

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

QA

S-Metolachlor 960 EC

HERBICIDE

ACTIVE CONSTITUENT: 960 g/L S-METOLACHLOR

GROUP **15** HERBICIDE

For the control of certain annual grasses and broadleaf weeds in certain crops as specified in the Directions for Use table.

APVMA Approval No.: 91159/149839

EC Formulation Type
Emulsifiable
Concentrate

**BE PROUDLY
AUSTRALIAN**

Quantum Agrosiences Holdings Pty Ltd | ABN 79 680 792 625
Suite 2, Level 7, 330 Collins Street, Melbourne, Victoria 3000
T: 1300 658 988 | www.quantumag.au

 **QUANTUM
AGROSCIENCES**

DIRECTIONS FOR USE

Restrictions:

DO NOT apply to waterlogged soils.

DO NOT apply if heavy rains or storms that are likely to cause runoff are forecast within 2 days of application.

DO NOT irrigate to the point of runoff for at least 2 days after application.

CROP	WEEDS CONTROLLED	STATE
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
	Crowsfoot Grass, Fierce Thornapple (suppression), Liverseed Grass, Winter Grass	NSW, ACT only
	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), Twigg Turnip (suppression), Winter Grass	Vic, TAS only
Canola	Toad Rush	QLD, NSW, ACT, Vic, Tas, SA and WA only
Cotton	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Lovegrass, Pigeon Grass, Summer Grass, Wandering Jew	Qld, ACT, NSW, only

RATE	CRITICAL COMMENTS
1.5 to 2 L/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.
	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, Twigg 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.
150 to 250 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.
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 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.

CROP	WEEDS CONTROLLED	STATE
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	Qld, NSW, ACT, Vic, SA only
Maize, Sweet Corn	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Lovegrass, Pigeon Grass, Summer Grass, Wandering Jew	Qld, NSW, ACT, Vic, Tas, SA, NT only
	Blackberry Nightshade, Caltrop, Common Thornapple, Mintweed Needle Burr, Noogoora Burr, Pigweed, Redroot Amaranth, Slim Amaranth	
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, NT only
Peanuts	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Love Grass, Pigeon Grass, Summer Grass, Wandering Jew	Qld, NSW, ACT, NT only
Soybeans Sunflowers		Qld, NSW, ACT, Vic, SA, NT only

RATE	CRITICAL COMMENTS
1.5 to 2 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.
1 L to 2 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 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%.
1 L to 2 L plus 2.5 L of Atrazine (500 g/L) Flowable per ha	
200 to 250 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.
1 L to 2 L/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.

CROP	WEEDS CONTROLLED	STATE
Sorghum treated with Concep II Sorghum Seed Safener	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Love Grass, Pigeon Grass, Summer Grass, Wandering Jew	Qld, NSW, ACT, NT only
	Blackberry Nightshade, Caltrop, Common Thornapple, Mintweed, Needle Burr, Noogoora Burr, Pigweed, Redroot Amaranth, Slim Amaranth	
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)
		Northern Qld only (Mackay North)
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

RATE	CRITICAL COMMENTS
1 L to 2 L/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>DO NOT apply to Sorghum seed not previously treated with Concep II Sorghum Seed Safener.</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 toward the higher end of the range on heavy soils or where a heavy grass population is expected.</p> <p>DO NOT throw untreated soil onto treated areas as this will reduce weed control. Use the lower rate on sandy soils.</p>
1 to 2 L plus 2.5 L of Atrazine (500 g/L) Flowable per ha	
1 to 1.45 L plus 2.7 to 3.6 L Atrazine (500 g/L) Flowable	<p>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.</p> <p>DO NOT throw untreated soil on to treated areas as this will reduce weed control.</p> <p>In Southern Queensland, use rates toward the higher end of the range on heavy soils where a high grass population is expected.</p>
1.45 to 1.8 L plus 3.6 to 4.5 L Atrazine (500 g/L) Flowable or 2 to 2.5 kg of Atrazine (900 g/kg) WDG	<p>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.</p> <p>Where broadleaf weeds and grasses have emerged and are in the 2 to 4 true leaf stage then a 2,4-D amine (500 g/L) at 2 L/ha should be added. In all cases add a non-ionic surfactant.</p> <p>Follow all instructions and restrictions on the Atrazine labels.</p>
1.5 L/ha	<p>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 rehill due to exposure of untreated soil.</p>

CROP	WEEDS CONTROLLED	STATE
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, ACT & Vic only
Barley, Oats	Suppression of Annual Ryegrass	NSW, ACT, Vic, Tas, SA, WA only
Barley, Oats, Triticale, Wheat	Toad Rush	NSW, ACT, Vic, Tas, SA, WA only

