

Product Name: Albaugh ZIPMAL 960 EC Herbicide  
APVMA Approval No: 94198/141806



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| Label Name: | Albaugh ZIPMAL 960 EC Herbicide |
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| Signal Headings: | CAUTION<br>KEEP OUT OF REACH OF CHILDREN<br>READ SAFETY DIRECTIONS BEFORE OPENING OR USING |
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| Constituent Statements: | ACTIVE CONSTITUENT: 960 g/L S-METOLACHLOR |
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| Mode of Action: | GROUP 15 HERBICIDE |
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| Statement of Claims: | Controls Certain Annual Grasses and Broadleaf Weeds in Certain Crops, such as Rhubarb, Brassica Leafy Vegetables, Mustard, Spinach, Silverbeet, Spring onions, Shallots, Culinary herbs, as specified in the Directions for Use |
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| Net Contents: | 5 - 1000 L |
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| Restraints: | <p>RESTRAINTS</p> <p>DO NOT apply to waterlogged soils.<br/>DO NOT apply if heavy rains or storms that are likely to cause runoff are forecast within 2 days of application.<br/>DO NOT irrigate to the point of runoff for at least 2 days after application.</p> <p>SPRAY DRIFT RESTRAINTS</p> <p>Specific definitions for terms used in this section of the label can be found at <a href="http://apvma.gov.au/spraydrift">apvma.gov.au/spraydrift</a></p> <p>DO NOT allow bystanders to come into contact with the spray cloud.<br/>DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.</p> |
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|  | <p>DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.</p> <p>DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.</p> |
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| Directions for Use: | This section contains file attachment. |
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| Other Limitations: |  |
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| Withholding Periods: | <p>WITHHOLDING PERIODS</p> <p>SPINACH AND SILVERBEET:<br/>         GRAZING: DO NOT GRAZE OR USE FOR STOCKFEED FOR 8 WEEKS AFTER APPLICATION<br/>         CANOLA, MUSTARD: DO NOT GRAZE TREATED FIELDS FOR 10 WEEKS AFTER APPLICATION<br/>         GREEN BEANS, NAVY BEANS:<br/>         HARVEST: DO NOT HARVEST FOR AT LEAST 8 WEEKS AFTER APPLICATION<br/>         GRAZING: DO NOT GRAZE OR USE FOR STOCKFEED FOR AT LEAST 10 WEEKS AFTER APPLICATION<br/>         HERBS, CHERVIL, MIZUNA, RUCOLA, LEMON VERBENA:<br/>         DO NOT HARVEST FOR AT LEAST 8 WEEKS AFTER APPLICATION<br/>         GALANGAL, TURMERIC:<br/>         DO NOT HARVEST FOR AT LEAST 23 WEEKS AFTER APPLICATION<br/>         PASTURES: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 13 WEEKS AFTER APPLICATION<br/>         SWEET POTATOES: DO NOT HARVEST, GRAZE OR CUT FOR STOCK FOOD FOR 23 WEEKS AFTER APPLICATION<br/>         WHEAT, BARLEY, OATS, TRITICALE<br/>         DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 8 WEEKS AFTER APPLICATION<br/>         HARVEST withhold for all other crops<br/>         NOT REQUIRED WHEN USED AS DIRECTED<br/>         FORAGE withhold for all other crops (except Sweet Potatoes)<br/>         DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 13 WEEKS AFTER APPLICATION</p> |
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| Trade Advice: | <p>Export of treated produce:</p> <p>Growers should note that maximum residue limits (MRLs) or import tolerances may not exist in all markets for edible produce treated with this product. If you are growing edible produce for export, please check with Albaugh Asia Pacific Limited for the latest information on MRLs and import tolerances before using this product.</p> |
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| General Instructions: | <p>GENERAL INSTRUCTIONS</p> <p>USES</p> <p>Albaugh ZIPMAL 960 EC Herbicide is a short residual, pre-emergent herbicide for the control of many important annual grasses and broadleaf weeds in the crops nominated. The product does not control the important broadleaf weeds in maize, sweet corn and with oxabetrinil treated sorghum, but when mixed with atrazine (500 g/L) control of many important annual weeds and grasses is obtained without the problem of carryover of</p> |
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herbicides affecting succeeding crops. The product acts mainly through shoot (coleoptile) absorption. Its effectiveness depends on the occurrence of rainfall or irrigation to move it down into the top 3 to 4 cm of soil, where it must be present at the time of weed germination.

