



# Spartan NZ

## Herbicide

*An ounce of prevention is  
worth a pound of cure*

**TURF**  
culture



For Pre-Emergent Control of Weeds in Established Turf, Garden Beds and Nursery Containers

### Technical Brief

<b>Active Constituent:</b>	480 g/L Prodiamine
<b>Chemical Family:</b>	Dinitroaniline (DNA)
<b>Mode of Action Group:</b>	3
<b>Formulation:</b>	Suspension Concentrate (SC)
<b>Mode of Action:</b>	Spartan NZ Herbicide is a member of the Dinitroaniline (DNA) family of herbicides. Spartan NZ Herbicide inhibits the steps in plant cell division responsible for chromosome separation and cell wall formulation, therefore stopping root growth. After application, roots are relatively few in number and club shaped and, as a result, cannot effectively absorb the water and nutrients required for root and plant development. Note: see Selectivity section below
<b>Behaviour in Plants:</b>	Spartan NZ Herbicide does not translocate through the roots into the stem and leaves.

## Spartan NZ Herbicide

HSNO Approval Code HSR101240

### Benefits

- Effective against all major annual grass weeds in turf, garden beds & potted plants during summer and winter
- Season-long control of annual weeds
- Reduces future weed set and germination
- Reduces the reliance on costly selective post-emergent herbicides
- Minimises nutrient and sunlight competition from annual grasses
- Application compatibility with wetting agents
- Low odour formulation
- Economical solution for your main annual weed problems including African Lovegrass, Parramatta Grass, Summer Grass, Crab Grass, Crowsfoot Grass and Winter Grass
- Flexibility to delay wash-in in turf for a few days if necessary

### Selectivity

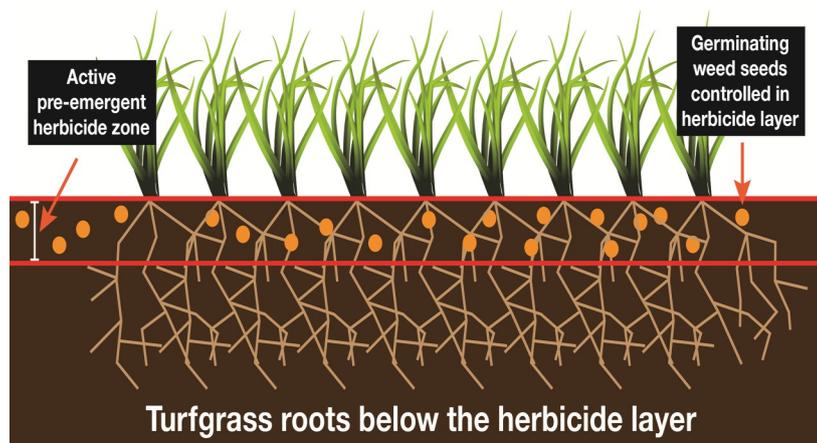
Spartan NZ Herbicide's selectivity is primarily through soil profile placement. Achieving this soil profile placement of the herbicide correctly is vital to obtain high efficacy. Applicators should ensure an even matrix flow through the soil profile to achieve a consistent and even zone of herbicide activity (see graphic below).

After application, plants which have the majority of their root system in the herbicide profile zone cannot effectively absorb the water and nutrients required for root and plant development. Therefore good even coverage and incorporation is required to ensure the weeds cannot recover by establishing roots outside the zone of herbicide activity.

Small seeded plants (i.e. annual grass weeds) are affected more by the herbicide than established grasses and plants as they germinate in the soil profile zone of herbicide placement (i.e. 100% of their germinating root system is affected by the herbicide).

Warm season grasses and established Garden & Potted Plants can be less prone to root inhibition due to the fact that they have multiple fibrous root systems with established roots beyond the depth of the zone of herbicide activity and are therefore still able to obtain moisture and nutrients.

