POISON

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

F.S.A.

PYROXASULFONE 850 WG

HERBICIDE

ACTIVE CONSTITUENT: 850 g/kg PYROXASULFONE

GROUP 15 HERBICIDE

For the pre-emergence control of annual ryegrass, barley grass, annual phalaris, silver grass and toad rush and suppression of certain grass weeds in wheat (not durum wheat), triticale and certain winter legume crops as specified in the DIRECTIONS FOR USE table

IMPORTANT: READ THE ATTACHED BOOKLET BEFORE USING THIS PRODUCT

FOUR SEASONS AGRIBUSINESS

APVMA Approval No.: 92777/136615

DIRECTIONS FOR USE

RESTRAINTS

DO NOT apply with aircraft.
DO NOT plant durum wheat *(Triticum durum)* after the application of F.S.A. Pyroxasulfone 850 WG (refer to **Crop Rotation Recommendations** for further advice).
DO NOT apply if heavy rain has been forecast within 48 hours.
DO NOT apply unless incorporation by sowing (IBS) can be performed within 3 days of application.
DO NOT apply to waterlogged soil.
DO NOT allow first irrigation tailwater from land treated with F.S.A. Pyroxasulfone 850 WG to enter aquatic and wetland areas including aquacultural ponds, surface streams and rivers.

SPRAY DRIFT RESTRAINTS

Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift

DO NOT allow bystanders to come into contact with the spray cloud.

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. The buffer zones in the relevant buffer zone table/s below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.

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.

DO NOT apply by a boom sprayer unless the following requirements are met:
Spray droplets not smaller than a **COARSE** spray droplet size category.
Minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for boom sprayers') are observed.

Buffer zones for boom sprayers

Application rate	Mandatory downwind buffer zones
	Natural aquatic areas
Up to maximum label rate 80 metres	80 metres

CROP	WEED	RATE	CRITICAL COMMENTS
Wheat (not durum wheat) and triticale **Chickpeas, field peas, lentils, lupins**	Annual ryegrass *(Lolium rigidum),* annual phalaris or paradoxa grass *(Phalaris paradoxa* only*),* barley grass *(Hordeum leporinum),* silver grass *(Vulpia bromoides, Vulpia myuros),* toad rush *(Juncus bufonius)*	118 g/ha	Apply pre-sowing and incorporate by sowing (IBS) using knife points and press wheels, or narrow points and harrows. For best results apply just before sowing (refer to **Interval between Application and Sowing** in **GENERAL INSTRUCTIONS**). Avoid throwing treated soil into adjacent crop rows when sowing with knife points and press wheels. To reduce the risk of crop effects refer to **Crop Safety** in **GENERAL INSTRUCTIONS**. *Cultivation:* To optimise weed control apply directly to uncultivated soil. Weed control may be greatly reduced where weed seeds have been buried by cultivation prior to sowing. *Rainfall soon after application:* • Weed control may be adversely affected by insufficient rainfall within 7 to 10 days after application. Adequate rainfall is necessary to facilitate uptake of the product by the germinating weed seeds, however the quantity of rainfall required will depend on many factors including stubble load, soil type, the existing soil moisture at sowing, the pattern of rainfall and other considerations. • In soils prone to leaching, rainfall which is sufficiently heavy to cause movement of the herbicide out of the weed seed zone may lead to reduced weed control. *Other factors which may adversely affect weed control include;* • uneven application, • application to ridged or cloddy soil, • stubble, plant residue or other ground cover particularly where this exceeds 50%, • germinated and emerged weeds that are not controlled by a knockdown herbicide. The factors above, when combined, may substantially reduce weed control. Competition provided by the crop can assist with the final weed control achieved by F.S.A. Pyroxasulfone 850 WG. Chickpea, field pea, lentil and lupin crops may provide less competition than cereal crops, hence weeds that survive the application of F.S.A. Pyroxasulfone 850 WG may grow taller (relative to the height of the crop), tiller more and generally give the appearance that weed control is poorer compared to weed control in wheat or triticale.
	Suppression* of: Great brome *(Bromus diandrus),* wild oat *(Avena fatua)* *Refer **Suppression of great brome and wild oat** in GENERAL INSTRUCTIONS for further details		