#### APPLICATION

Ground Application only: Apply in a minimum of 60 L/ha of water. DO NOT apply by aircraft.

#### MIXING

Add the required amount directly to the spray tank, fill with water and mix well.

#### Zero-tillage (Canola, Barley, Oats, Wheat, Triticale)

When sowing using knife points and zero-tillage, and leaving a seeding slot, do not apply post-seeding unless harrows (or similar) have filled-in the seeding slot before application. Alternatively, apply Albaugh ZIPMAL 960 EC Herbicide immediately before seeding.

Warning - Cotton: Heavy rain following an application of Albaugh ZIPMAL 960 EC Herbicide, together with below average soil temperatures, can result in crop injury, due to the inability of the germinating plant being able to metabolise the herbicide. Albaugh ZIPMAL 960 EC Herbicide should not be used in situations where these conditions are likely to occur.

Warning - Brassica Crops: Crop retardation may occur where Albaugh ZIPMAL 960 EC Herbicide is used on soils that have a low organic matter content and which contain more than 60% of fine sand and silt. On these soil types, use rates of Albaugh ZIPMAL 960 EC Herbicide towards the lower end of the rate range and apply onto moist soil. Irrigation after application should be limited to no more than 25mm. DO NOT use more than once per year.

#### To Avoid Crop Damage

As metolachlor is known to cause some crop damage in sandy-sandy loam soils with low organic matter, it is recommended that growers test the safety of metolachlor on a small area of their crop before using the product on larger areas. If any adverse crop symptoms are observed within 14 days of application in which irrigation or rainfall has occurred, then the product should not be used.

#### Resistance Warning:

#### RESISTANT WEEDS WARNING

##### GROUP 15 HERBICIDE

Albaugh ZIPMAL 960 EC Herbicide is a member of the  $\alpha$ -Chloroacetamides group of herbicides. Albaugh ZIPMAL 960 EC Herbicide has the inhibition of very long chain fatty acid synthesis (VLCFA inhibition) mode of action. For weed resistance management this is a Group 15 herbicide. Some naturally occurring weed biotypes resistant to Albaugh ZIPMAL 960 EC Herbicide and other Group 15 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 Albaugh ZIPMAL 960 EC Herbicide or other Group 15 herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, Albaugh Asia Pacific Limited accepts no liability for any losses that may result from the failure of Albaugh ZIPMAL 960 EC Herbicide to control the resistant weeds. Advice as to strategies and alternative treatments that can be used should be obtained from your local supplier, consultant, local Department of Agriculture, or Primary Industries Department.

#### Precautions:

#### PRECAUTIONS

##### Re-entry Period

Do not allow entry into treated areas until the spray has dried.

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| Protections: | <p><b>PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS</b><br/> DO NOT apply under weather conditions, or from spraying equipment that may cause drift onto nearby plants/crops, cropping lands or pastures.<br/> DO NOT plant crops other than broccoli, Brussels sprouts, cabbages, cauliflowers, cotton, maize, peanuts, soybeans, sunflowers, sweet corn, tobacco or oxabetrinil treated sorghum within 6 months of application of Albaugh ZIPMAL 960 EC Herbicide</p> <p><b>PROTECTION OF LIVESTOCK</b><br/> DO NOT graze or cut sweet potato leaves for stock food.</p> <p><b>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT</b><br/> <b>TOXIC TO FISH.</b> DO NOT contaminate streams, rivers or watercourses with the chemical or used containers.<br/> DO NOT apply under meteorological conditions, or from spraying equipment, which could be expected to cause spray to drift onto adjacent areas, particularly wetlands, water bodies or watercourses lands or pastures.</p> |
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| Storage and Disposal: | <p><b>STORAGE AND DISPOSAL</b></p> <p>Store in the closed, original container in a dry, cool well-ventilated area out of direct sunlight. Protect from frost.</p> <p>Non-refillable containers<br/> Triple-rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm 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.</p> <p>Refillable containers<br/> Empty contents fully into application equipment. Close all valves and return to point of supply/designated collection point/other specific collection details for refill or storage.</p> |
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| Safety Directions: | <p>Will damage the eyes. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. Avoid contact with eyes. When opening the container and preparing spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles. When using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow length PVC gloves and face shield or goggles. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves, goggles, and face shield or goggles, and contaminated clothing.</p> |
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| First Aid Instructions: | <p>If poisoning occurs, contact a doctor or Poisons Information Centre.<br/> Phone Australia 13 11 26, New Zealand 0800 764 766.</p> |
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| First Aid Warnings: |  |
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## DIRECTIONS FOR USE

