

# POISON

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

# ROOTOUT<sup>®</sup> 212

## HERBICIDE

ACTIVE CONSTITUENT: 212g/L FLUAZIFOP-P  
present as the butyl ester  
SOLVENT: 636g/L HYDROCARBON SOLVENT

**GROUP A HERBICIDE**

For the control of certain grasses in crops  
as per Directions for Use table.

**IMPORTANT:  
READ THIS BOOKLET BEFORE  
USING THIS PRODUCT**

APVMA APPROVAL  
NO: 64609/48764



**sinon<sup>®</sup>**

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## DIRECTIONS FOR USE

### Restraints:

DO NOT treat weeds that are not actively growing or are growing under stress. Under such conditions the biological processes of the weeds slow down and Rootout® 212 Herbicide transport in the weed can be drastically reduced, resulting in an incomplete kill or suppression only of the weeds.

DO NOT allow annual grass weeds to reach the late tillering stage before application.

DO NOT apply at flowering stage of weeds.

CROP / SITUATION	WEEDS CONTROLLED	WEED STAGE	RATE / HA
Lupins	Annual Ryegrass, Wild Oats, Barley Grass, Brome Grasses, Annual Phalaris and Volunteer Cereals	Growing actively at 2 to 5 leaf stage before tillering commences	250mL#
	As above	Growing actively at 5 leaf to early tillering	500mL#
Canola, Linseed	Annual Ryegrass, Wild Oats, Barley Grass, Annual Phalaris and Volunteer Cereals	Growing actively at 2 to 5 leaf stage before tillering commences	250mL#
Faba Beans			300mL#
Field Peas Chickpeas	Brome Grasses		
White and Subterranean Clover, Snail and Barrel Medic, Pastures and Vetches ( <i>Vicia</i> spp)	Annual Ryegrass, Wild Oats, Barley Grass, Brome Grasses, Annual Phalaris and Volunteer Cereals	Growing actively at 5 leaf to early tillering	500mL#
Pigeon Peas	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Summer Grass (Crabgrass), Stinkgrass, <i>Panicum</i> sp., Rhodes Grass, Wild Oats and Johnson Grass (seedling)	Growing actively at the 3 to 5 leaf stage before tillering commences	500mL*

STATE(S)	WITHHOLDING PERIOD		CRITICAL COMMENTS
	HARVEST	GRAZING	
All States	17 weeks	21 days	Apply in not less than 50L/ha.  Use the higher rate in dense weed populations or under less than ideal weather conditions.
	5 weeks	5 weeks	Apply in not less than 50L/ha. Use the 500mL rate in dense weed populations or under less than ideal weather conditions.
	7 weeks	7 weeks	<b>Canola</b> – DO NOT apply to crop beyond the 6 leaf stage.
	-	21 days	<b>Volunteer Cereals</b> – DO NOT apply once weed has reached the jointing stage.
NT, Qld only	17 weeks	17 weeks	Follow-up spraying will be necessary if new germinations occur.

<b>CROP / SITUATION</b>	<b>WEEDS CONTROLLED</b>	<b>WEED STAGE</b>	<b>RATE / HA</b>
Pigeon Peas ( <i>continued</i> )	As above plus Innocent Weed	Growing actively at 5 leaf to early tillering	750mL*
	Plants of Carpet Grass, Couch Grass, Water Couch, Paspalum and Kikuyu Grass, re-established from seed or fragmented stems	Growing actively with 3 to 6 leaves per shoot, less than 2 months old and establishing from seed or fragmented stems	
		Beyond the 6 leaf stage	1L*
	Pigeon Grass and Foxtail seedlings ( <i>Setaria</i> spp.)	Growing actively at the 3 to 5 leaf stage before tillering commences	
Lucerne (Seedling and Established)	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Summer Grass (Crabgrass), Stinkgrass, Rhodes grass, Annual (Wimmera) Ryegrass Wild Oats, Barley Grass, Brome Grasses and Johnson Grass (seedling)	Growing actively at the 3 to 5 leaf stage before tillering commences	500mL*
		Growing actively at 5 leaf to early tillering	1L
	Innocent Weed, and seedlings, of Couch grass, English Couch (rope twitch) and Water Couch	Growing actively at the 3 to 5 leaf stage before tillering commences	750mL*
	Established plants of Couch Grass, English Couch (rope twitch), Water Couch, Johnson Grass, Paspalum, Bent Grass and Kikuyu Grass	Young growth (3 to 6 leaves per shoot) after a cut, when weeds are exposed and are growing actively.	2 or 4L*

