



Product Name: GRANDO 600 HERBICIDE
APVMA Approval No: 59202/111896

Label Name:	GRANDO 600 HERBICIDE
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Signal Headings:	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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Constituent Statements:	600 g/L TRICLOPYR PRESENT AS THE BUTOXYETHYL ESTER
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Mode of Action:	GROUP I HERBICIDE
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Statement of Claims:	For the control of various woody and broadleaf weeds as specified in the Directions for Use Table.
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Net Contents:	1000L 10L 110L 20L 1L 5L 20L
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Restraints:	DO NOT apply to weeds which may be stressed (not actively growing) due to prolonged periods of extreme cold, moisture stress (water-logged or drought affected), poor nutrition, presence of disease, or previous herbicide treatment as reduced levels of control may result. DO NOT spray if rain is likely within one hour or if foliage is wet from rain and dew. However, when tank mixed with Glyphosate CT, this time extends to 6 hours.
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Directions for Use:	This section contains file attachment.
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Other Limitations:	IN TASMANIA FOR BLACKBERRY : DO NOT treat bushes carrying mature or near mature fruit. FOR NATIVE VEGETATION : Use of Grando 600 on native vegetation must be done in accordance with STATE and/or LOCAL legislation
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Withholding Periods:	PASTURE: NOT REQUIRED WHEN USED AS DIRECTED. SORGHUM: NOT REQUIRED WHEN USED AS DIRECTED.
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Trade Advice:	
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General Instructions:	This section contains file attachment.
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Resistance Warning:	<p>RESISTANT WEEDS WARNING GROUP I HERBICIDE</p> <p>Grando 600 Herbicide is a member of the Pyridines group of herbicides. Grando 600 Herbicide has the disruptors of plant cell growth mode of action. For weed resistance management Grando 600 Herbicide is a Group I Herbicide. Some naturally occurring weed biotypes resistant to Grando 600 Herbicide and other disruptors of plant cell growth 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 Grando 600 Herbicide or other disruptors of plant cell growth. Since the occurrence of resistant weeds is difficult to detect prior to use, Nufarm Australia Limited accepts no liability for any loss that may result from the failure of Grando 600 Herbicide to control resistant weeds.</p>
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Precautions:	
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Protections:	<p>PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS Crops susceptible to Grando 600 include, but are not limited to: peas, lupins, lucerne, navy beans, soybeans and other legumes; cotton, fruit, hops, ornamentals, shade trees and Pinus spp, potatoes, safflower, sugar beet, sunflower, tobacco, tomatoes, vegetables and vines. Grando 600 is damaging to susceptible crops during both growing and dormant periods. Grasses are normally unaffected and establish quickly after treatment. DO NOT allow physical spray drift onto waterways, native vegetation and susceptible crops. When using Grando 600 and Glyphosate CT by aerial application in fallow situations, observance of a buffer zone of 150 metres to protect native tree species is required .DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.</p> <p>PROTECTION OF LIVESTOCK Poisonous plants may become more palatable after spraying and stock should be kept away from these plants until they have died down.</p> <p>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT This product is highly toxic to fish and other aquatic organisms. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.</p>
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Storage and Disposal:	<p>STORAGE AND DISPOSAL (10L, 20L only) Store in the closed, original container in a dry well-ventilated area, out of direct sunlight. DO NOT store below 5°C. Extended storage below 5°C can result in the formation of crystals on the bottom of the container. If crystallisation does occur, store the container on its side at room temperature and rock occasionally until crystals re-dissolve. Ensure any crystals are dissolved before adding to the spray tank. 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 bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots. Empty containers and products should not be burnt.</p> <p>Envirodrum 110L Mini Bulk Returnable Container (110L only) Store the original sealed Envirodrum in a dry, well-ventilated area, out of direct sunlight. DO NOT store below 5°C. Extended storage below 5°C can result in the formation of crystals on the bottom of the container. If crystallisation does occur, store the container on its side at room temperature and rock occasionally until crystals re-dissolve. Ensure any crystals are dissolved before adding to the spray tank. DO NOT tamper with the Micro Matic valve or the security seal. DO NOT contaminate the Envirodrum with water or any other foreign matter. After each use of the product, please ensure that the Micro Matic coupler, delivery system and hoses are disconnected, triple rinsed with clean water and drained accordingly. When the contents of the Envirodrum have been used, please return the empty Envirodrum to the point of purchase. The Envirodrum remains the property of Nufarm Australia Limited.</p> <p>Refillable containers (1000L only) Store in the closed, original container in a dry well-ventilated area, out of direct sunlight. DO NOT store below 5°C. Extended storage below 5°C can result in the formation of crystals on the bottom of the container. If crystallisation does occur, store the container on its side at room temperature and rock occasionally until crystals re-dissolve. Ensure any crystals are dissolved before adding to the spray tank. Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.</p> <p>SMALL SPILL MANAGEMENT Wear protective equipment (see SAFETY DIRECTIONS). Apply absorbent material such as earth, sand, clay granules or cat litter to the spill. Sweep up material for disposal when absorption is completed and contain in a refuse vessel for disposal (see STORAGE AND DISPOSAL section). If necessary wash the spill area with an alkali detergent and water and absorb the wash liquid as above for disposal.</p>
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Safety Directions:	<p>SAFETY DIRECTIONS Poisonous if swallowed. May irritate the eyes and skin. Avoid contact with eyes and skin. When opening the container, preparing the spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow length rubber gloves. Wash hands after use. After each day's use, wash gloves and contaminated clothing.</p>
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First Aid Instructions:	<p>FIRST AID If poisoning occurs, contact a Doctor or Poisons Information Centre Phone Australia 13 11 26. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.</p>
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First Aid Warnings:	
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Grando 600 Herbicide

