CAUTION

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

Sabakem

Isoxaflutole 750 WG®

Herbicide

ACTIVE CONSTITUENT: 750g/kg ISOXAFLUTOLE

GROUP H HERBICIDE

For the control and suppression of various broadleaf weeds and grasses in sugarcane and chickpeas as specified in the Directions For Use Table.

IMPORTANT: READ THIS LEAFLET BEFORE OPENING OR USING THIS PRODUCT

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RESTRAINTS

All Crops:
DO NOT apply by aircraft.

Sugarcane:
DO NOT apply with wetting agents, crop oils or other adjuvants.
DO NOT apply to poorly drained soils, e.g. soils prone to waterlogging, sodic soils or soils affected by physical compaction.
DO NOT apply to crops with poor root development or to crops under stress from waterlogging, drought, nutrient deficiency or disease.
DO NOT apply to soils of cation exchange capacity (C.E.C.) below 4.5 meq/100 g.
DO NOT apply to soils with organic carbon content of 1.0% or less, unless the cation exchange capacity (C.E.C.) is above 9.5 meq/100 g. These values should be determined through soil analysis prior to using Sabakem Isoxaflutole 750 WG Herbicide.

DIRECTIONS FOR USE

CROP	WEEDS CONTROLLED	STATES	RATE	CRITICAL COMMENTS
Sugarcane	**Pre-Weed Emergence:** Barnyard grass, Billygoat Weed (Blue Top), Blackberry Nightshade, Crowsfoot Grass, Green Summer Grass, Guinea Grass, Summer Grass, Thick Head	QLD, NSW, WA only	200 g/ha	**General:** Sabakem Isoxaflutole 750 WG Herbicide can be applied to hot and dry soils, without the risk of breakdown by sunlight. For effective weed control, incorporation by rainfall or irrigation to the weed root zone is required, but immediate soil incorporation is not critical due to the ultraviolet stability of Sabakem Isoxaflutole 750 WG Herbicide. See 'Crop Safety' and 'Application' under General Instructions. **Pre- to early Post-Emergence of plant cane:** May be applied as a broadcast or band spray 'over the top' of plant cane from planting up to the 3 to 4 leaf crop stage. Add paraquat at label rates where green cane leaf has emerged at application, even if no weeds have emerged. DO NOT apply as a broadcast or band spray after the 4 leaf stage of plant cane. Beyond this stage, Sabakem Isoxaflutole 750 WG Herbicide must only be applied as a directed spray (see PRIOR TO THE 'OUT-OF-HAND' STAGE OF PLANT AND RATOON CANE below). DO NOT apply to unconsolidated soil in the cutaway situation, where rainfall or irrigation may cause soil movement into the planting drill. DO NOT apply to shallow planted cane (e.g. less than 60 mm soil cover above the sett). A greater depth of soil cover is recommended where soils have a high infiltration rate. **After Harvest of ratoon cane:** May be applied 'over the top' of cane as a broadcast or band spray up to the two-leaf crop stage. Sabakem Isoxaflutole 750 WG Herbicide can be applied to burnt or trash blanketed ratoon cane. Avoid soil disturbance, e.g. stool splitting, after application. If weeds have emerged at application, add paraquat at the appropriate label rate to provide improved weed knockdown. **Prior to the 'Out-of-Hand' stage of plant and ratoon cane:** Apply as a directed inter-row spray (e.g. Irvin leg) to the soil surface after the last working. Best results are obtained where the mound surface has consolidated to minimize soil and herbicide movement. Direct the spray to minimize contact with sugarcane foliage. DO NOT apply to sugarcane less than 0.75 m in height. If weeds have emerged at application, add paraquat at the appropriate label rate to provide improved weed knockdown.
	Pre-Weed Emergence: Weeds as above plus: Vines (*Ipomoea* spp.)	QLD, NSW only	200 g/ha + 1.6 kg/ha diuron (900 g/kg)	**After harvest of ratoon cane and prior to the 'Out-oF-Hand' stage of plant and ratoon cane:** Apply as for Sabakem Isoxaflutole 750 WG Herbicide alone (above). For best results diuron requires incorporation by rainfall or irrigation within 10 days of application. **Note:** Application of diuron to crops planted in very light sandy or gravelly soils, or soils low in clay or organic matter may result in crop damage. Heavy rains after the application of diuron may cause severe crop damage. **Pre- to early Post-Emergence of plant cane:** DO NOT apply Sabakem Isoxaflutole 750 WG Herbicide in a tank mixture with diuron at this crop stage.

