

CAUTION

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

Palmero[®] 750 WG Herbicide



ADAMA
ESSENTIALS

ACTIVE CONSTITUENT: 750 g/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.

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CONTENTS: 500 g, 600 g, 1.5 kg, 2 kg, 3 kg, 5 kg, 10 kg

DIRECTIONS FOR USE

Restrictions:

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 PALMERO 750 WG.

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: PALMERO 750 WG 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 PALMERO 750 WG. 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, PALMERO 750 WG 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 (eg. 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. PALMERO 750 WG can be applied to burnt or trash blanketed ratoon cane. Avoid soil disturbance, eg. stool splitting, after application. If weeds have emerged at application, add paraquat at the appropriate label rate to provide improved weed knockdown.

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CROP	WEEDS CONTROLLED	STATES	RATE	CRITICAL COMMENTS
Sugarcane – continued				<i>From previous page</i> Prior to the 'out-of-hand' stage of plant and ratoon cane: Apply as a directed inter-row spray (eg. Irvin leg) to the soil surface after the last working. Best results are obtained where the mound surface has consolidated to minimise soil and herbicide movement. Direct the spray to minimise 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.
Chickpeas	Weeds controlled Capeweed, Crassula, Indian Hedge Mustard, Medic, Prickly Lettuce, Sowthistle, Turnip Weed, Wild Radish Weeds suppressed 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 PALMERO 750 WG 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 stabilise 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 PALMERO 750 WG post-sowing pre-emergent to chickpeas planted in sandy or gravelly soils, or soils low in clay or organic matter may result in crop damage. Heavy rains after the application of PALMERO 750 WG may cause crop damage, particularly in sandy or gravelly soils. PALMERO 750 WG is not recommended for use on Yorker chickpeas. See "Crop Safety" in the GENERAL INSTRUCTIONS section below.
	Weeds controlled Capeweed, Crassula, Deadnettle, Indian Hedge Mustard, Medic, Prickly Lettuce, Silvergrass, Slender Celery, Sowthistle, Spear Thistle, Turnip Weed, Wild Radish Weeds suppressed Saffron Thistle, Spiny Emex, Wireweed		100 g/ha +1.5 L/ha simazine (500 gL SC)	The Critical Comments for the use of Palermo 750 WG alone in chickpeas (above) also apply to this section. Application of PALMERO 750 WG + Simazine in sandy or gravelly soils may result in sever 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.**

RESISTANT WEEDS WARNING

PALMERO® 750 WG Herbicide is a member of the isoxazole group of herbicides. PALMERO 750 WG is a herbicide which inhibits 4-hydroxyphenyl-pyruvate dioxygenase (4-HPPD). For weed resistance management PALMERO 750 WG is a Group H herbicide. Some naturally-occurring weed biotypes resistant to PALMERO 750 WG, 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 PALMERO 750 WG or other Group H herbicides.

Since occurrence of resistant weeds is difficult to detect prior to use, Adama Australia Pty. Ltd. accepts no liability for any losses that may result from the failure of PALMERO 750 WG to control resistant weeds.

CROP SAFETY

Chickpeas

Application of PALMERO 750 WG PSPE to chickpeas planted in sandy or gravelly soils, or soils low in clay or organic matter may result in crop damage. Heavy rains after the application of PALMERO 750 WG may cause crop damage, particularly in sandy or gravelly soils. Application of Palmero 750 WG + simazine in sandy or gravel soils may result in severe crop damage.

Varietal tolerance

PALMERO 750 WG is not recommended for use with the chickpea variety Yorker. Application of PALMERO 750 WG post-sowing pre-emergence to crops of Yorker variety chickpeas can result in unacceptable crop damage and may result in yield loss.

Crop rotation recommendations

PALMERO 750 WG may be applied to chickpea crops where the following crop will be chickpeas, or where the land will be left fallow. The following recropping 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 Adama representative.
- Heavy rainfall after an extended dry period may result in the reactivation of PALMERO 750 WG. 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 recropping intervals.
- Cultivation is recommended prior to recropping.
- Minimum recropping intervals apply for all crops following PALMERO 750 WG application. For advice on all crops not listed below, contact the manufacturer, Adama Australia Pty. Ltd.

CROP	MINIMUM RECROPPING 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 PALMERO 750 WG use until planting of the subsequent crop. **DO NOT include flood or furrow irrigation in the minimum rainfall requirement.**

** If PALMERO 750 WG has been tank-mixed with simazine, observe the recropping interval for simazine for Wheat, Barley, Oats and Maize.

Sugarcane

There are 3 key guidelines for maintaining crop safety when using PALMERO 750 WG 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 PALMERO 750 WG to minimise foliar uptake when applying as a broadcast spray to plant cane.

PALMERO 750 WG 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

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root zone. Crop root uptake of PALMERO 750 WG may result in phytotoxicity, which is evident as bleaching of leaves. To minimise the risk of crop root uptake, PALMERO 750 WG 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 PALMERO 750 WG. Refer to your local reseller or Adama representative to assist you with interpretation of your soil analysis results.

The use of PALMERO 750 WG on newly limed soil could cause severe crop damage, please contact your local Adama representative for advice prior to use of PALMERO 750 WG in this situation.

PALMERO 750 WG 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 PALMERO 750 WG 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 Adama representative.

MIXING

Partly fill the spray tank with water. Start agitation. Add the correct amount of PALMERO 750 WG to the spray tank with the agitation system running. When tank-mixing with paraquat, ensure that PALMERO 750 WG 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

PALMERO 750 WG 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. PALMERO 750 WG is activated by rainfall or irrigation, which is required to carry the herbicide into the root zone of the germinating weeds. Deep germinating weeds (eg. wild radish) may not be adequately controlled in years where rainfall is low (<15 mm).

Weed escapes may occur after spraying PALMERO 750 WG 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 PALMERO 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 PALMERO 750 WG 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 PALMERO 750 WG. DO NOT incorporate PALMERO 750 WG 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.

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.

COMPATIBILITY

Sugarcane

PALMERO 750 WG may be tank-mixed with paraquat formulations at the appropriate label rates for each product. PALMERO 750 WG is also compatible with Actril® DS (apply no more than 500 mL/ha in combination with PALMERO 750 WG).

Chickpeas

PALMERO 750 WG should not be tank-mixed with trifluralin.

SPRAY EQUIPMENT CLEAN-UP

After using PALMERO 750 WG, 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. Before disassembling nozzles, filters and other parts for cleaning, thoroughly wash down the exterior of the spray equipment with a pressure hose.

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 decontaminate: Before spraying sensitive crops (e.g. canola, pulses (except chickpeas), forage legumes and forage brassicas), wash the tank and rinse the system as above. 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 fifteen 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. Finally, flush the system with clean water and allow to drain.

Drainage and rinse water should be discharged into 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 131126.

MATERIAL SAFETY DATA SHEET

Additional information is listed in the material safety data sheet (MSDS). A material safety data sheet for PALMERO 750 WG Herbicide is available from Adama on request. Call Customer Service on (02) 9431 7800.

CONDITIONS OF SALE: The use of PALMERO® 750 WG Herbicide being beyond the control of the manufacturer, no warranty expressed or implied is given by Adama Australia Pty. Ltd. regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Adama Australia Pty. Ltd. accepts no responsibility for any consequence whatsoever resulting from the use of this product.

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NOT A DANGEROUS GOOD ACCORDING TO THE AUSTRALIAN DANGEROUS GOODS (ADG) CODE.

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Batch No.

Date of Manufacture