

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

# TOUCHDOWN<sup>®</sup>

# HI TECH

## HERBICIDE

**ACTIVE CONSTITUENT: 500 g/L GLYPHOSATE**  
present as the potassium salt

**GROUP**

**M**

**HERBICIDE**

*A non-selective foliar applied systemic herbicide  
for the control of a wide range of annual and perennial weeds as per Directions for  
Use table*

***IMPORTANT: Read the attached booklet before using this product***

**1, 5, 20, 50, 100, 110, 200, 640, 1000 LITRES**

**Syngenta Crop Protection Pty Limited**  
Level 1, 2-4 Lyonpark Road, Macquarie Park NSW 2113

**In a transport emergency dial 000, Police or Fire Brigade**  
**For specialist advice in an emergency only, call 1800 033 111 (24 hrs)**

**APVMA Approval No: 54617/pack size/0503**  
**Item Number**

**STORAGE AND DISPOSAL (1, 5, 20, 50, 200, 640 L only)**

Store in the closed, original container in a dry, 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 bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

**STORAGE AND DISPOSAL (100, 110 and 1000 L only)**

Store in the closed, original container in a dry, cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight. Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

**SAFETY DIRECTIONS**

**Will irritate the eyes. May irritate the nose and throat. Avoid contact with eyes and skin. If product in eyes, wash it out immediately with water. 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 or nitrile gloves
- face shield or goggles

**Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.**

**FIRST AID**

**If poisoning occurs contact a doctor or Poisons Information Centre. Phone 131 126.**

**MATERIAL SAFETY DATA SHEET**

If additional hazard information is required refer to the Material Safety Data Sheet. For a copy phone 1800 067 108 or visit our website at [www.syngenta.com.au](http://www.syngenta.com.au)

**MANUFACTURER'S WARRANTY AND EXCLUSION OF LIABILITY**

Syngenta has no control over storage, handling and manner of use of this product. Where this material is not stored, handled or used correctly and in accordance with directions, no express or implied representations or warranties concerning this product (other than non-excludable statutory warranties) will apply. Syngenta accepts no liability for any loss or damage arising from incorrect storage, handling or use.

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APVMA Approval No: 54617/pack size/0503

Item Number

Batch number	
Date of manufacture	

**BAR CODE**

**BOOKLET:**

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**DIRECTIONS FOR USE****Restraint**

For maximum herbicide uptake by the weeds, DO NOT cultivate, sow or graze for 6 hours after spraying annual weeds, 7 days for perennial weeds, unless specified in Critical Comments.

Situation	Weeds Controlled	States	Rate/ha	Critical Comments		
<b>SOUTHERN AUSTRALIA</b>  <b>Crop or pasture establishment</b>  For weed control prior to full disturbance by cultivation or sowing with a tyned implement	Barley ( <i>Hordeum vulgare</i> ) Barley Grass ( <i>Hordeum</i> spp.) Brome Grass ( <i>Bromus</i> spp.) Oats ( <i>Avena sativa</i> ) Wheat ( <i>Triticum aestivum</i> ) Wild Oats ( <i>Avena</i> spp.)	NSW, Vic, SA, WA, ACT only	330 to 660 mL seedling 660 to 830 mL early tillering	<b>Spraying:</b> Weeds should be actively growing and free from any stresses likely to reduce efficacy including heavy grazing. If pasture has been grazed regrowth should be 6 to 8 cm high before spraying, use the higher rate only. Also use the higher rate under less optimum conditions eg- cold/overcast weather, less uniform weed growth stage.  <b>Sowing:</b> Cultivation or planting may proceed from 2 hours after application to seedling annual weeds if a satisfactory seedbed can be created for crop germination and seedling establishment. For weed control and crop establishment, soil must be fully disturbed after application. Where dense weed growth/cold, wet conditions are present delay sowing until the dead material has decomposed otherwise reduced crop emergence may result.  <b>Tank mixes:</b> For lupins this product can be mixed with Gesatop® WG or Gesaprim® WG.  <b>Annual Ryegrass:</b> Glyphosate resistant biotypes have been detected in Australia. If glyphosate resistant weeds are known or suspected to be present, apply an alternative method of control, such as rotation with another herbicide eg Spray.seed®.		
	Annual Ryegrass ( <i>Lolium rigidum</i> ) Annual Phalaris/Canary Grass ( <i>Phalaris</i> spp.) Silver Grass ( <i>Vulpia</i> spp.) Winter Grass ( <i>Poa annua</i> )		660 to 830 mL pre-tillering 830 to 1 L post-tillering			
	Capeweed ( <i>Arctotheca calendula</i> ) Doublegee ( <i>Emex australis</i> ) Calomba Daisy ( <i>Oncosiphon suffruticosum</i> ) Volunteer Lupins ( <i>Lupinus</i> spp.) Volunteer Peas ( <i>Pisum sativum</i> )		330 to 660 mL less than 8 cm diameter 660 to 1 L more than 8 cm diameter			
	Amsinckia ( <i>Amsinckia</i> spp.) Dock ( <i>Rumex</i> spp.)(seedling) Fumitory ( <i>Fumaria</i> spp.) Paterson's Curse ( <i>Echium plantagineum</i> ) Saffron Thistle ( <i>Carthamus lanatus</i> ) Scotch Thistle ( <i>Onopordum acanthium</i> ) Shepherd's Purse ( <i>Capsella bursa-pastoris</i> ) Sowthistle ( <i>Sonchus</i> spp.) Spear Thistle ( <i>Cirsium vulgare</i> ) Variegated Thistle ( <i>Silybum marianum</i> ) Wild Turnip ( <i>Brassica tournefortii</i> )		660 to 830 mL less than 12 cm diameter 830 mL to 1 L more than 12 cm diameter			
	Perennial Phalaris ( <i>Phalaris aquatica</i> ) Skeleton Weed ( <i>Chondrilla juncea</i> ) Sorrel ( <i>Rumex acetosella</i> ) Soursob ( <i>Oxalis pes-caprae</i> ) Subterranean Clover ( <i>Trifolium subterraneum</i> ) Wild Radish ( <i>Raphanus raphanistrum</i> )		1 L		Control of Subterranean Clover will only be achieved when applied prior to full soil disturbance by cultivation or sowing with a tyned implement.	
	All the above weeds		Tas only		1 to 2 L	<b>Spraying:</b> Use the lower rate on annual weeds, the higher rate on perennial weeds. Add 1 L/ha dicamba to control White Clover and to improve control of other perennial broadleaved weeds.