DIRECTIONS FOR USE

CROP	WEEDS CONTROLLED	STATES	RATE	CRITICAL COMMENTS
Chickpeas	Capeweed, Crassula, Indian Hedge Mustard, Medic, Prickly Lettuce, Sowthistle, Turnip Weed, Wild Radish <u>Weeds Suppressed:</u> Deadnettle, Slender Celery	QLD, NSW, ACT, VIC, SA, WA only	100 g/ha	**Pre-Weed Emergence:** Application can be made to dry or damp soil. Application should be made as soon as possible after planting prior to emergence of the crop. If applied during the planting operation ensure Sabakem Isoxaflutole 750 WG Herbicide is applied after furrow closure. Failure to thoroughly close and firm the seed furrow may allow herbicide to directly contact the seed which may cause crop injury. If sowing with knife points or disc openers, ensure that herbicide cannot be concentrated in the sowing furrow by soil wash. Either close the furrow with harrows, or stabilize the furrow with press wheels. Mechanical incorporation is not recommended. Use a nozzle configuration to achieve a medium to coarse spray pattern. A minimum spray volume of 50 L/ha is recommended. Application of Sabakem Isoxaflutole 750 WG Herbicide post-sowing pre-emergent to chickpeas planted in sandy or gravely soils, or soils low in clay or organic matter may result in crop damage. Heavy rains after the application of Sabakem Isoxaflutole 750 WG Herbicide may cause crop damage, particularly in sandy or gravely soils. Sabakem Isoxaflutole 750 WG Herbicide is NOT recommended for use on Yorker chickpeas. See "Crop Safety" in the GENERAL INSTRUCTIONS section below.
	Capeweed, crassula, Deadnettle, Indian hedge Mustard, Medic, Prickly Lettuce, Silvergrass, Slender Celery, Sowthistle, Spear Thistle, Turnip Weed, Wild radish <u>Weeds Suppressed:</u> Saffron Thistle, Spiny Emex, Wireweed		100 g/ha + 1.5 L/ha simazine (500 g/L SC)	The Critical Comments for the use of Sabakem Isoxaflutole 750 WG Herbicide alone in chickpeas (above) also apply to this section. Application of Sabakem Isoxaflutole 750 WG Herbicide + simazine in sandy or gravely soils may result in severe crop damage.

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

WITHHOLDING PERIODS:

SUGARCANE:
Harvest: DO NOT HARVEST FOR 19 WEEKS AFTER APPLICATION
Grazing: DO NOT GRAZE ANIMALS ON TREATED CROPS

CHICKPEAS:
Harvest: NOT REQUIRED WHEN USED AS DIRECTED
Grazing: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 4 WEEKS AFTER APPLICATION

GENERAL INSTRUCTIONS

RESISTANT WEEDS WARNING

GROUP H HERBICIDE

Sabakem Isoxaflutole 750 WG Herbicide is a member of the isoxazole group of herbicides. Sabakem Isoxaflutole 750 WG Herbicide is a herbicide which inhibits 4-hydroxyphenyl-pyruvate dioxygenase (4-HPPD). For weed resistance management Sabakem Isoxaflutole 750 WG Herbicide is a Group H herbicide. Some naturally occurring weed biotypes resistant to Sabakem Isoxaflutole 750 WG Herbicide, and other Group H 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 Sabakem Isoxaflutole 750 WG Herbicide or other Group H herbicides.
Since the occurrence of resistant weeds is difficult to detect prior to use, Sabakem Pty Ltd accepts no liability for any losses that may result from the failure of Sabakem Isoxaflutole 750 WG Herbicide to control resistant weeds.