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

WITHHOLDING PERIODS

Harvest:	
All crops	**NOT REQUIRED WHEN USED AS DIRECTED**
Grazing/Stockfood:	
Wheat and triticale	**DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 6 WEEKS AFTER APPLICATION**
Chickpeas, field peas, lentils, lupins	**DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 8 WEEKS AFTER APPLICATION**

GENERAL INSTRUCTIONS

F.S.A. Pyroxasulfone 850 WG Herbicide is a residual, soil applied, pre-emergent herbicide. It is absorbed by the roots and to a lesser extent by the shoots of germinating weeds, and works by inhibiting growth in the meristematic area. Weed control is optimised when F.S.A. Pyroxasulfone 850 WG is applied evenly to moist soil just prior to incorporation by sowing and there is sufficient rainfall soon after sowing to ensure uptake of the herbicide by germinating weeds. Weed control may be greatly reduced where weed seeds have been buried by cultivation prior to application. Weed control may also be reduced where there is insufficient soil moisture for herbicide uptake or in soils prone to leaching where rainfall is sufficiently heavy to cause movement of the herbicide out of the weed seed zone.
F.S.A. Pyroxasulfone 850 WG will not reliably control emerged weeds. A knockdown herbicide should be used to control emerged weeds at sowing.

Crop Safety
F.S.A. Pyroxasulfone 850 WG generally shows good crop selectivity when used as directed. The following directions will help minimise the risk of crop effects.

- Do not plant durum wheat after the application of F.S.A. Pyroxasulfone 850 WG as it may be severely damaged. Refer to Crop Rotation Recommendations for further advice.
- When incorporation is by sowing with knife points and press wheels avoid throwing treated soil into adjacent crop rows.
- Do not use a combination of both press wheels and a covering device such as harrows or chains when sowing.

The potential for crop damage is increased when there is substantial rainfall after the application of F.S.A. Pyroxasulfone 850 WG, especially where this leads to temporary waterlogging. Situations which lead to concentration of herbicide in the planting row, or movement of herbicide to the depth of the crop seed, may also increase the potential for crop damage. This includes the following scenarios;

- Where deep furrows are formed by the sowing operation, soil movement into the crop row may occur due to wind or heavy rainfall soon after sowing resulting in concentration of herbicide in the crop row.
- Where soil has a high potential for leaching, heavy rainfall between application and crop emergence may result in movement of herbicide into the crop seed zone.

Other circumstances which may increase the potential for crop damage include where F.S.A. Pyroxasulfone 850 WG is applied in tank mixes with other herbicides, where crop vigour is reduced due to factors such as frosts, insect attack or crop disease, when weather damaged seed is used and/or with the use of some fungicide seed treatments especially in conjunction with crop varieties with short coleoptile length. A combination of individual factors which increase the potential for crop damage may increase the extent of crop damage.

Chickpeas, field peas, lentils and lupins:

- F.S.A. Pyroxasulfone 850 WG may occasionally delay emergence or flowering of winter legume crops.
- Luxor variety of albus lupin has been identified as potentially more sensitive to F.S.A. Pyroxasulfone 850 WG than other lupin varieties, particularly in situations of late sowing and/or wet conditions around the time of sowing.

Incorporation by Sowing

F.S.A. Pyroxasulfone 850 WG should be applied prior to sowing, and incorporated by sowing using knife points and press wheels, or narrow points and harrows. When incorporation is by knife points and press wheels, weeds germinating in the seed row may not be controlled. Weeds germinating from depth, weeds just about to emerge, or weeds that have emerged which are not controlled by a knockdown herbicide at sowing may not be controlled by F.S.A. Pyroxasulfone 850 WG.

Interval between Application and Sowing

Incorporate by sowing as soon as practicable after the application of F.S.A. Pyroxasulfone 850 WG, but no later than 3 days after application.

Sandy Soils

Weed control may be reduced in soil prone to leaching where rainfall after application and sowing is sufficiently heavy to cause movement of the herbicide out of the weed seed zone.