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

RATE	CRITICAL COMMENTS
1.5 L/ha	<p>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.</p> <p>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.</p> <p>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.</p>
375 to 500 mL/ha	<p>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 seed bed 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.</p> <p>See General Instructions for use in zero-tillage systems.</p>
150 to 250 mL/ha	<p>Apply at or immediately after planting and before crop and weeds emerge. Application should be made to a moist seed bed 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 Triasulfuron Herbicide apply pre-sowing and incorporate by sowing operation (for Wheat only).</p> <p>See General Instructions for use in zero-tillage systems.</p>

WITHHOLDING PERIODS:

Canola: DO NOT GRAZE TREATED FIELDS FOR 10 WEEKS AFTER APPLICATION.

Green Beans: DO NOT HARVEST, GRAZE OR CUT FOR STOCK FOOD FOR 10 WEEKS AFTER APPLICATION.

Pastures: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 13 WEEKS AFTER APPLICATION.

Sweet Potatoes: DO NOT HARVEST, GRAZE OR CUT FOR STOCK FOOD FOR 23 WEEKS AFTER APPLICATION.

Wheat, Barley, Oats, Triticale: DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 8 WEEKS AFTER APPLICATION.

HARVEST withhold for all other Crops: NOT REQUIRED WHEN USED AS DIRECTED.

FORAGE withhold for all other Crops (Except Sweet Potatoes): DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 13 WEEKS AFTER APPLICATION.

GENERAL INSTRUCTIONS

USES

QA S-Metolachlor 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 Concep* II treated Sorghum, but when mixed with Flowable Atrazine (500 g/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 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.

COMPATIBILITY

QA S-Metolachlor 960 EC Herbicide is compatible with Atrazine (500 g/L), Glyphosate 360 and 450 herbicides and Paraquat + Diquat.

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 QA S-Metolachlor 960 EC Herbicide immediately before seeding.

Warning – Cotton: Heavy rain following an application of QA S-Metolachlor 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. QA S-Metolachlor 960 EC Herbicide should not be used in situations where these conditions are likely to occur.

Warning – Brassica crops: Crop retardation may occur where QA S-Metolachlor 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 QA S-Metolachlor 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 25 mm. DO NOT USE MORE THAN ONCE PER YEAR.

RE-ENTRY PERIOD

DO NOT enter treated area without protective clothing until spray has dried.

RESISTANT WEEDS WARNING

QA S-Metolachlor 960 EC Herbicide is a member of the amide group of herbicides with diverse sites of action. For weed resistance management QA

GROUP 15 HERBICIDE

S-Metolachlor 960 EC Herbicide is a Group 15 Herbicide. Some naturally occurring weed biotypes resistant to QA S-Metolachlor 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 QA S-Metolachlor 960 EC Herbicide or Group K other herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Quantum Agrosiences Holdings Pty Ltd accepts no liability for any losses that may result from the failure of QA S-Metolachlor 960 EC Herbicide to control 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, Primary Industries Department or Quantum Agrosiences Holdings representative.

PROTECTION OF CROPS NATIVE AND OTHER NON-TARGET PLANTS

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.

DO NOT plant crops other than broccoli, brussels sprouts, cabbages, cauliflowers, cotton, maize, peanuts, soybeans, sunflowers, sweet corn, tobacco, or Concep II treated Sorghum within 6 months of application of QA S-Metolachlor 960 EC Herbicide.

PROTECTION OF LIVESTOCK

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

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

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

DO NOT apply under meteorological conditions or from spraying equipment which could be expected to cause spray to drift onto adjacent areas, particularly wetlands, waterbodies or watercourses or pastures.

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.

Refillable Containers: Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

SAFETY DIRECTIONS

Will damage the eyes. Avoid contact with eyes and skin. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. When opening the container and preparing product for use wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length chemical resistant gloves, goggles and a disposable fume mask. When using the prepared product wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length chemical resistant gloves. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, goggles and contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.

SAFETY DATA SHEET

Additional information is listed in the Safety Data Sheet (SDS) which is available from the supplier.

CONDITIONS OF SALE: Quantum Agrosciences Holdings 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 Quantum Agrosciences Holdings Pty Ltd's skill or judgement in purchasing or using the same and every person dealing with this product does so at his own risk absolutely. No representative of Quantum Agrosciences Holdings 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: **May cause an allergic skin reaction. Causes eye irritation. Very toxic to aquatic life with long lasting effects.** Wear protective gloves and protective clothing. Avoid breathing mist/vapours/spray. Avoid release to the environment. Wash all exposed external body areas thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.



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