| Crop   | Weeds Controlled   | State      | Rate            | Critical Comments  |
|--|--|------------|-----------------|--|
| Rhubarb  | Barnyard Grass, Blackberry Nightshade, Chickweed (suppression), Deadnettle, Fat-hen, Lovegrass, Pigeon Grass, Pigweed (suppression), Potato Weed, Shepherds Purse, Stinging Nettle, Summer Grass, Wireweed (suppression) | All states | 1 - 2 L /ha     | Pre-emergent: Apply one (1) application only, immediately before or after transplanting crowns and before weeds have germinated. Sufficient irrigation to wet the soil through the weed zone should be applied within 24 hours. Further weed germination may occur following re-hilling due to exposure of untreated soil.   |
| <b>Brassica leafy vegetables including</b> Chinese white cabbage, Chinese flowering cabbage, Chinese broccoli, Indian mustard cabbage, Chinese cabbage, Mizuna greens, Red mustard, Curled mustard, Chinese flat cabbage, Mustard greens, Turnip greens, Rutabaga greens, and Mibuna greens) | Barnyard Grass, Blackberry Nightshade, Chickweed (suppression), Deadnettle, Fat-hen, Lovegrass, Pigeon Grass, Pigweed (suppression), Potato Weed, Shepherds Purse, Stinging Nettle, Summer Grass, Wireweed (suppression) | All states | 1 - 2 L /ha     | Apply one treatment only, immediately after transplanting. Apply in a minimum of 60 L water per hectare. Apply sufficient irrigation after application to wet the upper 3 to 4 cm of soil with 24 hours. Use rates towards the higher end of the range where blackberry nightshade, chickweed, fat hen, love grass, pigweed, potato weed and wire weed are major problems (Refer Brassica use pattern on product label). See general instructions for warning – brassica crops |
| Spinach and silverbeet   | Barnyard Grass, Blackberry Nightshade,   | All states | 1.5 – 2.0 L /ha | Apply with a boom spray, in a minimum of 60 L water/ha   |

| Crop  | Weeds Controlled   | State      | Rate            | Critical Comments  |
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|   | Chickweed (suppression), Deadnettle, Fat-hen, Lovegrass, Pigeon Grass, Pigweed (suppression), Potato Weed, Shepherds Purse, Stinging Nettle, Summer Grass, Wireweed (suppression)  |            |                 | <p>Apply immediately before, at, or immediately after sowing</p> <p>If transplanting the crop, apply immediately before transplanting. DO NOT apply herbicide over the transplants</p> <p>Crop retardation may occur where the herbicide is used on soils that have low organic matter content and which contain more than 60% of fine sand and silt. On these soil types, use rates towards the low end of the rate range, and apply to moist soil. Irrigation after application on these types of soils should be limited to no more than 25 mm. Also, on these soils, DO NOT use more than once per year (as on product label for brassicas);</p> <p>For other relevant instructions, see Broccoli (etc) section of Directions for Use table.</p> |
| Spring onions ( <i>Allium fistulosum</i> ) and Shallots ( <i>Allium cepa</i> var. <i>aggregatum</i> )                             | Barnyard Grass, Blackberry Nightshade, Chickweed (suppression), Deadnettle, Fat-hen, Lovegrass, Pigeon Grass, Pigweed (suppression), Potato Weed, Shepherds Purse, Stinging Nettle, Summer Grass, Wireweed (suppression) | All states | 1 L/ha          | <p>DIRECT SEEDED CROPS: Apply one application before, at or immediately after planting and before crops and weeds have germinated;</p> <p>TRANSPLANTED CROPS: Apply one application before planting and before weeds have germinated.</p>  |
| Culinary herbs: basil, bay leaves, borage, chives, coriander, dill, fennel, lemon balm, lemon grass, kaffir lime leaves, marigold | Barnyard Grass, Blackberry Nightshade, Chickweed (suppression), Deadnettle, Fat-hen, Lovegrass, Pigeon Grass, Pigweed (suppression), Potato Weed, Shepherds Purse, Stinging Nettle, Summer                               | All states | 1.5 – 2.0 L /ha | <p>Apply before, at, or immediately after planting/transplanting and before crops and weeds have germinated.</p> <p>Sufficient irrigation to wet the top 3-4 cm of soil should be applied within 24 hours.</p> <p>Do not use more than once per season</p>   |