Situation	Weeds Controlled	States	Rate/ha	Critical Comments			
<b>SOUTHERN AUSTRALIA continued</b>  <b>Crop, pasture or fallow establishment</b>  For weed control prior to minimal or no soil disturbance	Barley Grass ( <i>Hordeum</i> spp.) Wild Oats ( <i>Avena</i> spp.) Volunteer Cereals	NSW, Vic, SA, WA, ACT only	660 mL to 1 L	<b>Spraying:</b> Weeds should be actively growing and free from any stresses likely to reduce efficacy including heavy grazing. If pasture has been grazed regrowth should be 6 to 8 cm high before spraying, use the higher rate only. Also use the higher rate under less optimum conditions eg- cold/overcast weather, less uniform weed growth stage. <b>Pasture or crop establishment:</b> DO NOT sow into excessive trash. Excessive plant residues may be removed by grazing after treatment. Planting may proceed from 2 hours after application to seedling annual weeds if a satisfactory seedbed can be created for crop germination and seedling establishment. <b>Aerial (or surface) seeding:</b> Delay seeding until trash level is reduced to allow for satisfactory placement of broadcast seed on the soil surface. <b>Annual Ryegrass:</b> Glyphosate resistant biotypes have been detected in Australia. If glyphosate resistant weeds are known to be present, apply an additional method of control, such as rotation with another herbicide eg Spray.Seed. <b>Couch:</b> 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. <b>Dock, Flatweed:</b> Use the maximum rate for full control. <b>Hoary Cress:</b> Treat from late rosette to early flowering. <b>Kikuyu, Paspalum:</b> Use the low rate for suppression, the high rate for control. <b>Silver Grass:</b> When treating dense infestations of Silver Grass, add Wetter TX and use water volumes of 70 L/ha or more and small droplets to improve coverage. <b>Soursob:</b> Treat at tuber exhaustion. <b>Tank Mix:</b> See Compatibility Section.			
	Annual Phalaris/Canary Grass ( <i>Phalaris</i> spp.) Annual Ryegrass ( <i>Lolium rigidum</i> ) Brome Grass ( <i>Bromus</i> spp.) Capeweed ( <i>Arctotheca calendula</i> ) Hoary Cress ( <i>Cardaria draba</i> ) Paterson's Curse ( <i>Echium plantagineum</i> ) Saffron Thistle ( <i>Carthamus lanatus</i> ) Scotch Thistle ( <i>Onopordum acanthium</i> ) Silver Grass ( <i>Vulpia</i> spp.) Soursob ( <i>Oxalis pes-caprae</i> ) Spear thistle ( <i>Cirsium vulgare</i> ) Variegated Thistle ( <i>Silybum marianum</i> ) Wild Mustard ( <i>Sisymbrium orientale</i> ) Wild Radish ( <i>Raphanus raphanistrum</i> ) Wild Turnip ( <i>Brassica tournefortii</i> ) Winter Grass ( <i>Poa annua</i> )		1 to 1.32 L				
	Couch ( <i>Cynodon dactylon</i> ) Dock ( <i>Rumex</i> spp.) Erodium ( <i>Erodium</i> spp.) Flatweed ( <i>Hypochoeris radicata</i> ) Kikuyu ( <i>Pennisetum clandestinum</i> ) Plantain ( <i>Plantago</i> spp.) Paspalum ( <i>Paspalum</i> spp.) Perennial Phalaris ( <i>Phalaris aquatica</i> ) Sorrel ( <i>Rumex acetosella</i> ) Subterranean Clover ( <i>Trifolium subterraneum</i> ) Yorkshire Fog ( <i>Holcus lanatus</i> )		1.66 L to 2.06 L				
	Poa Tussock ( <i>Poa labillardieri</i> )		2.06 to 2.85 L				
	All the above weeds		Tas only		1 to 2 L	<b>Timing:</b> Teat 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. <b>Spraying:</b> Use the lower rate on annual weeds, the higher rate on perennial weeds. Add 1 L/ha dicamba to control White Clover and to improve control of other perennial broadleaved weeds.	
	<b>Pasture Topping</b>  For Annual Grass, Capeweed, Calomba Daisy seed-set reduction		Barley Grass ( <i>Hordeum</i> spp.) Brome Grass ( <i>Bromus</i> spp.) Capeweed ( <i>Arctotheca calendula</i> ) Silver Grass ( <i>Vulpia</i> spp.)		NSW, Vic, Tas, SA, WA, ACT, NT only	200 to 300 mL	<b>Spraying:</b> Graze paddock before treatment but allow 2 to 3 weeks for even regrowth. Ryegrass, Capeweed and Calomba Daisy should be flowering, other grasses should be in full head, but before signs of "haying off". Pasture legume seed set can be reduced by the treatment. DO NOT apply to legume seed crops intended for seed production.
			Annual Ryegrass ( <i>Lolium rigidum</i> )			300 to 700 mL	
Calomba Daisy ( <i>Oncosiphon suffruticosum</i> )		300 mL					

Situation	Weeds Controlled	States	Rate/ha	Critical Comments
<b>Seedhead Suppression</b>	Bent Grass ( <i>Agrostis capillaris</i> )	NSW, ACT, Vic, Tas only	260 to 430 mL	Apply treatments late October to late November before seedheads have emerged. Add Wetter TX. Use the higher rate where growth is excessive. Graze hard after spraying.
<b>Bent Grass</b> For control/suppression prior to establishing a crop or pasture	Bent Grass ( <i>Agrostis capillaris</i> ), most annual weeds		1.66 L	<b>Spraying:</b> Bent Grass should be actively growing and free from moisture stress. If grazed allow regrowth to 5 to 7 cm before spraying. Good management post spraying in conjunction with follow up option chosen is required to minimise reinvasion. Where summer fallow is to follow, spray in late spring at early seedhead stage (late November early December) then cultivate with tined implement or rotera 2 to 4 weeks later. From 3 to 7 cultivations may be needed for effective weed control before establishing autumn pasture. Where summer crop is to follow spray in early spring cultivate 2 to 3 weeks later then sow summer crop or pasture.
<b>Serrated Tussock</b> For control/suppression prior to establishing crops or improved pasture species	Serrated Tussock ( <i>Nassella trichotoma</i> )	NSW, Vic, Tas only	2.85 to 4.22 L	Apply to actively growing and stress free plants. Best results May to October. <b>Application:</b> Boom spray volume of 70 L/ha or more is recommended to improve coverage. Also see <b>Aerial Equipment</b> . <b>Surfactants:</b> Addition of 200 mL of Wetter TX to 100 L of spraying solution may improve control of Serrated Tussock. <b>Site preparation:</b> Burning of Serrated Tussock 10 to 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 of stock.) <b>Rates:</b> 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).
For prevention of seed head emergence and seed formation	Serrated Tussock ( <i>Nassella trichotoma</i> )		470 to 940 mL	Apply to actively growing and stress free plants. Best results obtained during mid September to mid October. Apply prior to any seed head emergence. Also see <b>Aerial Equipment</b> . <b>Surfactants:</b> Addition of 200 mL of Wetter TX to 100 L of spraying solution may improve results. <b>Rates:</b> The lower rates will be less damaging to desirable pasture species. If seed head emergence is imminent then higher rates will give better results.