CROP SAFETY

Chickpeas
Application of Sabakem Isoxaflutole 750 WG Herbicide PSPE to chickpeas planted in sandy or gravely soils, or soils low in clay or organic matter may result in crop damage. Heavy rains after the application of Sabakem Isoxaflutole 750 WG Herbicide may cause crop damage, particularly in sandy or gravely soils. Application of Sabakem Isoxaflutole 750 WG Herbicide + simazine in sandy or gravely soils may result in severe crop damage.

Varietal Tolerance
Sabakem Isoxaflutole 750 WG Herbicide is NOT recommended for use with the chickpea variety Yorker. Application of Sabakem Isoxaflutole 750 WG Herbicide post-sowing pre-emergent to crops of Yorker variety chickpeas can result in unacceptable crop damage and may result in yield loss.

Crop Rotation Recommendations
Sabakem Isoxaflutole 750 WG Herbicide may be applied to chickpea crops where the following crop will be chickpeas, or where the land will be left fallow. The following re-cropping instructions apply to following crops other than chickpeas.

- Prolonged dry periods or cold conditions may result in extended re-cropping intervals, even if rainfall exceeds the required amount (listed in the table below). If in doubt, contact your local supplier, Sabakem Pty Ltd representative.
- Heavy rainfall after an extended dry period may result in the reactivation of Sabakem Isoxaflutole 750 WG Herbicide. This can lead to transient bleaching or crop stunting.
- Use on soils with a pH less than 7.0 has not been extensively tested, and may result in extended re-cropping intervals.
- Cultivation is recommended prior to re-cropping.
- Minimum re-cropping intervals apply for all crops following Sabakem Isoxaflutole 750 WG Herbicide application. For advice on crops not listed below, please contact your local supplier, Sabakem Pty Ltd.

CROP	MINIMUM RE-CROPPING INTERVAL	MINIMUM RAINFALL REQUIREMENT*
Wheat	10 weeks**	100 mm
Barley	10 weeks**	100 mm
Oats	10 weeks**	100 mm
Canola	9 months	350 mm
Faba Beans	9 months	250 mm
Field Peas	9 months	250 mm
Lentils	21 months	500 mm
Clover	21 months	500 mm
Lucerne	9 months	350 mm
Medic	21 months	500 mm
Maize	10 weeks**	100 mm
Mung Beans	7 months	250 mm
Sorghum	7 months	250 mm
Soybeans	7 months	250 mm
Sunflowers	7 months	250 mm
Cotton	7 months	350 mm

* Minimum rainfall total from Sabakem Isoxaflutole 750 WG Herbicide use until planting of the subsequent crop. DO NOT include flood or furrow irrigation in the minimum rainfall requirement.

** If Sabakem Isoxaflutole 750 WG Herbicide has been tank-mixed with simazine, observe the re-cropping interval for simazine for wheat, barley, oat and maize.

Sugarcane
There are 3 key guidelines for maintaining crop safety when using Sabakem Isoxaflutole 750 WG Herbicide in sugarcane.

1. DO NOT apply to soils with a low binding potential, that is with a C.E.C. below 4.5 meq/100 g, or an O.C. of 1.0% or less (unless C.E.C. is greater than 9.5 meq/100 g).
2. DO NOT apply to areas which have poor drainage or poor root development.
3. Add paraquat to Sabakem Isoxaflutole 750 WG Herbicide to minimize foliar uptake when applying as a broadcast spray to plant cane.

