



Product Name: GENFARM PANZER 450 HERBICIDE  
APVMA Approval No: 58830/129409V

Label Name:	GENFARM PANZER 450 HERBICIDE
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Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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Constituent Statement:	ACTIVE CONSTITUENT: 450 g/L GLYPHOSATE present as the isopropylamine salt ALSO CONTAINS: 85 g/L POLYEYTHANOXY (15) TALLOW AMINE
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Mode of Action:	Group M Herbicide
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Statement of Claims:	A non-selective herbicide for the control of a wide range of annual and perennial weeds as per the Directions for Use Table.
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Net Contents:	20 L - 1000 L
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Restrains:	<b>RESTRAINTS</b> DO NOT disturb weeds by cultivation, sowing or grazing for 1 day after treatment of annual weeds and 7 days for perennial weeds, except where noted.  DO NOT treat weeds under poor growing conditions or dormant conditions as occur in drought, waterlogging, disease, insect damage or following frost.  DO NOT treat weeds heavily covered with dust or silt.  Rainfall occurring up to 6 hours after application may reduce effectiveness. Heavy rainfall within 2 hours of the application may wash the chemical off the foliage and repeat treatment may be required.
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Directions for Use:	This section contains file attachment.
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Other Limitations:	
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Withholding Periods:	<p>WITHHOLDING PERIOD:  WHEAT AND LEGUMES: DO NOT HARVEST GRAIN, GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION  PRE-HARVEST SORGHUM: DO NOT HARVEST FOR 7 DAYS  ALL OTHER USES: NOT REQUIRED WHEN USED AS DIRECTED</p>
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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 M HERBICIDE  GENFARM PANZER 450 HERBICIDE is a member of the glycines group of herbicides. Its mode of action is to inhibit the EPSP synthase. For weed resistance management GENFARM PANZER 450 HERBICIDE is a Group M Herbicide.</p> <p>Some naturally-occurring weed biotypes resistant to GENFARM PANZER 450 HERBICIDE and other Group M herbicides may exist through normal genetic variability in any weed population. The resistant individuals may eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by this product or any other Group M herbicides.</p> <p>Since the occurrence of resistant weeds is difficult to detect prior to use Nutrien Ag Solutions Limited accepts no liability for any losses that may result from the failure of this product to control resistant weeds.</p>
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Precautions:	
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Protection Statements:	<p>PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS  Avoid contact with foliage, green stems or fruit of crops, desirable plants and trees, as severe injury or destruction may result.  DO NOT apply under meteorological conditions or from spraying equipment that could be expected to cause spray drift onto nearby susceptible plants, adjacent crops, croplands or pastures.</p> <p>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT  DO NOT contaminate dams, rivers or streams with the product or used container. DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water.</p>
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Storage and Disposal:	<p>Store in the original container, tightly closed in a safe well-ventilated area, as cool as possible. Do not store for prolonged periods in direct sunlight.  Do not store the product in galvanised steel or unlined steel containers, as the product may react to produce hydrogen gas, which can form a combustible gas mixture that can be flashed by ignition sources.</p> <p>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.</p> <p>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.</p> <p>This container can be recycled if it is clean, dry, free of visible residues and has the</p>
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	<p>drumMUSTER logo visible. Triple-rinse container for disposal. Dispose of rinsate by adding it to the spray tank. Do not dispose of undiluted chemical on site. Wash outside of the container and the cap. Store cleaned container in a sheltered place with cap removed. It will then be acceptable for recycling at any drumMUSTER collection or similar container management program site. The cap should not be replaced, but may be taken separately.</p> <p>Refillable Containers (110 L, 1000 L): Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.</p>
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<p>Safety Directions:</p>	<p>Product will irritate the eyes and skin. Avoid contact with eyes and skin. When preparing the product for use and using the product, wear cotton overalls buttoned to the neck and wrist, elbow-length PVC gloves and face shield or goggles. When using controlled droplet applicator wear protective waterproof clothing and impervious footwear. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield or goggles and contaminated clothing.</p>
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<p>First Aid Instructions:</p>	<p>If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26, New Zealand 0800 764 766. If skin contact occurs, remove contaminated clothing and wash skin thoroughly. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.</p>
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<p>First Aid Warnings:</p>	
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## DIRECTIONS FOR USE

Crop/Situation	State	Weeds controlled	Rate L/ha	Critical comments
SOUTHERN AUSTRALIA  Prior to sowing a crop or pasture with full soil disturbance by cultivation or sowing with a tyned implement	WA, SA, VIC, ACT, NSW only	Barley Grass, Brome grass, Volunteer cereals, Wild oats	Pre tillering: 400 – 800 mL  Post tillering: 800 mL – 1L	Treat actively growing weeds not under stress from low moisture, frost, cold, disease or water logging. If heavy grazing has occurred allow regrowth to 6-8cm before spraying and use the higher rate.  <b>RATE SELECTION:</b> Increase to higher rates late in the season or when treating under cold/overcast conditions.  <b>FULL DISTURBANCE</b> with cultivation or sowing with a tyned implement may start 1 day after treatment (7 days if Dock, Phalaris, Skeleton weed, Soursob or Sorrel are present) and should occur within 21 days after treatment. Where cultivation or sowing does not occur within 21 days, new weed growth may require further treatment. When treating light infestations of seedling annual grasses (pre-tillering) and annual broadleaved weeds (less than 8cm dia./height) cultivation or sowing may start 6 hours after treatment and should occur within 21 days.  <b>CROP ESTABLISHMENT:</b> Sowing should not proceed until conditions allow the formation of a satisfactory seedbed. See Crop Establishment for directions.  <b>ANNUAL RYEGRASS, SILVER GRASS AND PERENNIAL GRASSES:</b> Addition of non-ionic surfactant, 200mL/100L of spray solution may improve control. When treating dense infestations of Silver grass, nozzles designed to give MEDIUM to COARSE spray quality and a spray volume of 70L/ha or more is recommended to improve plant spray coverage. Good coverage of Silver grass is critical for control.  <b>TANK MIXTURES:</b> For improved control of clover add Dicamba. Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See Tank Mixtures for directions.  <b>PERENNIALWEEDS:</b> For Perennial Phalaris, Soursob, Skeleton weed and Sorrel, this product will provide knockdown, seasonal suppression and reduction in treated plant numbers.
		Annual ryegrass, Canary grass (Annual phalaris), Silvergrass, Winter grass	Pre tillering: 800 – 1 L  Post tillering: 1.0 L – 1.2 L	
		Calomba daisy, Capeweed, Spiny Emex (Doublegee)	400 – 800 mL less than 8 cm diameter  800 mL – 1L greater than 8 cm diameter	
		Amsinckia, Fumitory, Paterson's Curse, Saffron Thistle, Scotch Thistle, Variegated thistle, Volunteer lupins, Wild turnip	800 mL – 1 L less than 12 cm diameter  1 L – 1.2L greater than 12 cm diameter	
		Dock (Seedling)	800 mL – 1.2L	
	Perennial phalaris, Skeleton weed, Sorrel, Soursob, Sub clover	1.2 L		
Tas only	All the above weeds	1.2 – 2.4 L	Use 1.2L/ha on annual weeds. Increase to 2.4L/ha on perennial weeds. Surfactant is recommended to be added. Where White Clover, Sorrel and Dock are present add Dicamba in accordance with directions on the Dicamba label. Observe plant back periods.	

