Spartan
Herbicide

An ounce of prevention is worth a pound of cure

Lawn Pride AUSTRALIA

TURF culture

TURF culture

Lawn Pride AUSTRALIA

Plant Protection Solutions



For Pre-Emergent Control of Weeds in Established Turf

Spartan Herbicide

Technical Brief

Active Ingredient:	480 g/L Prodiamine
Chemical Family:	Dinitroaniline (DNA)
Mode of Action Group:	D
Formulation:	Suspension Concentrate (SC)
Mode of Action:	Spartan Herbicide is a member of the Dinitroaniline (DNA) family of herbicides. Spartn 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
Behaviour in Plants:	Spartan Herbicide does not translocate through the roots into the stem and leaves.

Benefits

- Effective against all major annual grass weeds in turf 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
- Unscheduled (exempt from poison scheduling)
- 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 for a few days if necessary

Selectivity

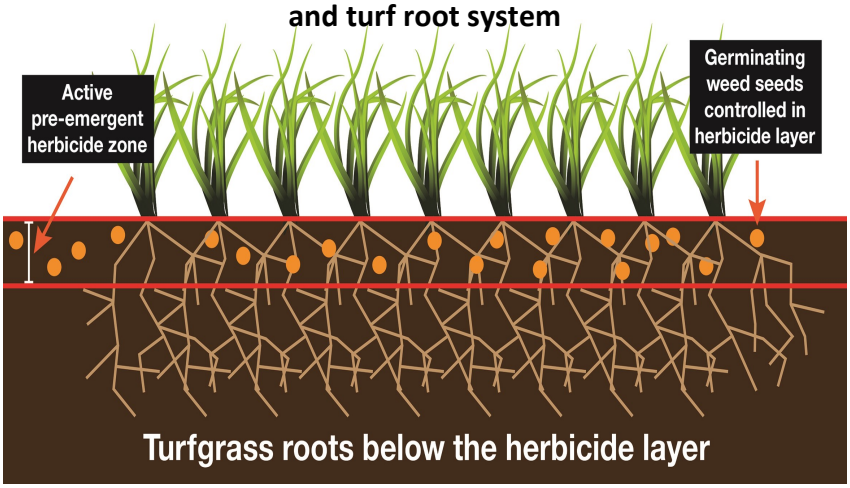
Spartan Herbicide's selectivity is primarily through soil profile placement. Achieving this soil profile placement of the herbicide correctly is vital to obtain high efficacy. Applicators should ensure an even matrix flow through the soil profile to achieve a consistent and even zone of herbicide activity (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 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 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 are still able to obtain moisture and nutrients.

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



Weed Management

Situation	Weeds Controlled	Rate	Critical Comments
Established turf as listed: Bahia Grass (*Paspalum notatum*), Buffalo Grass (*Stenotaphrum secundatum*), Carpet Grass (*Axonopus affinis, Axonopus compressus*), Couch, Common (*Cynodon dactylon*), Couch, Hybrid (*Cynodon dactylon x Cynodon transvaalensis*), Kikuyu (*Pennisetum clandestinum*), Qld Blue Couch (*Digitaria didactyla*), Seashore Paspalum (*Paspalum vaginatun*), Zoysia (*Zoysia japonica, Zoysia matrella*)	Barnyard Grass (*Echinochloa crus-gali*), Crab Grass (*Digitaria sanguinalis*), Parramatta Grass (*Sporobolus africana*), Rat's Tail Fescue (*Vulpia myuros*), Summer Grass (*Digitaria sanguinalis*)	1 to 3 L per ha (10 to 30 mL per 100 m2)	Apply prior to weed emergence in early spring for residual control of up to 6 months. 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 **Application** section for detailed information.
	Crowsfoot Grass (*Eleusine indica*)		Apply prior to weed emergence in early spring. For residual control of up to 4 months use 1 to 2 L/ha. For residual control of up to 6 months use 2 to 3 L/ha. 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. Note: 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. Refer to **Application** section for detailed information.
	African Lovegrass (*Eragrostis curvula*), Bahia Grass (*Paspalum notatum*), Kentucky Blue Grass *(Poa patensis*)	2 to 3 L per ha (20 to 30 mL per 100 m2)	Apply prior to weed emergence in early spring. Residual control of up to 6 months. 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 **Application** section for detailed information.
	Paspalum (*Paspalum dilitatum)*	2 to 4 L per ha (20 to 40 mL per 100 m2)	
	Winter Grass (*Poa annua)*	1 to 2 L per ha (10 to 20 mL per 100 m2)	**In the absence of emerged *Poa annua.*** 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 **Application** section for detailed information.
		4 L per ha (40 mL per 100 m2)	**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.).** 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 **Application** section for detailed information.

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

Packaging

Pack sizes: 500 mL, 10 L

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 be lower than 500 L/ha per hectare (5 L per 100 m2).
- 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.
- Spartan Herbicide should be incorporated by 6 mm of spray irrigation or rainfall as soon as possible, at least within 7 days after application.

Restraints

DO NOT blend Spartan 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 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.

DO NOT apply with aircraft or through any type of irrigation equipment.

Mixing and Compatibility

MIXING
Add the required quantity of Spartan Herbicide directly to a spray tank containing 2/3 of the required spray volume. Add the rest of the water and ensure the mix is thoroughly agitated before application.

COMPATIBILITY
As formulations of other manufacturers' products are beyond the control of Turf Culture, and water quality varies with location, all mixtures should be tested prior to mixing commercial quantities. Spartan Herbicide is compatible with Coliseum Herbicide and Skeletor Herbicide.

All of Turf Culture's products come with a formulation guarantee, ensuring turf managers can be extremely confident they are applying a quality product.

TURF culture

Lawn Pride AUSTRALIA

Australian owned

"Professional Products - Professional Results"

www.lawnpride.com.au