STATE(S)	WITHHOLDING PERIOD		CRITICAL COMMENTS
	HARVEST	GRAZING	
			<p>As above. Apply in not less than 100L/ha. Use higher water volumes if weeds are dense.</p> <p>Apply in not less than 100L/ha. Use higher water volumes if weeds are dense.</p> <p>Suppression only beyond the 5 leaf stage.</p>
All States	-	21 days	<p>Apply in not less than 100L/ha. Apply when lucerne is past the 2 to 3 trifoliate leaf stage.</p> <p>These rates will only control Couch Grass seedlings and Johnson Grass seedlings which are less than 2 months old and established from seed.</p> <p>Apply in not less than 200L/ha. Use the higher rate for well-established weed infestations or when greater control is required in the one season.</p> <p><b>Tasmania</b> – only partial control can be expected.</p>

<b>CROP / SITUATION</b>	<b>WEEDS CONTROLLED</b>	<b>WEED STAGE</b>	<b>RATE / HA</b>
<b>Forage Crops and Seed Crops</b> Axillaris, Wynn Cassia, Kenya, White Clover, Greenleaf Desmodium, Silverleaf Desmodium, Bargoo	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Summer Grass (Crabgrass), Stinkgrass and Rhodes Grass	Growing actively at the 3 to 5 leaf stage before tillering commences	500mL*
	As above plus Giant Paspalum (seedling) and Green Panic (seedling)	Growing actively at 5 leaf to early tillering	1L*
Jointvetch, Glenn Jointvetch, Lotononis, Lotus, Pintos Peanut, Shrubby Stylo, Creeping Vigna	Plants of Carpet Grass, Couch Grass, Water Couch, Johnson Grass, Paspalum, Giant Paspalum, and Kikuyu Grass, re-established from seed or fragmented stems	Young vegetative growth with 3 to 6 leaves per shoot	2L*
Soybeans	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Summer Grass (Crabgrass), Stinkgrass, <i>Panicum</i> sp., Rhodes grass, Wild Oats and Johnson Grass (seedling)	Growing actively at the 3 to 5 leaf stage before tillering commences	500mL*
	As above plus Innocent Weed	Growing actively at 5 leaf to early tillering	750mL*

STATE(S)	WITHHOLDING PERIOD		CRITICAL COMMENTS
	HARVEST	GRAZING	
Qld only	-	26 weeks	Apply as a post-emergent application at least 3 weeks after sowing (crop seedlings with a minimum of 2 to 6 true leaves). Some initial chlorotic mottling of leaves may occur at high application rates in some crops.
Qld, NSW Vic and NT only	17 weeks	17 weeks	<p>Follow-up spraying will be necessary if new germinations occur.</p> <p>As above. Apply in not less than 100L/ha. Use higher water volumes if weeds are dense.</p>

<b>CROP / SITUATION</b>	<b>WEEDS CONTROLLED</b>	<b>WEED STAGE</b>	<b>RATE / HA</b>
Soybeans (continued)	Plants of Carpet Grass, Couch Grass, Water Couch, Paspalum and Kikuyu Grass, re-established from seed or fragmented stems	Growing actively with 3 to 6 leaves per shoot, less than 2 months old and establishing from seed or fragmented stems	750mL*
		Beyond the 6 leaf stage	1L*
	Pigeon Grass seedlings ( <i>Setaria</i> spp.)	Growing actively at the 3 to 5 leaf stage before tillering commences	
Blueberries	Barnyard Grass, Crowsfoot Grass, Stinkgrass, Urochloa Grass	Growing actively at the 3 to 5 leaf stage before tillering commences	750mL
	Plants of Carpet Grass, Couch Grass, Johnson Grass, Kikuyu and Paspalum re-established from seeds or fragments rhizomes	Growing actively at 5 leaf to early tillering	1L*
	Established plants of Carpet Grass, Couch Grass, Johnson Grass, Kikuyu and Paspalum	Growing actively and have 3 to 6 leaves per shoot	2 or 4L
Blackcurrants	Barnyard Grass, Crowsfoot Grass, Summer Grass (Crabgrass), Annual (Wimmera) Ryegrass, Wild Oats, Barley Grass and Brome Grasses	Growing actively at the 3 to 5 leaf stage before tillering commences	500mL*
Hops		Growing actively at 5 leaf to early tillering	1L*



