

Product Name: ROUNDUP DURA HERBICIDE
APVMA Approval No: 68932/118776



Label Name:	ROUNDUP DURA HERBICIDE
Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	520 g/L GLYPHOSATE (present as the potassium salt)
Mode of Action:	GROUP M HERBICIDE
Statement of Claims:	NON-SELECTIVE HERBICIDE FOR THE CONTROL OF MANY ANNUAL AND PERENNIAL WEEDS.
Net Contents:	1000L 110L 20L
Restrains:	DO NOT disturb weeds by cultivation, sowing or grazing for six hours of daylight following treatment of annual weeds and seven days for perennial weeds to ensure herbicide absorption, unless specified otherwise in critical comments.
Directions for Use:	
Other Limitations:	
Withholding Periods:	WITHHOLDING PERIODS:

	<p>WHEAT, SORGHUM AND LEGUMES: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.</p> <p>ALL OTHER USES: NOT REQUIRED WHEN USED AS DIRECTED.</p>
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Trade Advice:	
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General Instructions:	
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Resistance Warning:	<p>RESISTANT WEEDS WARNING GROUP M HERBICIDE</p> <p>Roundup Dura® Herbicide is a member of the Glycines group of herbicides. Roundup Dura® Herbicide has the inhibition of EPSP synthase mode of action. For weed resistance management Roundup Dura® Herbicide is a Group M herbicide.</p> <p>Some naturally occurring weed biotypes resistant to Roundup Dura® Herbicide and other Group M 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 Roundup Dura® Herbicide or any other Group M herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Monsanto 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:	Not applicable
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Protections:	<p>PROTECTION OF CROP, NATIVE AND OTHER NON-TARGET PLANTS. Contact with foliage, green bark or stems, canes, laterals, suckers, fresh wounds, exposed non-woody roots, flowers or fruits of crops, desirable plants and trees since severe injury or destruction may result. DO NOT apply under weather conditions, or from spraying equipment that may cause spray to drift to nearby susceptible plants/crops, cropping lands or pastures.</p> <p>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT DO NOT contaminate dams, rivers or streams with the product or used containers. DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water. DO NOT contaminate seed, feed or foodstuffs. Keep container closed to prevent spills and contamination.</p>
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Storage and Disposal:	<p>STORAGE AND DISPOSAL</p> <p>Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in 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 packaging for appropriate disposal at 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 regulations. Empty containers and product must not be burnt.</p>
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Safety Directions:	SAFETY DIRECTIONS Will irritate the eyes. May irritate the nose and throat. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. When opening the container, preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) elbow-length PVC gloves and face shield or goggles. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.
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First Aid Instructions:	FIRST AID If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.
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First Aid Warnings:	Not applicable
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DIRECTIONS FOR USE

CONSERVATION TILLAGE

SITUATION	WEEDS CONTROLLED	BOOM RATE	CRITICAL COMMENTS
SOUTHERN AUSTRALIA Prior to sowing a crop or pasture will FULL SOIL DISTURBANCE by cultivation or sowing with a tyned instrument	Barley Grass Brome Grass Wild Oats Volunteer Cereals	360 – 690 mL/ha pre-tillering 690 – 870 mL/ha post-tillering	Rate Selection: Use higher rates for advanced weed growth or when treating under cold/overcast conditions. Cultivation or planting may proceed from 1 hour of daylight after application to seedling annual weeds if a satisfactory seedbed can be created for crop germination and seedling establishment. Silvergrass: When treating dense infestations of Silvergrass, add Wetter TX and use water volumes of 70 L/ha or more and small droplets to improve coverage. Perennial Weeds: Roundup Dura® Herbicide will provide seasonal control and reduction in plant numbers. Control of Skeleton weeds requires addition of full soil disturbance at planting. In Tasmania, for perennial weeds use 1.05 L – 2.1 L/ha.
	Annual Phalaris Annual Ryegrass Silver Grass Winter Grass	690 – 870 mL/ha pre-tillering 870 mL – 1.05 L/ha post-tillering	
	Calomba Daisy Capeweed Doublegee/Spiny Emex Fumitory Volunteer Lupins Volunteer Peas	350 mL – 690mL/ha less than 8 cm diam/height 690 mL – 1.05L/ha greater than 8 cm diam/height	
	Amsinckia Dock (seedling), Paterson's Curse Saffron Thistle Scotch Thistle Spear Thistle Variegated Thistle Wild Turnip	690 - 870mL/ha less than 12 cm diam/height 870 mL – 1.05 L/ha greater than 12 cm diam/height	
	Perennial Phalaris Skeleton Weed Sorrel Sub Clover	1.05 L/ha	