Situation	Weeds Controlled	States	Rate/ha	Critical Comments
<b>NORTHERN AUSTRALIA</b>  <b>Crop or fallow establishment</b>  <b>Cotton: shielded sprayers</b>	Annual Phalaris ( <i>Phalaris</i> spp.) Volunteer Cereals Wild Oats ( <i>Avena</i> spp.)	Qld, NSW, WA, NT only	330 to 660 mL	<b>Spraying:</b> Weeds should be actively growing and free from any stresses likely to reduce efficacy especially drought stress. If pasture has been grazed regrowth should be 6 to 8 cm high before spraying, use the higher rate only. Also use the higher rate under less optimum conditions eg cold/overcast weather, more advanced weed growth stage. Use lower rates on young weeds. Use the higher rates where grasses are tillered or broadleaved weeds reach stem elongation.  <b>Shielded sprayers:</b> Apply 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.  <b>Pasture or crop establishment:</b> DO NOT sow into excessive trash. Excessive plant residues may be removed by grazing after treatment. Cultivation or planting may proceed from 2 hours after application to seedling annual weeds if a satisfactory seedbed can be created for crop germination and seedling establishment.  <b>Tank mix:</b> See Compatibility Section.  Dense infestations of some weeds eg Barnyard Grass, Liverseed ( <i>Urochloa</i> ) Grass may need follow up treatments for complete control.
	African Turnip Weed ( <i>Sisymbrium thellungii</i> ) Amaranth ( <i>Amaranthus</i> spp.) Barnyard Grass ( <i>Echinochloa</i> spp.) Black Pigweed ( <i>Trianthema portulacastrum</i> ) Boggabri Weed ( <i>Amaranthus mitchellii</i> ) Caltrop/Yellow Vine ( <i>Tribulus terrestris</i> ) Carrot Weed ( <i>Daucus carota</i> ) Columbus Grass ( <i>Sorghum alnum</i> ) Deadnettle ( <i>Lamium amplexicaule</i> ) Dinebra ( <i>Dinebra retroflexa</i> ) Liverseed Grass ( <i>Urochloa panicoides</i> ) Mintweed ( <i>Salvia reflexa</i> ) Noogoora Burr ( <i>Xanthium pungens</i> ) New Zealand Spinach ( <i>Tetragonia tetragonoides</i> ) Pigeon Grass ( <i>Setaria</i> spp.) Saffron Thistle ( <i>Carthamus lanatus</i> ) Speedy Weed ( <i>Flaveria australasica</i> ) Spiny Burrgrass ( <i>Cenchrus longispinus</i> ) Stinkgrass ( <i>Eragrostis cilianensis</i> ) Sweet Summer Grass ( <i>Brachiaria eruciformis</i> ) Thornapples ( <i>Datura stramonium</i> ) Variegated Thistle ( <i>Silybum marianum</i> ) Volunteer sorghum ( <i>Sorghum bicolor</i> ) Wild Poppy ( <i>Papaver</i> spp.) Windmill Grass ( <i>Chloris truncata</i> ) Wireweed ( <i>Polygonum aviculare</i> )		470 to 660 mL up to 5 true leaves or 3 cm diameter/ height  660 to 1330 mL greater than 5 true leaves or 3 cm in diameter/ height	
	Annual Ground Cherry ( <i>Physalis angulata</i> ) Barnyard Grass ( <i>Echinochloa crus-galli</i> ) Bladder Ketmia ( <i>Hibiscus trionum</i> ) Button Grass ( <i>Dactyloctenium radulans</i> ) Camel (Afghan) Melon ( <i>Citrullus lanatus</i> ) Caustic Weed ( <i>Chamaesyce drumondii</i> ) Liverseed Grass ( <i>Urochloa panicoides</i> ) Mexican Poppy ( <i>Argemone ochroleuca</i> ) Native Millett ( <i>Panicum decompositum</i> ) Noogoora Burr ( <i>Xanthium pungens</i> ) Pigweed ( <i>Portulaca oleracea</i> ) (up to 25 cm diameter) Spear Thistle ( <i>Cirsium vulgare</i> ) Sowthistle ( <i>Sonchus oleraceus</i> ) Thorn Apple ( <i>Datura</i> ) Turnip Weed ( <i>Rapistrum rugosum</i> ) Wild/Prickly Lettuce ( <i>Lactuca</i> spp.) Wild Turnip ( <i>Brassica tournefortii</i> ) Wireweed ( <i>Polygonum aviculare</i> )		660 to 1330 mL before stem elongation	
	Prickly Paddy Melon ( <i>Cucumis myriocarpus</i> )		670 to 1330 mL plus 80 mL Garlon 600	
	Climbing Buckwheat (less than 12 leaves) ( <i>Fallopia convolvulus</i> ) Johnson Grass ( <i>Sorghum halepense</i> )		1330 to 1870 mL	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 Johnson grass, repeat applications will be required.