STATE(S)	WITHHOLDING PERIOD		CRITICAL COMMENTS
	HARVEST	GRAZING	
Qld, NSW, Vic, NT only	17 weeks	17 weeks	Apply in not less than 100L/ha. Use higher water volumes if weeds are dense.
			Suppression only beyond the 5 leaf stage.
Qld only	4 weeks	-	Apply in not less than 100L/ha. Use higher water volumes if weeds are dense.
			Apply in not less than 100L/ha. Use higher water volumes if weeds are dense. Use higher rate for well established infestations where greater control is required in one season.
Vic and Tas only	4 weeks	-	For blackcurrants apply in not less than 100L/ha.
	10 weeks	-	

<b>CROP / SITUATION</b>	<b>WEEDS CONTROLLED</b>	<b>WEED STAGE</b>	<b>RATE / HA</b>
Hops (Continued)	Pigeon Grass and Foxtail (Tas) seedlings ( <i>Setaria</i> spp.)	Growing actively at the 3 to 5 leaf stage before tillering commences	
	Established plants of Couch Grass, English Couch (rope twitch), Water Couch, Paspalum, Bent Grass and Kikuyu Grass	Young growth (3 to 6 leaves per shoot) when growing actively	2 or 4L*
Broad Beans, Green Beans, Broccoli, Brussel Sprouts, Cabbage, Cauliflower, Capsicums, Tomatoes, Lettuce, Celery, Carrots	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Stinkgrass	Growing actively at the 3 to 5 leaf stage before tillering commences	500mL
	<i>Panicum</i> sp., Annual (Wimmera) Ryegrass, Wild Oats, Barley Grass, Brome Grasses, Annual Phalaris, Volunteer Cereals, Paspalum and Johnson Grass (seedling) Green Summer Grass	Growing actively at 5 leaf to early tillering	1L
Peas (including freezer peas)	Seedlings of Couch Grass, English Couch (rope twitch), Water Couch, Summer Grass (Crabgrass) and Innocent Weed	Growing actively at the 3 to 5 leaf stage before tillering commences	750mL
Peanuts	Volunteer Cereals	Growing actively at the 3 to 5 leaf stage before tillering commences	750mL*
		Growing actively at 5 leaf to early tillering	1L*

STATE(S)	WITHHOLDING PERIOD		CRITICAL COMMENTS
	HARVEST	GRAZING	
			Suppression only beyond the 5 leaf stage.
			Apply in not less than 200L/ha. Use the higher rate for well established weed infestations or when greater control is required in the one season.
All States	5	5	Use only 200mL Agral or 120mL BS1000 per 100L spray solution. Apply in not less than 100L/ha.
	5	5	
	6	-	
	6	-	
	6	-	
	6	-	
	11	-	
	4	-	
	4	-	
	8	-	
Qld, NSW, Tas and WA only	7 weeks	7 weeks	Apply in not less than 200L/ha.
NSW, Vic, Tas, SA and WA only	7 weeks	7 weeks	These rates will only control perennial grass weed seedlings which are less than 2 months old and are establishing from seed.
Qld and NT only	6 weeks	6 weeks	Follow-up spraying may be necessary if new germinations occur.
			Apply in not less than 100L/ha. Use higher water volumes if weeds are dense. Follow up spraying may be necessary if new germinations occur.

<b>CROP / SITUATION</b>	<b>WEEDS CONTROLLED</b>	<b>WEED STAGE</b>	<b>RATE / HA</b>
Peanuts, Navy Beans, Cotton	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Summer Grass(Crabgrass), Stinkgrass, Innocent Weed,	Growing actively at the 3 to 5 leaf stage before tillering commences	750mL*
Sunflowers	<i>Panicum</i> sp., Rhodes Grass, Wild Oats and Johnson Grass (seedling)	Growing actively at 5 leaf to early tillering	1L*
	Plants of Carpet Grass, Couch Grass, Water Couch, Paspalum and Kikuyu Grass, re-established from seed or fragmented stems	Growing actively with 3 to 6 leaves per shoot, less than 2 months old and establishing from seed or fragmented stems	750mL*
	Pigeon Grass and Foxtail (Tas) seedlings ( <i>Setaria</i> spp.)	Growing actively at the 3 to 5 leaf stage	1L*
Leucaena	Seedlings of perennial grasses only	-	1L*
	or pasture grasses regrowing from seed or fragmented stems		2L*
Apples, Pears	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Summer Grass (Crabgrass), Annual (Wimmera) Ryegrass, Wild Oats, Barley Grass, Brome Grasses, Johnson Grass and Prairie Grass	Growing actively at 5 leaf to early tillering	1L*
Grapes			
Stonefruit			
Citrus			
	Innocent Weed and Stinkgrass	Growing actively at 5 leaf to early tillering	1.5L*
	Pigeon Grass and Foxtail (Tas) seedlings ( <i>Setaria</i> spp.)	Growing actively at the 3 to 5 leaf stage only.	