Crop/Situation	State	Weeds controlled	Rate L/ha	Critical comments
SOUTHERN AUSTRALIA  Prior to sowing a crop or pasture with an implement that gives minimal or no soil disturbance	NSW, ACT, SA, VIC, WA, only	Barley grass, volunteer cereals, Wild oats	800 mL – 1.2 L	Treat actively growing weeds not under stress from low moisture, frost, cold, disease or water logging. If heavy grazing of mature plants has occurred allow regrowth to 6-8cm before spraying and use the higher rate.  <b>RATE SELECTION:</b> Use the lower rate on young weeds, increase to the higher rate where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding. Increase to higher rates in Spring or when treating under cold/overcast conditions.  AERIAL APPLICATION: Use the higher rates. See also Aerial Application.  <b>ANNUAL RYEGRASS, SILVER GRASS AND PERENNIAL GRASSES:</b> Add non-ionic surfactant, 200mL/100L of spray solution. When treating dense infestations of Silver grass, nozzles designed to give MEDIUM to COURSE spray quality and a spray volume of 70L/ha or more is recommended to improve plant spray coverage. Good coverage of Silver grass is critical for control.  <b>TANK MIXTURES:</b> For improved control of Dock, Sorrel and Sub. clover add Dicamba. Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See Tank Mixtures for directions. Addition of ammonium sulphate 417, 2L/100L, may improve control when treating under adverse environmental conditions.  <b>PASTURE OR CROP ESTABLISHMENT: DO NOT</b> sow into excessive trash. Trash may be removed by grazing after treatment. Grazing may commence one day after treatment of annual weeds (small) and 7 days for perennial weeds. Delay grazing for 3 days where annual weeds are large. Sowing may proceed when excessive trash is removed, but not sooner than one day after treatment of annual weeds and 7 days for perennial weeds. See also Crop establishment.  <b>AERIAL (OR SURFACE) SEEDING:</b> Delay seeding until trash is completely removed by grazing and/or plant decay. When establishing pasture, ensure application of fertilizer and insecticides and follow-up management is undertaken as required.
		Brome grass, Canary grass ( <i>Annual Phalaris</i> ), Capeweed, Variegated Thistle, Winter grass	1.0 – 1.6 L	
		Annual ryegrass, Paterson's curse, Saffron thistle, Scotch thistle, Silvergrass, Wild mustard, Wild radish, Wild turnip	1.2 – 1.6 L	
		Erodium, Perennial phalaris, Plantain, Perennial Ryegrass, Sorrel, Sub clover, Yorkshire fog	1.5 – 2.0 L	
		Dock, Flatweed	2.0 L	
	Tas only	All the above weeds	1.2 – 2.4 L	
SOUTHERN AUSTRALIA  Weed control to commence a fallow.	NSW, ACT, VIC, SA, WA only	Barley grass, volunteer cereals, Wild oats	800 mL – 1.2 L	Treat actively growing weeds not under stress from low moisture, frost, cold, disease or water logging. If heavy grazing has occurred allow regrowth to 6-8cm before spraying and use the higher rate.  <b>RATE SELECTION:</b> Use the lower rate on young weeds, or where cultivation is to follow within 21 days, increasing to the higher rate where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding.  <b>ANNUAL RYEGRASS, SILVER GRASS AND PERENNIAL GRASSES:</b> Add non-ionic surfactant, 200mL/100L of spray solution. When treating dense infestations of Silver grass, nozzles designed to give MEDIUM to COURSE spray quality and a spray volume of 70L/ha or more is recommended to improve plant spray coverage. Good coverage of Silver grass is critical for control.  <b>HOARYCRESS:</b> Treat from late rosette to early flowering. <b>SOURSOB:</b> Treat at tuber exhaustion. <b>COUCH:</b> Use the higher rate on dense infestations. Apply sequential treatments during Summer and Autumn, with Autumn being most effective. Repeat applications will be required for full control. For improved control use in conjunction with cultivation. The use of LI700 500mL/100L may improve control.  <b>BATHURST BURR:</b> For mature weeds use the higher rate.  <b>TANK MIXTURES:</b> Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See Tank Mixtures for directions.
		Annual ryegrass, Brome grass, Capeweed, Paterson's curse (rosette), Saffron thistle, Scotch thistle, Silvergrass, Spear thistle, Wild mustard, Wild radish, Wild turnip	1.2 - 1.6 L	
		Hoary cress, Soursob	1.2 L	
		Couch	1.2 – 2.4 L	
		Bathurst burr	1.5-2.4 L	
	TAS only	All the above weeds	1.2 – 2.4 L	

Crop/Situation	State	Weeds controlled	Rate L/ha	Critical comments	
NORTHERN AUSTRALIA  For weed control in fallows or prior to sowing a summer or winter crop	Qld, NSW, ACT only	Barley Grass, Canary Grass (Annual Phalaris), Cereals volunteer, Wild Oats	400-800mL	Treat actively growing weeds not under stress from low moisture, frost, cold, disease or water logging. If heavy grazing has occurred allow regrowth to 6-8cm. NOTE that under Summer (hot) conditions, dense infestations of Barnyard grass and Liverseed grass may require follow-up treatment for complete control. In Winter (cold) conditions, symptoms on Dead nettle may be slow to develop.  <b>RATE SELECTION:</b> Use the lower rate on young weeds, increase to the higher rate where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding. At more advanced stages of growth certain broadleaf weeds require a higher rate range or the addition of LV Ester 680.  <b>CROP ESTABLISHMENT:</b> Sowing should not proceed until conditions allow for a formation of a satisfactory seedbed. See Crop Establishment for directions.  <b>TANK MIXTURES:</b> Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. DO NOT tank mix with atrazine when spraying Barnyard grass or Liverseed grass.  <b>AERIAL APPLICATION:</b> For instructions on Aerial application under hot conditions, see Aerial Application. DO NOT apply by aircraft when temperature is above 30°C.	
		Barnyard Grass, Button Grass, Columbus Grass (Seedling), Liverseed Grass, Lovegrass, (Stinkgrass), Native Millet, Sorghum (volunteer)	800mL-1.6L		
		Australian Bluebell (Qld only), Cudweed, Furnitory, Mexican Poppy, New Zealand Spinach, Saffron Thistle, Spear Thistle, Spurge, Stinking Goosefoot	800mL-1.2L		
		Black (Giant) Pigweed, Boggabri Weed, Caltrop, Indian Hedge Mustard, Mintweed, Summer Grass	400mL –800mL up to 3cm in height or diameter or up to 5 true leaves or 800mL –1.2L greater than 3cm height or diameter or 5 true leaves		
		African Turnip Weed, Deadnettle, Sweet Summer Grass, Sunflower (volunteer), Variegated Thistle	600-800mL up to 3cm in height or diameter or up to 5 true leaves or 800mL-1.2L greater than 3cm height or diameter or 5 true leaves		
		Annual ground cherry (Gooseberry), Bladder Ketmia, Camel Melon, False Castor Oil Plant, Ground Cherry, Noogoora Burr, Turnip Weed, Wild Lettuce, Wild Turnip, Wireweed	800mL-1.2L prior to stem elongation/ budding.  400mL-1.2L/ha plus 600 - 820mL/ha LV Ester 680 OR 1.2-1.6L/ ha of this product alone.		
		Pigweed	800mL-1.6L up to 20cm diameter		Use higher rate on larger weeds. Control of Pigweed over a wide range of growth stages can be obtained with the addition of Metsulfuron 600. Observe re-cropping intervals.
		Prickly paddy melon	770mL-1.6L/ha plus 80mL/ha of triclopyr 600		DO NOT add crop oil.
		Milkthistle (Sowthistle)	600-800mL rosettes up to 3cm diameter. 800mL-1.6L greater than 3cm diameter		Previously grazed plants may be difficult to control without allowing full recovery.
		Couch	1.2-2.4L		Use the higher rate on dense infestations. Apply sequential treatments during summer and autumn, with autumn being the most effective. Repeat applications will be required for complete control. For improved control use in conjunction with cultivation.
Johnson Grass	1.6-2.4L	Use higher rate on plants approaching seedhead stage. Apply to plants with a minimum of 30cm new growth. Sequential treatments will be required for long-term control.			
Nutgrass	2.4 +2.4L	Make the first application to actively growing plants when at least 20% have reached the head stage (normally around February). After allowing maximum re-emergence to occur (normally 6-8 weeks), it is essential to make a second application.			