Situation	Weeds Controlled	States	Rate/ha	Critical Comments
<b>NORTHERN AUSTRALIA Continued.</b>  <b>Crop or fallow establishment</b>  <b>Cotton: shielded sprayers Cont.</b>	Nutgrass ( <i>Cyperus rotundus</i> )	Qld, NSW, WA, NT only	1870 mL followed by 1870 mL	Make the first application to actively growing plants when the majority of plants have reached at least the 6 to 8 leaf stage but preferably later. Allow for maximum re-emergence before retreating.
<b>Perennial Grass Pasture</b>  For suppression or control of pasture species prior to drilling forage species or soybeans	Carpet Grass ( <i>Axonopus affinis</i> ) Paspalum ( <i>Paspalum dilatatum</i> )	Qld, NSW only	1 to 4 L	Use lower rate for suppression. For complete control, use the maximum rate.
	Couch ( <i>Cynodon dactylon</i> )		1.6 to 4 L	
<b>Sorghum Control</b>  Post-harvest	Sorghum, Grain Sorghum ( <i>Sorghum bicolor</i> )	Qld, NSW, WA, NT only	660 mL to 1.3 L fresh regrowth from slashed stubble and spring regrowth	<b>Spraying:</b> Sorghum should be actively growing and free from stresses due to low soil moisture, frost, cold or waterlogging. If plants have been grazed or slashed allow regrowth to 20 cm before spraying. Slashing before treatment will aid knockdown and regrowth control. Use the lower rate for knockdown and regrowth suppression under good conditions or if plants have been slashed. The higher rate will improve regrowth control of harder to control varieties or plants growing under less optimum conditions. Cultivation after spraying will assist in regrowth control. Varieties differ in their sensitivity to TOUCHDOWN HITECH which will be influenced by the growth conditions.
<b>Sorghum Control</b>  Pre-harvest			940 to 1330 mL	

Situation	Weeds Controlled	States	Rate/ha	Critical Comments
<b>Cotton Pre-harvest</b>	Bathurst Burr ( <i>Xanthium spinosum</i> ) Noogoora Burr ( <i>Xanthium occidentale</i> ) Winter annual weeds	Qld, NSW only	940 to 1870 mL	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.
<b>Pre-harvest Application</b> To reduce viable seed set of weeds in:  Field Peas ( <i>Pisum sativum</i> ),  Faba Beans ( <i>Vicia faba</i> )	Annual Ryegrass ( <i>Lolium rigidum</i> )		300 to 700 mL	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. Glyphosate resistant biotypes have been detected in Australia. If glyphosate resistant weeds are known or suspected to be present, apply an alternative method of control.
<b>Pre-harvest Application</b> As harvest aid and weed control:  Wheat ( <i>Triticum aestivum</i> )	Annual weeds		940 to 1870 mL	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.

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

**WITHHOLDING PERIODS**

**Cereals and Legumes: DO NOT HARVEST, GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION**

**All Other Uses: NOT REQUIRED WHEN USED AS DIRECTED**

## All States (except for Sugarcane: Qld, NSW, WA only)

Situation	Critical Comments
<p><b>General Weed Control</b> For general weed control in and around home gardens, industrial, commercial and public service areas, parks and gardens, around farm buildings and other farm situations-</p>	<p>For control of a wide range of grass and broadleaf weeds. <b>Rate: 8 mL per litre of water</b> Ensure thorough coverage of weed foliage. DO NOT allow spray to contact foliage or green bark of desirable plants. Apply under good growing conditions only to actively growing weeds.</p>
<p><b>Non-Cultivated Land</b> Industrial, commercial, domestic and public service areas-</p>	<p>For residual control of annual weeds TOUCHDOWN HITECH can be tank mixed with Gesaprim WG, Diurex* WG or Gesatop WG. See Compatibility Section.</p>
<p><b>Forests, orchards, vines, plantations, AND Nurseries</b></p>	<p>TOUCHDOWN HITECH can be used prior to the establishment of the trees and vines and amongst established trees and vines using a directed or shielded spray or wiper equipment. DO NOT allow spray or spray drift to contact green bark or stems, canes, laterals, suckers, pruned surfaces or fruit. Particular care is required to avoid spray contact with the trunks of avocado, banana, guava, kiwi fruit, lychee, mango, paw paw and stone fruit trees and ornamentals in the Rosaceae family. For residual control of annual weeds in citrus, pome fruit and vines TOUCHDOWN HITECH may be tank mixed with Gesatop WG. See Compatibility Section.</p>
<p><b>Crops</b> Sown/Transplanted</p>	<p>Touchdown HiTech can be used to control annual and perennial weeds prior to sowing most crops. In some instances crops sown or transplanted after the use of glyphosate salts have been injured by one or more factors including inadequate soil phosphorous sorption capacity especially under dry conditions, an interaction with soil fungi and/or decaying weed residues or root exudates from treated weeds. DO NOT use TOUCHDOWN HITECH prior to transplanting tomato seedlings. TOUCHDOWN HITECH applied with selective application equipment can be used to control weeds growing between crop rows and weeds extending at least 15 cm above the crop. Avoid contact of crop foliage with TOUCHDOWN HITECH or its application equipment.</p>
<p><b>Sugarcane Ratoon Sprayout</b> For control of sugarcane <i>Saccharum officinale</i> ratoon regrowth Qld, NSW, WA only</p>	<p>Apply under good growing conditions only to actively growing ratoons 60 to 120 cm tall. DO NOT apply if plants are under stress from low moisture or waterlogging. <b>Rate: 2.6 to 6 L/ha.</b> Use the lower rate for suppression or where cultivation is to follow. Use the higher rate for control without cultivation. Varieties differ in their sensitivity to TOUCHDOWN HITECH and this can be influenced by the growing conditions.</p>
<p><b>Pastures</b> Spot Application Wick Wiper Application</p>	<p>TOUCHDOWN HITECH is non-selective and may kill desirable plants in the sprayed area. See General Instructions - Wiper Equipment</p>
<p><b>Dry drains and channels, dry margins of dams, lakes, and-streams</b></p>	<p>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.</p>