STATE(S)	WITHHOLDING PERIOD		CRITICAL COMMENTS
	HARVEST	GRAZING	
Qld, NSW and NT only	6 5 14 weeks	6 5 - weeks	Follow-up spraying may be necessary if new germinations occur.
All States	14 weeks	14 weeks	As above. Apply in not less than 100L/ha. Use higher water volumes if weeds are dense.
			Apply in not less than 100L/ha. Use higher water volumes if weeds are dense.
			Suppression only beyond the 5 leaf stage.
Qld only	17 Weeks	26 Weeks	Does not control Blady Grass ( <i>Imperata cylindrica</i> ). Repeat spray may be necessary if grasses are more advanced.
All States	-	-	Apply in not less than 200L/ha. Direct the spray to the base of the tree / vine.  <b>Crop Safety</b> Stonefruit, especially peaches and nectarines: Apply as a directed spray avoiding contact of spray with foliage of trees. DO NOT spray over-the-top of young trees. Suppression only at the 5 leaf stage.
	4 Weeks		
	-	-	
	-	-	

<b>CROP / SITUATION</b>	<b>WEEDS CONTROLLED</b>	<b>WEED STAGE</b>	<b>RATE / HA</b>
Citrus (cont'd)	Established plants of Couch Grass, English Couch (rope twitch) Water Couch, Johnson Grass, Paspalum, Bent Grass and Kikuyu Grass	Young vegetative growth with 3 to 6 leaves per shoot when growing actively	2 or 4L*
Avocados, Bananas, Custard Apples, Kiwifruit, Lychee, Mangoes, Passionfruit, Pawpaw, Persimmons	Barnyard Grass, Crowsfoot Grass, Summer Grass, Stinkgrass, Giant Paspalum (seedling), Green Panic (seedling), Rhodes Grass, Johnson Grass, Prairie Grass and Para Grass	Growing actively seedlings at 5 leaf to early tillering	1L*
Akee, Black Sapote, Breadfruit-Caimito (Star Apple), Canistel, Casimoroa (White Sapote), Cherimoya, Durian, Feijoa, Granadilla, Guava, Jackfruit, Longan, Mammee Apple, Mamey, Sapote, Mangostein, Plantain, Pomegranate, Prickly Pear (Cactus Fruit), Rambutan, Santol, Sapodilla, Soursop, Sweetsop, Yellow Mombin	Established plants of Couch Grass, Paspalum, Giant Paspalum, Johnson Grass, Kikuyu Grass, Guinea Grass, Carpet Grass and Para Grass	Young vegetative growth with 3 to 6 leaves per shoot when growing actively	2 or 4L*

STATE(S)	WITHHOLDING PERIOD		CRITICAL COMMENTS
	HARVEST	GRAZING	
All States	-	-	As above. Use the higher rate for well-established infestations or where greater control is required in one season.
Qld, NSW, WA and NT only	14 days	-	Apply in not less than 200L/ha. Direct the spray to the base of the tree / vine. Repeat spray may be necessary if grasses are more advanced.
Qld, NT and WA only	14 days	-	As above. Use the higher rate for well-established infestations or where greater control is required in one season.

CROP / SITUATION	WEEDS CONTROLLED	WEED STAGE	RATE / HA
Onions	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Annual (Wimmera) Ryegrass, Wild Oats, Barley Grass, Brome Grasses, Volunteer Cereals and Johnson Grass (seedling)	Growing actively at the 3 to 5 leaf stage before tillering commences	500mL*
	Summer Grass (Crabgrass), Innocent Weed, Stinkgrass and seedlings of Couch Grass, English Couch (rope twitch) and Water Couch		750mL*
	Pigeon Grass and Foxtail (Tas) seedlings ( <i>Setaria</i> spp.)		1.5L*
	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Summer Grass (Crabgrass), Innocent Weed, Stinkgrass, Annual (Wimmera) Ryegrass, Wild Oats, Barley Grass, Brome Grasses, Johnson Grass (seedling) and seedlings of Couch Grass, English Couch (rope twitch) and Water Couch		1.5L*



STATE(S)	WITHHOLDING PERIOD		CRITICAL COMMENTS	
	HARVEST	GRAZING		
All States	5 weeks	-	Apply in not less than 100L/ha	<p>These rates will only control Couch and Johnson Grass seedlings which are less than 2 months old and are Establishing from seed.</p> <p>Suppression only for Pigeon Grass and Foxtail (Tas) seedlings beyond the 5 leaf stage.</p>
			Apply in not less than 200L/ha	