Suppression of great brome and wild oat

F.S.A. Pyroxasulfone 850 WG is most effective when grass weed seeds are present on or very close to the soil surface at the time of application. For this reason, it is recommended that F.S.A. Pyroxasulfone 850 WG is applied to uncultivated soil. As the depth of weed seeds increases, control from F.S.A. Pyroxasulfone 850 WG tends to decrease. It is rare that all great brome and wild oat weed seeds will be on the soil surface at the time of F.S.A. Pyroxasulfone 850 WG application, especially considering that these seeds may remain viable in the soil for several seasons. Plants may germinate from seeds buried by the sowing operation in previous seasons, by livestock or by weed seed self-burial mechanisms particularly in some soil types (e.g. cracking clays and sand). **Therefore only partial control or suppression of the great brome or wild oat population should generally be expected.** In these situations, a follow up application with a suitable post-emergent herbicide may be required to control remaining plants.

Mixing

Ensure sprayer and nozzle filters are clean before preparing the spray mixture. Half fill the spray tank with water and, with the agitators in motion, add the correct amount of F.S.A. Pyroxasulfone 850 WG directly to the spray tank. Complete filling the tank with agitators in motion. Agitation must continue before and during spraying. When other products are to be applied in addition to F.S.A. Pyroxasulfone 850 WG, always add F.S.A. Pyroxasulfone 850 WG to the spray tank first and ensure it is fully dispersed in the spray tank before adding other products.

Application

Ensure complete and even spray coverage of the soil is achieved. Poor spray coverage may result from application to ridged or excessively cloddy soil or in situations of high stubble, plant residue or other ground cover. A significant reduction in weed control may result where stubble, plant residue or other ground cover exceeds 50%, and in situations where a 'cold' or incomplete burn of stubble results in a mass of material which can act as a physical barrier between the herbicide and germinating weeds - this can be exacerbated in header trails where there may be greater weed seed numbers and higher levels of plant residue. Weed control can be particularly affected where F.S.A. Pyroxasulfone 850 WG is applied to a barrier of stubble, plant residue or other ground cover and there is insufficient following rainfall to transfer F.S.A. Pyroxasulfone 850 WG to the soil surface and the germinating weed seeds.

Equipment

Ground Sprayers – Standard boom sprayers only are recommended and must be fitted with by-pass or mechanical agitation. It is recommended that 50 to 100 L water/ha is applied with spray droplets of a COARSE droplet size category. In some situations (e.g. high stubble loads) high water volumes may give higher levels of weed control.

Aircraft – DO NOT apply F.S.A. Pyroxasulfone 850 WG by aircraft.

APVMA Compliance Instructions for Mandatory COARSE or Larger Droplet Size Categories

Important Information

These instructions inform users of this chemical product how to lawfully comply with the requirement of a COARSE or larger spray droplet size category for spray application.

Spray droplet size categories are defined in the ASAE S572 Standard (newer name may also be shown as ASABE) or the BCPC guideline. Nozzle manufacturers may refer to one or both to identify droplet size categories, but for a nozzle to comply with this requirement, the manufacturer must refer to at least one.

In the following instructions, Section 1 is for ground application and Sections 2 and 3 are for aerial application.

Complying with the label requirement to use a specific droplet size category means using the correct nozzle that will deliver that droplet size category under the spray operation conditions being used. The APVMA has approved only the following specific methods for choosing the correct nozzle. Use one of the methods specified in these instructions to select a correct nozzle to deliver a COARSE or larger droplet size category.

SECTION 1 Instructions for **Ground Application – for COARSE droplet size or larger categories**

Mandatory Instructions for Ground Applications

USE ONLY nozzles that the nozzles' manufacturer has rated to deliver a COARSE, a VERY COARSE or an EXTREMELY COARSE droplet size category as referenced to ASAE S572 or BCPC. Choose a nozzle specified to provide the droplet size category required in the label Spray Drift Restraints.

DO NOT use a higher spray system pressure than the maximum the manufacturer specifies for the selected nozzle to deliver the droplet size category required in the label Spray Drift Restraint.

SECTIONS 2 and 3 are not applicable to this label.

Compatibility

Crop damage seen in adverse conditions, particularly wet or waterlogged conditions (refer **Crop Safety** above) may be exacerbated when F.S.A. Pyroxasulfone 850 WG is used in conjunction with other herbicides that may also cause crop damage in such conditions.

Always refer to the crop tolerance, plant back restrictions, rate recommendations and other directions for use on the label of the tank mix partner.