Annual Weeds Controlled	Rate
<p><b>Broadleaved</b>  Annual Ground Cherry (<i>physalis angulata</i>)  Bathurst Burr (<i>Xanthium spinosum</i>)  Bellvine (<i>Ipomoea plebeia</i>)  Black Bindweed (<i>Fallopia convolvulus</i>)  Blue Billygoat Weed (<i>Ageratum houstonianum</i>)  Caltrop (<i>Tribulis terrestris</i>)  Capeweed (<i>Arctotheca calendula</i>)  Carrot (<i>Daucus carota</i>)  Chickweed (<i>Stellaria media</i>)  Cobbler's Peg (<i>Bidens pilosa</i>)  Common Sowthistle (<i>Sonchus oleraceus</i>)  Common Thornapple (<i>Datura stramonium</i>)  Deadnettle (<i>Lamium amplexicaule</i>)  Doublegee (<i>Emex australis</i>)  Fat Hen (<i>Chenopodium album</i>)  Flaxleaf Fleabane (<i>Conyza bonariensis</i>)  Fumitory (<i>Fumaria</i> spp.)  Hedge Mustard (<i>Sisymbrium officinale</i>)  Lesser Swinecress (<i>Coronopus didymus</i>)  Mintweed (<i>Salvia reflexa</i>)  Noogoora Burr (<i>Xanthium occidentale</i>)  Paterson's Curse (<i>Echium plantagineum</i>)  Pigweed (<i>portulaca</i> spp.)  Prickly Lettuce (<i>Lactuca serriola</i>)  Redroot Amaranth (<i>Amaranthus retroflexus</i>)  Rough Poppy (<i>Papaver hybridum</i>)  Rough Sowthistle (<i>Sonchus asper</i>)  Saffron Thistle (<i>Carthamus lanatus</i>)  Shepherd's Purse (<i>Capsella bursa-pastoris</i>)  Slender Celery (<i>Apium leptophyllum</i>)  Smooth Catsear (<i>Hypochoeris glabra</i>)  Spear Thistle (<i>Cirsium vulgare</i>)  Speedy Weed (<i>Flaveria australasica</i>)  Spurge (<i>Euphorbia</i> spp.)  Storksbill (<i>Erodium</i> spp.) (Qld, NSW, Vic, SA, WA only)  Subterranean Clover (<i>Trifolium subterraneum</i>)  Tall Fleabane (<i>Conyza albida</i>)  Turnip Weed (<i>Rapistrum rugosum</i>)  Variegated Thistle (<i>Silybum marianum</i>)  Wild Mustard (<i>Sisymbrium orientale</i>)  Wild Turnip (<i>Brassica tournefortii</i>)  Wireweed (<i>Polygonum aviculare</i>) (apply to young plants - repeat application may be required)</p>	<p><b>Boom:</b> <sup>Δ</sup>1.3 to 2 L/ha.</p> <p><b>Hand Spray (handgun or knapsack):</b> 330 to 465 mL/100 L.</p> <p><b>Wiper:</b> 1 part TOUCHDOWN HITECH to 2 parts water.</p>

<p><b>Grasses</b></p> <p>Annual Ryegrass (<i>Lolium rigidum</i>)  Awnless Barnyard Grass (<i>Echinochloa colona</i>)  Barley Grass (<i>Hordeum leporinum</i>)  Barnyard Grass (<i>Echinochloa crus-galli</i>)  Crowsfoot Grass (<i>Eleusine indica</i>)  Dinebra (<i>Dinebra retroflexa</i>)  Grain Sorghum (<i>Sorghum bicolor</i>)  Great Brome (<i>Bromus diandrus</i>)  Lesser Canary Grass (<i>Phalaris minor</i>)  Liverseed Grass (<i>Urochloa panicoides</i>)  Maize (<i>Zea mays</i>)  Paradoxa Grass (<i>Phalaris paradoxa</i>)  Pigeon Grass (<i>Setaria</i> spp.)  Silver Grass (<i>Vulpia</i> spp.)  Soft Brome (<i>Bromus mollis</i>)  Spiny Burrgrass (<i>Cenchrus incertus</i>)  Sterile Brome (<i>Bromus sterilis</i>)  Stink Grass (<i>Eragrostis cilianensis</i>)  Volunteer Cereals  Wheat (<i>Triticum aestivum</i>)  Whorled Pigeon Grass (<i>Setaria verticillata</i>)  Wild Oats (<i>Avena fatua</i>, <i>A. ludoviciana</i>)  Windmill Grass (<i>Chloris truncata</i>)  Winter Grass (<i>Poa annua</i>)</p>	<p><b>Boom:</b> <sup>Δ</sup>1.3 to 2 L/ha.</p> <p><b>Hand Spray (handgun or knapsack):</b> 330 to 465 mL/100 L.</p> <p><b>WIPER:</b> 1 part TOUCHDOWN HITECH to 2 parts water.</p>
<p><sup>Δ</sup><b>NOTE:</b> Use the lower rate on actively growing weeds up to 15 cm high; use the higher rate on weeds which are not stressed greater than 15 cm high or when conditions are dry or cold with ongoing overcast conditions.</p>	

## PERENNIAL WEEDS

Species Controlled	States	Rate			Critical Comments
		Boom L/ha	Hand spray per 100 L	Hand spray per 5 L	
<b>Broad Leaves, Brush, &amp;-Woody Weeds, Rushes/Sedges</b>					
Bitou Bush/Boneseed ( <i>Chrysanthemoides</i> spp.)	All States	-	330 to 660 mL	16 to 32 mL	Apply higher rates on bushes > 1.5 m. Apply to actively growing plants. DO NOT apply to drought stressed plants. Further treatment may be necessary to restrict seedling re-establishment.
Blackberry ( <i>Rubus fruticosus</i> )		-	660 to 900 mL	32 to 45 mL	Apply to actively growing plants. Burning (after complete brownout), pasture improvement or further treatment are recommended to control seedlings and/or regrowth. Apply from flowering to leaf fall, use higher rates on old dense infestations > 2 m high. In Tasmania, DO NOT treat bushes bearing mature fruit.
Boxthorn, African ( <i>Lycium ferocissimum</i> )		-	600 mL	33 mL	Spray foliage thoroughly. Retreatment and/or subsequent control of seedlings may be required
Bracken ( <i>Pteridium esculentum</i> )		6 L	1L	50 mL	Add Pulse 200 mL/100L for boom and spot spray, not wiper. Slash bracken 6 months prior to application in autumn to fully expanded, actively growing fronds. Wiper application preferred for control in pasture, refer to Wiper Equipment under General Instructions.
Catsear ( <i>Hypochoeris radicata</i> )		2 L	465 mL	23 mL	Apply at early flowering and when growing actively.
Chinese Shrub ( <i>Cassinia arcuata</i> )		-	660 to 900 mL	32 to 45 mL	Apply to actively growing plants. Burning (after complete brownout), pasture improvement or further treatment are recommended to control seedlings and/or regrowth. Use higher rates on bushes > 1 m.
Crofton Weed ( <i>Eupatorium adenophorum</i> )	Qld, NSW only	-	330 mL	16 mL	Spray foliage thoroughly. Follow up control of seedlings may be required.
<i>Eucalyptus</i> spp. (seedlings < 2m)	All States	-	660 to 900 mL	32 to 45 mL	Apply to actively growing plants. Burning (after complete brownout), pasture improvement or further treatment are recommended to control seedlings and/or regrowth. Add Pulse at 200 mL/100L of spray mix.
Fennel (Aniseed) ( <i>Foeniculum vulgare</i> )		-	330 mL	16 mL	Apply when growing actively.
Gorse ( <i>Ulex europaeus</i> )		-	330 to 660 mL	16 to 32 mL	<b>Always add Pulse</b> at 200 mL/100 L of spray mix. Apply to actively growing plants. DO NOT apply to drought stressed plants. Further treatment may be necessary to restrict seedling re-establishment.
Groundsel Bush ( <i>Braccharis halimifolia</i> )					Apply higher rate on bushes > 2 m. Apply to actively growing plants. DO NOT apply to drought stressed plants. Further treatment may be necessary to restrict seedling re-establishment.
Hawthorn ( <i>Crataegus monogyna</i> )		-	660 to 900 mL	32 to 45 mL	Apply to actively growing plants. Burning (after complete brownout), pasture improvement or further treatment are recommended to control seedlings and/or regrowth. Apply from flowering to leaf fall, use higher rates on bushes > 2 m.