Sabakem Isoxaflutole 750 WG Herbicide is adsorbed to organic matter and clay particles in the soil. Soils with low organic carbon (O.C.) and cation exchange capacity (C.E.C.) have a reduced capacity to adsorb the herbicide in the soil, which may result in the herbicide leaching past the weed root zone into the cane root zone. Crop root uptake of Sabakem Isoxaflutole 750 WG Herbicide may result in phytotoxicity, which is evident as bleaching of leaves. To minimize the risk of crop root uptake, Sabakem Isoxaflutole 750 WG Herbicide is not recommended for use on soil with a C.E.C. below 4.5 meq/100 g, or an O.C. of 1.0% or less (unless C.E.C. is greater than 9.5 meq/100 g). These values should be determined through soil analysis prior to using Sabakem Isoxaflutole 750 WG Herbicide. Refer to your local reseller or Sabakem Pty Ltd representative to assist you with interpretation of your soil analysis results.
The use of Sabakem Isoxaflutole 750 WG Herbicide on newly limed soil could cause severe crop damage, please contact your local supplier, Sabakem Pty Ltd representative for advice prior to use of Sabakem Isoxaflutole 750 WG Herbicide in this situation.
Sabakem Isoxaflutole 750 WG Herbicide has been field tested on all important commercial varieties of sugarcane (available up to September 2002) without any evidence of varietal tolerance variation. If you are contemplating the use of Sabakem Isoxaflutole 750 WG Herbicide on experimental or minor varieties of sugarcane, small test areas should be treated to establish suitable tolerance before treating large areas.
For further information on varietal tolerance please contact your local supplier, Sabakem Pty Ltd representative.

MIXING

Partly fill the spray tank with water. Start agitation. Add the correct amount of Sabakem Isoxaflutole 750 WG Herbicide to the spray tank with the agitation system running. When tank-mixing with paraquat, ensure that Sabakem Isoxaflutole 750 WG Herbicide is added to the spray mixture first, followed by paraquat to ensure thorough mixing. Continue agitation while topping up the tank with water and while spraying. Use prepared spray mixture on day of preparation. DO NOT allow spray mixture to stand overnight.

APPLICATION

Sugarcane
Apply in a minimum spray volume of 250 L/ha. For best results flat fan nozzles are recommended. Select the lowest pressure (within the recommended nozzle operating range), to reduce drift. Use a nozzle size that delivers a medium to coarse droplet at the selected operating pressure.
Sabakem Isoxaflutole 750 WG Herbicide can be applied to hot and dry soils, without the risk of breakdown by sunlight. This ultraviolet stability removes the need for immediate soil incorporation of the product. Sabakem Isoxaflutole 750 WG Herbicide is activated by rainfall or irrigation, which is required to carry the herbicide into the root zone of the germinating weeds.
Deep germinating weeds (e.g. Wild Radish) may not be adequately controlled in years where rainfall is low (<15 mm).
Weed escapes may occur after spraying Sabakem Isoxaflutole 750 WG Herbicide if weed germination occurs before the chemical is activated OR carried to the depth of the weed root zone. Under prolonged dry conditions a greater quantity of rainfall or irrigation may be required for effective activation of the product. Under these conditions, shoots of germinating weeds may intercept the Sabakem Isoxaflutole 750 WG Herbicide band and appear affected, but may not be controlled. Weeds that DO NOT turn completely white within days of emergence must be sprayed with an appropriate knockdown herbicide. To avoid weed escapes, it is recommended to allow weeds to germinate, and then apply Sabakem Isoxaflutole 750 WG Herbicide in tank mixture with paraquat at an appropriate label rate to provide additional weed knockdown.
Soil movement from irrigation or cultivation may result in poor weed control from Sabakem Isoxaflutole 750 WG Herbicide. DO NOT incorporate Sabakem Isoxaflutole 750 WG Herbicide by flood irrigation or with high-pressure water cannons if excessive soil movement is expected, particularly if the soil is in a loose, dry condition. Best results are achieved where rainfall or low pressure overhead irrigation carries the herbicide downward in an even band to the depth of the weed root zone.

