

Product Name: RAINBOW METOLACHLOR 960 HERBICIDE
APVMA Approval No: 69073/127876



Label Name:	RAINBOW METOLACHLOR 960 HERBICIDE
Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	960 g/L METOLACHLOR
Mode of Action:	GROUP K HERBICIDE
Statement of Claims:	For the control of certain annual grasses and broadleaf weeds in certain crops as specified in the Directions for Use table.
Net Contents:	20 L-1000 L
Restrains:	
Directions for Use:	This section contains file attachment.
Other Limitations:	
Withholding Periods:	Canola, Mustard: DO NOT GRAZE TREATED FIELDS FOR 10 WEEKS AFTER APPLICATION. Green Beans, Navy Beans: DO NOT HARVEST FOR AT LEAST 8 WEEKS AFTER APPLICATION. DO NOT GRAZE OR CUT FOR STOCK FEED FOR AT LEAST 10 WEEKS AFTER APPLICATION. Pastures: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 13 WEEKS AFTER APPLICATION.

	<p>Spinach and Silverbeet: HARVEST – NOT REQUIRED WHEN USED AS DIRECTED. DO NOT GRAZE OR USE FOR STOCKFEED FOR 8 WEEKS AFTER APPLICATION.</p> <p>Sweet Potatoes: DO NOT HARVEST, GRAZE OR CUT FOR STOCK FOOD FOR 23 WEEKS AFTER APPLICATION.</p> <p>Wheat, Barley Oats, Triticale: DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 8 WEEKS AFTER APPLICATION.</p> <p>FORAGE - All Other Crops (Except Sweet Potatoes): DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 13 WEEKS AFTER APPLICATION.</p> <p>Spring Onions and Shallots: HARVEST – NOT REQUIRED WHEN USED AS DIRECTED.</p> <p>Adzuki beans and mung beans: HARVEST – NOT REQUIRED WHEN USED AS DIRECTED</p> <p>GRAZING – DO NOT GRAZE OR CUT FOR STOCK FEED 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 Shandong Rainbow International Co., Ltd for the latest information on MRLs and import tolerances before using this product.</p>
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General Instructions:	This section contains file attachment.
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Resistance Warning:	<p>RESISTANT WEEDS WARNING GROUP K HERBICIDE</p> <p>Rainbow Metolachlor 960 Herbicide is a member of the Chloroacetamides Inhibitors of cell division / Inhibitors of very long chain fatty acids (VLCFA inhibitors) group of herbicides. For weed resistance management Rainbow Metolachlor 960 Herbicide is a Group K Herbicide. Some naturally occurring weed biotypes resistant to Rainbow Metolachlor 960 Herbicide and other Group K 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 Rainbow Metolachlor 960 Herbicide or Group K other herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Shandong Rainbow International Co., Ltd accepts no liability for any losses that may result from the failure of Rainbow Metolachlor 960 Herbicide to control resistant weeds.</p> <p>Advice as to strategies and alternative treatments that can be used should be obtained from your local supplier, consultant, local Department of Agriculture, Primary Industries Department or Shandong Rainbow International Co., Ltd..</p>
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Precautions:	<p>RE-ENTRY PERIOD</p> <p>DO NOT enter treated area until spray has dried.</p>
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Protections:	<p>PROTECTION OF CROPS NATIVE AND OTHER NON-TARGET PLANTS</p> <p>DO NOT plant crops other than maize, sweet corn, tobacco, cotton, soybeans, sunflowers, peanuts, broccoli, brussels sprouts, cabbages, cauliflowers or Concep II treated Sorghum within 6 months of application of Rainbow Metolachlor 960.</p> <p>DRIFT WARNING</p> <p>DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.</p>
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PROTECTION OF LIVESTOCK

DO NOT graze or cut sweet potato leaves for stock food.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

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

Storage and Disposal:

Store in the closed, original container in a cool, well-ventilated area. Do NOT store for prolonged periods in direct sunlight. 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.