## Perennial Weeds (cont.)

Species Controlled	States	Rate			Critical Comments	
		Boom L/ha	Hand spray per 100 L	Hand spray per 5 L		
Lamb's Tongue ( <i>Plantago lanceolata</i> )	All States	2 L	465 mL	23 mL	Apply when heads present and plants growing well.	
Lantana ( <i>Lantana camara</i> )		-	330 to 660 mL	16 to 32 mL	Apply to actively growing plants. DO NOT apply to drought stressed plants. Further treatment may be necessary to restrict seedling re-establishment.	
Mistflower ( <i>Ageratina riparia</i> )		-	330 to 660 mL	16 to 32 mL	Apply to actively growing plants. DO NOT apply to drought stressed plants. Further treatment may be necessary to restrict seedling re-establishment.	
Nutgrass ( <i>Cyperus rotundus</i> )		4 L	660 mL	32 mL	Apply when plants flowering in summer and growing well. Retreatment necessary for longer term control.	
Plantain ( <i>Plantago</i> spp.)		2 to 4 L	330 to 660 mL	16 to 32 mL	Control of established perennials is best obtained when plants are at the seedhead stage.	
Redflower Mallow ( <i>Modiola caroliniana</i> )		2 L	465 mL	23 mL	Apply when growing well at early flowering.	
Rush, Common ( <i>Juncus usitatus</i> )					Apply when growing well. Wiper preferred for control in pasture - refer to Wiper Equipment under General Instructions. 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.	
Salsify ( <i>Tragopogon porrifolius</i> )			1 L	330 mL	16 mL	Apply at early flowering and when growing well.
Silverleaf Nightshade ( <i>Solanum elaeagnifolium</i> )			6 L	900 to 1380 mL	45 to 70 mL	In cultivated situations use sequential treatments of 4.22 L/ha for control.
Sorrel ( <i>Rumex acetosella</i> )			2.6 L	660 mL	32 mL	Control of established perennials is best obtained when plants are at the seedhead stage.
Soursob ( <i>Oxalis pes-caprae</i> )	NSW, ACT, Vic, SA, WA, Tas only	1 L	330 mL	16 mL	Apply when flowering, before natural die back occurs. Retreatment required in following season for longer term control.	
Sweet Briar ( <i>Rosa rubiginosa</i> )	All States	-	1040 to 1380 mL	52 to 70 mL	Apply to actively growing plants. Burning (after complete brownout), pasture improvement or further treatment are recommended to control seedlings and/or regrowth. Apply from late flowering to leaf fall. Use higher rates on bushes > 1.5 m.	
Thistle, Artichoke ( <i>Cyanara cardunculus</i> )		2 to 4 L	330 to 660 mL	16 to 32 mL	Control of established perennials is best obtained when plants are at the seedhead stage.	
Wild Sage ( <i>Salvia verbenaca</i> )		1 L	330 mL	16 mL	Apply at rosette to early flowering stage.	
Willow (< 2 m) ( <i>Salix</i> spp.)		-	660 to 900 mL	32 to 45 mL	Apply to actively growing plants. Burning (after complete brownout), pasture improvement or further treatment are recommended to control seedlings and/or regrowth.	
Yellow Vine ( <i>Tribulis micrococcus</i> )	Qld, NSW only	1 L	330 mL	16 mL	Apply when growing actively and flowering.	

## GRASSES

Species Controlled	States	Rate			Critical Comments
		Boom L/ha	Hand spray per 100 L	Hand spray per 5 L	
African Lovegrass ( <i>Eragrostis curvula</i> )	All States	2 to 4L	330 to 660 mL	16 to 32 mL	Control of established perennials is best obtained when plants are at the seedhead stage.
Bamboo		-	330 to 660 mL	16 to 32 mL	Apply when foliage/regrowth is 1 to 2 m tall. Apply to actively growing plants. DO NOT apply to drought stressed plants.
Bent Grass ( <i>Agrostis capillaris</i> )		2 to 4L	330 to 660 mL	16 to 32 mL	Control of established perennials is best obtained when plants are at the seedhead stage.
Blady Grass ( <i>Imperata cylindrica</i> )		6 L	900 to 1380 mL	45 to 70 mL	In cultivated situations use sequential treatments of 1.87 to 4.22 L/ha for control.
Cocksfoot ( <i>Dactylis glomerata</i> )		2 to 4L	330 to 660 mL	16 to 32 mL	Control of established perennials is best obtained when plants are at the seedhead stage.
Carpet Grass ( <i>Axonopus affinis</i> )		2 L	330 mL	16 mL	Apply when growing well at early flowering.
Common Reed ( <i>Phragmites australis</i> )		6 L	830 mL	46 mL	Apply at early flowering. Control may not be evident until following season. Refer to <b>Wiper Equipment</b> under General Instructions. 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.
Couch ( <i>Cynodon dactylon</i> )		6 L	830 mL	46 mL	Apply when growing well at early flowering. 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.
Cumbungi ( <i>Typha domingensis</i> ) ( <i>T. orientalis</i> )	Qld, NSW, Vic, SA, WA, ACT, NT only	4 to 6 L	830 mL	46 mL	Apply in summer when in head. Plants must be growing actively. The lower rate has given good control of regrowth in the following summer. Use the higher rate when faster control is required. Refer to <b>Wiper Equipment</b> under General Instructions. 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.
Guinea Grass ( <i>Panicum maximum</i> )	All States	6 L	830 mL	46 mL	Apply when growing well at early flowering.
Hamil Grass ( <i>Panicum maximum</i> cv Hamil) Humidicola ( <i>Brachiaria humidicola</i> )		4 to 6 L	660 to 830 mL	32 to 46 mL	Apply when growing well at early flowering. Use the lower rate under good growing conditions. Use the higher rate for more advanced growth or under less optimum growing conditions.