| Crop  | Weeds Controlled  | State   | Rate             | Critical Comments   |
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| flowers,<br>marjoram<br>(oregano),<br>mints,<br>nasturtium<br>leaves,<br>parsley,<br>rosemary,<br>sage, salad<br>burnett,<br>sorrel,<br>tarragon,<br>thyme,<br>savoury root<br>vegetable:<br>galangal<br>leafy<br>vegetables:<br>rucola<br>(rocket),<br>chervil,<br>mizuna. teas:<br>lemon<br>verbena<br>spice:<br>turmeric.<br>edible<br>flowers:<br>dianthus,<br>roses. | Grass, Wireweed<br>(suppression)  |   |                  |   |
| Broccoli,<br>Brussels<br>sprouts,<br>Cabbages,<br>Cauliflowers  | Barnyard Grass,<br>Blackberry<br>Nightshade,<br>Chickweed<br>(suppression),<br>Deadnettle, Fat-hen,<br>Lovegrass, Pigeon<br>Grass, Pigweed<br>(suppression), Potato<br>Weed, Shepherds<br>Purse, Stinging<br>Nettle, Summer<br>Grass, Wireweed<br>(suppression) | NSW,<br>ACT,<br>Vic,<br>Qld,<br>Tas, NT<br>only | 1.5 to<br>2 L/ha | Apply immediately after transplanting.<br>Sufficient irrigation to wet the top 3 to<br>4cm of soil should be applied within 24<br>hours. Use rates towards the higher end<br>of the range where Blackberry<br>Nightshade, Chickweed, Fat-hen,<br>Lovegrass, Pigeon Grass, Pigweed,<br>Potato Weed and Wireweed are the<br>major problem.<br>See Warning - Brassica crops. |
|   | Crowsfoot Grass,<br>Fierce Thornapple<br>(suppression),<br>Liverseed Grass,<br>Winter Grass   | NSW,<br>ACT<br>only                             |                  | Apply immediately after transplanting.<br>Sufficient irrigation to wet the top 3 to<br>4cm of soil should be applied within 24<br>hours. Use rates towards the higher end<br>of the range where Apple of Peru,  |

| Crop  | Weeds Controlled  | State                                   | Rate              | Critical Comments  |
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|   | Apple of Peru, Awnless Barnyard Grass, Fierce Thornapple (suppression), Liverseed Grass, Yellow Weed, Redroot Amaranth (suppression).   | Qld only                                |                   | Common Sowthistle, Fierce Thornapple, Liverseed Grass, Redroot Amaranth, Twiggy Turnip and Nettleleaf Goosefoot are the major problems.<br>WARNING: Qld. only stunting and reduced yield may occur in broccoli in red soils and light alluvial soils. See Warning - Brassica crops.  |
|   | Annual Ryegrass, Common Cotula, Common Sowthistle (suppression), Crowsfoot Grass, Fiddle Dock, Italian Ryegrass, Liverseed Grass, Nettleleaf Goosefoot (suppression), Twiggy Turnip (suppression), Winter Grass | Vic, Tas only                           |                   |  |
| Canola and mustard (oilseed cultivars) ( <i>Brassica juncea</i> ) | Toad Rush   | NSW, ACT, SA, Vic, Tas, Qld and WA only | 0.15 to 0.25 L/ha | Apply at or immediately after planting and before crops and weeds emerge. Apply to moist soil. Use rates towards the higher end of the range where longer residual control is required.  |
| Cotton  | Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Lovegrass, Pigeon Grass, Summer Grass, Wandering Jew  | NSW, ACT, Qld only                      | 1 L/ha            | Pre-emergent: Apply before, at, or immediately after planting and before crops and weeds have germinated using a low volume boom sprayer applying 60 to 120 litres of mixture per hectare.<br>Rain or irrigation is necessary within 10 days of spraying to thoroughly wet the top 3 to 4cm of soil. If rain does not occur or irrigation is unavailable, incorporate chemical to a depth of 3 to 4cm. Use rates towards the higher end of the range on heavy soils or where a heavy grass population is expected.<br>DO NOT throw untreated soil onto treated areas, as this will reduce weed control.<br>DO NOT use on soils where the sand content exceeds 70%.<br>Use lower rate where sand content of the soil is within the range 50% to 70%.<br>See Warning - Cotton. |