### Relationship of Spartan NZ Herbicide zone, germinating weeds and turf root system



## Weed Management

Situation	Weeds Controlled	Rate	Critical Comments
<b>Established turf as listed:</b>  Bahia Grass ( <i>Paspalum notatum</i> ),  Buffalo Grass ( <i>Stenotaphrum secundatum</i> ),  Carpet Grass ( <i>Axonopus affinis</i> , <i>Axonopus compressus</i> ),  Couch, Common ( <i>Cynodon dactylon</i> ),  Couch, Hybrid ( <i>Cynodon dactylon</i> x <i>Cynodon transvaalensis</i> ),  Kikuyu ( <i>Pennisetum clandestinum</i> ),  Qld Blue Couch ( <i>Digitaria didactyla</i> ),  Seashore Paspalum ( <i>Paspalum vaginatum</i> ),  Zoysia ( <i>Zoysia japonica</i> , <i>Zoysia matrella</i> )	Barnyard Grass ( <i>Echinochloa crus-gali</i> ),  Crab Grass ( <i>Digitaria sanguinalis</i> ),  Crowsfoot Grass ( <i>Eleusine indica</i> )  Parramatta Grass ( <i>Sporobolus africana</i> ),  Rat's Tail Fescue ( <i>Vulpia myuros</i> ),  Summer Grass ( <i>Digitaria sanguinalis</i> )	1 to 3 L per ha  (10 to 30 mL per 100 m <sup>2</sup> )	Apply prior to weed emergence.  For residual control of up to 6 months use the higher rate listed.  A repeat application (3 to 4 months after initial application) may be needed if lower rates are used in high weed pressure situations or during extended germination periods due to environmental conditions.  Refer to <b>Application</b> section for detailed information.  Wash in with at least 6 mm rain or irrigation within 7 days of application.  <b>Note:</b> Crowsfoot Grass germinates later than Crab Grass and/or Summer Grass. In situations with multiple weeds present use higher rates to ensure adequate residual control.
	African Lovegrass ( <i>Eragrostis curvula</i> ),  Bahia Grass* ( <i>Paspalum notatum</i> ),  Kentucky Blue Grass ( <i>Poa patensis</i> )	2 to 3 L per ha  (20 to 30 mL per 100 m <sup>2</sup> )	*In the case of Bahia Grass, Spartan NZ Herbicide will be safe to use on existing turf swards where established Bahia Grass plants can be tolerated or are desirable. Spartan NZ Herbicide will only control newly germinating seed of Bahia Grass after it has been sprayed.
	Paspalum ( <i>Paspalum dilitatum</i> )	2 to 3.95 L per ha  (20 to 39.5 mL per 100 m <sup>2</sup> )	
		Winter Grass ( <i>Poa annua</i> )	1 to 2 L per ha  (10 to 20 mL per 100 m <sup>2</sup> )
3.95 L per ha  (39.5 mL per 100 m <sup>2</sup> )			<b>In areas where post-emergent herbicides for Winter Grass control may pose a high risk of tracking or off site damage (i.e. greens surrounds, slopes on high side of greens, etc.).</b>  Apply prior to weed emergence in late summer to early autumn for residual control of up to 6 months.  A repeat application (3 to 4 months after initial application) may be needed in high weed pressure situations or during extended germination periods due to environmental conditions.  Refer to <b>Application</b> section for detailed information.  Wash in with at least 6 mm rain or irrigation within 7 days of application.

Note: The above table represents only a modified extract from the full registered label. Always read the full product label before use.

## How to get the most out of your application

- Soil Preparation: Areas to be treated should be free of established weeds.
- Apply prior to germination of weeds.
- Apply at a water volume not lower than 500 L/ha per hectare (5 L per 100 m<sup>2</sup>).
- An addition of a soil penetrant is recommended to ensure an even matrix flow through the soil profile.
- The addition of crop oil concentrate may result in crop injury and reduced compatibility in the spray tank.
- Applications to Turf should be incorporated by 6 mm of spray irrigation or rainfall as soon as possible, at least within 7 days after application.
- Applications to Garden Beds & Potted Plants should be incorporated by 3 mm of spray irrigation or rainfall immediately after application.