Refer to **Mixing** section above for advice on preparing tank mixtures with F.S.A. Pyroxasulfone 850 WG. Mixtures with products containing paraquat (e.g. Gramoxone and Spray.Seed) require particular attention to these instructions, including ongoing agitation to ensure F.S.A. Pyroxasulfone 850 WG remains in suspension in the spray tank.

For advice on compatibilities not listed below, contact Four Seasons Agribusiness Pty Ltd.

For application prior to planting wheat or triticale

F.S.A. Pyroxasulfone 850 WG is compatible with any one of the following herbicides; Ally®, Avadex® Xtra, Cadence® WG, Diuron 900WG, Dual® Gold, Glean®, glyphosate (Glyphosate CT, Roundup PowerMax®), Goal® EC, Gramoxone® 250, Hammer®, Logran®, Logran B-Power®, Monza®, Spray.Seed®, Striker®, Trifluralin 480 and Triflur X®

F.S.A. Pyroxasulfone 850 WG is compatible with mixtures of glyphosate (Glyphosate CT, Roundup PowerMax) with any one of the following herbicides; Ally, Cadence WG, Goal EC, Hammer, Logran B-Power, Monza and Striker.

F.S.A. Pyroxasulfone 850 WG is compatible with any one of the following insecticides; Le-mat®.

For application prior to planting chickpeas, field peas, lentils or lupins

Knockdown herbicides, some "spike" herbicides and insecticides shown to be compatible with F.S.A. Pyroxasulfone 850 WG prior to planting cereals, should also be suitable prior to planting chickpeas, field peas, lentils or lupins e.g. glyphosate (Glyphosate CT, Roundup PowerMax®), Goal® EC, Gramoxone® 250, Hammer®, Spray.Seed®, Lemat®. Note that plantback restrictions may render some herbicides unsuitable for mixing with F.S.A. Pyroxasulfone 850 WG where legume crops are to be planted.

Limited studies have shown that the following residual herbicides appear to be compatible with F.S.A. Pyroxasulfone 850 WG when used according to label directions;
Chickpeas: Trifluralin 480 EC, Simazine 900 WG, Trifluralin + Simazine, Terbyne® 750 WG
Field peas: Trifluralin 480 EC, Stomp® 440 EC, Bladex® 900 WG, Terbyne® 750 WG
Lentils: Stomp® 440 EC, Terbyne® 750 WG
Lupins: Trifluralin 480 EC, Simazine 900 WG, Trifluralin + Simazine, Simazine + Atrazine 900 WG, Stomp® 440 EC, Terbyne® 750 WG

Sprayer clean-up

Following the use of F.S.A. Pyroxasulfone 850 WG, the spraying equipment should be thoroughly cleaned before it is used for application of other products.

Cleaning should occur immediately following application of F.S.A. Pyroxasulfone 850 WG. The spray unit should first be completely emptied. The sprayer, including all filters and lines, should be thoroughly rinsed with water, to remove all traces of product.

Ensure that the sprayer clean-up is carried out in an area that is clear of waterways, desirable vegetation and tree roots. If using F.S.A. Pyroxasulfone 850 WG with a tank-mix partner, refer to the sprayer clean-up instructions for the other product, which may be more rigorous than those for F.S.A. Pyroxasulfone 850 WG.

Crop Rotation Recommendations

F.S.A. Pyroxasulfone 850 WG breaks down by microbial degradation, which is favoured by warm, moist aerobic soil.

Minimum recropping intervals (months after F.S.A. Pyroxasulfone 850 WG application) have been established for F.S.A. Pyroxasulfone 850 WG to minimise the risk of damage to following crops (see table below). However, environmental and agronomic factors make it impossible to eliminate all risk and therefore the potential for damage to following crops exists.

Rainfall of less than the minimum interim rainfall required (see table below) may result in extended recropping intervals. Interim rainfall is the total rainfall between the application of F.S.A. Pyroxasulfone 850 WG and planting of the particular following crop. For recropping with winter crops, where a minimum of 250 mm of interim rainfall is required, if rain from application to the end of spring is less than 125 mm and isolated heavy summer and autumn falls and break rains are required to achieve the 250 mm interim rainfall, then extended recropping intervals may apply.