## PASTURE RENOVATION

Situation	State	Weeds controlled	Rate L/ha	Critical comments
POA TUSSOCK INFESTED PASTURE For reduction of ground cover allowing pasture renovation	NSW, ACT, Vic, TAS, Qld only	Most annual weeds and suppression of POA tussock	2.4 – 3.2L	<b>TIMING:</b> Graze heavily, then remove stock at least 14 days before spraying to allow fresh regrowth. Apply to actively growing plants after the Autumn break but before heavy frosts (March-May). <b>APPLICATION:</b> Increasing to the higher rate may give more effective reductions. If aerial spraying see Aerial Equipment. <b>FOLLOW-UP MANAGEMENT:</b> Sowing may start from 14 days after spraying. It is essential that correct follow-up pasture establishment and management occurs after treatment. Spot treatment will limit re-infestations.
SEED-HEAD SUPPRESSION OF PERENNIAL GRASSES	VIC, TAS, NSW, ACT, WA, SA only	Bent grass	300-500mL	<b>TIMING:</b> Treat from late October to late November. Apply before seedheads have emerged. Use the higher rate where growth is excessive and renovation is intended the following Autumn. <b>FOLLOW-UP MANAGEMENT:</b> Graze hard after spraying.
BENT GRASS INFESTED PASTURE For control / Suppression prior to Establishing crops or Improved pasture species	Vic, Tas only	Most annual weeds and Bent grass	2.0L	<b>TIMING:</b> Apply to actively growing plants in late Spring when they have some seed-head development, but before Summer moisture stress. Remove stock to ensure there is full leaf growth. <b>FOLLOW-UP MANAGEMENT:</b> Full disturbance with a tyned implement should follow 10-21 days after spraying. Then follow with a Summer crop, and/or reseeded pasture or crop the following Autumn.

## PASTURE TOPPING

Crop/Situation	State	Weeds controlled	Rate L/ha	Critical comments
PASTURE TOPPING For Annual grass, Capeweed and Calomba Daisy seed-set reduction	NSW, SA, Tas, ACT, WA, Vic only	Barley grass, Brome grass, Capeweed, Silvergrass	240 mL–360 mL	Allow even regrowth of weeds by removing stock prior to treatment. Pasture legume populations may be reduced due to treatment. Do not apply to Clover or Medic crops to be used for hay or seed. <b>TIMING:</b> Apply to Capeweed and Annual ryegrass at FLOWERING and before signs of “haying off”. For other weeds apply from HEAD to MILKY DOUGH stage. <b>APPLICATION:</b> Use the higher rate for dense infestations of weeds where Annual ryegrass is present. Add wetter at label rates for water rates over 50L/ha.
		Annual yegrass, Calomba Daisy	360mL	

## PASTURE MANIPULATION

Crop/Situation	State	Weeds controlled	Rate L/ha	Critical comments
PASTURE MANIPULATION For suppression or control of pasture species prior to drilling, improved pasture, forage species, soybeans or Leucaena  BAND SPRAYING: May also be applied as a band or strip spray.	NSW, WA, ACT, Vic, only	Carpet grass, Kikuyu, Paspalum	1.1–4.8L	<b>RATE SELECTION:</b> For suppression apply the low rate. Where complete control is required apply up to the high rate. <b>BAND SPRAYING:</b> Band spraying may be done immediately after the sowing operation. Mount the nozzles behind the coulter/tyne/press wheel assembly of the band seeder. Adjust to spray 0.5-1m strips. Ensure minimal disturbance of the pasture. Excessive dust created in the seeding operation may reduce herbicide activity. Pasture seed must be drilled at the appropriate depth and covered by soil. <b>LEUCAENA (QLD ONLY):</b> Apply 2L/ha through a single taper fan nozzle LF1-80 mounted at the rear of the single row planter providing a 1m swath. Planting rows to be 4m apart.
	QLD only	Carpet grass, Paspalum	500mL-4.8L	
		Kikuyu		
		Barbed wire grass, Black speargrass, Love grasses, Red Natal grass, Wire grasses	2.4L	

## DIRECT DRILLING FOR RICE

Crop/Situation	State	Weeds controlled	Rate L/ha	Critical comments
Prior to Direct drilling rice	NSW only	Canary grass (Annual phalaris), Annual ryegrass, Barley grass, Burr medic, Sub-clover, Winter grass	800mL – 1.0 L	This product is less effective on drought stressed plants. In drought conditions a pre-watering prior to spraying is recommended. In grazed situations, if heavy grazing has occurred allow regrowth o 6-8cm before spraying. <b>ANNUAL RYEGRASS:</b> Add non-ionic surfactant at 200mL/100L spray solution and when dominant use the higher rate. <b>SOWING:</b> Direct drilling may take place 1-14days after spraying. This product does not provide residual weed control. Permanent water and approved selective herbicides should be used to provide continual control of weeds.

## COTTON

Crop/Situation	State	Weeds controlled	Rate L/ha	Critical comments
COTTON PREHARVEST  DO NOT use on crops intended for seed production.	QLD, NSW only	Bathurst burr, Noogoora burr, Annual weeds including Sowthistle/ Milkthistle	1.0 – 2.0 L	Use the lower rate on light infestations of small weeds, where the crop canopy allows adequate spray coverage of the weeds.  Increase to the higher rate when the crop canopy may limit spray coverage, when treating dense infestations, or when treating larger weeds. Apply alone or in tank mixtures with THIDIAZURON or dimethipin . Apply when at least 60% of bolls are open and immature bolls cannot be easily cut with a sharp knife. Where a leafy canopy limits spray coverage, reduced weed control can be expected. For better results under these conditions, delay application until canopy re-opens following initial conditioning treatment.  Where control of Nutgrass or Noogoora burr is required, treatment should be applied prior to the onset of frosts. When tank mixed with defoliant, a slightly higher proportion of cotton leaf may be retained, particularly where the higher rate is used. Read and follow all label directions for tank mix products.
		Nutgrass (seasonal suppression only)	2.0 L	
COTTON  Shielded Sprayers		Refer to weeds controlled section  Northern Australia for weed control in fallows or prior to sowing a summer or winter crop		Apply this product to weeds growing between crop rows using a shielded sprayer.  DO NOT apply in crops less than 20cm high.  DO NOT allow spray or spray drift to contact any part of the cotton plants as severe injury or destruction may result.