CONSERVATION TILLAGE continued

SITUATION	WEEDS CONTROLLED	BOOM RATE	CRITICAL COMMENTS
<p>SOUTHERN AUSTRALIA To commence a fallow OR Prior to planting a crop or pasture with an implement that gives MINIMAL SOIL DISTURBANCE or prior to surface seeding of pastures.</p>	<p>Barley Grass Canary Grass Wild Oats Volunteer Cereals</p>	<p>680 mL -1.05 L/ha</p>	<p>Rate Selection: Use the lower rate on young weeds; increase to the higher rate where grasses reach full tillering or where broadleaf weeds commence stem elongation or budding. Use higher rates in Spring and under cold conditions. In Tasmania use 1.03 L – 2.1 L/ha with the higher rate for control of perennial weeds.</p> <p>Pasture or Crop Establishment: Do NOT sow into excessive trash. Excessive plant residues may be removed by grazing after treatment. Planting may proceed from 1 hour of daylight after application to seedling annual weeds if a satisfactory seedbed can be created for crop germination and seedling establishment.</p> <p>Aerial (or Surface) Seeding: Delay seeding until trash is reduced to allow for satisfactory placement of broadcast seed on the soil surface.</p> <p>Bathurst Burr: For mature weeds use the higher rate. Bentgrass: Use a rate of 1.75 L/ha. Apply in late Spring following initiation of seed-head emergence. Follow up with full disturbance with a tined implement 10 - 21 days after spraying. Couch, Kikuyu, Paspalum: Use the higher rate on dense infestations. Apply sequential treatments during Summer and Autumn. Repeat applications will be required for full control. For improved control, use in conjunction with cultivation. Dock, Flatweed: Use the maximum rate for full control. Hoary Cress: Treat from late rosette to early flowering. Kikuyu, Paspalum: Use the low rate for suppression, the high rate for control. Silvergrass: When treating dense infestations of Silvergrass, add Wetter TX and use water volumes of 70 L/ha or more and FINE to MEDIUM droplets to improve coverage. Soursob: Use at a rate of 1.05 L/ha. Treat at tuber exhaustion.</p>
	<p>Annual Ryegrass Brome Grass Capeweed Paterson's Curse Saffron Thistle Scotch Thistle Silvergrass Soursob Spear Thistle Variegated Thistle Wild Mustard Wild Radish Wild Turnip Winter Grass</p>	<p>1.05 - 1.35 L/ha</p>	
	<p>Bentgrass Bathurst Burr Couch Dock Erodium Flatweed Hoary Cress Kikuyu Plantain Paspalum Perennial Phalaris Sorrel Sub. Clover Yorkshire Fog</p>	<p>1.3 – 2.1 L/ha</p>	
	<p>Poa Tussock</p>	<p>2.1 – 2.8 L/ha</p>	<p>Timing: Treat fresh regrowth (at least 14 days after heavy grazing) after Autumn break and before onset of heavy frosts. Sowing may start from 14 days after spraying.</p>
<p>Pasture Topping</p>	<p>Annual Ryegrass</p>	<p>310 – 710 mL/ha</p>	<p>Remove livestock prior to application to allow even regrowth. Use lower rate if grasses are flowering and higher rate if at the milky dough stage. Apply to Capeweed and Calomba Daisy at flowering. DO NOT add Wetter TX. Do not apply to clover or medic crops intended for seed production.</p>
	<p>Barley Grass Brome Grass Capeweed Silvergrass</p>	<p>210 – 310 mL/ha</p>	
	<p>Calomba Daisy</p>	<p>310 mL/ha</p>	
<p>Seed-head suppression</p>	<p>Bentgrass</p>	<p>250 – 440 mL/ha</p>	<p>Apply treatments late October to late November, before seed-heads have emerged. Add Wetter TX. Use the higher rate where growth is excessive. Graze hard after spraying.</p>