Safety Directions:

Harmful if inhaled. Will irritate the eyes. Repeated exposure may cause allergic disorders. Avoid contact with eyes. Do not inhale spray mist. When opening the container, preparing product for use and using the prepared spray, wear elbow-length chemical resistant gloves, goggles, disposable mist face mask covering mouth and nose. In addition, if applying by spraying equipment carried on the back of the user wear cotton overalls, over normal clothing, buttoned to the neck and wrist. If product or spray in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

First Aid Instructions:

If poisoning occurs, contact a doctor or Poisons Information Centre.
Phone Australia 131126, New Zealand 0800 764 766.

First Aid Warnings:

GENERAL INSTRUCTIONS

USES

The product 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 Concep* II treated Sorghum, but when mixed with Atrazine 600g/L control of many important annual weeds and grasses is obtained without the problem of carryover of 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 4cm of soil, where it must be present at the time of weed germination. Reduce the incidence of "fines" by using the correct nozzles and operating pressures.

APPLICATION

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

MIXING

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

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.

COMPATIBILITY

Rainbow Metolachlor 960 is compatible with prometryn/fluometuron, Cotoran SC, Atrazine 600g/L, Atrazine 900 g/kg, Prometryn 500 Flowable, Farmalinx Triafon, Farmalinx Paraquat 250 and Sixgun (glyphosate).

Warning — Cotton: DO NOT use when planting into dry soil or soil with marginal moisture. Under dry planting conditions heavy rain or flood irrigation soon after planting, together with below average soil temperatures, can result in crop injury, due to the inability of the germinating seedling to metabolise above normal amounts of the herbicide that may accumulate in the root zone as a result of accelerated capillary movement. Rainbow Metolachlor 960 should not be used in situations where these conditions are likely to occur.

Warning — Brassica crops: Crop retardation may occur where Rainbow Metolachlor 960 is used on soils that have a low organic matter content and which contain more than 60% of fine sand and silt and less than 5% clay in the top 30cm. On these soil types, use rates of Rainbow Metolachlor 960 towards the lower end of the rate range and apply onto moist soil. Irrigation after application should be limited to no more than 25mm.

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 tilled-in the seeding slot before application. Alternatively, apply Rainbow Metolachlor 960 immediately before sowing,

DO NOT USE ON SOILS CONTAINING LESS THAN 5% CLAY IN THE TOP 30cm. DO NOT USE MORE THAN ONCE PER YEAR.

DIRECTIONS FOR USE

CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Adzuki beans and mung beans	Barnyard grass, Liverseed grass, Summer grass, Common sow thistle, Blackberry nightshade, Fat hen and other pest weeds as listed for broccoli (see below)	All States	2.25 to 3 L/ha	Apply one application only using calibrated ground boom spray or similar equipment. Apply before, at or immediately after planting and before crops and weeds have germinated. Use lower rates on soils with high sand and silt content, or low in organic matter. Apply in a minimum spray volume of 60 L/ha of water. 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 4 cm. DO NOT throw untreated soil onto treated areas, as this will reduce weed control. The sensitivity of some species and varieties of the crops to be treated has not been fully evaluated. It is advisable to only treat a small number of plants to ascertain their reaction before treating the whole crop
Barley, Oats	Suppression of Annual Ryegrass	NSW, ACT, Vic, Tas, SA, WA only	565 to 750 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.
Barley, Oats, Triticale, Wheat	Toad Rush		225 to 375 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 4 cm of soil 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. When mixed with a Triasulfuron Herbicide apply pre-sowing and incorporate by sowing operation (for Wheat only). See General Instructions for use in zero-tillage systems.
Broccoli, Brussels Sprouts, Cabbages, Cauliflowers	Barnyard Grass, Blackberry Nightshade, Chickweed (suppression), Deadnettle, Fat Hen, Lovegrass, Pigeon Grass, Pigweed (suppression), Potato Weed, Shepherd's Purse, Stinging Nettle, Summer Grass, Wireweed (suppression)	QLD, NSW, ACT, Vic, Tas, NT only	2.25 to 3L/ha	Apply immediately after transplanting. Sufficient irrigation to wet the top 3 to 4 cm of soil should be applied within 24 hours. Use rates towards the higher end of the range where Blackberry Nightshade, Chickweed, Fat Hen, Lovegrass, Pigeon Grass, Pigweed, Potato Weed and Wireweed are the major problem. See Warning — Brassica crops.
	Crowsfoot Grass, Fierce Thornapple (suppression), Liverseed Grass, Winter Grass	NSW, ACT only		Apply immediately after transplanting. Sufficient irrigation to wet the top 3 to 4 cm of soil should be applied within 24 hours. Use rates towards the higher end of the range where Apple of Peru, Common Sowthistle, Fierce Thornapple, Liverseed Grass, Redroot Amaranth, Twiggy Turnip and Nettleleaf Goosefoot are the major problems. Warning: Qld only - stunting and reduced yield may occur in broccoli in red soils and light alluvial soils. See Warning — Brassica crops.
	Apple of Peru, Awnless Barnyard Grass, Fierce Thornapple (suppression), Liverseed Grass, Yellow Weed, Redroot Amaranth (suppression)	QLD only		
	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		
CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS

Spinach and Silverbeet	See weeds above for Broccoli, Brussels Sprouts, Cabbages, Cauliflowers	All States	2.25 to 3L/ha	Apply with a boom spray, in a minimum of 60 L water/ha. Apply immediately before, at, or immediately after sowing. If transplanting the crop, apply immediately before transplanting. DO NOT apply herbicide over the transplants. 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). For other relevant instructions, see Broccoli (etc) section of Directions for Use table.
Spring onions (<i>Allium fistulosum</i>) and Shallots (<i>Allium cepa</i> var. <i>aggregatum</i>)			1.5L/ha	DIRECT SEEDED CROPS: Apply one application before, at or immediately after planting and before crops and weeds have germinated; TRANSPLANTED CROPS: Apply one application before planting and before weeds have germinated.
Canola	Toad Rush		225 to 375 mL/ha	Apply at or immediately after planting and before crops and weed emerge. Apply to moist soil. Use rates towards the higher end of the range where longer residual control is required. To avoid crop injury use rates towards the lower end of the range on light sandy soils. See General Instructions for use in zero-tillage systems.
Canola and mustard (oilseed cultivars) (<i>Brassica juncea</i>)				
Cotton	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Lovegrass, Pigeon Grass, Summer Grass, Wandering Jew	Qld, NSW, WA only	1.5L per 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 L of mixture per hectare. 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 4 cm. Use rates towards the higher end of the range on heavy soils or where a heavy grass population is expected. DO NOT throw untreated soil onto treated areas as this will reduce weed control. DO NOT use on soils where the sand content exceeds 70%. Use lower rate where the sand content of the soil is within the range 50% to 70%. See Warning — Cotton.
Green Beans, Navy Beans	Blackberry Nightshade, Common Sowthistle, Fat Hen, Potato Weed, Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Lovegrass, Pigeon Grass, Summer Grass and suppression of Pigweed	All States	2.25 to 3 L/ha	Pre-emergent: Apply before, at, or immediately after planting and before crops and weeds have germinated. 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 4 cm. DO NOT throw untreated soil onto treated areas as this will reduce weed control. DO NOT use on soils where the sand content exceeds 70%. Use lower rate where the sand content is within the range 50% to 70%.
	Powell's Amaranth	Tas only	3L/ha	Pre-emergent: Apply before, at, or immediately after planting and before crops and weeds have germinated. For sufficient Amaranth control the Rainbow Metolachlor 960 Herbicide application should be followed by 1L/ha Basagran* (2 leaf Amaranth) or 2 L/ha Basagran (4 leaf Amaranth). 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 4 cm. DO NOT throw untreated soil onto treated areas as this will reduce weed control.

CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Maize (not Waxy Maize), Sweet Corn	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Lovegrass, Pigeon Grass, Summer Grass, Wandering Jew	All States	1.5 to 3L per ha	<p>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 L of mixture per hectare.</p> <p>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 4 cm. Use rates towards the higher end of the range on heavy soils or where a heavy grass population is expected. DO NOT throw untreated soil onto treated areas as this will reduce weed control. DO NOT use on soils where the sand content exceeds 70%. Use lower rate where the sand content of the soil is within the range 50% to 70%.</p>
	Blackberry Nightshade, Caltrop, Common Thornapple, Mintweed Needle Burr, Noogoora Burr, Pigweed, Redroot Amaranth, Slim Amaranth		1.5 to 3 L plus 2.5 L of a registered Flowable Atrazine (500 g/L) Flowable per ha	
Pastures - Trikkala Sub-Clover, Haifa White Clover, Maral Persian Clover, Paradana Balansa Clover, Redquin Red Clover, Phalaris and Cocksfoot	Toad Rush	NSW, ACT, Vic, SA, WA, NT only	300 to 375 mL/ha	Apply at or immediately after planting and before pasture species and weeds emerge. Application should be made to a moist seed bed. Sufficient rain to thoroughly wet the top 3 to 4 cm of soil 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. DO NOT use in soils where prolonged waterlogging is anticipated otherwise unacceptable crop retardation will occur. Avoid damage to pasture species by avoiding overlaps and double spraying in headlands where White, Persian and Balansa Clovers are sown and if the 375 mL rate is being used.
Peanuts	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Lovegrass, Pigeon Grass, Summer Grass, Wandering Jew	Qld, NSW, NT only	1.5 to 3 L per ha	Apply before 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 4 cm. DO NOT throw untreated soil onto treated areas as this will reduce weed control. Use rates toward the higher end of the range on heavy soils or where a heavy grass population is expected.
Soybeans, Sunflowers		Qld, NSW, ACT, Vic, SA, NT only		
Sorghum treated with Concep II Sorghum Seed Safener		Blackberry Nightshade, Caltrop, Common Thornapple, Mintweed, Needle Burr, Noogoora Burr, Pigweed, Redroot Amaranth, Slim Amaranth		

CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Sugar Cane (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 (Bunda- berg South)	1.65 to 2.175 L plus 2.7 to 3.6 L of a registered Flowable Atrazine (500 g/L) Flowable or 1.5 to 2 kg of Atrazine (900 g/kg) WDG	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.
		Northern Qld only (Mackay North)	2.175 to 2.7 L plus 3.6 to 4.5 L of a registered Flowable Atrazine (500 g/L) Flowable or 1.5 to 2 kg of Atrazine (900 g/kg) WDG	Where broadleaf weeds and grasses have emerged and are in the 2 to 4 true leaf stage, knockdown herbicides such as a flowable Ametryn (500 g/L) (2 L/ha), a flowable diuron (500 g/L) at 1 L/ha of paraquat at label rates, applied as a post directed spray, can be added. If using with diuron, 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. Where broadleaf weeds only have emerged and are at the 2 to 4 true leaf stage then a 500 g/L 2,4-D amine at 2 L/ha should be added. In all cases add a non-ionic surfactant. Follow all instructions and restrictions on the Atrazine labels.
Sweet Potato	Black Pigweed, Red Shank, Potato Weed, Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Lovegrasses, Pigeon Grass, Summer Grass, suppression of Evening Primrose	Qld, NSW, ACT, Vic, SA, NT only	2.25 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 reilling 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>)	NSW, Vic only	2.25 L/ha	Apply by low volume boom spray prior to transplanting and before weeds and grasses germinate. The seed bed 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 7.5 cm. 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 4 cm 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.

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