<b>CROP / SITUATION</b>	<b>WEEDS CONTROLLED</b>	<b>WEED STAGE</b>	<b>RATE / HA</b>
Potatoes (15cm or less in height)	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Summer Grass	Growing actively at the 3 to 5 leaf stage before tillering commences	500mL*
	(Crabgrass), Stinkgrass, Annual (Wimmera) Ryegrass, Wild Oats, Barley Grass, Brome Grasses, Annual Phalaris, Volunteer Cereals, Johnson Grass (seedling), and seedlings of Couch Grass, English Couch (rope twitch) and Water Couch	Growing actively at 5 leaf to early tillering	1L*
	Plants of Couch Grass, English Couch (rope twitch), Water Couch, Johnson Grass, Paspalum, Bent Grass and Kikuyu Grass, re-established from seed or fragmented stems	Growing actively and have 3 to 6 leaves per shoot	2L*

STATE(S)	WITHHOLDING PERIOD		CRITICAL COMMENTS	
	HARVEST	GRAZING		
All States	10 weeks	-	Apply in not less than 100L/ha	These rates will only control perennial grass seedlings which are less than 2 months old and are establishing from seed or fragmented stems.
			Apply in not less than 200L/ha. Use higher water volumes if weed growth is dense or where crop is shielding weeds	

<b>CROP / SITUATION</b>	<b>WEEDS CONTROLLED</b>	<b>WEED STAGE</b>	<b>RATE / HA</b>
Cucurbits Rockmelon, Pumpkin, Honeydew Melon, Watermelon, Zucchini, Squash, Cucumber, Gherkin	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Summer Grass (Crabgrass), Stinkgrass, Guinea Grass, Annual (Wimmera) Ryegrass, Wild Oats, Barley Grass, Brome Grasses, Volunteer Cereals, seedlings of Couch Grass and Water Couch, Johnson Grass (seedling) and Paspalum (seedling)	Growing actively at the 3 to 5 leaf stage before tillering commences	500mL
		Growing actively at 5 leaf to early tillering	1L
Strawberries	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Summer Grass (Crabgrass), Innocent Weed, Stinkgrass, Guinea Grass, Annual (Wimmera) Ryegrass, Wild Oats, Brome Grasses, Annual Phalaris, Volunteer Cereals, seedlings of Couch Grass, English Couch (rope twitch), and Water Couch, Johnson Grass (seedling) and Paspalum (seedling)	Growing actively at the 3 to 5 leaf stage before tillering commences	500mL*
		Growing actively at 5 leaf to early tillering	1L*

STATE(S)	WITHHOLDING PERIOD		CRITICAL COMMENTS	
	HARVEST	GRAZING		
All States	5 Weeks	-	DO NOT apply before the 5 true leaf stage of the crop. <b>NOTE:</b> Use only 200mL Agral or 120mL BS1000 per 100L spray solution. DO NOT apply in water volumes higher than 200L/ha. This rate will only control Couch, Johnson Grass and Paspalum seedlings that are less than 2 months old and are establishing from seed.	
	21 Days	-		
	4 Weeks	-	Apply in not less than 100L/ha	These rates will only control Couch, Johnson Grass and Paspalum Seedlings which are less than 2 months old and are establishing from seed.
		Apply in not less than 200L/ha		

CROP / SITUATION	WEEDS CONTROLLED	WEED STAGE	RATE / HA
Pineapples	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Summer Grass (Crabgrass), Stinkgrass and Rhodes Grass	Growing actively at the 3 to 5 leaf stage before tillering commences	500mL*
	As above plus Giant Paspalum (seedling) and Green Panic (seedling)	Growing actively at 5 leaf to early tillering	1L*
	Plants of Carpet Grass, Couch Grass, Water Couch, Johnson Grass, Paspalum, Giant Paspalum and Kikuyu Grass, re-established from seed or fragmented stems	Young vegetative growth with 3 to 6 leaves per shoot	2L*
Potted and open grown ornamental shrubs and trees in:  roadside, farm and fenceline plantings,  nurseries, parks and gardens.	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Summer Grass (Crabgrass), Stinkgrass, Guinea Grass, Annual (Wimmera) Ryegrass, Wild Oats, Barley Grass, Brome Grasses, Annual Phalaris, Volunteer Cereals, seedlings of Couch Grass, English Couch (rope twitch), and Water Couch, Johnson Grass (seedling) and Paspalum (seedling)	Growing actively at 5 leaf to early tillering	750mL or 1L