DIRECTIONS FOR USE:

IT IS ESSENTIAL to select a rate appropriate for the weed size. Best results will be obtained when weeds are actively growing at treatment.

1. WOODY WEED SITUATIONS

Table A: High Volume Spraying

See GENERAL INSTRUCTIONS - APPLICATION section for application method details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY.

WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE/100L WATER	CRITICAL COMMENTS
African boxthorn	Less than 2m tall	Tas only	170mL	
Angophora and Banksia regrowth	1-2m tall	All States	400 or 560mL	Use the higher rate on larger regrowth. Ensure the weed has dense foliage.
Blackberry	Active growth during late Spring to early Autumn		170mL	Where herbicides other than Group I herbicides have been used, allow two seasons regrowth to occur before spraying with Grando 600. Any subsequent regrowth and seedlings should be sprayed after hardening off.
In association with: St John's wort	During flowering (Nov-Jan)	NSW, Vic and Tas only		Apply as a thorough foliage spray.
Brigalow	1-2m tall	NSW and Qld only		Use at least 1000L of water/ha
Brooms: English	Spring to mid-Summer prior to pod formation	All States		
Camphor laurel	Seedlings up to 3m tall			
Capeweed	Rosette	Tas only	80mL	
Common prickly pear	Active growth	All States	3L	
English ivy	Active growth during late Spring to late Summer	Vic only	1L+ 800mL Gladiator (450g/L glyphosate)	DO NOT treat ivy growing up trees or on other plants as death of the host may result. This mixture is not selective to grasses.
Eucalyptus	Seedlings and regrowth from small lignotubers, 1-2m tall	Qld, SA, WA, and NT only	400mL	
		NSW, Tas and Vic only	560mL	
Fennel	1-2m tall	Tas only	170mL	
Green cestrum		NSW, Qld and Vic only		Some regrowth may be expected the following season which can be sprayed after hardening off.
Groundsel bush (<i>Baccharis halimifolia</i>)	Seedlings, 1-2m tall	All States	160mL	
	2-3m tall		320mL	
Gorse	Spring to mid Summer		170mL or 340mL	Add BS1000 at a rate of 125mL/100L water. Retreatment of regrowth may be necessary. Use higher water rate on older hardened off plants.
Horehound	Rosette	Tas only	170mL	
Saffron thistle	Up to bud stage		80mL	
Tiger pear	Active growth	All States	3L	
Wattles, including Silver wattle, Black wattle	Seedlings, 1-2m tall		160mL	
	2-3m tall		320mL	