## SORGHUM CONTROL

Crop/Situation	State	Weeds controlled	Rate L/ha	Critical comments
SORGHUM CONTROL  Pre-harvest	QLD, NSW, ACT only	Sorghum, Grain Sorghum  DO NOT apply to varieties intended for seed production or varieties prone to lodging.	1.2 - 1.6 L	DO NOT apply if crop is under stress from low moisture, frost, cold or water logging.  <b>RATE SELECTION:</b> Use the lower rate for control of crop and late tillers and suppression of ratoon regrowth. Use the higher rate for improved suppression of ratoon regrowth.  <b>TIMING:</b> Apply when grain moisture is less than 25%. Application can be made when moderate browning has occurred.  <b>CAUTION:</b> Treatment may increase potential for CROP LODGING, particularly if prior moisture stress has occurred.  Harvest as soon as sufficient dry down has occurred to avoid possible lodging. Speed of dry down is dependant on physiological maturity, soil moisture and climatic conditions.  <b>CAUTION:</b> Sorghum may be naturally toxic to stock.
SORGHUM CONTROL  Post-harvest		Sorghum stubble, Grain sorghum	800mL – 1.2 L for fresh regrowth from slashed stubble  1.2 – 1.6 L for standing stubble if sufficiently green and for fresh spring regrowth	<b>APPLY UNDER GOOD GROWING CONDITIONS ONLY.</b> DO NOT apply if plants are under stress from low moisture, frost, cold or water logging.  <b>SLASHED STUBBLE AND SPRING REGROWTH:</b> Apply when fresh regrowth is at least 20cm high.  <b>STANDING STUBBLE:</b> Apply only if sufficient green leaf is present. If grazing has occurred allow regrowth to 20cm high before treatment.  <b>RATE SELECTION:</b> Use the lower rate for knockdown and regrowth suppression where cultivation is to follow. Increase to the higher rate for improved regrowth control. NOTE: Variable results occur where the crop has been subject to stress or the growing conditions are marginal.  <b>CAUTION:</b> Sorghum may be naturally toxic to stock.

## SUGAR CANE

Crop/Situation	State	Weeds controlled	Rate L/ha	Critical comments
SUGAR CANE Ratoon spray out	QLD, NSW only	Sugar Cane (Regrowth of the ratoons)	3.2 - 7.8 L	<b>APPLY UNDER GOOD GROWING CONDITIONS ONLY:</b> To actively growing ratoons 60-120cm tall. DO NOT apply if plants are under stress from low moisture, frost, cold or water logging.  Use the lower rate for suppression or where cultivation is to follow. Use the higher rate for control.

## TREE AND VINECROPS

Crop/Situation	State	Weeds controlled	Rate L/ha	Critical comments
TREE AND VINECROPS Vineyards, Berries and other small fruits (excluding strawberry) Citrus fruits Tropical and Subtropical fruits Pome fruits Stone fruits Tree nuts Duboisia Hops Tea	All State	Amaranth, Barley grass, Brome grass, Barnyard grass, Caltrop, Canary grass, Capeweed, Chickweed, Dead nettle, Double gee, Liverseed grass, Mintweed, Paterson's curse, Pigweed, Ryegrass, Silver grass, Spear thistle, Thornapple, Wild mustard, Wild oats, Wild turnip, Winter grass, Variegated thistle	Boom: 1.6-2.4L/ha  Handgun: 400-600mL/100L  Knapsack: 60-80mL/15L	Apply as a directed or shielded spray or using wiper equipment. DO NOT apply as a spray near trees or vines less than 3 years old unless they are effectively shielded from spray and spray drift. DO NOT allow wiper surface to contact any part of the tree, vine or plant. <b>Citrus fruit, Nuts, Olives, Pome fruit &amp; Vineyards:</b> DO NOT allow spray or spray drift to contact green bark or stems, canes, laterals, suckers, fresh wounds, foliage or fruit. <b>Hops:</b> Apply in Winter, prior to crop emerging from dormancy. <b>Tea:</b> Apply a maximum of 3.2L/ha by shielded boom or directed off-centre nozzle or 0.4L/100L by directed hand-gun or knapsack to avoid application to the crop. <b>All other crops:</b> DO NOT allow spray or spray drift to contact any part of the plant including the trunk. CAUTION Where split bark on Kiwifruit and green stems on Pawpaw occur, extreme care is required. Annual weeds may be sprayed anytime they are actively rowing. Use the lower rate on weeds up to 15cm tall.

## GENERAL USES

SITUATION	CRITICAL COMMENTS - Read General Application Information before using See Annual, Perennial and Woody weeds sections below for most appropriate rate.
<p>For general weed control in Domestic areas (Home gardens), Commercial, Industrial and Public Service areas. Agricultural buildings and other farms situations.</p> <p>For specific weeds, brush and woody weeds or unwanted trees, refer to the appropriate Weeds Controlled table.</p>	<ul style="list-style-type: none"> <li>- For the control of many grasses and broadleaf weeds <b>Rate: 8mL/L water.</b></li> <li>- Apply when weeds are actively growing</li> <li>- Apply to ensure complete and uniform wetting of foliage</li> <li>- Visible symptoms may take from 3-7 days to develop</li> </ul> <p>When spraying GENFARM PANZER 450 HERBICIDE in high volumes typical of spot spraying (except where a specific wetter such as Organosilicone Penetrants is recommended), the addition of 200mL per 100L of a 1000g/L Non Ionic wetting agent is recommended</p>
<p>NON-AGRICULTURAL AREAS</p> <p>Around buildings, Commercial and Industrial areas, Domestic and public service areas, Right-of-ways.</p>	<p>GENFARM PANZER 450 HERBICIDE does not provide residual weed control. For residual control of annual weeds, GENFARM PANZER 450 HERBICIDE may be tank-mixed with certain residual herbicides.</p> <p>See TANK MIXTURES/COMPATIBILITY</p>
<p>AGRICULTURAL AREAS</p>	<p>GENFARM PANZER 450 HERBICIDE may be used for control of annual and perennial weeds as directed, in agricultural land prior to sowing of any edible or non-edible crop, but not prior to transplanting tomato seedlings.</p>
<p>DRY DRAINS AND CHANNELS</p> <p>Dry margins of dams, lakes and streams situations</p>	<p>DO NOT apply to weeds growing in or over water.</p> <p>DO NOT spray across open bodies of water and DO NOT allow spray to enter the water.</p> <p>DO NOT allow water to return to dry channels and drains within 4 days of application.</p>
<p>FORESTS</p>	<p>GENFARM PANZER 450 HERBICIDE may be used prior to establishment of nurseries, for site preparation prior to planting and amongst established trees using a directed or shielded spray, or using selective wiper equipment.</p> <p>DO NOT allow wiper surface to contact any part of the tree.</p> <p>DO NOT allow spray or spray drift to contact foliage or green bark of desirable trees, since severe injury may result.</p>
<p>PEANUTS, COTTON, SOYBEANS, SUGARCANE, NAVY BEANS AND CHICKPEAS</p> <p>Application using selective equipment. Qld, NSW only</p>	<p>Wiper Equipment. Apply GENFARM PANZER 450 HERBICIDE to weeds growing between crop rows or to weeds growing at least 15cm above the crop.</p> <p>DO NOT allow wiper to contact crop and ensure operating conditions do not allow solution to drip from applicator since severe injury may result.</p> <p>Refer to WIPER EQUIPMENT in the APPLICATION section of the label.</p> <p>Shielded Sprayers (Cotton only). Apply GENFARM PANZER 450 HERBICIDE to weeds growing between crop rows using a shielded sprayer. Refer to the Weeds Controlled tables for rates of application.</p> <p>DO NOT apply in crops less than 20cm high.</p> <p>DO NOT allow spray or spray drift to contact any part of the cotton plant as severe injury or destruction may result.</p>
<p>PASTURE</p>	<p><b>DIRECTED (SPOT) APPLICATION:</b> GENFARM PANZER 450 HERBICIDE is non-selective and may damage or kill any plant in the sprayed area. Re-treatment and/or pasture improvement may be necessary to restrict seedling reestablishment.</p> <p><b>SELECTIVE APPLICATION:</b> SEE WIPER EQUIPMENT</p> <p><b>BOOM APPLICATION:</b> GENFARM PANZER 450 HERBICIDE may be used to suppress or kill existing pasture species prior to re-seeding or establishment of other crops. Where spot application (spray or wiper) is undertaken, grazing stock need not be removed.</p> <p><b>CAUTION:</b> Certain plants may be naturally toxic to stock. Where known toxic plants are present DO NOT allow stock to graze until complete browning of treated plants has occurred.</p>
<p>ONIONS</p> <p>Post-plant, Pre-emergence application. Tas only</p>	<p>For control of annual weeds and suppression of perennial weeds, including Rope twitch. Apply GENFARM PANZER 450 HERBICIDE at 800mL-2.4L/ha post-sowing and at least 7 days before crop is due to emerge. DO NOT apply to emerging onion plants as severe injury will result. Use the lower rate on small, actively growing annual weeds. Increase to the higher rate for larger annual weeds (over 15cm tall) and for suppression of perennial weeds.</p>