CONSERVATION TILLAGE continued

SITUATION	WEEDS CONTROLLED	BOOM RATE	CRITICAL COMMENTS
<p>SOUTHERN AUSTRALIA NSW, ACT, Vic and Tas only</p> <p>For control / suppression prior to establishing crops or improved pasture species</p>	Serrated Tussock	2.8 – 4.15 L/ha	<p>Apply to actively growing and stress free plants. Best results May to October.</p> <p>Application: Boom spray volume of 75 L/ha or more is recommended to improve plant coverage. Also see Aerial Equipment.</p> <p>Surfactants: Addition of 200mL of Wetter TX to 100 L of spraying solution may improve control of Serrated Tussock.</p> <p>Site Preparation: Burning of Serrated Tussock 10 - 12 months before spraying or slashing/heavy grazing (cell grazing) 2 weeks before spraying is essential for good results. (Note: Serrated Tussock is almost indigestible and prolonged exposure can lead to starvation and death in stock).</p> <p>Rates: Use lower rate on Serrated Tussock regrowth after burning (no residual dead foliage). Use higher rate on Serrated Tussock that has been slashed or grazed (may contain some residual dead foliage).</p>
For prevention of seed head emergence and seed formation	Serrated Tussock	520 – 870 mL/ha	<p>Apply to actively growing and stress free plants. Best results obtained during mid-September-mid October. Apply prior to any seed head emergence. Also see Aerial Equipment.</p> <p>Surfactants: Addition of 200 mL of Wetter TX to 100 L of spraying solution may improve results.</p> <p>Rates: The lower rates will be less damaging to desirable pasture species. If seed head emergence is imminent then higher rates will give better results.</p>

CONSERVATION TILLAGE continued

SITUATION	WEEDS CONTROLLED	BOOM RATE	CRITICAL COMMENTS
<p>NORTHERN AUSTRALIA In fallow or prior to planting a crop.</p> <p>Cotton: Shielded Sprayers</p>	<p>Paradoxa Grass Volunteer Cereals Wild Oats</p>	<p>350 – 680 mL/ha</p>	<p>Rate Selection: Use the lower rates on young weeds and increase to the higher rate where weeds are dense or well developed. Dense infestations of some weeds e.g. Barnyard Grass, Liverseed (<i>Urochloa</i>) Grass may need follow up treatments for complete control.</p> <p>Tank Mixtures: Read and follow label directions, restraints, plant back periods, withholding periods and safety directions for the tank mix products. Tank mixes with atrazine may give unacceptable knockdown control of certain weeds. Do not apply the tank mix for control of Barnyard Grass, Liverseed Grass or Milk Thistle. A crystalline 980 g/kg ammonium sulphate at 850 g/100 L may enhance knockdown weed control where tank mixtures of atrazine are used.</p> <p>Shielded Sprayers: Apply Roundup Dura® Herbicide to weeds growing between crop rows using a shielded sprayer. Do not apply in cotton less than 20 cm high. Do not allow spray or spray drift to contact any part of the cotton plant as severe injury may result.</p> <p>Pasture or crop establishment: Do not sow into excessive trash. Excessive plant residues may be removed by grazing after treatment. Cultivation or planting may proceed from 1 hour of sunlight after application to seedling annual weeds if a satisfactory seedbed can be created for crop germination and seedling establishment.</p>
	<p>African Turnip Weed Black Pigweed Boggabri Weed Caltrop (yellow vine) Deadnettle Mintweed Milk (Sow) Thistle Stinkgrass (Lovegrass) Sweet Summer Grass Variegated Thistle Volunteer Sorghum</p>	<p>520 – 680 mL/ha Up to 5 true leaves or 3 cm in dia/height</p> <p>680 mL - 1.4 L/ha Greater than true leaves or 3 cm in dia/height</p>	
	<p>Annual Ground Cherry, Barnyard Grass, Bathurst Burr, Bladder Ketmia, Button Grass, Camel (Afgan) Melon, Caustic weed, Columbus Grass, Liverseed Grass, Mexican Poppy, Native Millet, New Zealand Spinach, Noogoora Burr, Pigweed (up to 25cm diam.), Spear Thistle, Stinking Goosefoot, Thornapple (<i>Datura</i>), Turnip Weed, Wild/Prickly Lettuce, Wireweed</p>	<p>650 mL - 1.35 L/ha</p>	