Table B: Aerial Application

Helicopter NSW, SA, Tas Vic and WA only

Helicopter or fixed wing aircraft (Qld only)

See GENERAL INSTRUCTIONS - APPLICATION section for application method details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY

WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE	CRITICAL COMMENTS
Blackberry	Late Spring to Autumn	All States	4.8L/ha	AVOID overspray/drift onto waterways.

Table C: Controlled Droplet Application (C.D.A.)

See GENERAL INSTRUCTIONS - APPLICATION section for application method details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY

WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE/1L WATER	CRITICAL COMMENTS
Blackberry	Late Spring to Autumn	All States	170mL	

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Table D:Low Volume High Concentrate Application Techniques

(Gas Powered Gun, Sprinkler Sprayer)

See GENERAL INSTRUCTIONS - APPLICATION section for application method details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY

WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE/10L WATER	CRITICAL COMMENTS
Blackberry	Late Spring to Autumn	All States	280mL	
Eucalypt seedlings	1-2m tall		400mL	

Table E:Basal Bark and Cut Stump Treatment

See GENERAL INSTRUCTIONS - APPLICATION section for application method details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY

WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE (60L DIESEL)	CRITICAL COMMENTS	
African boxthorn	Basal Bark: Plants up to 5 cm basal diameter	All States	2L		
Australian blackthorn			1L		
Broom		Tas only	1.25L		
Brown salwood		All States	0.5L		
Bitter bark		Cut stump: Plants up to and in excess of basal bark sizes 1-2m tall	NSW and Qld only		1L
Castor oil Chinese apple			All States		
Dawson gum			Qld only		2L
Eucalypts (except Dawson gum) False sandal wood Green wattle Lantana Needlewood			All States		1L
Olive			SA only		2L
			NSW only		4L
Paperbark teatree, Rubbervine, Silver wattle	All States	1L			
Sweet briar		2L			
Yellow-wood	Qld only				
Camphor laurel	Basal Bark: Plants up to 10 cm basal diameter	NSW and Qld only	1L		
Common prickly pear		All states	0.8L	Apply as a thorough foliage spray.	
Groundsel bush (<i>Baccharis halimifolia</i>)	Cut stump Plants up to: and in excess of basal bark sizes		0.5L	Treat from early summer rains to end of April when regrowth is apparent.	
Prickly acacia					
Privet			5L	Treatment may be carried out at any time of the year.	
Smooth tree pear			0.8L	Apply as a thorough foliage spray.	
Tiger pear					
Tree of heaven			1L		

FENCELINES AND FIRE TRAILS only

WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE (60L DIESEL)	CRITICAL COMMENTS
Broadleaf hopbush, Narrowleaf hopbush, Turpentine bush	Basal bark: Plants up to 10 cm basal diameter	NSW only	1L	

2. CROPPING/FALLOW SITUATIONS

See GENERAL INSTRUCTIONS - APPLICATION section for the application method details.

FALLOW, STUBBLE, FIREBREAKS

WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE /ha	CRITICAL COMMENTS
Camel (Afghan, Bitter) melon (<i>Citrullus lanatus</i>)	Up to 20cm diameter	NSW, Qld, SA, Vic and WA only	120mL	There are some strains of melon that are not controlled. Contact your Nufarm representative for more information. Add a crop oil such as D-C-Trate* Crop Oil at 1L/100Lwater. DO NOT use oils when tank mixing with Gladiator Herbicide. See COMPATIBILITY section. This mixture is not selective to grasses.
	Runners from 20-40cm diameter		160mL	
Prickly paddy melon (<i>Cucumis myriocarpus</i>)	Up to 20cm diameter		80mL	
	Runners from 20-40cm diameter		160mL	