## Weed Management

Situation	Weeds Controlled	Rate	Critical Comments
<p><b>Garden beds (under mulch) and potted plants in nurseries, public open spaces and residential or commercial gardens</b></p> <p>DO NOT use on food producing trees, vines, or plants</p>	<p><b>Nursery weeds such as:</b></p> <p>African Lovegrass (<i>Eragrostis curvula</i>),            Barnyard Grass (<i>Echinochloa crus-galli</i>),            Bittercress (<i>Cardamine hirsute</i>),            Capeweed (<i>Arctotheca calendula</i>),            Chickweed (<i>Ceratium glomeratum</i>),            Cotula (<i>Cotula australis</i>),            Cotula [Creeping Yellow Buttons] (<i>Cotula lineariloba</i>),            Crab Grass (<i>Digitaria sanguinalis</i>),            Creeping Tickfoil (<i>Desmodium triflorum</i>),            Crowsfoot Grass (<i>Eleusine indica</i>),            Creeping Oxalis (<i>Oxalis corniculata</i>),            Cudweed (<i>Gnaphalium spp</i>),            Dandelion (<i>Taraxacum officinale</i>),            Dock, Narrow Leaf (<i>Rumex tenax</i>),            Emilia or Purple Sow Thistle (<i>Emilia sonchifolia</i>),            Flatweed (<i>Hypochaeris radicata</i>),            Flickweed [Willow herb] (<i>Epilobium ciliatum</i>),            Florida Beggar-weed (<i>Desmodium tortuosum</i>),            Fumitory, Pink (<i>Fumaria officinalis</i>),            Nightshade, Black (<i>Solanum nigrum</i>),            Nightshade, Deadly (<i>Solanum dulcamara</i>),            Paspalum (<i>Paspalum dilatatum</i>),            Pearlwort (<i>Sagina procumbens</i>),            Prairie Grass (<i>Bromus willdenowii</i>),            Prickly Lettuce (<i>Lactuca serriola</i>),            Rat's Tail Fescue (<i>Vulpia myuros</i>),            Ryegrass (<i>Lolium perenne</i>),            Siratro (<i>Macroptilium atropurpureum</i>),            Sow Thistle (<i>Sonchus spp</i>),            Summer Grass (<i>Digitaria ciliaris</i>),            Willowherb (<i>Epilobium ciliatum</i>),            Winter Grass (<i>Poa annua</i>)</p>	<p>2 to 4 L per ha</p> <p>(20 to 40 mL per 100 m<sup>2</sup>)</p>	<p>Apply prior to weed emergence for residual control of up to 4 months in potted plants and 6 months in garden beds under mulch. Use higher rates in situations of high weed pressure or for difficult to control weeds.</p> <p>Apply the product to garden beds and wash in before applying mulch so that the herbicide reaches the soil.</p> <p>Refer to <b>Application</b> section for detailed information.</p> <p>For Garden Beds (under mulch): An addition of a soil penetrant wetting agent is recommended to ensure an even matrix flow through the soil profile.</p> <p>When used on garden beds or potted plants wash in immediately with minimum 3 mm rain or irrigation.</p>

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## Restraints

DO NOT blend Spartan NZ Herbicide onto dry fertiliser or any other granular material.

DO NOT apply to turf under stress.

DO NOT apply to golf course putting greens or bowling greens.

DO NOT apply to newly seeded, sodded or sprigged turf. Delay application until turf is at 100% cover and root system is developed beyond a 3 cm depth.

DO NOT apply to garden beds over the top of mulch.

DO NOT apply to recently re-potted or newly potted seeds, cuttings, divisions or plants. Allow a period of establishment within which a substantial root system can be developed.

DO NOT apply if heavy rain has been forecast within 48 hours.

DO NOT apply to waterlogged soil.

DO NOT irrigate to the point of run-off within 3 days of application.

DO NOT apply to turf which is not well-established.

Spartan NZ Herbicide **MUST NOT** be applied at rates exceeding 1.9 kg ai/ha (3.95 L/ha) when using ground-based boom equipment on turf or 3.84 kg ai/ha (8 L/ha) when using hand-held equipment.

DO NOT apply to the same area more than twice in any 365 day period; and an interval of at least 90 full days must be observed before Spartan NZ Herbicide is re-applied to the same area.

DO NOT apply with aircraft or through any type of irrigation equipment, Spartan NZ Herbicide must be applied by ground-based methods only.

Spartan NZ Herbicide **MUST NOT** be applied within 50 metres of a downwind water body or non-target vegetation.

**Pack Sizes: 1L & 10L**



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**Spartan NZ Herbicide**

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