CONSERVATION TILLAGE continued

SITUATION	WEEDS CONTROLLED	BOOM RATE	CRITICAL COMMENTS
NORTHERN AUSTRALIA In fallow or prior to planting a crop. Cotton: Shielded Sprayers	Prickly Paddy Melon	670 mL - 1.4 L/ha plus 80 mL Garlon* 600	DO NOT add crop oil.
	Climbing Buckwheat (less than 12 leaves), Couch, Johnson Grass	1.35 – 2.1 L/ha	Use the higher rate on plants at the flowering / seedhead stage. For Johnson Grass apply to plants with a minimum of 30 cm new growth. For long term control of Couch and Johnson Grass, repeat applications will be required.
	Nutgrass (<i>Cyperus rotundus</i>)	2.1 L/ha followed by 2.1 L/ha	Make first application to actively growing plants when the majority of plants have reached at least the 6-8 leaf stage but preferably later. Allow for maximum re-emergence before retreating.
SUGAR CANE: Inter-row Spraying	Annual and Perennial Grasses and Broadleaf weeds	1.25 – 5.2 L/ha	Apply to weeds growing between crop rows using a ground based hooded and shielded sprayer. Apply at early growth stage of crop, before formation of the cane. Apply no more than 3 applications, to a maximum of 12.5 L/ha per crop. Do not allow spray or spray drift to contact any part of the crop as severe injury may result.
SUGAR CANE Ratoon spray out Qld, NSW only	Sugar Cane ratoon regrowth	4.15 – 6.25 L/ha	Apply under good growing conditions only to actively growing ratoons 60 - 120 cm tall. Do not apply if plants are under stress from low moisture or water logging. Use the lower rate for suppression or where cultivation is to follow. Use higher rate for control.

PRE AND POST HARVEST USES

SITUATION	WEEDS CONTROLLED	BOOM RATE/HA	CRITICAL COMMENTS
Sorghum control	Grain-Sorghum (pre-harvest)	1.05 – 2.1 L/ha	DO NOT apply if crop is under stress from low moisture, frost, cold or waterlogging. Apply when grain moisture is less than 25%. Use the higher rate where the crop has produced significant number of late tillers or where following crops will be established without further treatment. DO NOT apply to crops intended for seed production. Treatment may increase potential for crop lodging. Under any set of environmental conditions, individual varieties can vary in response to preharvest treatments. In general, varieties with a more "determinant" growth habit are more susceptible than "indeterminant" varieties.
	Grain-Sorghum (post-harvest)	680 mL - 1.4 L/ha	Slashed/grazed stubble. Apply when fresh regrowth is at least 20 cm high. Use the higher rate on standing stubble or where regrowth from slashed sorghum has advanced beyond 50 cm in height.
Cotton pre-harvest	Bathurst Burr, Noogoora Burr, Winter Annual Weeds	870 mL - 1.75 L/ha	Treatments may be applied alone or in a tank mix with Dropp* or Harvade*. Apply when 60% of bolls are open. When tank mixed with conditioner/defoliant treatments, a slightly higher proportion of cotton leaf may be retained particularly where higher rates are used and conditions are unfavourable for defoliation.
<p>PRE-HARVEST APPLICATION To reduce viable seed set of weeds in: FIELD PEAS (<i>Pisum sativum</i>), FABA BEANS (<i>Victa faba</i>)</p>	Annual Ryegrass (<i>Lolium rigidum</i>)	330 – 710 mL/ha	Use lower rate if Ryegrass is flowering and higher rate if Ryegrass is at milky dough stage. Application should be made at or after crop maturity. Application before this time may significantly reduce yields (in practice losses in excess of 25% can occur). Apply when the average seed moisture content is below 30%. For Faba Beans, this is indicated by the pods going black, and for Field Peas by the pods going yellow. Do not harvest within 7 days after application. Do not use on crops intended for seed or sprouting.
<p>PRE-HARVEST APPLICATION As harvest aid and weed control: WHEAT (<i>Triticum aestivum</i>)</p>	Annual weeds	930 mL – 1.9 L/ha	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. DO NOT harvest within 7 days after application. DO NOT use on crops intended for seed or sprouting. 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.

SITUATION	WEEDS CONTROLLED	BOOM RATE/HA	CRITICAL COMMENTS
<p>PRE-HARVEST APPLICATION To desiccate a crop as a harvest aid and weed control ADZUKI BEANS CHICKPEAS COWPEA FABA BEANS FIELD PEAS LENTILS MUNGBEANS SOYBEAN</p> <p>(Application to crops intended for seed production or for sprouting may reduce germination percentage to commercially unacceptable levels).</p>	<p>Annual Weeds</p>	<p>710mL – 1.9 L/ha</p>	<p>Apply within 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: Chickpeas and Lentils - apply when physiologically mature and less than 15% green pods. Soybean - apply only after seed pods have been lost all green colour and 80-90% of leaves have dropped. Mungbeans/Adzuki and Cowpea - apply to mature crops when pods are brown/black. Field Peas - apply when seeds turn yellow and average seed moisture content is below 30%. Faba Beans - apply when pods turn black and average seed moisture content is below 30%. Do not harvest within 7 days of application. Speed of crop desiccation is dependent on crop stage, growing conditions and weather conditions during and after application.</p>

