

CAUTION

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING OR USING



F.S.A.

CARFENTRAZONE 400 HERBICIDE

ACTIVE CONSTITUENT: 400 g/L CARFENTRAZONE-ETHYL

SOLVENTS: 452 g/L LIQUID HYDROCARBON

100 g/L N-METHYL-2-PYRROLIDONE

GROUP

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HERBICIDE

For improvement in the control of marshmallow and certain other broadleaf weeds prior to establishment of broadacre crops, fallows or forest plantations, in commercial, industrial and public service areas, around agricultural buildings and yards, in tree fruits, nuts, grape vines in tank mixture with knockdown herbicides; control of marshmallow and annual nettles in grass pastures and rough grass/turf areas; and control of volunteer cotton seedlings including Roundup Ready® cotton and desiccation of cotton re-growth as per the Directions For Use Table.

IMPORTANT: READ THIS BOOKLET BEFORE USING THIS PRODUCT



FOUR SEASONS
AGRIBUSINESS

DIRECTIONS FOR USE

RESTRAINTS

DO NOT apply by aerial application except for cotton desiccation.

SITUATION	WEEDS CONTROLLED/ SITUATION	STATE	TIME OF APPLICATION	RATE	CRITICAL COMMENTS
<p>Prior to sowing winter and summer broadacre and horticultural crops; starting a fallow; and prior to establishment of forestry plantations.</p> <p>To assist in weed control in Commercial, Industrial and Public Service areas, around Agricultural buildings and yards.</p> <p>In young or established Grapevines, Treefruits (including Pome fruit, Stone fruit and Citrus fruit), Tree Nuts and Assorted Tropical and Sub tropical fruits.</p>	<p>Australian Crassula/ Stonecrop <i>Crassula</i> sp., Capeweed <i>Arctotheca calendula</i>, Chickwed <i>Stellaria media</i>, Common storks bill (max. 4 leaves) <i>Erodium cicutarium</i>, Doublegee/Spiny emex/Three cornered jack <i>Emex australis</i>, Marshmallow <i>Malva parviflora</i>, Paterson's curse <i>Echium plantagineum</i>, Sub. Clover <i>Trifolium subterraneum</i>, Wild radish <i>Raphanus raphanistrum</i></p> <p>Refer also to the product label for the knockdown herbicide used.</p> <p>If one of the above weeds is the dominant weed, and there is no specific rate for it in the knockdown herbicide's label, consult the label's generic annual weed rate-range. Select from within this range to suit the weed-stage, weed-density, conditions etc of your situation.</p>	All States	Apply as a tank mix with glyphosate or paraquat products. (ie knockdown herbicides)	<p>15 - 45 mL/ha plus recommended label rates of knockdown herbicides</p> <p>Spot spray 6 mL/ 100 L water plus recommended label spot spray rates of knock-down herbicides</p>	<p>Addition of F.S.A. CARFENTRAZONE 400 HERBICIDE to knockdown herbicides will increase the speed at which treated broadleaved weeds in general develop visible symptoms (compared to results achieved with knockdown herbicides applied alone) and may improve final control of broadleaved weeds including certain hard-to-kill weeds, marshmallow in particular. The use of higher rates and full soil disturbance in cropping situations may improve control of marshmallow in particular.</p> <p>Use the lower rates on younger plants or plants growing under good conditions and the higher rates on older plants or plants growing under less optimum conditions. The lower rate may only provide suppression of capeweed, wild radish, common storksbill and doublegee under poor growing conditions. Common storksbill should be no larger than 4 leaf at spraying, recently germinated and not under stress – older or stressed plants may not be adequately controlled. Application to hardened weeds or drought stressed weeds especially under summer conditions may cause only localised injury to weed foliage which may not enhance final weed control.</p> <p>Mallow growing and sprayed in the summer is especially prone to drought stress and may either not show symptoms typical of F.S.A. CARFENTRAZONE 400 HERBICIDE or may regrow following treatment although plants did not appear very stressed at application. Apply only as a tank mix with recommended rates of knockdown herbicides. Refer to the appropriate label for weed sizes and follow all label directions. Addition of Supercharge at 0.5% may be beneficial when applying F.S.A. CARFENTRAZONE 400 HERBICIDE with a glyphosate herbicide.</p> <p>To ensure uptake of F.S.A. CARFENTRAZONE 400 HERBICIDE DO NOT sow crops for at least 1 hour after application. Always refer to the appropriate companion product label in case a longer re-crop sowing period is required. When using F.S.A. CARFENTRAZONE 400 HERBICIDE as a spot spray, apply in sufficient water (minimum 500L/ha) to thoroughly wet all weed foliage to the point of run-off. Addition of standard rates of a non-ionic surfactant may improve weed control.</p>