## Pre-harvest application (All States)

Situation	Weeds Controlled	Boom Rate/ha	Critical Comments
<p>PRE-HARVEST APPLICATION</p> <p>To reduce viable seed set of weeds in : Field Peas (<i>Pisum sativum</i>)</p> <p>Faba beans (<i>Vicia faba</i>)</p>	Annual Ryegrass ( <i>Lolium rigidum</i> )	385 – 815 mL	<p>Use the lower rate if ryegrass is flowering and higher rate if Ryegrass is at milky dough stage.</p> <p>Application should be made at or after crop maturity. Application before this time may significantly affect yields (in practice loss of in excess of 25% can occur).</p> <p>Apply when average seed moisture content is below 30%. For Faba Beans, this is indicated by pods going black, and for Field peas by the pods going yellow.</p> <p>DO NOT harvest within 7 days after application. DO NOT use on crops intended for seed or sprout growing.</p> <p>Glyphosate resistant biotypes have been detected in Australia. If glyphosate resistant weeds are known to be present, apply an additional method of control.</p>
<p>PRE-HARVEST APPLICATION:</p> <p>As a harvest aid and weed control:</p> <p>Wheat (<i>Triticum aestivum</i>)</p>	Annual weeds	1.1 – 2.2L	<p>Apply to mature crop from late dough stage (28% moisture) onwards. The higher rate will be required when crops are heavy and leaf shading effects may occur.</p> <p>DO NOT harvest within 7 days after application. DO NOT use on crops intended for seed or sprout growing.</p> <p>Where wheat is grown in rotation with any herbicide tolerant crop, management should be consistent with implementation of any management plan for herbicide tolerant crops.</p>
<p>PRE-HARVEST APPLICATION:</p> <p>To desiccate a crop as a harvest aid and weed control</p> <p>ADZUKI BEANS</p> <p>CHICKPEAS</p> <p>COWPEA</p> <p>FABA BEANS</p> <p>FILED PEAS</p> <p>LENTILS</p> <p>MUNGBEANS</p> <p>SOYBEAN</p> <p>(Application to crops intended for seed production or for sprouting may reduce germination percentage to commercially unacceptable levels).</p>	Annual weeds	815 mL – 2.2L	<p>Apply with boom or by air. Use higher rates where crops or weeds are dense and where faster desiccation is required. Application should be made at or after crop maturity.</p> <p><b>Chickpeas and Lentils:</b> apply when physiologically mature and less than 15% green pods.</p> <p><b>Soybean:</b> apply only after seed pods have lost all green colour and 80-90% of leaves have dropped.</p> <p><b>Mungbeans/Adzuki and Cowpea:</b> apply to mature crops when pods are brown/black.</p> <p><b>Field peas</b> – apply when seeds turn yellow and average seed moisture content is below 30%.</p> <p><b>Faba Beans</b> – apply when pods turn black and average seed moisture content is below 30%.</p> <p><b>DO NOT harvest within 7 days of application. Speed of desiccation is dependent on crop stage, growing conditions and weather conditions during and after application.</b></p>
<p>PRE-HARVEST APPLICATION:</p> <p>As a harvest aid and weed control:</p> <p>Chickpeas</p> <p>(Application to crops intended for seed production or for sprouting may reduce germination percentage to commercially unacceptable levels).</p>	Annual weeds	600 mL – 1.3 L plus 5g Genfarm Metsulfuron 600 WG Herbicide	<p>Apply by boom or by air. Apply when chickpeas are physiologically mature and less than 15% of green pods are present.</p> <p>Use higher rates where crops or weeds are dense and where faster desiccation is required.</p> <p><b>DO NOT harvest within 7 days of application. Speed of desiccation is dependent on crop stage, growing conditions and weather conditions during and after application.</b></p>

PERENNIAL WEEDS					
WEEDS CONTROLLED	STATE	APPLICATION RATES			CRITICAL COMMENTS
		Boom – L/Ha	Handgun/ 100L	Knapsack per 15L	
Bent Grass ( <i>Agrostis spp.</i> )	Vic, Tas only	2.0L	400mL	60mL	Apply to actively growing plants in late spring when they have some seed-head development, but before summer moisture stress. Follow up management will be required. Fully disturb with a tined implement 10-21 days after spraying. Follow with a summer crop and/or re-seeded pasture in the following autumn.
Blackberry ( <i>Rubus fruticosus</i> )	NSW, Qld, Vic, Tas only		800mL-1L	20-60mL	Should be applied between January-May i.e. from flowering to leaf fall. Ensure that plants are not under stress. Use of CDA equipment is not recommended. Complete spraying of foliage cover is essential for total control. Use the higher rate on old dense infestations over 1.75m high. In Tasmania, Do Not treat bushes bearing mature fruit or near mature fruit.
Blady Grass ( <i>Imperata cylindrical</i> )	Qld, ACT, NSW only	7.2L	1L	150mL	Apply to actively growing plants at the early head stage.
Bracken ( <i>Pteridium esculentum</i> )	All States	7.2L	1.2L	180mL	For boom application, always add a Organosilicone Penetrant, or otherwise reduced results will occur. It is recommended to slash bracken if practical in the Winter/Spring prior to treatment. Apply product to fully unfurled actively growing fronds, but prior to frosts. Complete control will not be achieved by one application, therefore repeat treatment is recommended.
Carpet Grass ( <i>Axonopus spp.</i> )	All States	2.4L	400mL	60mL	Apply to actively growing plants at the early head stage.
Cocksfoot ( <i>Dactylis dactylon</i> )			600mL	90mL	Apply to actively growing plants at the early head stage.
Couch ( <i>Cynodon dactylon</i> )		7.2L	1L	150mL	Apply to actively growing plants at the early head stage.
Cumbungi ( <i>Typha spp.</i> )					Apply to actively growing plants at the early head stage to full head stage. (Summer/Autumn). Re-treatment may be required to restrict re-establishment from seedlings. Do not apply to weeds growing in or over water. Do not spray across open bodies of water and do not allow spray to enter the water. Do not allow water to return to dry channels and drains within 4 days of application.
Flatweed ( <i>Cat's Ear</i> ( <i>Hypochaeris radicata</i> )		2.4L	600mL	90mL	Apply to fully developed rosettes at the early flower stage.
Guinea Grass ( <i>Panicum maximum</i> )		7.2L	1L	150mL	Apply to actively growing plants at the early head stage.
Hoary Cress ( <i>Cardaria draba</i> )	NSW, Tas, ACT, Vic only	1.2L	400mL	60mL	Apply from late July to September when plants are in late rosette to flowering stage. Plants should be actively growing and not under stress from low moisture, frost or waterlogging. Cultivation may start 7 days after application. In Tasmania addition of a non-ionic surfactant is recommended.
Johnson Grass ( <i>Sorghum halepense</i> ) Kangaroo Grass ( <i>Themeda australis</i> ) Kikuyu ( <i>Pennisetum clandestinum</i> )	All States	4.8L	800mL	120mL	For maximum long-term control, apply to actively growing plants at the early head stage.
Nutgrass ( <i>Cyperus rotundus</i> ) Does not refer to other Cyperus species which may be known locally as Nutgrass	All States	4.8L	800mL	120mL	Non-arable: Apply to actively growing plants in late summer/autumn (Feb-Apr) when at least 20% have reached the head stage.
Paragrass ( <i>Brachiaria mutica</i> )		2.4L followed by 2.4L	600mL followed by 600mL	90mL followed by 90 mL	Arable land: Apply to actively growing plants when at least 20% have reached the head stage (around Feb). After maximum re-emergence (normally 6-8 weeks), it is essential to make the second application. Follow-up treatments should be made as part of a nutgrass eradication program.
Paspalum ( <i>Paspalum dilatatum</i> )		7.2L	1L	150mL	Do not apply to weeds growing in or over water. Do not spray across open bodies of water and Do not allow spray to enter the water. Do not allow water to return to dry channels and drains within 4 days of application.
		4.8L	800mL	120mL	Apply to actively growing plants at the early head stage.

