

CAUTION

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING OR USING



F.S.A.

S-METOLACHLOR 960

HERBICIDE

ACTIVE CONSTITUENT: 960 g/L S-METOLACHLOR

GROUP

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HERBICIDE

Controls Certain Annual Grasses and Broadleaf Weeds in Certain Crops as specified in the Directions for Use

IMPORTANT: READ THIS BOOKLET BEFORE USING THIS PRODUCT



FOUR SEASONS
AGRIBUSINESS

DIRECTIONS FOR USE

Restraints

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	RATE	CRITICAL COMMENTS
Broccoli, Brussels sprouts, Cabbages, Cauliflowers	Barnyard Grass, Blackberry nightshade, Chickweed (suppression), Deadnettle, Fat-hen, Lovegrass, Pigeon grass, Pigweed (suppression), Potato weed, Shepherds purse, Stinging nettle, Summer grass, Wireweed (suppression)	NSW, ACT, Vic, Qld, Tas, NT only	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.
	Crowsfoot grass, Fierce thornapple (suppression), Liverseed grass, Winter grass	NSW, ACT only		Apply immediately after transplanting. Sufficient irrigation to wet the top 3 to 4cm 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		
Canola	Toad Rush	NSW, ACT, SA, Vic, Tas, Qld, 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.

CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Cotton	Barnyard grass, Crowsfoot grass, Liverseed grass, Lovegrass, Pigeon grass, Summer grass, Wandering Jew	NSW, ACT, Qld only	1 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 litres 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.</p> <p>DO NOT throw untreated soil onto treated areas, as this will reduce weed control.</p> <p>DO NOT use on soils where the sand content exceeds 70%. Use lower rate where sand content of the soil is within the range 50% to 70%.</p> <p>See Warning - Cotton.</p>
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	NSW, ACT, Qld, Vic, SA only	1.5 to 2 L/ha	<p>Pre-emergent: Apply before, at, or immediately after planting and before crops and weeds have germinated.</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.</p> <p>DO NOT throw untreated soil onto treated areas, as this will reduce weed control.</p>
	Powell's amaranth	Tas only	2 L/ha	<p>Pre-emergent: Apply before, at, or immediately after planting and before crops and weeds have germinated.</p> <p>For sufficient Amaranth control, the F.S.A. S-Metolachlor 960 Herbicide application should be followed by 1 L/ha Basagran* (2-leaf Amaranth) plus 2 L/ha Basagran* (4-leaf Amaranth).</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.</p> <p>DO NOT throw untreated soil onto treated areas, as this will reduce weed control.</p>

CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Maize, Sweet Corn	Barnyard grass, Crowsfoot grass, Liverseed grass, Lovegrass, Pigeon grass, Summer grass, Wandering Jew	NSW, ACT, Vic, Qld, SA, NT, Tas only	1 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 litres of mixture per hectare.
	Blackberry nightshade, Caltrop, Common thornapple, Mintweed, Needle burr, Noogoora burr, Pigweed, Redroot amaranth, Slim amaranth		1 to 2 L plus 2.5 L of atrazine (500 g/L) per ha	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 of 50% to 70%.
Pastures - Trikkala subclover, Haifa White clover, Maral Persian clover, Paradana, Balansa clover, Redquin Red clover, Phalaris and Cocksfoot	Toad Rush	Vic, NSW, ACT, NT, SA, WA only	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 seedbed. Sufficient rain to thoroughly wet the top 3 to 4 cm 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. 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 if the 500 mL rate is being used.
Peanuts	Barnyard grass, Crowsfoot grass, Liverseed grass, Love grass, Pigeon grass, Summer grass, Wandering Jew	Qld, NSW, ACT, NT only	1 to 2 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 4 cm. 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, Sunflowers		NSW, ACT, Vic, Qld, SA, NT only		

CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Sorghum treated with Concep II Sorghum Seed Safener	Barnyard grass, Crowsfoot grass, Liverseed grass, Lovegrass, Pigeon grass, Summer grass, Wandering Jew	NSW, ACT, NT, Qld only	1 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 litres of mixture per hectare. DO NOT apply to sorghum seed not previously treated with Concep II 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 4 cm. 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. Use the lower rate on sandy soils.
	Blackberry nightshade, Caltrop, Common thornapple, Mintweed, Needle burr, Noogoora burr, Pigweed, Redroot amaranth, Slim amaranth		1 to 2 L/ha plus 2.5 L/ha of atrazine (500 g/L) per ha	
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 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.
		Northern Qld only (Mackay North)	1.45 to 1.8 L/ha plus 3.6 to 4.5 L of 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. 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.
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.

CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
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 7.5 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.
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 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 formulations, apply pre-sowing and incorporate by sowing operation (for wheat only). See General Instructions for use in zero-tillage systems.

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

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 STOCK FOOD 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 STOCK FOOD FOR 13 WEEKS AFTER APPLICATION

GENERAL INSTRUCTIONS

USES

F.S.A. S-Metolachlor 960 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 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

F.S.A. S-Metolachlor 960 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 F.S.A. S-Metolachlor 960 Herbicide immediately before seeding.

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

Warning - Brassica Crops: Crop retardation may occur where F.S.A. S-Metolachlor 960 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 F.S.A. S-Metolachlor 960 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.

RESISTANT WEEDS WARNING

GROUP	K	HERBICIDE
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F.S.A. S-Metolachlor 960 Herbicide is a member of the Chloroacetamide group of herbicides with mode of action as inhibitors of cell division / Inhibitors of very long chain fatty acids. For weed resistance management this is a Group K herbicide. Some naturally occurring weed biotypes resistant to F.S.A. S-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 F.S.A. S-Metolachlor 960 Herbicide or other Group K herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, Four Seasons Agribusiness accepts no liability for any losses that may result from the failure of F.S.A. S-Metolachlor 960 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.

PRECAUTION

Re-entry Period

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

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under weather conditions, or from spraying equipment that may cause drift onto nearby 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 F.S.A. S-Metolachlor 960 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, water bodies or watercourses lands or pastures.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well-ventilated area, out of direct sunlight.

For refillable containers

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

Other containers

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 bury empty containers in a approved waste management facility. If no approved waste management facility is available, bury the containers 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 regulations. Empty containers and product should not be burnt.

SAFETY DIRECTIONS

Will damage the eyes. Avoid contact with eyes and skin. IF PRODUCT IN EYES, WASH IT OUT IMMEDIATELY WITH WATER. 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 and 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

For further information refer to the Safety Data Sheet (SDS), which is available from the supplier.

CONDITIONS OF SALE

The sale, supply, storage, use and application of this product is beyond the control of the manufacturer, and, subject to this provision, all warranties, conditions, rights and remedies express or implied under common law, statute or otherwise, in relation to the sale, supply, storage, use or application are excluded. Four Seasons Agribusiness Pty Limited and its associated entities shall not accept any liability whatsoever (including consequential loss) or however arising (including negligence) for any damage, injury or death connected with the sale, supply, storage, use or application of this product except for liability which cannot be excluded by statute.

Very toxic to aquatic life with long lasting effects. Avoid breathing fumes, mists, vapours or spray. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If skin irritation or rash occurs: Get medical advice. If eye irritation persists: Get medical advice. Collect spillage. In case of fire, use carbon dioxide, dry chemical, foam.

**IN AN EMERGENCY
DIAL 000
POLICE OR FIRE BRIGADE**



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