SITUATION	CRITICAL COMMENTS
	READ APPLICATION CHECKLIST BEFORE USING. See Annual, Perennial and Woody weeds sections below for most appropriate rate.
GENERAL WEED CONTROL For general weed control in domestic areas (home gardens), commercial, industrial and public service areas, agricultural buildings and other farm situations. For specific weeds refer to the appropriate weeds controlled table	For the control of many grasses and broadleaf weeds. RATE: 7 mL per litre of water Apply when weeds are actively growing. Apply to ensure complete and uniform wetting of foliage. Visible symptoms may take from 3 to 7 days to develop.
AGRICULTURAL AREAS	Roundup Dura® Herbicide may be used for control of annual, perennial and woody weeds as directed, in agricultural land prior to sowing of any edible or non-edible crop, but not prior to transplanting tomato seedlings.
DRY DRAINS AND CHANNELS ONLY	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.
FORESTS	Roundup Dura® 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. DO NOT allow wiper surface to contact any part of the tree. DO NOT allow spray or spray drift to contact foliage or green bark of desirable trees, since severe injury may result.
NON-AGRICULTURAL AREAS Around Buildings, Commercial and Industrial Areas, Domestic and Public Service Areas, Right-of-Ways.	Roundup Dura® Herbicide does not provide residual weed control. For residual control of annual weeds, Roundup Dura Herbicide may be tank mixed with certain residual herbicides. See Tank Mixtures/Compatibility.
TREE AND VINE CROPS Vineyards, Berries and other small fruits (excluding strawberry), Citrus fruits, Tropical and Sub-tropical Fruits, Pome Fruits, Stone Fruits, Tree nuts, Duboisia, Hops, Tea.	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. Citrus fruit, Nuts, Olives, Pome fruit & Vineyards: DO NOT allow spray or spray drift to contact green bark or stems, canes, laterals, suckers, fresh wounds foliage or fruit. Hops: Apply in Winter, prior to crop emerging from dormancy. Tea: Apply a maximum of 2.8 L/ha by shielded boom or directed off-centre nozzle 350 mL/100 L by directed hand-gun or knapsack to avoid application to the crop. All other crops: 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.

WEEDS CONTROLLED	RATE	CRITICAL COMMENTS
<p>ANNUAL WEEDS Amaranth, Bathurst Burr, Barley Grass, Brome Grass, Barnyard Grass, Caltrop, Canary Grass, Capeweed, Chickweed, Cobblers Peg, Deadnettle, Double Gee, Fumitory, Ground Cherry, Hedge Mustard, Lesser Swinecress, Liverseed Grass, Mintweed, Noogoora Burr, Paradoxa Grass, Paterson's Curse, Pigweed, Potato Weed, Ryegrass, Saffron Thistle, Silvergrass, Sow Thistle, Spear Thistle, Spiny Burrgrass, Spurge, Sub Clover, Thornapple, Wild Mustard, Wild Oats, Wild Turnip, Winter Grass, Variegated Thistle, Volunteer Cereals</p>	<p>Boom: 1.4 – 2.1 L/ha</p> <p>Handgun: 340 mL – 500 mL per 100 L</p> <p>Knapsack: 50 – 75 mL per 15 L</p>	<p>Apply to weeds whenever they are not subject to stress due to drought or frost. Use higher rate on weeds over 15 cm in height or diameter or where dense weed cover limits spray coverage. Use higher spot spraying rate when applying less than 5 L spray per 100 sqm. Roundup Dura Herbicide does not provide residual weed control. Repeat treatments may be necessary to control later germinating weeds.</p> <p>For residual control of annual weeds Roundup Dura Herbicide may be tank mixed with certain residual herbicides. See Tank Mixtures in the General Instructions for directions. Do not use an atrazine tank mix for control of Barnyard Grass or Liverseed Grass.</p>
<p>PERENNIAL WEEDS Artichoke Thistle, African Lovegrass, Bent Grass, Carpet Grass, Cocksfoot, Flatweed, Johnson Grass, Kangaroo Grass, Kikuyu, Nutgrass (<i>Cyperus rotundus</i>), Paspalum, Phalaris, Plantains, Poa Tussock, Prairie Grass, Qld Blue Grass, Red-Leg Grass, Rhodes Grass, Rope Twitch, Sorrel, Soursob, Yorkshire Fog</p>	<p>Boom: 2.1 - 4.15 L/ha</p> <p>Handgun: 490 – 680 mL per 100 L</p> <p>Knapsack: 70 – 105 mL per 15 L</p>	<p>Control of established perennials is best obtained when plants are at the seed head stage. In general best control of Winter growing perennials is obtained with application during Winter-Spring. Best control of Summer growing perennials is obtained with application late Summer and Autumn. For Nutgrass in cultivated situations apply sequential low rate treatments when Nutgrass has a minimum of 6 - 8 leaves. Use the higher rate in uncultivated situations. For Rhodes grass, Rope Twitch, Prairie Grass, Qld Blue Grass, Johnson Grass, Kangaroo Grass, Kikuyu, Red-Leg Grass, Paspalum and Sorrel, use the higher rates only.</p>
<p>Blady Grass, Bracken, Couch, Guinea Grass, #Para grass, Silver leaf Nightshade, #Water Couch</p> <p># Use on Dry Drains and Channels ONLY (see Use Situations, Critical Comments Above)</p>	<p>Boom: 6.25 L/ha</p> <p>Handgun: 9000 mL or 1.4 L per 100 L</p> <p>Knapsack: 135 mL or 210 mL per 15 L</p>	<p>For Bracken add Pulse® at 200 mL/100 L spray mix. Best control of Couch in WA and SA is obtained with Spring treatment. Most effective control of couch in eastern states is obtained with Summer and Autumn treatments. In cultivated situations use sequential treatments of 2 L - 4.5 L/ha for control. Only use higher rate for handgun and knapsack for Silver leaf Nightshade.</p>