SITUATION	WEEDS CONTROLLED/ SITUATION	STATE	TIME OF APPLICATION	RATE	CRITICAL COMMENTS
Prior to sowing summer broadacre and horticultural crops; starting a fallow	Volunteer cotton seedlings, including Roundup Ready varieties	NSW, Qld, WA only	Apply to seedlings at 2 - 6 leaf stage	<p>Roundup Ready cotton only: 45 - 60 mL/ha plus Super-charge or Hasten 1%</p> <p>or 45 - 60 mL/ha plus glyphosate plus Super-charge or Hasten 0.5%</p> <p>Conventional cotton only: 30 - 45 mL/ha plus recommended rates of knockdown herbicides</p>	<p>Apply F.S.A. CARFENTRAZONE 400 HERBICIDE in a minimum spray volume of 80 L/ha to ensure effective coverage.</p> <p>Use of lower spray volumes may reduce weed control. Cotton should be growing well at application; application to plants growing under heat and moisture stress may reduce the level of control.</p> <p>To broaden the weed spectrum F.S.A. CARFENTRAZONE 400 HERBICIDE may be tank mixed with the recommended rate of a knockdown herbicide (glyphosate or paraquat products). When using a tank mix with glyphosate for control of Roundup Ready seedlings the higher rate range of F.S.A. CARFENTRAZONE 400 HERBICIDE is required as well as Supercharge or Hasten at 0.5%.</p> <p>When using a tank mix with glyphosate for control of Conventional Cotton seedlings the addition of standard rates of a non-ionic surfactant or 0.5% of an oil adjuvant such as Supercharge or Hasten will maximise control.</p>
Grass pastures; Rough grass/turf areas	Marshmallow <i>Malva parviflora</i> Annual (stinging) nettles <i>Urtica urens</i>	All States	Apply to seedlings at 2 - 10 leaf stage	15 - 45 mL/ha plus Supercharge or Hasten 0.5%	<p>Use the lower rates on younger plants or plants growing under good conditions and the higher rates on older plants or plants growing under less optimum conditions. These rates may only provide suppression of marshmallow.</p> <p>To improve the control of marshmallow F.S.A. Carfentrazone 400 should be tank mixed with one of the following: 500 mL/ha of an 800 g/L ethyl ester of 2,4-D 650 mL/ha of a 600 g/L LV Ester of 2,4-D 750 mL of a 625 g/L amine of 2,4-D - activity of this mix will be improved with the addition of Supercharge or Hasten at 0.5%.</p>

SITUATION	WEEDS CONTROLLED/ SITUATION	STATE	TIME OF APPLICATION	RATE	CRITICAL COMMENTS
Cotton	Desiccation of regrowth	Qld, NSW, WA only	Apply to regrowth following defoliation	48 – 60 mL/ha	Use F.S.A. CARFENTRAZONE 400 HERBICIDE to desiccate regrowth which occurs following the defoliation program. Apply with crop oil concentrates or blended oil/surfactant adjuvants as this may result in a greater reduction of green shoot. Use the higher rate of F.S.A. CARFENTRAZONE 400 HERBICIDE when regrowth is vigorous or when there are more than 20 regrowth leaves of any size, per plant. Ensure that spray equipment is adjusted to provide thorough coverage of foliage to maximise product performance. Use a minimum of 100 L/ha for ground application and 30 L/ha for aerial application.

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

WITHHOLDING PERIODS:

HARVEST: NOT REQUIRED FOR F.S.A. CARFENTRAZONE 400 HERBICIDE WHEN USED AS DIRECTED.

HOWEVER, REFER ALSO TO THE WITHHOLDING PERIOD OF PRODUCT/S MIXED WITH F.S.A. CARFENTRAZONE 400 HERBICIDE.

COTTON PROCESSING: DO NOT HARVEST FOR 1 DAY AFTER APPLICATION.

GRAZING:

GRAZING/COTTON TRASH: DO NOT GRAZE TREATED AREAS OR FEED COTTON TRASH TO LIVESTOCK.