Species Controlled	States	Rate			Critical Comments
		Boom L/ha	Hand spray per 100 L	Hand spray per 5 L	
Johnson Grass ( <i>Sorghum halepense</i> )	All States	4 L	660 mL	32 mL	Apply when growing well at early flowering. Refer to <b>Wiper Equipment</b> under General Instructions
Kangaroo Grass ( <i>Themeda triandra</i> )		2 to 4 L	330 to 660 mL	16 to 32 mL	Control of established perennials is best obtained when plants are at the seedhead stage.
Kikuyu ( <i>Pennisetum clandestinum</i> )		4 L	660 mL	32 mL	Apply when growing well at early flowering. Refer to <b>Wiper Equipment</b> under General Instructions
Pampas Grass ( <i>Cortaderia selloana</i> )		-	660 to 900 mL	32 to 45 mL	Apply to actively growing plants. Burning (after complete brownout), pasture improvement or further treatment are recommended to control seedlings and/or regrowth. Allow regrowth to reach 1 m, best results - apply after flowering.
Para Grass ( <i>Bracharia mutica</i> )		4 to 6 L	660 to 830 mL	32 to 46 mL	Apply when growing well at early flowering. Refer to <b>Wiper Equipment</b> under General Instructions. 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.
Paspalum ( <i>Paspalum dilatatum</i> )		2 L	465 mL	23 mL	Apply when growing well at early flowering.
Phalaris ( <i>Phalaris aquatica</i> )		NSW, Vic, SA, ACT only	2 to 4 L	330 to 660 mL	
Poa Tussock ( <i>Poa labillardierei</i> )	All States	2 to 4 L	330 to 660 mL	16 to 32 mL	Control of established perennials is best obtained when plants are at the seedhead stage.
Prairie Grass ( <i>Bromus unioloides</i> )		4 L	660 mL	32 mL	Apply when growing well at early flowering.
Queensland Blue Grass ( <i>Dichanthium sericeum</i> ) Redleg Grass ( <i>Bothriochloa macra</i> )		2 to 4 L	330 to 660 mL	16 to 32 mL	Control of established perennials is best obtained when plants are at the seedhead stage.
Rhodes Grass ( <i>Chloris gayana</i> )		4 L	660 mL	32 mL	Apply when growing well at early flowering.
Rope Twitch ( <i>Elytrigia repens</i> )		2 to 4 L	330 to 660 mL	16 to 32 mL	Control of established perennials is best obtained when plants are at the seedhead stage.
Timothy Grass ( <i>Phleum pratense</i> )		NSW, Vic, SA, WA, Tas, ACT only	2 L	465 mL	23 mL
Water Couch ( <i>Paspalum distichum</i> )	All States	6 L	900 to 1380 mL	45 to 70 mL	In cultivated situations use sequential treatments of 1.87 to 4.22 L/ha for control. Apply when growing well at early flowering. Refer to <b>Wiper Equipment</b> under General Instructions. 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 Grass ( <i>Holcus lanatus</i> )		2 L	465 mL	23 mL	Control of established perennials is best obtained when plants are at the seedhead stage.

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

**WITHHOLDING PERIODS**

*Cereals and Legumes:* DO NOT HARVEST, GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION  
*All Other Uses:* NOT REQUIRED WHEN USED AS DIRECTED

**GENERAL INSTRUCTIONS**

TOUCHDOWN HITECH is a non-selective foliar applied herbicide which is absorbed by green plant tissue and translocated through the plant. Weeds must be growing well for optimum performance. Any conditions eg cold or overcast, which slow plant growth will delay or inhibit weed control. Avoid treating plants that are stressed from soil moisture deficit, frost, pests and diseases and water logging. Plants covered with dust may be less susceptible.

TOUCHDOWN HITECH causes yellowing and wilting of above ground parts followed by browning and death. Visible symptoms may take from several days to 3 to 4 weeks to appear depending on the weed species and the weather conditions. In perennials TOUCHDOWN HITECH controls underground roots and buds and symptoms may not be visible for a period of up to 6 weeks. Control of regrowth may not be evident until the following season.

TOUCHDOWN HITECH is absorbed and inactivated by soil particles and will not provide residual control of weeds. Where longer term weed control is required, TOUCHDOWN HITECH can be tank mixed with certain soil residual herbicides (see Compatibility) or follow-up applications can be made. TOUCHDOWN HITECH is water soluble and can be washed off plants by rainfall.

**Crop Establishment**

TOUCHDOWN HITECH can be used to control annual and perennial weeds prior to sowing most crops. In some instances some crops sown or transplanted after the use of glyphosate salts have been injured by one or more factors including inadequate soil phosphorus sorption capacity especially under dry conditions, an interaction with soil fungi and/or decaying weed residues or root exudates from treated weeds.

**Mixing**

Use only clean soft water. Use of dam water containing soil particles, or hard water eg- from bores containing calcium salts may reduce efficacy.

Fill the clean spray tank two-thirds full with water. Add the required volume of TOUCHDOWN HITECH and agitate. Complete filling the tank with the hose and under the surface to minimise frothing.

**Application**

Avoid direct or indirect contact (through spray drift) of desirable plants.

**Aerial Application**

Use recommended rates specified in this label up to a maximum limit of 3 L/ha in 20 to 80 L of water.

TOUCHDOWN HITECH 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 to sorghum and cotton crops up to a maximum rate of 3 L/ha where specified by this label. DO NOT apply treatments by aircraft in situations where drift onto sensitive crops and pastures 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 median droplet diameter of 250 to 350 microns. 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 Pre-harvest 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 to 80L/ha and increase median droplet diameter of output to at least 300 microns to optimise deposition of spray output onto weeds.