| <b>Crop</b>                | <b>Weeds Controlled</b>  | <b>State</b>  | <b>Rate</b>   | <b>Critical Comments</b>   |
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| Green Beans,<br>Navy Beans | Blackberry<br>Nightshade,<br>Common Sowthistle,<br>Fat-hen, Potato<br>Weed, Barnyard<br>Grass, Crowsfoot<br>Grass, Liverseed<br>Grass, Lovegrass,<br>Pigeon Grass,<br>Summer Grass and<br>suppression of<br>Pigweed. | All<br>states                                       | 1.5 to<br>2 L/ha  | Pre-emergent: Apply before, at, or<br>immediately after planting and before<br>crops and weeds have germinated. Rain<br>or irrigation is necessary within 10 days<br>of spraying to thoroughly wet the top 3<br>to 4cm of soil. If rain does not occur or<br>irrigation is unavailable, incorporate<br>chemical to a depth of 3 to 4cm.<br>DO NOT throw untreated soil onto<br>treated areas, as this will reduce weed<br>control.<br>Do not use on soils where the sand<br>content exceeds 70%. Use lower rate<br>where the sand content is within the<br>range 50% to 70%.   |
|                            | Powell's Amaranth  | Tas<br>only   | 2 L/ha  | Pre-emergent: Apply before, at, or<br>immediately after planting and before<br>crops and weeds have germinated.<br>For sufficient Amaranth control, the<br>Albaugh ZIPMAL 960 EC Herbicide<br>application should be followed by 1<br>L/ha Basagran* (2-leaf Amaranth) plus<br>2L/ha Basagran* (4-leaf Amaranth).<br>Rain or irrigation is necessary within 10<br>days of spraying to thoroughly wet the<br>top 3 to 4cm of soil. If rain does not<br>occur or irrigation is unavailable,<br>incorporate chemical to a depth of 3 to<br>4cm.<br>DO NOT throw untreated soil onto<br>treated areas, as this will reduce weed<br>control.   |
| Maize,<br>Sweet Corn       | Barnyard Grass,<br>Crowsfoot Grass,<br>Liverseed Grass,<br>Lovegrass, Pigeon<br>Grass, Summer<br>Grass, Wandering<br>Jew   | NSW,<br>ACT,<br>Vic,<br>Qld, SA,<br>NT, Tas<br>only | 1 to 2<br>L/ha  | Pre-emergent: Apply before, at, or<br>immediately after planting and before<br>crops and weeds have germinated using<br>a low volume boom sprayer applying 60<br>to 120 litres of mixture per hectare.<br>Rain or irrigation is necessary within 10<br>days of spraying to thoroughly wet the<br>top 3 to 4cm of soil. If rain does not<br>occur or irrigation is unavailable,<br>incorporate chemical to a depth of 3 to<br>4cm. Use rates towards the higher end<br>of the range on heavy soils or where a<br>heavy grass population is expected.<br>DO NOT throw untreated soil onto<br>treated areas, as this will reduce weed<br>control.<br>DO NOT use on soils where the sand<br>content exceeds 70%. |
|                            | Blackberry<br>Nightshade, Caltrop,<br>Common<br>Thornapple,<br>Mintweed, Needle<br>Burr, Noogoora Burr,<br>Pigweed, Redroot<br>Amaranth, Slim<br>Amaranth  |   | 1 to 2 L<br>plus<br>2.5 L<br>of<br>atrazine<br>(500<br>g/L)<br>per ha |  |