Phalaris ( <i>Phalaris aquatica</i> )	NSW, Vic, ACT, SA only	2.4-4.8L	400-800mL	60-150mL	For longer-term control, use the higher rates while plants are in an active growth phase in Winter/Spring. Lower rates may be used in conjunction with burning. Leave for 14-21 days for brownout before burning.
Phragmites, Common Reed ( <i>Phragmites australis</i> )	All States	7.2L	1L	150mL	Apply to actively growing, developed plants approaching the early head stage. Results may not be apparent until the following season. Do not apply to weeds growing in or over water. Do not spray across open bodies of water and Do not allow spray to enter the water. Do not allow water to return to dry channels and drains within 4 days of application.
Plantains ( <i>Plantago spp.</i> )		2.4L	600mL	90mL	Apply to actively growing plants at the early head stage. Symptoms may be slow to develop.
Prairie Grass ( <i>Bromus unioloides</i> ) Qld Blue Grass ( <i>Dichanthium sericeum</i> ) Red-leg Grass ( <i>Bothriochloa macra</i> ) Rhodes Grass ( <i>Chloris gayana</i> )		4.8L	800mL	120mL	Apply to actively growing plants at the early head stage.
Rope Twitch ( <i>Agropyron repens</i> )		Vic, Tas only			Apply in late summer-autumn to actively growing plants with foliage at least 20cm high. To ensure maximum shoot emergence the area should NOT be cultivated in the period from the preceding winter to the time of spraying.
Rushes ( <i>Juncus spp.</i> )	All States			Burning or pre-slashing of dead foliage is recommended if there is a dense infestation. Ensure plants are actively growing and sufficient green tissue before treatment. Do not apply to weeds growing in or over water. Do not spray across open bodies of water and Do not allow spray to enter the water. Do not allow water to return to dry channels and drains within 4 days of application.	
Silverleaf Nightshade ( <i>Solanum elaeagnifolium</i> )	NSW, ACT only		1.6L	240mL	Use ONLY under good soil moisture conditions. Apply to actively growing plants at the late flowering to berry stage. Repeat spraying will be required to restrict re-growth and seedling establishment.
Sorrel ( <i>Rumex acetosella</i> )	All States		800mL	120mL	Apply to actively growing plants when most have reached the early bud stage.
Soursob ( <i>Oxalis pes-caprae</i> )	NSW, WA, ACT, SA, Vic, Tas only	1.2L	400mL	60mL	For long-term reduction apply from late July to early September but before natural plant yellowing occurs. Soursob should be actively growing and not under stress from low moisture of waterlogging. Allow recovery after frost damage before spraying. Allow foliage to re-grow to 5cm after heavy grazing.
St. Johns Wort. ( <i>Hypericum perforatum</i> )	All States	2.4L	400mL	60mL	Apply to actively growing plants in the flowering to post flowering – procumbent stem stage. (Usually Nov-May). Re-treatment may be necessary to restrict seedling re-establishment.
Tall Sedge ( <i>Carex appressa</i> )	NSW, ACT, Vic only	1.6 or 3.2L	400-800mL	60-120mL	Apply to actively growing plants in flowering to post-flowering period (Oct-April). Use the lower rate only if the stand has been slashed prior to treatment. Re-treatment may be required. Symptoms may not be visible for up to 3 months. Use of CDA equipment is not recommended. Do not apply to weeds growing in or over water. Do not spray across open bodies of water and Do not allow spray to enter the water. Do not allow water to return to dry channels and drains within 4 days of application.
Yorkshire Fog ( <i>Holcus lanatus</i> )	All States	2.4L	600mL	90mL	Apply to actively growing plants when most have reached the early bud stage.

ANNUAL WEEDS – NON-CULTIVATED OPTIONS			
WEEDS CONTROLLED (ALL STATES)		RATE	CRITICAL COMMENTS (Read application check list before using)
Amaranth	<i>Amaranthus spp.</i>	Boom	Annual weeds may be sprayed anytime they are actively growing.
Annual Ryegrass	<i>Lolium rigidum</i>	1.6–2.4L/Ha	
Barley Grass	<i>Horedeum leporinum</i>	Handgun 400-600mL per 100L	Use the lower rate on weeds up to 15cm tall. Increase to the higher rate for weeds over 15cm tall.
Barnyard Grass	<i>Echinochloa crus-galli</i>		
Brome Grass	<i>Bromus spp.</i>	Knapsack 60-80mL per 15L	Visible symptoms develop in 3-7 days, but complete desiccation may take 20-30 days under cool conditions.
Caltrop	<i>Tribulus terrestris</i>		
Canary Grass (Annual Phalaris)	<i>Phalaris spp.</i>	Refer to Application Section	GENFARM PANZER 450 HERBICIDE does not provide residual weed control. Repeat treatments may be required to control later germinating weeds.
Capeweed	<i>Arctoteca calendula</i>		
Cereals	<i>(Volunteer barley, oats, sorghum, wheat)</i>	Refer to Application Section	For residual control, GENFARM PANZER 450 HERBICIDE may be tank mixed with certain herbicides. Refer to Compatibility section.
Chickweed	<i>Stellaria media</i>		
Cobblers Pegs	<i>Bidens pilosa</i>	Refer to Application Section	When applying in high volume (i.e. Handgun or Knapsack), add a non-ionic wetter (1000g/L) at 200mL per 100L of spray mix.
Deadnettle	<i>Lamium amplexicaule</i>		
Fumitory	<i>Fumaria officinalis</i>	Refer to Application Section	When applying in high volume (i.e. Handgun or Knapsack), add a non-ionic wetter (1000g/L) at 200mL per 100L of spray mix.
Ground cherry	<i>F. muralis</i>		
Lesser Swinecress	<i>Physalis ixiocarpa</i>	Refer to Application Section	When applying in high volume (i.e. Handgun or Knapsack), add a non-ionic wetter (1000g/L) at 200mL per 100L of spray mix.
Liverseed grass	<i>Coronopus didymus</i>		
Milkthistle (Sowthistle)	<i>Urochloa panicoides</i>	Refer to Application Section	When applying in high volume (i.e. Handgun or Knapsack), add a non-ionic wetter (1000g/L) at 200mL per 100L of spray mix.
Mintweed	<i>Sonchus oleraceus</i>		
Paradoxa Grass	<i>Salvia reflexa</i>	Refer to Application Section	When applying in high volume (i.e. Handgun or Knapsack), add a non-ionic wetter (1000g/L) at 200mL per 100L of spray mix.
Paterson's Curse	<i>Phalaris paradoxa</i>		
Pigweed	<i>Echium plantagineum</i>	Refer to Application Section	When applying in high volume (i.e. Handgun or Knapsack), add a non-ionic wetter (1000g/L) at 200mL per 100L of spray mix.
Potato Weed	<i>Portulaca oleracea</i>		
Saffron Thistle	<i>Galinsoga parviflora</i>	Refer to Application Section	When applying in high volume (i.e. Handgun or Knapsack), add a non-ionic wetter (1000g/L) at 200mL per 100L of spray mix.
Silver Grass	<i>Carthamus lanatus</i>		
Spear Thistle	<i>Vulpis spp.</i>	Refer to Application Section	When applying in high volume (i.e. Handgun or Knapsack), add a non-ionic wetter (1000g/L) at 200mL per 100L of spray mix.
Spiny Burr Grass	<i>Cirsium vulgare</i>		
Spiny Emex (Doublegee)	<i>Cenchrus spp.</i>	Refer to Application Section	When applying in high volume (i.e. Handgun or Knapsack), add a non-ionic wetter (1000g/L) at 200mL per 100L of spray mix.
Spurge	<i>Emex australis</i>		
Sub-Clover	<i>Euphorbia spp.</i>	Refer to Application Section	When applying in high volume (i.e. Handgun or Knapsack), add a non-ionic wetter (1000g/L) at 200mL per 100L of spray mix.
Thornapple	<i>Trifolium Subterraneum</i>		
Wild Mustard	<i>Datura spp.</i>	Refer to Application Section	When applying in high volume (i.e. Handgun or Knapsack), add a non-ionic wetter (1000g/L) at 200mL per 100L of spray mix.
Wild Oats	<i>Sisymbrium officinale</i>		
Wild Turnip	<i>Avena spp.</i>	Refer to Application Section	When applying in high volume (i.e. Handgun or Knapsack), add a non-ionic wetter (1000g/L) at 200mL per 100L of spray mix.
Winter Grass	<i>Brassica tournefortii</i>		
Variiegated Thistle	<i>Poa annua</i>	Refer to Application Section	When applying in high volume (i.e. Handgun or Knapsack), add a non-ionic wetter (1000g/L) at 200mL per 100L of spray mix.
	<i>Silybum marianum</i>		