Grass Pasture and all other situations: NOT REQUIRED FOR F.S.A. CARFENTRAZONE 400 WHEN USED AS DIRECTED.

GENERAL INSTRUCTIONS

F.S.A. CARFENTRAZONE 400 HERBICIDE is an emulsifiable concentrate formulation and is to be mixed with water and applied as per the labelled Directions for Use. F.S.A. CARFENTRAZONE 400 HERBICIDE is a post-emergence herbicide to be added to knockdown herbicides to improve the control of certain broadleaf weeds including marshmallow prior to the establishment of fallows, winter and summer broadacre and horticultural crops, marshmallow control in grass pastures, in commercial, industrial and public service areas, around agricultural buildings, yards and other farm situations or in treefruits, nuts and grapevines.

F.S.A. CARFENTRAZONE 400 HERBICIDE can be used alone with a suitable adjuvant for control of volunteer cotton seedlings including Roundup Ready cotton. It can also be used for desiccation of regrowth in cotton.

F.S.A. CARFENTRAZONE 400 HERBICIDE is a fast-acting contact herbicide and aids in control of weeds through a process of membrane disruption. The foliar uptake of F.S.A. CARFENTRAZONE 400 HERBICIDE is rapid and plant desiccation can occur within 4 days of application. Application of F.S.A. CARFENTRAZONE 400 HERBICIDE should target small actively growing weeds. Subsequent germinations will not be controlled.

SYMPTOMS

F.S.A. CARFENTRAZONE 400 HERBICIDE is rapidly absorbed through the foliage of plants. Within a few hours following application, the foliage of susceptible weeds show signs of desiccation, and in subsequent days necrosis and death of the plant.

Extremes in environmental conditions eg. temperature and moisture, soil conditions and cultural practices may affect the activity of F.S.A. CARFENTRAZONE 400 HERBICIDE. Under warm moist conditions, herbicide symptoms may be accelerated.

While under very dry conditions, the expression of herbicidal symptoms is delayed, and weeds hardened off by drought are less susceptible to F.S.A. CARFENTRAZONE 400 HERBICIDE.

COMPATIBILITY

As per the Directions for Use, F.S.A. CARFENTRAZONE 400 HERBICIDE should always be tank mixed with formulations of the knockdown herbicides glyphosate, paraquat and/or glufosinate. F.S.A. CARFENTRAZONE 400 HERBICIDE is also compatible with partner herbicides commonly used with knockdown herbicides including atrazine, Boxer Gold, clopyralid, dicamba, metribuzin, Outlook, pendimethalin, Sakura, simazine, triasulfuron, triclopyr and trifluralin. This compatibility claim is restricted to a three-way mix of F.S.A. CARFENTRAZONE 400 HERBICIDE with any one of the above partner herbicides plus a knockdown herbicide provided the knockdown herbicide label includes a claim of compatibility with that partner herbicide. F.S.A. CARFENTRAZONE 400 HERBICIDE is compatible with non-ionic surfactants (wetting agents) such as BS1000 and Shirwet 600, and with oil adjuvants including Adigor, Bonza, Hasten, Supercharge, and Vibral. F.S.A. CARFENTRAZONE 400 HERBICIDE can also be mixed with the insecticides alpha-cypermethrin, bifenthrin, omethoate and phosmet.

TIMING

Pre-crop, Volunteer cotton and Marshmallow in grass pastures.

Application should be made to small, actively growing weeds less than 6 to 8 leaf in stage. As F.S.A. CARFENTRAZONE 400 HERBICIDE is a contact herbicide, best control is achieved when weeds are exposed and are not shielded by other weeds and or stubble.

Cotton

If cotton re-growth occurs after the initial defoliation program, apply F.S.A. CARFENTRAZONE 400 HERBICIDE to desiccate re-growth prior to harvest.

MIXING

Add half the required volume of water to spray tank and start agitation. Add any partner SC or WG herbicide next if it should be added before an EC or knockdown herbicide. Add the measured amount of F.S.A. CARFENTRAZONE 400 HERBICIDE next, followed by the knockdown herbicide (if required). Add balance of water to tank and add any adjuvant or additive if recommended for use with the knockdown herbicide or as suggested in the Critical Comments. Maintain good agitation at all times until spraying is completed. DO NOT store spray mixture overnight.