Crops	**Recropping recommendation**	
	Minimum recropping interval	**Minimum interim rainfall**
Wheat (not durum wheat) and triticale	0 months	0 mm
Cotton, maize, mung beans, sorghum, soybeans and sunflowers	5 months	150 mm
Barley, canola*, chickpeas**, faba beans, field peas**, lentils**, lupins**, vetch and subterranean clover	9 months	250 mm
Durum wheat, oats, lucerne and medic	21 months	550 mm

*For canola sown the year after the application of F.S.A. Pyroxasulfone 850 WG there may occasionally be some crop stunting but no yield reductions have been measured.

**Chickpeas, field peas, lentils and lupins can be sown immediately after the application of F.S.A. Pyroxasulfone 850 WG where F.S.A. Pyroxasulfone 850 WG has not already been incorporated. However, where F.S.A. Pyroxasulfone 850 WG has been incorporated into the soil, for example, by a previous sowing operation for a subsequently failed crop, these legume crops should not be sown for at least 9 months after the application of F.S.A. Pyroxasulfone 850 WG.

For advice on crops and situations not listed above, contact Four Seasons Agribusiness Pty Ltd.

RESISTANT WEEDS WARNING

GROUP	15	HERBICIDE

F.S.A. Pyroxasulfone 850 WG Herbicide is a member of the isoxazoline group of herbicides and has the inhibitor of very long chain fatty acids (VLCFA inhibitors) mode of action. For weed resistance management F.S.A. Pyroxasulfone 850 WG is a Group 15 herbicide. Some naturally-occurring weed biotypes resistant to F.S.A. Pyroxasulfone 850 WG, and other Group 15 herbicides, may exist through normal genetic variability in any weed population. These 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. Pyroxasulfone 850 WG or other Group 15 herbicides.

Do not rely exclusively on F.S.A. Pyroxasulfone 850 WG for weed control. Use as part of an integrated weed management program involving herbicides with other modes of action and non-chemical methods of control. CropLife Australia resistance management strategies are available from your local agricultural chemical supplier or at the CropLife Australia website (www.croplife.org.au). Refer to these strategies for details of how to manage the build-up of resistant weeds on your farm.

Since occurrence of resistant weeds is difficult to detect prior to use Four Seasons Agribusiness Pty Ltd accepts no liability for any losses that may result from the failure of F.S.A. Pyroxasulfone 850 WG to control resistant weeds.

PRECAUTIONS

Re-entry Period
Do not allow entry into treated areas until the spray has dried, unless wearing cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length chemical resistant gloves. Clothing must be laundered after each day's use.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT
Very toxic to aquatic life.
DO NOT contaminate wetlands or watercourses with this product or used containers.
DO NOT apply if heavy rain has been forecast within 48 hours.
DO NOT apply unless incorporation by sowing (IBS) can be performed within 3 days of application.
DO NOT apply to waterlogged soil.

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 non-target plants, cropping lands or pastures.

Undersown Pasture Species
DO NOT undersow with pasture species (legumes or grasses) following the application of F.S.A. Pyroxasulfone 850 WG.

STORAGE AND DISPOSAL
Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight.
(HDPE containers only; 1.18 to 60 kg)
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. Do not re-use containers for any other purpose.
(Bag-in-a-box containers only; 1.18 to 25 kg)
Single rinse before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. 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. Do not re-use container for any other purpose.

SAFETY DIRECTIONS
May irritate the eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. When using together with other products, consult their label safety directions. When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow length chemical-resistant gloves. Wash hands after use. After each day's use, wash gloves and contaminated clothing.

FIRST AID
If poisoning occurs contact a doctor or Poisons Information Centre. Phone Australia 13 11 26; New Zealand 0800 764 766.

SAFETY DATA SHEET
Additional information is listed on the Safety Data Sheet that 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.

• May cause an allergic skin reaction. • Suspected of causing cancer. • May cause damage to the musculator and nervous system through prolonged or repeated oral exposure.
• Do not handle until all safety precautions have been read and understood. • Do not breathe dust. • IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. • IF exposed or concerned: Get medical advice/attention. • Take off contaminated clothing and wash before reuse. • Store locked up.

IN AN EMERGENCY
DIAL 000
POLICE OR FIRE BRIGADE

FOUR SEASONS AGRIBUSINESS

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APVMA Approval No.:92777/136615