| Crop  | Weeds Controlled  | State   | Rate   | Critical Comments   |
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|   |   |   |  | Use lower rate where the sand content of the soil is within the range of 50% to 70%.  |
| Pastures -<br>Trikkala<br>subclover,<br>Haifa White<br>clover, Maral<br>Persian<br>clover,<br>Paradana<br>Balansa<br>clover,<br>Redquin Red<br>clover,<br>Phalaris and<br>Cocksfoot | Toad Rush   | Vic,<br>NSW,<br>ACT,<br>NT, SA,<br>WA<br>only | 200 to<br>250<br>mL/ ha                                      | Apply at or immediately after planting and before pasture species and weeds emerge. Application should be made to a moist seedbed. Sufficient rain to thoroughly wet the top 3 to 4cm of soil should occur within 10 days of spraying. Use rates towards the higher end of the range in wet areas or when longer residual control is required.<br>DO NOT use in soils where prolonged waterlogging is anticipated, otherwise unacceptable crop retardation will occur.<br>Avoid damage to pasture species by avoiding overlaps and double spraying in headlands where White, Persian and Balansa clovers are sown if the 250 mL rate is being used. |
| Peanuts   | Barnyard Grass,<br>Crowsfoot Grass,<br>Liverseed Grass, Love<br>Grass, Pigeon Grass,<br>Summer Grass,<br>Wandering Jew      | Qld,<br>NSW,<br>ACT, NT<br>only               | 1 to 2<br>L/ha   | Apply pre-irrigation where soil crusting is likely. Apply before, at or immediately after planting and before weeds germinate. Rain or irrigation is necessary within 10 days of spraying to thoroughly wet the top 3 to 4 cm of soil. If rain does not occur or irrigation is unavailable, incorporate chemical to a depth of 3 to 4cm. DO NOT throw untreated soil onto treated areas as this will reduce weed control. Use rate toward the higher end of the range on heavy soils or where a heavy grass population is expected.   |
| Soybeans,<br>Sunflowers   |   | NSW,<br>ACT,<br>Vic,<br>Qld, SA,<br>NT only   |  |   |
| Sorghum<br>treated with<br>oxabtrinil<br>Sorghum<br>Seed Safener  | Barnyard Grass,<br>Crowsfoot Grass,<br>Liverseed Grass,<br>Lovegrass, Pigeon<br>Grass, Summer<br>Grass, Wandering<br>Jew    | NSW,<br>ACT,<br>NT, Qld<br>only               | 1 to 2<br>L/ha   | Pre-emergent: Apply before, at or immediately after planting and before crops and weeds have germinated using a low volume boom sprayer applying 60 to 120 litres of mixture per hectare. DO NOT apply to sorghum seed not previously treated with oxabtrinil Sorghum Seed Safener. Rain or irrigation is necessary within 10 days of spraying to thoroughly wet the top 3 to 4 cm of soil. If rain does not occur or irrigation is unavailable, incorporate chemical to a depth of 3 to 4cm. DO NOT throw untreated soil onto treated areas as this will reduce weed control.  |
|   | Blackberry<br>Nightshade, Caltrop,<br>Common<br>Thornapple,<br>Mintweed, Needle<br>Burr, Noogoora Burr,<br>Pigweed, Redroot |   | 1 to 2<br>L/ha<br>plus<br>2.5<br>L/ha of<br>atrazine<br>(500 |   |