APPLICATION

DO NOT apply by aerial application except for cotton desiccation.

The best application conditions are when soil is moist, weather fine and rain unlikely within one hour or as specified for the knockdown herbicide.

Extremes in environmental conditions eg. temperature and moisture, soil conditions and/ or cultural practices may affect the activity of F.S.A. CARFENTRAZONE 400 Herbicide. Under warm moist conditions, herbicide symptoms may be accelerated. While under very dry conditions, the expression of herbicidal symptoms is delayed, and weeds hardened off by drought are less susceptible to F.S.A. Carfentrazone 400 Herbicide.

Ground sprayers

Pre-crop, Volunteer cotton and Marshmallow in grass pastures. Apply F.S.A. CARFENTRAZONE 400 HERBICIDE as a broadcast application using a conventional boom sprayer with either mechanical or by-pass agitation.

Use single orifice flat fan nozzles such as Spraying Systems TeeJet 11001, 110015, 11002 or equivalent sizes from other manufacturers or Spraying Systems TwinJet twin flat spray tips TJ60-11002, TJ60-11003 or TJ60-11004 or equivalent sizes from other manufacturers. Do not use 110-03 or bigger single orifice nozzles or TJ11006 or bigger twin orifice nozzles with F.S.A. CARFENTRAZONE 400 HERBICIDE. Do not use floodjet, boomless jets or misters or controlled droplet application equipment.

Spray equipment should be properly calibrated to ensure correct and uniform application. Use a spray volume of 50 to 150 litres per hectare (minimum 80L/ha for volunteer cotton). Experience has shown that increasing spray volumes can improve weed control. Use the lowest pressure and boom height which provides uniform coverage. Use the higher volume if weed infestation is heavy and/or tall.

Cotton

When desiccation cotton regrowth, use sufficient water to obtain complete coverage of all leaves, ie. at least 100 litres of water per hectare. Good coverage should be obtained with three or more nozzles per row depending upon crop height and canopy density.

Knapsack, Pneumatic, Handgun sprayers

Apply F.S.A. CARFENTRAZONE 400 HERBICIDE at the recommended rate of 1 mL per 15 litres (6 mL per 100 litres) in conjunction with labelled handgun rates of a knockdown herbicide in sufficient water to adequately and uniformly wet the foliage of the weeds being sprayed. A spray volume of 500 L to 1000 L will usually be sufficient but higher volumes may be required for dense taller vegetation.

Aerial Application (for Cotton Desiccation Only)

Apply by fixed wing aircraft in a minimum of 30L/ha water and ensure thorough coverage. Do not exaggerate swath width.

SPRAYER CLEAN OUT - AFTER THE USE OF F.S.A. CARFENTRAZONE 400 HERBICIDE

Thoroughly clean all spray equipment using the following procedure when you have finished spraying highly active materials such as carfentrazone-ethyl. In addition to the following procedure, ensure proper equipment clean-out for any other products mixed with F.S.A. CARFENTRAZONE 400 HERBICIDE as specified on the other product labels.

IMPORTANT:

More complete cleaning can be achieved if the spray equipment is cleaned immediately following each use.

Mix only as much herbicide spray solution as needed at a time.

DO NOT store the sprayer for any extended period of time, especially over night, with F.S.A. CARFENTRAZONE 400 HERBICIDE spray solution remaining in the tank, spray lines, spray boom plumbing, spray nozzles or strainers.

Preparation of the Cleaning Solution:

Prepare a spray equipment cleaning solution by mixing an alkaline detergent eg "OMO" or "SPREE" at a rate of 100g for every 100L of clean water used. Upon completion of applying F.S.A. CARFENTRAZONE 400 HERBICIDE and before spraying sensitive crops including canola, pulses such as faba beans, lentils, other legumes and cotton:

