercress</b>	<i>Coronopus didymus</i>	<b>Pigweed</b>	<i>Portulaca oleracea</i>
<b>Bladder Ketmia</b>	<i>Hibiscus trionum</i>	<b>Prickly Lettuce</b>	<i>Lactuca serriola</i>
<b>Chickweed</b>	<i>Stellaria media</i>	<b>Shepherd's Purse</b>	<i>Capsella bursa-pastoris</i>
<b>Deadnettle</b>	<i>Lamium amplexicaule</i>	<b>Wireweed</b>	<i>Polygonum aviculare</i>
<b>Fat Hen</b>	<i>Chenopodium album</i>		
<b>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).</b>			
<b>Annual Nettles</b>	<i>Urtica</i> spp.	<b>Indian Hedge Mustard</b>	<i>Sisymbrium orientale</i>
<b>Blackberry Nightshade</b>	<i>Solanum nigrum</i>	<b>Turnip Weed</b>	<i>Rapistrum rugosum</i>
<b>Common Sowthistle</b>	<i>Sonchus oleraceus</i>	<b>Wild Radish</b>	<i>Raphanus raphanistrum</i>
<b>Fumitory</b>	<i>Fumaria</i> spp.	<b>Winter Grass</b>	<i>Poa annua</i>

## GENERAL INSTRUCTIONS

Apparent Pendimethalin 440 Herbicide is a selective herbicide for the control of most annual grasses and certain broadleaved weeds. Apparent Pendimethalin 440 Herbicide 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 Apparent Pendimethalin 440 Herbicide 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.

**NOTE:** Apparent Pendimethalin 440 Herbicide 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 Apparent Pendimethalin 440 Herbicide alone, add Apparent Pendimethalin 440 Herbicide to partially filled tank and then add the remainder of the water. Mix thoroughly.

When using Apparent Pendimethalin 440 Herbicide in tank mixes with products such as atrazine or diuron, mix these products as indicated on the relevant label and add the Apparent Pendimethalin 440 Herbicide last, then complete filling of the tank. Maintain good agitation at all times until spraying is completed. If the spray mixture is allowed to settle, thorough agitation is essential to re-suspend the mixture before spraying is resumed. Note that when tank mixing Apparent Pendimethalin 440 Herbicide with paraquat and glyphosate herbicides, the Apparent Pendimethalin 440 Herbicide 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 Apparent Pendimethalin 440 Herbicide in tank mix combination with atrazine or diuron, nozzle screens must be no finer than 50 mesh. Apply the recommended quantity of Apparent Pendimethalin 440 Herbicide in 50-200 litres of water per hectare. Where pre-emergence surface treatment is used, the higher rates of water are recommended.

#### Aerial Application:

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 Apparent Pendimethalin 440 Herbicide 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.

Do NOT apply Apparent Pendimethalin 440 Herbicide by aerial spraying in eucalypt forestry situations.

#### Incorporation:

- Apparent Pendimethalin 440 Herbicide 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.
- Post-plant pre-emergence surface applications of Apparent Pendimethalin 440 Herbicide alone, or as a tank mixture, are most effective in controlling weeds when adequate rainfall occurs or irrigation is applied within 7-10 days after treatment to achieve incorporation. If no rain or irrigation is received within 7-10 days, light mechanical incorporation is required for optimum weed control, except when used on maize, carrots and rice.

- Maize is tolerant to Apparent Pendimethalin 440 Herbicide either alone or in mixtures with atrazine if the seed germinates below the chemically treated band. Maize, carrots and rice are NOT tolerant to Apparent Pendimethalin 440 Herbicide 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 Apparent Pendimethalin 440 Herbicide treated areas 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.

### COMPATIBILITY

Apparent Pendimethalin 440 Herbicide is compatible with the following herbicides: atrazine, diuron, simazine, prometryn, fluometuron, fluometuron plus prometryn, ametryn, paraquat, 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 the retilled area.

**The following crops may be sown after a minimum interval of 2 months after application of Apparent Pendimethalin 440 Herbicide:**

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 Apparent Pendimethalin 440 Herbicide:**

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 Apparent Pendimethalin 440 Herbicide:**

Redbeet (beetroot), spinach, silverbeet, poppy.

### RESISTANT WEEDS WARNING

#### GROUP 3 HERBICIDE

Apparent Pendimethalin 440 Herbicide is a member of the dinitroaniline group of herbicides. Apparent Pendimethalin 440 Herbicide has the inhibition of tubulin formation mode of action. For weed resistance management, Apparent Pendimethalin 440 Herbicide is a Group 3 herbicide. Some naturally-occurring weed biotypes resistant to Apparent Pendimethalin 440 Herbicide and other Group 3 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 Apparent Pendimethalin 440 Herbicide or other Group 3 herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, AIRR Apparent Pty Ltd accepts no liability for any losses that may result from the failure of Apparent Pendimethalin 440 Herbicide to control resistant weeds.

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

Do NOT apply under weather conditions or from spraying equipment, which could be expected to cause spray to drift onto nearby susceptible plants/adjacent crops, cropping lands or pastures.

## **PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT**

Dangerous to fish and other aquatic life. Do NOT contaminate dams, rivers, drains or streams with chemical or used containers.

## **STORAGE AND DISPOSAL**

### **All pack sizes:**

Store in the closed, original container in a dry cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. DO NOT store below 5°C. Extended storage below 5°C can result in the formation of crystals on the bottom of the container. If crystallisation does occur, store the container on its side at room temperature and rock occasionally until crystal re-dissolve.

### **5L, 10L, 20L, 200L ONLY**

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

### **For refillable containers (110L and 1000L only)**

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, nose, and throat and skin. Avoid contact with eyes and skin. DO NOT inhale vapour. When preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow length nitrile gloves and face shield or 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 and face shield (or goggles) and contaminated clothing.

## **FIRST AID**

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone 13 11 26, New Zealand 0800 764 766).

## **SAFETY DATA SHEET**

Additional information is listed in the safety data sheet (SDS). A safety data sheet for APPARENT Pendimethalin 440 Herbicide is available from AIRR APPARENT Pty Ltd on request.

## **CONDITIONS OF SALE:**

AIRR Apparent Pty Ltd shall not be liable for any loss injury damage or death whether consequential or otherwise whatsoever or howsoever arising whether through negligence or otherwise in connection with the sale supply use or application of this product. The supply of this product is on the express condition that the purchaser does not rely on Apparent's skill or judgment in purchasing or using the same and every person dealing with this product does so at his own risk absolutely. No representative of AIRR Apparent Pty Ltd has any authority to add to or alter these conditions.

Additional statements required by Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia: Combustible liquid. May cause an allergic skin reaction. May be fatal if swallowed and enters airways. Very toxic to aquatic life with long lasting effects. Precautionary Statements: Keep away from flames and hot surfaces. No smoking. Avoid breathing dust/fume/gas/mist/vapours/spray. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/ eye protection/ face protection. IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Specific treatment (see on this label). Do NOT induce vomiting. Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/ attention. In case of fire: Use to extinguish: CO2, powder or water spray. Collect spillage. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container in accordance with local/regional/national regulations.