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				When using Grando 600 and Gladiator by aerial application, observance of a buffer zone of 150 metres to protect native tree species is required.
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SORGHUM

(Apply between 4 to 6 leaf stage, when secondary roots have developed)

WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE/ha	CRITICAL COMMENTS
Prickly paddy melon	Up to 20 cm diameter	NSW and QLD only	80mL	DO NOT add crop oils, as severe crop damage may occur. Fusing of sorghum prop roots may be observed and this may be worse under stress (e.g. root disease). Should only be mixed with Comet® 200 EC Herbicide and Crop Care Atrazine Flowable for increased weed spectrum.

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

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GENERAL INSTRUCTIONS

COMPATIBILITY

FALLOW SITUATIONS:

Grando 600 is compatible with the following products: Nufarm Archer® Herbicide/ Lontrel*, Comet® 200 EC Herbicide / Starane* 200 , Crop Care Amine® 625 or Crop Care Ester® 800, Glyphosate, Crop Care Chlorpyrifos 500 EC Insecticide. When mixing with Glyphosate CT in fallow, refer to the Glyphosate CT label for use rate and adjuvants recommended. DO NOT use D-C-Trate* Crop Oil.

SORGHUM:

Grando 600 is compatible with: Comet® 200 EC Herbicide/Starane* 200, Crop Care Atrazine Flowable Herbicide.

MINIMUM RECROPPING PERIODS

Before using Grando 600 in tank mixes with other herbicides, check the plant-back information on all product labels. The time between spraying and planting will be determined by the product with the longest plant-back period.

Observe the following recropping periods for Grando 600:

- wheat, barley, sorghum, maize 7 days
- chickpeas, soybeans, sunflowers 7 days
- cotton 14 days

MIXING

Half fill the spray unit with water and add the required amount of Grando 600. Add the remaining water with the agitator running. If required, then add crop oils or wetters (surfactants). Maintain mechanical or by-pass agitation in the spray tank during spraying. Only mix sufficient solution for immediate daily use and avoid storing.

Basal Bark and Cut Stump Application: Quarter fill the spray unit or mixing container with diesel and add the required amount of Grando 600. Add the remaining diesel and shake or agitate thoroughly to mix the contents. Periodically shake or agitate to stop product settling out. Only mix sufficient solution for immediate daily use and avoid storing.

APPLICATION

1. WOODY WEED SITUATIONS

Weeds need to be actively growing for herbicides to have optimum effect. Delay treatment until all regrowth has had time to grow to one metre high in situations which have been bulldozed, slashed, burnt, ploughed or areas having a previous chemical treatment.

A. High Volume Spraying

Thorough coverage of foliage and stems to the point of runoff is essential, however, avoid excess spraying which is wasteful of chemical.

Hand Gun

Apply the recommended mix to give full coverage of leaves and stems through a No. 6 to 8 tip at 700-1500kPa. A spray volume of 3,000-4,000L per infested hectare (30-40L/100m²) should be used on the weed infestation.

Knapsack

Used for smaller infestations, where penetration of the canopy is not essential. A spray volume of 3-4L/10m² of infested area should be used.

B. Aerial Application

Apply in 100-200L water/ha. Use a calibrated aircraft to apply in half overlap passes. Nozzle configurations should produce droplets of not less than 250-350 micron diameter (e.g. D8/45). The potential for damage from drift can be greatly reduced by avoiding unsuitable spraying conditions and using spray pressure and nozzles to minimise the production of small droplets.

DO NOT spray when wind exceeds 10km/hr and/or air temperature reaches 30°C.

C. Controlled Droplet Application (C.D.A)

Results similar to high volume spraying can be obtained using Micron Herbi* or similar equipment. Select a nozzle to give a flow rate of 2mL/sec and sweeping action of approximately 1m/sec to ensure a droplet density of 20/cm². Use a marking agent as recommended by the manufacturers, to check spray coverage. Also, consult directions provided with C.D.A. unit.