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

## GENERAL INSTRUCTIONS

GENFARM PANZER 450 HERBICIDE is a non-selective herbicide that will kill most emerged weeds and plants. It provides no residual weed control and may therefore be used before sowing any crop, but not prior to transplanting tomato seedlings. If required, GENFARM PANZER 450 HERBICIDE can be mixed with certain other herbicides to achieve both knockdown and residual weed control (see Tank Mixtures).

GENFARM PANZER 450 HERBICIDE is absorbed by foliage and green stems and moves into the root system. Weeds should be actively growing when treated. DO NOT treat weeds under poor growing or dormant conditions (such as occur in drought, water logging, disease, insect damage or following frosts), as reduced weed control may result.

Reduced results may also occur when treating weeds heavily covered with dust or silt. Prior herbicide application may also induce stress in weeds.

For annual weeds, it may be 3-7 days before the effects of the treatment become apparent; for perennials, it may be as much as 2-3 weeks or more if cool and cloudy.

GENFARM PANZER 450 HERBICIDE is a non-volatile liquid that mixes readily with water. Just mix with the required volume of water, add a non-ionic wetting agent, and spray.

Rain occurring up to 6 hours after application may reduce effectiveness. Heavy rainfall within 2 hours of application may wash the chemical off the foliage and a repeat treatment may be required. Delay treatment of plants wet with dew or rain, if water droplets runoff when plants are disturbed.

Avoid contact with foliage, green stems or fruit of crops, desirable plants and trees, as severe injury or destruction may result.

A withholding period for stock is not required, however, it is recommended that grazing of treated plants be delayed for one day after treatment of annual weeds, or 7 days if perennial weeds are present to ensure absorption of GENFARM PANZER 450 HERBICIDE.

Certain plants (eg. Soursob, variegated thistle) may be naturally toxic to stock. When known toxic plants are present, DO NOT allow stock to graze until complete browning of treated plants has occurred.

## CROP ESTABLISHMENT

This product is recommended for control of emerged weeds prior to crop establishment. Suitable cultivation and/or sowing operations are required to produce the most satisfactory seedbed for crop germination and development, proceed as follows:

- Spray GENFARM PANZER 450 HERBICIDE early when the weeds are young.
- If weeds are few and the soil is friable, you can start seeding as early as one day after spraying.
- If the weed density is high, you should delay sowing until the dead weeds are sufficiently decayed, to ensure that crop emergence is not delayed as a result of dead green or decaying weeds being incorporated by cultivation or sowing. This is particularly important in cold or wet weather. Grazing will help to reduce the weed density, and you can assist weed decay by cultivation to leave trash on the surface.
- If seedbed conditions are marginal, be careful to seed at the correct depth. DO NOT use pre-emergent herbicides if their labels indicate that they may delay crop emergence.

## MIXING

NOTE: Reduced results may occur if water containing soil is used, eg. water from ponds and unlined ditches; or if hard water containing calcium salts is used. GENFARM PANZER 450 HERBICIDE is a non-volatile liquid that mixes readily with water. DO NOT mix or store or apply this product in galvanised steel, unlined steel containers or spray tanks, since a highly flammable gas mixture may be formed. So use only spray tanks and equipment made of plastic or plastic lined, fibre glass, rubber, aluminium, brass, copper, or stainless steel.

1. Make sure the spray tank is completely free of previous spray residues.
2. Half fill the spray tank with clean water. Where possible avoid using turbid water, or hard water containing calcium salts, as this may reduce weed control.
3. If GENFARM PANZER 450 HERBICIDE is being used alone, go to step 5.
4. If GENFARM PANZER 450 HERBICIDE is being used with insecticides, other herbicides or additives (see Tank Mixtures), add these products now according to their label directions. If ammonium sulphate is required, add ammonium sulphate 417 first using 2L/100L of spray volume.
5. Add the required volume of GENFARM PANZER 450 HERBICIDE, and mix well. Mechanical agitators may cause excessive foaming and should not be used unless required by any tank mix partners.
6. Add the rest of the water. Near the end, add a non-ionic wetting agent, see below. Make sure the filling hose is submerged to avoid excessive foaming, and on completion remove it immediately to avoid back siphoning into the water supply. Use the tank mix promptly. And certainly within 5 days since a gradual loss of activity will occur.

Spray tanks, pumps, lines and nozzles should be thoroughly rinsed with clean water following application to prevent corrosion.

## **SURFACTANT ADDITION**

Always add a non-ionic surfactant. In fallow spraying situations the addition of Surfact 700 at 250mL/100L minimum plus Ammonium Sulphate 417 at 2L/100L is recommended.

## **SPOT SPRAYING (handgun/knapsack)**

The use of a non-ionic surfactant may improve weed control where water rates are high or product rate is low. Use the following amounts of non-ionic wetting agent per 100L of spray mix:

- 200mL of Non Ionic Wetting Agents 1000
- 300mL of Non Ionic Wetting Agents 600

## **BOOM SPRAYING**

When spraying annual ryegrass, silver grass (*Vulpia*) or perennial grasses addition of 200mL of Non Ionic Wetting Agents 1000 per 100L of spray mix may improve control. For boom and high volume spraying of certain perennial and brush/woody weeds such as bracken, gorse, lantana, addition of an organosilicone wetter 1000 at 200mL per 100L of spray solution may improve control. DO NOT add any other agricultural chemicals, spraying oils or other materials except as directed on the label.

## **APPLICATION**

GENFARM PANZER 450 HERBICIDE is a non-selective translocated herbicide. Direct spray contact or even slight drift may cause severe injury or destruction of any growing crop or other desirable plants including trees. Thoroughly flush your mixing and spray equipment with clean water after use.