COMPATIBILITY

Sugarcane
Sabakem Isoxaflutole 750 WG Herbicide may be tank-mixed with paraquat formulations at the appropriate label rates for each product.
Sabakem Isoxaflutole 750 WG Herbicide may be tank-mixed with diuron (900 g/kg) at the rate recommended in the 'Directions For Use' table on this label.
Sabakem Isoxaflutole 750 WG Herbicide is also compatible with atrazine (900 g/kg) and Actril® DS (apply no more than 500 mL/ha in combination with Sabakem Isoxaflutole 750 WG Herbicide).

Chickpeas
Sabakem Isoxaflutole 750 WG Herbicide should NOT be tank-mixed with trifluralin.

SPRAY EQUIPMENT CLEAN-UP

To avoid injury or exposure to non-target crops, thoroughly clean all mixing and spray equipment, including pumps, nozzles, lines and screens with a good quality tank cleaner immediately after using Sabakem Isoxaflutole 750 WG Herbicide.
Before disassembling nozzles, filters and other parts for cleaning, thoroughly wash down the exterior of the spray equipment with a pressure hose. A more rigorous cleaning process is recommended, particularly before spraying very sensitive crops (e.g. canola).

To Rinse: After cleaning the tank as above, quarter fill the tank with clean water and circulate through the pump, lines, hoses and nozzles. Drain and repeat the rinsing procedure twice.

To Clean: Empty the tank completely and drain the whole system. Without entering it, thoroughly wash inside the tank using a pressure hose. Alternatively, if the tank is fitted with in-tank rinse nozzles, activate these nozzles to thoroughly rinse the inside of the tank. Drain the tank and clean any tank, pump, line and nozzle filters.

To Decontaminate: Quarter fill the tank and add a liquid alkali detergent at 500 mL/100 L of water or a chlorine bleach (4% chlorine) at 300 mL/100 L of water and circulate throughout the system for at least 15 minutes. Drain the whole system. Nozzles, screens, relief valves, dump lines, caps and taps at the end of spray lines, tank lids, flow meters, lines to pressure gauges, external tank indicators, induction hoppers and transfer systems should be removed/pulled apart and cleaned separately. Pay special attention to by-pass lines from pressure relief or dump valves to the main tank. To remove traces of chlorine bleach, flush the system with clean water and allow to drain.

Rinse water should be discharged onto a designated disposal area or if this is unavailable, onto unused land away from desirable plants and their roots, and water courses.

PRECAUTIONS

Re-Entry Period: DO NOT allow entry into treated areas for 12 hours after treatment.
When prior entry is necessary, wear 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 WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways with this product or the used containers, as this product may cause injury to non-target plants and vegetation, particularly aquatic plants and algae.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under weather conditions, or from spraying equipment, which could be expected to cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.

STORAGE AND DISPOSAL

Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Triple or preferably pressure 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 to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

SAFETY DIRECTIONS

Will irritate the eyes and skin. Avoid contact with eyes and skin. If product in eyes, wash it out immediately with water. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow length PVC gloves and face shield or goggles. When using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat and elbow length PVC gloves. Wash hands after use. After each day's 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.

SAFETY DATA SHEET

Additional information is listed in the Safety Data Sheet, which is available from the supplier.

CONDITIONS OF SALE: The use of this product is beyond the control of Sabakem Pty Ltd. No warranty is expressed or implied regarding the suitability or efficiency for any purpose for which it is used by the buyer. Sabakem Pty Ltd accepts no responsibility for any consequences resulting from the use of this product. Sabakem Pty Ltd will not be held liable for any loss, injury or damage arising from the sale, supply or use of this product, whether through negligence or otherwise. No responsibility will be accepted for any consequences whatsoever resulting from the use of this product.

Additional statements required by Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia: Suspected of damaging fertility or the unborn child. Very toxic to aquatic life with long lasting effects.