1. Fill the spray tank with sufficient cleaning solution to allow the operation of the spray system for a minimum of 15 minutes to thoroughly flush hoses, spray boom and spray nozzles then fill the spray tank to capacity to ensure contact of the solution with all internal surfaces. Let the cleaning solution soak in tank, pump and spray lines overnight.
2. Before further use of the sprayer, operate the spray system for 15 minutes, then completely drain the sprayer system. Rinse the tank with clean water and flush through the hoses, spray boom, and spray nozzles.
3. If possible spray a pesticide requiring an oil adjuvant eg Achieve & Supercharge onto cereals as a further means of removing possible residues of F.S.A. CARFENTRAZONE 400 HERBICIDE before spraying sensitive crops.
4. Immediately prior to commencement of spraying a sensitive crop, purge the boom lines by operating the spray system onto a fence line or waste area for sufficient time to remove any solution that has been residing in the spray lines. This is also recommended for subsequent tank loads or if the sprayer has been left standing for a period of time containing spray solution.
5. If storing equipment for more than 48 hours, preferred practice is to clean spray equipment as outlined above allowing to soak over night, drain and flush with fresh water and leave fresh water in the spray tank, hoses, and spray booms until next use. This water must be drained from the spray boom and lines and flushed out with clean water before beginning any application to a sensitive crop.

Properly dispose of all cleaning solution and rinsate safely in accordance with Federal, State, and local regulations and guidelines.

Do not apply sprayer cleaning solutions or rinsate to sensitive crops.

Should small quantities of F.S.A. CARFENTRAZONE 400 HERBICIDE remain in inadequately cleaned mixing, loading and/or spray equipment, they may be released during subsequent applications potentially causing effects to sensitive crops and other vegetation. The above method is only effective if the cleaning solution comes into contact with every surface or contact point that may contain even minute carfentrazone-ethyl residues.

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CROP PLANT BACK & ROTATION RECOMMENDATIONS

F.S.A. CARFENTRAZONE 400 HERBICIDE does not provide residual activity, therefore no crop plant back or rotational restrictions apply. However, check the label of any product mixed with F.S.A. CARFENTRAZONE 400 HERBICIDE, to determine any plant back periods or restrictions on use.

RESISTANT WEEDS WARNING

GROUP	G	HERBICIDE
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F.S.A. CARFENTRAZONE 400 HERBICIDE is a member of the Aryl triazoline group of herbicides. Its mode of action is through a process of membrane disruption, which is initiated by the inhibition of the enzyme protoporphyrinogen oxidase. This inhibition interferes with the chlorophyll biosynthetic pathway.

For weed resistance management F.S.A. CARFENTRAZONE 400 HERBICIDE is a Group G herbicide.

Some naturally occurring weed biotypes resistant to F.S.A. CARFENTRAZONE 400 HERBICIDE and other Group G 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. CARFENTRAZONE 400 HERBICIDE or other Group G herbicides. Since the 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. CARFENTRAZONE 400 HERBICIDE to control resistant weeds.

TRADE ADVICE

EXPORT SLAUGHTER INTERVAL (ESI):

An export slaughter interval is not required when used as directed.

PRECAUTIONS

RE-ENTRY

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 chemical resistant gloves. Clothing must be laundered after each day's use.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under weather conditions, or from spray equipment, which may cause spray drift onto nearby susceptible plants, adjacent crops, or pastures, or onto wetlands, waterbodies or watercourses.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Highly toxic to algae and aquatic plants. DO NOT contaminate streams, rivers or waterways with F.S.A. CARFENTRAZONE 400 HERBICIDE 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 for appropriate disposal at an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 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 government regulations. DO NOT burn empty containers or product.

SAFETY DIRECTIONS

Harmful if inhaled. May irritate the nose and throat. Will irritate the skin will irritate the eyes.

Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. Do not inhale vapour or spray mist. When preparing product for use and using the product, wear elbow-length chemical resistant gloves. When mixing, loading, opening the container and preparing spray and using the prepared spray, wear cotton overalls, over normal clothing, buttoned to the neck and wrist face shield or goggles. If applying by hand wear cotton overalls, over normal clothing, buttoned to the neck and wrist face shield or goggles. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Wash hands after use. After each days use, wash gloves, face shield or goggles and contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26. If swallowed, do NOT induce vomiting. If in eyes, wash out immediately with water.

SAFETY DATA SHEET

For further information refer to the Safety Data Sheet which is available from the supplier.

CONDITIONS OF SALE

The sale, supply and use of this product is beyond the control of the manufacturer, all warranties, express or implied under common law and statute 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.

Combustible liquid. May be fatal if swallowed and enters airways. May cause allergy or asthma symptoms or breathing difficulties if inhaled. H360: May damage fertility or the unborn child. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use only outdoors or in a well ventilated area. Avoid release to the environment. In case of inadequate ventilation wear respiratory protection. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. 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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