| Crop                       | Weeds Controlled   | State                               | Rate  | Critical Comments   |
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|                            | Amaranth, Slim Amaranth  |                                     | g/L per ha  | Use rate toward the higher end of the range on heavy soils or where a heavy grass population is expected. Use the lower rate on sandy soils.  |
| Sugarcane plant and ratoon | Awnless Barnyard Grass, Barnyard Grass, Bellvine, Billygoat Weed (Blue Top), Blackberry Nightshade, Caltrop, Common Sowthistle (Milk Thistle), Common Thornapple, Crowsfoot Grass, Green Summer Grass, Guinea Grass, Mexican Clover, Mintweed, Needle Burr, Passionfruit Vines, Pigeon Grass, Pigweed, Redroot Amaranth, Square Weed, Star of Bethlehem, Summer Grass, Wild Rose | Southern Qld only (Bundaberg South) | 1.1 to 1.45 L/ha plus 2.7 to 3.6 L/ha of an atrazine (500 g/L)                                      | Apply as a pre- or post-emergent application to crop. Apply once per year only. Application should be made to a moist soil before weeds and grasses have germinated. If conditions remain dry for a period of 10 days after spraying, irrigation or a shallow cultivation (2.5 cm) may assist results. DO NOT throw untreated soil on to treated areas as this will reduce weed control. In Southern Queensland, use rates toward the higher end of the range on heavy soils where a high grass population is expected. In Northern Queensland, application must be made to moist soil and rainfall or irrigation should occur within 24 hours of application. Use rates toward the higher end of the range where high Green Summer Grass population is expected. Where broadleaf weeds and grasses have emerged and are in the 2 to 4 true leaf stage, knockdown herbicides such as ametryn (500 g/L) at 2 L/ha, flowable diuron (500 g/L) at 1 L/ha or paraquat (250 g/L) at 1.2 to 1.6 L/ha, applied as a post directed spray, can be added. |
|                            |  | Northern Qld only (Mackay North)    | 1.45 to 1.8 L/ha plus 3.6 to 4.5L of an atrazine (500 g/L) or 2 to 2.5 kg/ha of atrazine (900 g/kg) | Where broadleaf weeds only have emerged and are at the 2 to 4 true leaf stage then 2,4-D amine (500 g/L) at 2 L/ha should be added. In all cases add a non-ionic surfactant. Follow all instructions and restrictions on the atrazine labels.   |

| Crop                            | Weeds Controlled   | State                           | Rate              | Critical Comments  |
|---------------------------------|--|---------------------------------|-------------------|--|
| Sweet Potatoes                  | Black pigweed, Red Shank, Potato Weed, Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Lovegrasses, Pigeon Grass, Summer Grass, Suppression of Evening Primrose                            | NSW, ACT, Qld, Vic, NT, SA only | 1.5 L/ha          | Pre-emergent: Apply immediately after transplanting before weeds have germinated. Sufficient irrigation to wet the soil through the weed zone should be applied within 24 hours. Further weed germination may occur following re-hilling due to exposure of untreated soil.  |
| Tobacco (transplanted in field) | Barnyard Grass, Lovegrass, Pigeon Grass, Summer Grass and suppression of Common Thornapple ( <i>Datura stramonium</i> ) and Nightshades ( <i>Solanum sarrachoides</i> and <i>S. nigrum</i> ) | Vic, NSW, ACT only              | 1.5 L/ha          | Apply by low volume boom spray prior to transplanting and before weeds and grasses germinate. The seedbed should be fine and free of large clods. Thoroughly incorporate within 7 days of spraying using a rotary hoe or similar equipment set to work to a depth of 7.5cm. DO NOT use disc-cultivating implements. An even coverage of the herbicide is essential. The herbicide needs to be activated by moisture through to the top 3 to 4cm of soil at the time of application or within 4 days of incorporation. This can be achieved by applying to moist soil, irrigating soon after incorporation or irrigating immediately after transplanting. Avoid boom overlaps as double treatment may cause growth suppression. Temporary crop retardation may be observed when soil conditions remain dry after application or where black root rot may occur. |
| Barley, Oats                    | Suppression of Annual Ryegrass   | NSW, ACT, Vic, Tas, SA, WA only | 375 to 500 mL/ ha | Apply to moist soils immediately after planting and before crop and weeds emerge. Use the lower rate on light soils. Application should be made to a moist seedbed and sufficient rain to thoroughly wet the top 3 to 4 cm of soil should occur within 10 days after spraying. Damage may occur if crop is sown too shallow (less than 4 cm). Damage can occur on light sandy soil types after heavy rain. See General Instructions for use in zero-tillage systems.   |
| Wheat, Barley, Oats, Triticale  | Toad Rush  | Vic, NSW, ACT, SA, WA only      | 150 to 250 mL/ ha | Apply at or immediately after planting and before crop and weeds emerge. Application should be made to a moist seedbed and sufficient rain to thoroughly wet the top 3 to 4cm of soil  |

| Crop | Weeds Controlled | State | Rate | Critical Comments  |
|------|------------------|-------|------|--|
|      |                  |       |      | <p>should occur within 10 days after spraying. Use rates towards the higher end of the range in wet areas or when longer residual control is required or in situations where crop competition is minimal.</p> <p>When mixed with triasulfuron formulations, apply pre-sowing and incorporate by sowing operation (for wheat only).</p> <p>See General Instructions for use in zero-tillage systems</p> |

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