## **BOOM EQUIPMENT**

Use recommended rates of GENFARM PANZER 450 HERBICIDE in 25-200L of clean water per hectare. When using GENFARM PANZER 450 HERBICIDE at 400mL-1.2L/ha spray volumes in the range 25-100L/ha are preferred. Use nozzles that produce a MEDIUM or COARSE spray quality at the target. Environmental conditions including delta T and wind speed, and the size and density of the target weed, should be taken into consideration when selecting nozzles. Boom height must be set to ensure double overlap of nozzle patterns at the top of the weed canopy.

## **HIGH VOLUME APPLICATION** (eg. Knapsack/Handgun Equipment)

The dilution rate is given as vol/1L eg: 8mL GENFARM PANZER 450 HERBICIDE per litre of water. This is equal to 120mL GENFARM PANZER 450 HERBICIDE per 15L of water or 800mL per 100L of water. Adjust equipment to achieve an even spray pattern. Apply to ensure complete and uniform wetting of all foliage. For handgun equipment, select a nozzle configuration and pressure to ensure good coverage with minimal production of fine droplets so as to reduce likelihood of off-target drift.

## **LOW VOLUME APPLICATION** (eg. Gas Gun or Splatter Gun)

Apply as an even spray to cover all foliage. Refer to Weeds Controlled for the dilution and volume of mixture to be applied. The dilution is specified as "Low volume mixture, GENFARM PANZER 450 HERBICIDE:Water". For example, a 1:9 mixture equals one part GENFARM PANZER 450 HERBICIDE plus 9 parts water.

## **WIPER EQUIPMENT**

Wiper Equipment (eg. ropewick, canvas, felt or carpet applicators) may be used to apply GENFARM PANZER 450 HERBICIDE onto weeds growing in oilseed crops, sugarcane, cotton, seed and pod vegetables, tree and vine crops specified in this label, pasture and non-crop areas. Avoid contact with desirable vegetation. Operate wiper equipment a minimum of 10cm above the crop or pasture. Weeds should be at least 15cm above the crop or pasture at time of application. Speed of travel should be no greater than 8km/h. Best results are achieved at lower speeds and where two applications are made in opposite directions (double pass).

Where weeds are of variable height, or occur in dense infestations or clumps, some plants may not be contacted by the herbicide solution.

In these cases repeat treatment may be necessary. Mix only enough herbicide solution for immediate requirements. DO NOT store mixed solution for more than a few days. Flush out equipment with water after use.

**RATE:** Mix 1L GENFARM PANZER 450 HERBICIDE with 2.5L of clean water to prepare a 29% solution. GENFARM PANZER 450 HERBICIDE may be used according to the above

directions for suppression or control of many annual and perennial weeds. See Weeds Controlled tables for specific use recommendations.

### CONTROLLED DROPLET APPLICATION EQUIPMENT (CDA)

Use the following table as a guide for achieving the correct application rates using the Micron 10 Herbi or similar equipment. See Weeds Controlled tables for specific rates and use recommendations. For handheld equipment a walking speed of approximately 1m/sec (4km/h) is recommended.

DO NOT add oils to GENFARM PANZER 450 HERBICIDE water mixture, otherwise difficulty in application and reduced weed control may occur.

**CAUTION:** CDA equipment produces a fine spray pattern, which is not easily visible. Ensure spray pattern or drift does not contact foliage or any other green tissue of desirable plants, since severe injury or destruction may result.

Rate of GENFARM PANZER 450 HERBICIDE delivered at 1m/sec	2.4L/ha	4.8L/ha	7.2L/ha
Mix ratio (by volume) GENFARM PANZER 450 HERBICIDE:Water	1:4	2:3	9:8
Quantity by volume to make 1L spray solution GENFARM PANZER 450 HERBICIDE +Water	200mL+800mL	400mL+600mL	530mL+470mL
Micron Herbi, nozzle	Blue	Blue	Yellow

### AERIAL APPLICATION

Use aerial spraying only in pasture or fallow before establishing new pasture, field crops or fodder crops, or for pre-harvest application to Sorghum. DO NOT apply GENFARM PANZER 450 HERBICIDE by air within intensive cropping areas as the consequences of accidental drift damage are too extreme. DO NOT exceed 3.2L of GENFARM PANZER 450 HERBICIDE per hectare. For Micron air equipment, apply in a minimum spray volume of at least 20L/h. Use nozzles that produce a MEDIUM to COARSE spray quality at the target are recommended. Swath width may need to be adjusted to take into account aircraft type, wind conditions, target height and density. Avoid application when relative humidity falls below 35%. In multiple product mixes a minimum water volume of 50L/ha is recommended and local advice should be sought. Correct mixing order is important. On hilly terrain, spraying height may vary. Increase the water volume to 30-80L/ha and use nozzles that produce a COARSE spray quality at the target. At 25°C increase the water volume to at least 30L/ha and nozzles that produce a COARSE spray quality at the target to compensate for evaporation. DO NOT spray by air at temperatures above 30°C as excessive evaporation may occur that will reduce weed control. Drift is likely when droplet size is 150 microns or less, when wind speed is near zero or over 8km/hr, the air is hot and dry, or there is a temperature inversion. DO NOT spray under these conditions. After each day of spraying, thoroughly wash the aircraft and landing gear with clean water to remove herbicide residues.

### TANK MIXTURES – COMPATIBILITY

GENFARM PANZER 450 HERBICIDE may be tank-mixed with the following. Read and follow all label directions, restraints, plant-back periods, withholding periods, regional use restriction and safety directions for the tank mix product:

**Herbicides:** Metsulfuron-Methyl, Triallate, Dicamba, Chlorsulfuron, LV Ester 680, Oxyfluorfen, Atrazine (Do not apply the tank mix for control of Barnyard grass or Liverseed grass or for non-crop situations) plus Ammonium Sulphate, Simazine (flowable or granular) plus Ammonium Sulphate, Trifluralin 480.

**Insecticides:** Dimethoate, Chlorpyrifos, Phosmet, Omethoate.

**Additives:** Ammonium Sulphate, Non Ionic Wetting Agents, Organosilicone Penetrants, and Loveland LI-700 as specified.

## **TANK MIXTURES - How to Choose**

Use the following list of suggestions to determine the appropriate tank mixtures. Adhere to manufacturers' instructions in all cases.

- To improve knockdown and give residual weed control Atrazine Hi-Load 600 can be added. Use with Ammonium Sulphate to overcome antagonism.
- DO NOT spray by air. This mixture does not control Barnyard grass.
- In fallow or in crop. Chlorsulfuron can be added.
- Prior to sowing lupins. Flowable Simazine can be added. Use with Ammonium Sulphate to overcome antagonism.
- To improve control of certain hard-to-kill weeds such as Marshmallow and Paterson's curse and accelerate knockdown symptoms on broadleaf weeds prior to planting cereal, pulse or oilseed crops. Add 25-75mL of Carfentrazone-Ethyl per hectare.
- To improve and accelerate knockdown symptoms prior to planting wheat or barley. Add 75mL of Oxyfluorfen 240 per hectare.
- To improve control of certain broadleaved weeds. Add LV Ester 680. Observe any regional restrictions on use.
- To improve control of Sorrel, Subterranean clover, Medics, and White clover. Add Dicamba. Observe any regional restrictions on use.
- To improve control of Annual ryegrass, Silver grass, and perennial grasses - Add 200mL of non-ionic surfactant per 100L of spray mix. Use only if recommended.
- To compensate for adverse growing conditions such as cool or cloudy weather. Control of annual weeds by GENFARM PANZER 450 HERBICIDE alone may possibly be improved by adding 2L of ammonium sulphate 417 per 100L of spray mix.
- To improve control on Couch. Add 500mL/100L Loveland LI-700.