STATE(S)	WITHHOLDING PERIOD		CRITICAL COMMENTS
	HARVEST	GRAZING	
Qld and NT only	14 days	-	
			Repeat spray may be necessary if grasses are more advanced.
			As above. Apply in 100 to 500L/ha. For spot spraying rates see separate sections.
All States			Use higher rate for more established weed infestations
			<p>These rates only control Perennial grass seedlings that are less than 2 months old and establishing from seed.</p> <p>Apply in not less than 100L/ha</p>

<b>CROP / SITUATION</b>	<b>WEEDS CONTROLLED</b>	<b>WEED STAGE</b>	<b>RATE / HA</b>
<i>Continued from previous</i>	Established plants of Couch Grass, English Couch (rope twitch), Water Couch, Johnson Grass, Paspalum, Bent Grass, Kikuyu Grass and Kentucky Bluegrass	Actively growing	2 or 4L
Plantations of <i>Pinus caribaea</i> (Caribbean Pine), <i>Pinus elliotti</i> (Slash Pine), <i>Araucaria cunninghamii</i> (Hoop Pine)	Barnyard Grass, Crowsfoot Grass, Stinkgrass, Urochloa Grass	Growing actively at the 3 to 5 leaf stage before tillering commences	750mL*
	Plants of Carpet Grass, Couch Grass, Johnson Grass, Kikuyu and Paspalum re-established from seeds or germinated rhizomes	Growing actively at 5 leaf to early tillering	1L*
	Established plants of Carpet Grass, Couch Grass, Johnson Grass, Kikuyu and Paspalum	Growing actively and have 3 to 8 leaves per shoot	2 or 4L*
Bushland	Veldtgrass	Growing actively and unstressed	2 to 4L
Tea-Trees ( <i>Melaleuca alternifolia</i> )	Annual Grasses (except <i>Poa annua</i> and <i>Vulpia</i> spp.)	Apply to actively growing weeds	1 to 2L
Oilseed Poppies	Annual Ryegrass, Brome Grass, Wild Oats, Barley Grass, Volunteer Cereals, Summer Grass(Crabgrass)	Growing actively at the 3 to 5 leaf stage before tillering commences	500mL*
Duboisia	Established plants of Couch Grass, Water Couch, Kikuyu, Johnson Grass and Paspalum	Young vegetative growth (3 to 6 leaves per shoot) when growing actively	2L*



STATE(S)	WITHHOLDING PERIOD		CRITICAL COMMENTS
	HARVEST	GRAZING	
All States			Use the higher rate for well established weed infestations or where greater control is required in one season. Apply in not less than 200L/ha
Qld only	-	18 months	Apply using sprinkler sprayers in 50L water/ha. Use subject to Queensland Forest Service Code of Practice.
WA only	-	-	Use the higher rate in dense undergrowth or on older, less vigorous weeds. Where veldtgrass is dense, 250L water per ha should be applied.
NSW only	-	-	Use higher rate when grasses fully tillered.
Tas only	12 weeks	-	Apply in 100 to 200L/ha. <b>DO NOT tank mix with diquat as severe crop injury may occur.</b> Annual Ryegrass regrowth may occur if sprayed beyond the early tillering stage.
Qld only	-	-	Apply in not less than 200L/ha. Direct the spray toward the ground under the tree canopy.

## SPOT SPRAYING

CROP / SITUATION	WEEDS CONTROLLED	WEED STAGE
Onions, Lucerne, Hops, All cucurbits, Apples, Pears, Stone fruit, Grapes, Broad beans, Green beans, Broccoli, Brussel sprouts, Cabbage, Cauliflower, Capsicums, Tomatoes, Carrots, Lettuce, Celery, Strawberries, Blackcurrants, Blueberries, Tropical fruit, as per label Potted and open grown ornamental shrubs and trees	Annual (Wimmera) ryegrass, wild oats, brome grasses, barley grass, crowsfoot grass, barnyard grass and perennial grass seedlings, including couch grass, paspalum, Johnson grass, kikuyu grass, bent grass and green summer grass	Growing actively at 5 leaf to early tillering
	Established plants of perennial grasses, couch grass, English couch (rope twitch), water couch, bent grass, kikuyu grass, Johnson grass, paspalum, giant paspalum, para grass, guinea grass and carpet grass	Established and growing actively.
	Plants of carpet grass, couch grass, English couch (rope twitch), water couch, paspalum, Johnson grass, bent grass and kikuyu grass, re-established from seed or fragments stems	

**Note:** Rootout® 212 Herbicide does NOT control Winter Grass (*Poa annua*), Silver Grass (*Vulpia bromoides*), Nutsedge (*Cyperus* spp.) and broadleaf weeds.