WEEDS CONTROLLED	RATE	CRITICAL COMMENTS
<p>WOODY WEEDS Bamboo, Bitou Bush, Boneseed, Boxthorn, Crofton Weed, Gorse, Groundsel Bush, Lantana, Mistflower</p>	<p>Handgun: 340 – 710mL per 100 L Knapsack: 50 mL – 105 mL per 15 L</p>	<p>Apply to actively growing plants. Do not apply to drought stressed plants. Further treatment may be necessary to restrict seedling re-establishment. Bamboo - apply when foliage/regrowth is 1-2 m tall, use higher rate only. Bitou Bush/Boneseed - apply higher rate on bushes greater than 1.5m. Best results are achieved when treated at peak flower during Winter. Boxthorn - minimum rate is 490 mL for handgun and 75 mL for knapsack. Groundsel Bush - apply higher rate on bushes greater than 2 m. DO NOT apply in Winter. Minimum rate is 490 mL for handgun and 75 mL for knapsack. Gorse - always add Pulse® at 200 mL/100 L of spray mix, use higher rate only. Lantana - use higher rate only. Addition of Pulse® (200 mL/100 L) may improve control. Boxthorn, Gorse, Lantana - removal of bushes (after complete brownout), pasture improvement or further treatment are recommended to control seedlings and/or regrowth.</p>
<p>Blackberry, Chinese Scrub, Eucalyptus spp. (seedlings less than 2 m), Hawthorn, Pampas Grass, Sifton Bush, Willow (less than 2 m)</p>	<p>Handgun: 680 – 900 mL per 100L Knapsack: 105 – 145 mL per 15 L</p>	<p>Apply to actively growing plants. Removal of bushes (after complete brownout), pasture improvement or further treatments are recommended to control seedlings and/or regrowth. Blackberry - apply from flowering to leaf fall, use higher rate on old dense infestations greater than 2 m high. In Tasmania, do not treat bushes bearing mature fruit. Chinese Scrub - use higher rates on bushes greater than 1m. Eucalyptus spp. - add Pulse® at 200 mL/100 L of spray mix. Hawthorn - apply from flowering to leaf fall, use higher rates on bushes greater than 2 m. Pampas Grass - allow regrowth to reach 1 m, best results-apply after flowering. Sifton Bush - use higher rates on bushes greater than 1 m.</p>
<p>Sweet Briar</p>	<p>Handgun: 1.05 – 1.4 L per 100 L Knapsack: 155 – 210 mL per 15 L</p>	<p>Apply from late flowering to leaf fall. Use higher rates on bushes greater than 1.5 m.</p>

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

GENERAL INSTRUCTIONS

PRODUCT INFORMATION

Roundup Dura® Herbicide is a non-volatile, non-selective, water soluble liquid herbicide for the control of annual and perennial grasses and broadleaf weeds in a wide range of agricultural and non-agricultural use situations. Roundup Dura® Herbicide may be used for weed control on agricultural land prior to planting any edible or non-edible crop but not prior to transplanting tomatoes. When applying this product prior to transplanting crop into plastic mulch, care must be taken to remove residues of this product from the plastic prior to transplanting. Residues can be removed by 2 cm of natural rainfall or by applying water via a sprinkler irrigation system.