**Air Temperature and Relative Humidity**

DO NOT apply TOUCHDOWN HITECH 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. DO NOT apply treatments under very light (<4 km/hr) or inversion conditions or where wind speeds exceed 12 km/hr.

**Boom Equipment**

Use the recommended rate of TOUCHDOWN HITECH in 25 to 250 L of water per ha. The amount of water required will vary depending on the density and size of the weeds to be controlled. Where the lower rates of TOUCHDOWN HITECH are used for fallow weed control, use the lower water volumes. Volumes of 70 L/ha may assist in control of dense infestations of Silver Grass. Spray booms equipped with flat fan nozzles are recommended using an operating pressure of 200 to 280 kPa.

**Knapsack and High Volume Equipment**

Select or adjust nozzle(s) to give a fine spray without causing undesirable runoff.

**Wiper Equipment**

TOUCHDOWN HITECH can be applied through hand held or machine mounted wiper equipment in non-crop areas and to selectively control weeds in crops and pastures. There must be sufficient height differential between the weed and crop/pasture to allow maximum contact of the wiper with the weeds without touching desirable vegetation.

Mix 1 part TOUCHDOWN HITECH with 2 parts clean water.

For machine mounted wipers ground speed should be 4 to 8 km/hr. Two passes, at right angles or in the opposite direction will give better results.

**Controlled Droplet Application Equipment (CDA)**

Use the following table as a guide for achieving correct application rates using the Microfit \*Herbi or similar equipment.

See **Species Controlled** tables for specific rates and use recommendations.

For hand held equipment a walking speed of approximately 1 m/sec (3.6 km/hr) is recommended.

Rate of TOUCHDOWN HITECH delivered at 1m/sec	3 L/ha	6 L/ha	9 L/ha
Mixture (by volume) TOUCHDOWN HITECH: water	1 : 3	1 : 1	2 : 1
Microfit *Herbi, nozzle	Blue	Blue	Yellow

**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 2 hours of application which causes runoff will require retreatment. Rainfastness is reduced if weeds are not actively growing, under stress or conditions of low light intensity/darkness. The addition 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 to 8 cm before spraying and use the higher rates recommended.

- If glyphosate resistant weeds are known or suspected to be present, apply an alternative method of control such as rotation with another herbicide eg Spray.Seed.

### Compatibility

TOUCHDOWN HITECH can be mixed with the following herbicides and additives where recommended. Ally\* (Brush Off\*, Renovate\*), Gesaprim WG, dicamba, 2,4-D ester, Diurex WG, Express\*, Garlon\*, Glean\*, Logran®, MCPA ester/Polo, Gesatop WG and Starane\* and the insecticides Imidan\*, Karate®, Lorsban\* and Le-mat\*. These additives may slow down initial activity of TOUCHDOWN HITECH, but final weed control is not usually affected.

Addition of crystalline or liquid ammonium sulphate is not required with these products. Add the partner herbicide to the tank when 2/3 full under agitation, the TOUCHDOWN HITECH and complete filling.

TOUCHDOWN HITECH can be mixed with Spark\* or Goal\* at the spike rate of 75 mL Spark or Goal/ha to increase speed of kill and to aid control of harder-to-kill weeds. Add the Spark or Goal to the 2/3 full spray tank under agitation, then the TOUCHDOWN HITECH and complete filling. DO NOT use a tank mix of atrazine and TOUCHDOWN HITECH for Barnyard Grass control. Also mixtures of other formulations of simazine, atrazine or diuron may reduce the activity of TOUCHDOWN HITECH.

### Wetting Agent

The addition of wetting agents is not normally necessary. The addition of BS1000\* at 200 mL/100 L or Agral® at 300 mL/100 L may improve weed control where weeds are dense and coverage is difficult as in pasture topping or where tank mixes with WG or flowable formulations are used.

### Adjuvants: Wetter TX

Wetter TX is recommended for the control of Silver Grass and Annual Ryegrass in late winter and spring. Wetter TX is not a general purpose surfactant and should only be used where recommended.

Rate: 200 mL/100 L spray solution.

### Adjuvants: Pulse Penetrant

Pulse is recommended for the control of bracken and many other woody weeds.

Rate: 200 mL/100 L spray solution.

### Adjuvants: Ammonium Sulphate

Ammonium sulphate may be used as an adjuvant to alleviate the adverse effects of high levels of calcium, magnesium and bicarbonate ions in water. Rate 2 L/100 L spray solution.

### Resistant Weeds Warning

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HERBICIDE
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TOUCHDOWN HITECH Herbicide is a member of the glycines group of herbicides. TOUCHDOWN HITECH has the inhibitor of EPSP synthase mode of action. For weed resistance management TOUCHDOWN HITECH is a Group M herbicide. Some naturally occurring weed biotypes resistant to TOUCHDOWN HITECH 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 TOUCHDOWN HITECH or other Group M herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, Syngenta Crop Protection Pty Ltd accepts no liability for any losses that may result from the failure of TOUCHDOWN HITECH to control resistant weeds. Advice as to strategies and alternative treatments that can be used should be obtained from your local supplier, consultant, local Department of Agriculture, Primary Industries Department or a Syngenta representative.

**PRECAUTIONS**

DO NOT use human flaggers/markers unless they are protected by engineering controls such as enclosed cabs.

**Re-entry Period:** DO NOT enter treated areas until spray has dried. When prior entry is necessary, wear chemical resistant gloves.

**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.

**PROTECTION OF LIVESTOCK**

Low hazard to bees. No special precautions required.

**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.

**STORAGE AND DISPOSAL**

Store in the closed, original container in a dry, cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight. The method of disposal of the container depends on the container type. Read the Storage and Disposal instructions on the label that is attached to the container.

**SAFETY DIRECTIONS**

**Will irritate the eyes. May irritate the nose and throat. Avoid contact with eyes and skin. If product in eyes, wash it out immediately with water. 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 or nitrile gloves**
- **face shield or goggles**

**Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.**

**FIRST AID**

**If poisoning occurs contact a doctor or Poisons Information Centre. Phone 131 26.**

**MATERIAL SAFETY DATA SHEET**

If additional hazard information is required refer to the Material Safety Data Sheet. For a copy phone 1800 067 108 or visit our website at [www.syngenta.com.au](http://www.syngenta.com.au)

**MANUFACTURER'S WARRANTY AND EXCLUSION OF LIABILITY**

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