\* ALWAYS ADD 350mL AGRAL OR 200mL BS1000 PER 100L OF SPRAY SOLUTION UNLESS OTHERWISE SPECIFIED.

# ADD 2L DC TRATE OR 200mL BS1000 PLUS 2L ULVAPRON PER 100L SPRAY SOLUTION.

RATE / 10L	STATE(S)	CRITICAL COMMENTS
12.5mL or 25mL	As for main section of this label	Use the higher rate for more established weed infestations. <b>Thoroughly wet target weeds. Always follow critical comments for specific crops. Always add water and surfactants at rates recommended for individual crop situations as in specific label segments.</b>
50mL or 100mL		
25mL or 50mL		

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

## **WITHHOLDING PERIODS:**

**DO NOT GRAZE OR CUT FOR STOCK FOOD EARLIER THAN THE NUMBER OF DAYS OR WEEKS SHOWN AFTER APPLICATION:**

**Clover, Lucerne, Lupins, Medics, Canola, Linseed, Vetches: 21 DAYS**

**Broad, Green, Faba and Navy Beans: 5 WEEKS**

**Peanuts: 6 WEEKS**

**Chick, Field and Green Vegetable Peas, Carrots: 7 WEEKS**

**Sunflowers: 14 WEEKS**

**Soybeans, Pigeon Peas: 17 WEEKS**

**Leucaena Forage and Seed Crops: 26 WEEKS**

**DO NOT SPRAY THE FOLLOWING CROPS LATER THAN THE NUMBER OF DAYS OR WEEKS SHOWN BEFORE HARVEST:**

**Custard Apples, Kiwifruit, Lychee, Mangoes, Passionfruit, Pawpaw, Persimmons, Pineapples: 14 DAYS**

**Cucumber, Gherkin, Squash, Zucchini: 21 DAYS**

**Blueberries, Blackcurrants, Grapes, Lettuce, Strawberries, Tomatoes: 4 WEEKS**

**Cucurbits: Honeydew, Rock and Watermelon, Pumpkin, Onions, Broad, Green, Faba and Navy Beans: 5 WEEKS**

**Brassica (Brussel Sprouts, Cauliflower, Broccoli, Cabbage) Peanuts: 6 WEEKS**

**Chick, Field and Green Vegetable Peas, Carrots: 7 WEEKS**

**Celery: 8 WEEKS**

**Hops, Potatoes: 10 WEEKS**

**Capsicums: 11 WEEKS**

**Oilseed Poppies: 12 WEEKS**

**Cotton, Sunflowers: 14 WEEKS**

**Lupins, Canola, Soybeans, Pigeon Peas, Linseed, Leucaena: 17 WEEKS**

**WITHHOLDING PERIOD TO HARVEST NOT REQUIRED:**

**Stone Fruit, Pome Fruit, Citrus**

**ANIMALS ARE NOT TO BE SENT FOR SLAUGHTER FOR 7 DAYS AFTER GRAZING ON TREATED PASTURES.**

## GENERAL INSTRUCTIONS

ROOTOUT® 212 HERBICIDE is rapidly absorbed by leaves and green stems (is rainfast within one hour) and translocated throughout the plant. It accumulates at growing points, both above ground and in the roots, rhizomes and stolons of grass weeds. Weed growth and hence competition with the crop stops within 48 hours. First symptoms are not evident for at least a week after application. Growing points turn brown and rot, shoot tips can be easily pulled out after 2 to 3 weeks. Young leaves turn yellow or redden soon after, but more mature leaves may remain green for extended period. Weed control is usually complete 3 to 5 weeks after spraying.

### GROUP A HERBICIDE

## RESISTANT WEEDS WARNING

ROOTOUT® 212 HERBICIDE Post-emergence Selective Herbicide is a member of the aryloxyphenoxypropionate (fops) group of herbicides. ROOTOUT® 212 HERBICIDE has the inhibitors of acetyl coA carboxylase mode of action. For weed resistance management ROOTOUT® 212 HERBICIDE is a Group A herbicide. Some naturally occurring weed biotypes resistant to ROOTOUT® 212 HERBICIDE and other inhibitors of acetyl coA carboxylase 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 ROOTOUT® 212 HERBICIDE or other inhibitors of acetyl coA carboxylase herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Sinon Australia Pty Limited accepts no liability for any losses that may result from the failure of ROOTOUT® 212 HERBICIDE to control resistant weeds.