Roundup Dura® Herbicide is absorbed by plant foliage and green stems. It is inactivated on clay and organic matter in soil and does not provide residual weed control. Roundup Dura® Herbicide moves throughout the plant from the point of contact to and into the root system. Initial visible effects on annual weeds take 3-7 days but may not be noticeable for 2 to 3 weeks under cool cloudy conditions or on some perennial weeds.

CROP ESTABLISHMENT

Roundup Dura® Herbicide is recommended for the control of emerged weeds prior to crop establishment. Cultivation and/or planting operations which will provide conditions suitable for crop emergence and establishment are required following herbicide application. Where heavy weed growth is present or soil conditions are unsuitable, planting should be delayed to allow for decay of weeds and/or development of more favourable soil conditions for the formation of a suitable seedbed. Incorporate of green or decaying vegetation may retard crop emergence under cold, wet conditions. Vegetation may be reduced by grazing and weed decay may be assisted by cultivation to leave trash on the surface.

MIXING

Roundup Dura® Herbicide mixes readily with water. Reduced results may occur if water is used containing; suspended clay or organic matter e.g. from dams, streams and irrigation channels, or high levels of calcium, magnesium or bicarbonate ions. Do not mix, store or apply this product in galvanised steel or unlined steel containers or spray tanks, since highly flammable gas mixture may be formed. Use stainless steel, aluminium, brass, copper, fibreglass, plastic or plastic lined containers or spray tanks. Spray tanks, pumps, lines and nozzles should be thoroughly cleaned with clean water following application. Ensure that the spray tank is free of any residue of other spray solutions prior to mixing. Use spray solutions promptly as a gradual loss of activity may occur over a period of days following spray preparation.

Mixing Instructions:

1. Add water to the spray tank to approximately 50% full. Commence agitation and continue throughout the mixing process.
2. Add any water conditioners (avoid dirty water). For hard water add crystalline ammonium sulphate (980 g/kg) at 850 g/100 L spray solution into the tank. Continue agitation.
3. Add tank mix partners. Make sure each product is completely dispersed before adding the next product. For further details refer to the Sinochem Tank Mixing Guide (www.sinochem.com.au).
4. Top up tank with more water to about 75% full, while continuing agitation.
5. Add Roundup DURA® Herbicide and the remaining water. Mix thoroughly.
6. Add surfactant, if required, near the end of the filling process to minimise foaming.

Always maintain adequate agitation during application and use the tank mix promptly.

Clean all equipment after use by washing thoroughly with water or with a high quality tank and boom cleaner such as ALL CLEAR® DS.

APPLICATION

Boom Equipment (Broadacre)

For boom application, a spray volume of 80 L/ha or less is recommended for broadacre uses and 200 L/ha or less for tree line and veline spraying in orchards and vineyards. Glyphosate works better when it is present at a higher concentration in the spray solution provided sufficient coverage of the target is achieved.

Unless specifically directed in the DIRECTIONS FOR USE table, nozzles and pressure setting should be selected to deliver a COARSE or VERY COARSE spray quality (as defined by ASAE S572) at the target. The use of nozzles and/or pressure settings that produce VERY FINE or FINE droplets should be avoided as these are prone to loss or drift. In multiple product tank mixes a minimum water volume of 50 L/ha is recommended and local advice should be sought. Correct mixing order is important as is good in-tank agitation when mixing and applying.

For shielded applications a spray volume of 80 L/sprayed ha is recommended using nozzle types and pressure settings to deliver a COARSE ASAE S572 spray quality at the target. Crop damage may result if spray drift occurs through incorrect nozzle and/or pressure selection, inadequate shielding and/or wind strength, high evaporation rates or excessive ground speed.