D. Low Volume High Concentrate

Application Techniques

Good control will be achieved, similar to high volume application, where bush size enables good coverage of the bush. Use a marking agent, as recommended by the equipment manufacturers, to check spray coverage.

Gas powered gun: Apply 50mL shots to obtain uniform coverage of 4-5m² of surface area of bush. This relates to 20 droplets/cm² of leaf surface.

Sprinkler sprayer: This technique involves using a micro sprinkler which is connected to a hollow fibreglass rod attached to a pressure knapsack sprayer. Use at low pressures (50-200kPa) and apply with a slow sweeping action over the top of the plants ensuring even coverage on the leaves.

E. Basal Bark and Cut Stump Treatment

Mix Grando 600 in diesel. The use of diesel as a herbicide carrier may affect the rubber seals in some sprayers. To avoid this, use sprayers which use Viton* seals and fittings.

Basal Bark Method

DO NOT apply to wet stems as this can repel the diesel mixture. Apply only with hand-directed equipment such as a pressure sprayer or a paint brush. Spray equipment should be used at low pressures, up to 200kPa, to avoid excessive splashing or drift. Species with old, rough bark require more thorough wetting than smooth barked species. Liberally spray or paint the bark around the stem from ground

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level up to 30 cm high, wetting thoroughly to the point of runoff (unless otherwise stated).

Cut Stump Method

Stems should be cut less than 15cm above the ground. **Immediately** apply Grando 600/diesel mixture **liberally** to the **freshly** cut stump by spraying or painting the cut surface and sides of the stem.

2. CROPPING/FALLOW SITUATIONS

A. Boom Application

Application of Grando 600 in a minimum spray volume of 50L/ha is recommended. Flat fan nozzles are recommended, using pressures in the range of 200-300kPa. Boom height must be set to ensure double overlap of nozzle patterns.

B. Aerial Application

DO NOT allow Grando 600 to physically drift onto desirable plants. Aircraft may be used to apply Grando 600 in fallow situations, when ground application equipment cannot be used due to prolonged wet conditions. A minimum spray volume of 35L/ha should be used with flat fan and CP nozzle configurations.

DO NOT apply Grando 600 by aircraft when wind exceeds 10km/hr and/or air temperature reaches 30°C. Droplets with an average size (or Volume Mean Diameter) of 250 to 350 micron diameter are recommended.

CLEANING SPRAY EQUIPMENT

WATER-BASED CLEANING

Rinsing

After using Grando 600, empty the spray unit completely and drain the whole system. Thoroughly wash inside the spray unit using a pressure hose. Drain the spray unit and clean any filters in the tank, pump, lines, hoses and nozzles.

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

Decontamination

Before spraying cotton and other sensitive crops, with equipment that has been used to apply Grando 600, see PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS section. Wash the tank and rinse the system as above. Then quarter fill the tank and add spraymate tank and equipment cleaner at 120g/100L water and circulate throughout the system for at least 15 minutes. Drain the whole system. Remove filters and nozzles and clean them separately. Finally 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 water courses.

DIESEL-BASED CLEANING

Rinsing

After using Grando 600, empty the spray unit completely and drain the whole system. Thoroughly wash inside the spray unit using a pressure hose. Drain the spray unit and clean any filters in the tank, pump, lines, hoses and nozzles. On completion of spraying, use a degreaser such as Caltex Kwik-D-Grease* to remove traces of diesel from the sprayer. Rinse tank and spray through the nozzles with water to remove degreaser.

Decontamination

After the above, quarter fill the tank with clean water and add spraymate tank and equipment cleaner at 120g/100L water. Shake or operate spray to circulate the washing solution throughout the sprayer and spray the solution through the nozzle. Rinse well with clean water and remove detergent. To clean brushes and container, spray liberally with degreaser. Hose off thoroughly with clean water and repeat using detergents (see above).