## STRESS CONDITIONS

Moisture stress is a particular problem, whether caused by drought or short term stresses, resulting from a combination of high temperatures and low humidity or by prior use of pre-emergence herbicides resulting in stunted root growth of weeds. An irrigation or an effective rainfall must occur immediately before or after spraying if these conditions exist. Other stress situations to avoid include frost, waterlogging and extended cold conditions. DO NOT spray if any stress conditions are evident just prior to application.

## MIXING

Add the required amount of product directly to the spray tank which should be 50 to 75% full. The agitation system should be running during mixing and spraying. If agitation ceases and settlement occurs, agitate thoroughly before spraying.

Adjuvants are essential and the following may be utilised: Agral at 350mL/100L of water OR BS1000 at 200mL/100L of water OR 2L DC Trate / 100L of water OR BS1000 at 200mL plus 2L Ulvapon / 100L of water, unless otherwise stated.

## **TIME OF APPLICATION**

To obtain the maximum benefits of this product, weeds should be sprayed when young and actively growing. Grasses establishing from seed should be sprayed before tillering occurs. Higher rates will be necessary once tillering commences. For annual grass weeds, spraying must take place before the late tillering stage if a complete kill is desired. Unless otherwise specified in the Critical Comments, application may be made at any stage of crop growth, but allowing sufficient time for the prescribed withholding period.

## **METHOD OF APPLICATION**

Good spray coverage is essential for maximum results. Spray equipment must be checked and calibrated accurately prior to application.

### **Boom spraying**

Check height of boom above the target weeds to ensure the spray is evenly distributed and a double overlap pattern is obtained. When spraying grass weed targets, an even distribution of droplets with no less than 50% of the spray volume in the 150 to 300 micron range is desirable.

### **Broadacre use:**

Water volumes per hectare will depend on nozzle selection and should be in the range of 50 to 100L/ha. 110° fan nozzles are preferred for use with this product. Use higher volumes of spray to achieve full coverage of dense, vigorous weed infestations.

### **Band spraying:**

Ensure sufficient coverage by using two nozzles (one either side of the plant row) when the crop is beyond the 2 leaf stage.

### **Aerial Application**

Flying height, pressure, nozzle size and positioning of the aircraft should be such to minimise spray drift. Avoid spraying in high winds or under temperature inversion conditions. Special care must be taken to avoid drift onto adjacent crops such as cereals, maize or sorghum. Apply in not less than 30L/ha.

### **Spot Spraying**

On smaller areas use a knapsack sprayer suitably calibrated.

### **Cleaning Up**

After use, clean equipment thoroughly and rinse several times prior to re-use.

## **COMPATIBILITY**

This product is compatible with Agral and BS1000, DC Trate, Ulvapron, sethoxydim, phosmet, lambda-cyhalothrin and pirimicarb. DO NOT tank mix with other pesticides without prior reference to a Sinon representative.

## **PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS**

DO NOT apply under weather conditions or from spraying equipment which may cause spray to drift onto nearby susceptible plants / crops, cropping lands or pastures. DO NOT plant cereal crops for a period of 12 weeks after application of Rootout® 212 Herbicide.

## **PROTECTION OF LIVESTOCK, WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT**

Moderately hazardous to fish. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

### **STORAGE AND DISPOSAL**

Store in the closed, original container in a well ventilated area, as cool as possible and away from children, animals, food, feedstuffs, seed and fertilisers. DO NOT store for prolonged periods in direct sunlight.

This container can be recycled if it is clean, dry, free of visible residues and has the 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 point or similar container management program site. The cap should not be replaced but may be taken separately.

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 500mm 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 and product.

**For REFILLABLE containers (110L):** Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

### **SAFETY DIRECTIONS**

May irritate the eyes and skin. Avoid contact with eyes and skin. When preparing spray and using the product wear, elbow-length PVC gloves; and face shield. If product or spray on skin, immediately wash area with soap and water. 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.

### **FIRST AID**

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia: 13 11 26. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.



### **SAFETY DATA SHEET**

For further information refer to the Safety Data Sheet which is available from the supplier.

## NOTICE TO BUYER

Seller warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use. No warranty of merchantability for a particular purpose, express or implied, extends to the use of the product contrary to label instructions, or under abnormal conditions.

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<b>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS FLUAZIFOP-P) MARINE POLLUTANT</b>		
 <b>MARINE POLLUTANT</b>	 <b>MISCELLANEOUS DANGEROUS GOODS 9</b>	
<b>PG III HAZCHEM 2X UN No.3082</b>	<b>IN A TRANSPORT EMERGENCY DIAL 000 POLICE OR FIRE BRIGADE</b>	<b>SPECIALIST ADVICE IN EMERGENCY ONLY 1800 033 111 ALL HOURS AUSTRALIA WIDE</b>