High Volume Application (eg. Knapsack, Handgun equipment)

The dilution rate varies depending on the use situation and weeds controlled – see Weeds Controlled tables for specific rates and use recommendations. Adjust equipment to achieve an even pattern with a COARSE spray quality at the target. Apply to ensure complete and uniform wetting of all foliage.

Wiper Equipment

Wiper equipment (e.g. ropewick, canvas, felt or carpet applicators) may be used to apply Roundup Dura Herbicide. Avoid contact with desirable vegetation. Operate wiper equipment a minimum of 10 cm above the crop or pasture. Weeds should be at least 15 cm above the crop or pasture at time of application. Speed of travel should be no greater than 8 km/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.

RATE: Mix 700 mL Roundup Dura Herbicide with 2.3 litres of clean water. Adjust flow rate to suit equipment.

Controlled Droplet Application Equipment (CDA)

Roundup Dura Herbicide can be applied through hand held and machine mounted CDA sprayers. See Weeds Controlled tables for specific rates and use recommendations. Due to the range of CDA equipment available, dilution rates, flow rates and travel speeds will need to be determined for individual sprayers to ensure label rates are applied. Use of Roundup Dura Herbicide at concentrations recommended for Roundup can result in uneven droplet distribution. Spray units need to be cleaned thoroughly preferably after each application to ensure optimum performance. DO NOT add oils to Roundup Dura/water mixture, otherwise difficulty in application and reduced weed control may occur.

Because CDA units may deliver relatively low spray volumes per hectare, use on large weeds may result in insufficient coverage resulting in inadequate control.

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 injury or destruction may result.

Aerial Equipment

Roundup Dura[®] Herbicide may be applied by aircraft for control of weeds in forests, cropland, or pasture prior to establishment of crops, new pastures or new forest plantings and for pre-harvest application, up to a maximum rate of 2.7 L/ha where specified by this label. DO NOT apply treatments by aircraft in situations where drift onto sensitive crops and pasture is likely to occur. Apply treatments using boom or Micronair equipment using a spray volume not less than 20 L/ha and using settings to produce a COARSE to VERY COARSE spray quality (as defined by ASAE S572). In multiple tank mixes a minimum water volume of 50 L/ha is recommended and local advice should be sought. Correct mixing order is important. Swath width should be set to take into account aircraft type, wind conditions and target height. Swath width will need to be reduced to avoid striping under light wind conditions and/or application to tall, dense targets eg. Preharvest application, treatments in heavy crop stubble. Thoroughly wash aircraft after each day of spraying to remove herbicide residues.

Application on Hilly Terrain

Increase water volume to 30-80 L/ha and use a COARSE spray quality to optimise spray coverage.

Air Temperature and Relative Humidity

DO NOT apply Roundup Dura® Herbicide by aircraft at temperatures above 30°C. Increase spray output to at least 30 L/ha when temperatures rise above 25°C. Avoid application when relative humidity falls below 35%.

AVOID DRIFT

DO NOT apply treatments with spraying equipment or under weather conditions which are likely to cause spray drift onto nearby susceptible crops, pastures or other sensitive plants. Spray drift is at its lowest between wind speeds of 3 to 15 km per hour. However many factors including droplet size and equipment type determine drift potential at any given speed. Application should be avoided in wind speeds below 3 km per hour (1.5 knots) due to variable wind direction and high inversion potential. DO NOT apply if wind is blowing towards a sensitive crop or situation and off-target damage cannot be avoided.

APPLICATION CHECK LIST

- Do not treat weeds under poor growing conditions due to moisture, stress, waterlogging, severe frosting, insect damage etc. Reduced performance may also occur where weeds are covered with dust or silt.
- Do not add surfactants, adjuvants or other pesticides except as specifically directed on this label.
- Rain within 1 hour of application which causes runoff may require re-treatment. Rainfastness is reduced if weeds are not actively growing, under stress or conditions of low light intensity/darkness. The additions of Wetter TX may improve rainfastness on Winter annual weeds.
- A withholding period for grazing is not required. However, it is recommended that grazing of treated plants be delayed to ensure herbicide uptake. Certain plants such as Soursob, Variegated Thistle, Sorghum and Johnson Grass may be naturally toxic to stock when eaten in large quantities under certain conditions. Where plants are known to be toxic, grazing should be delayed until complete desiccation of treated plants has occurred.
- Apply treatments to weeds which have at least one true leaf (broadleaf weeds) or two leaves (grasses) to provide an adequate surface area for herbicide uptake.
- If heavy grazing has occurred, allow regrowth to 6-8 cm before spraying and use higher rates recommended.