



Clean Sweep Trio

Fungicide

Tri-Active Control Technology

*Multi-site protection delivering strong Curative &
Preventative Performance.*

Effective ERI & Fairy Ring Control.



Product Overview



- **Clean Sweep Trio Fungicide** is a unique fungicide formulation containing 119g/L Thiophanate methyl, 37.5g/L Fluazinam and 36g/L Tebuconazole.
- Clean Sweep Trio Fungicide is registered for the broad spectrum, curative and preventative control of ERI, Fairy Ring, Anthracnose, Brown Patch, Dollar Spot and Helminthosporium in all recreational turf management situations.
- Clean Sweep Trio Fungicide is a Suspension Concentrate (SC) formulation.
- Clean Sweep Trio Fungicide is formulated in Australia.

Formulated in Australia



Key benefits



- **Tri-Active Control Technology. Unique, industry first 3-way fungicide mixture.**
- Strong curative and preventative activity.
- Broad Spectrum Activity - Registered for the control of 9 causal pathogens.
- **Excellent activity on ERI (Couchgrass Decline and Take All Patch) pathogens.**
- **Excellent preventative and early curative control of Fairy Ring.**
- Strong inside - out protection.
- Contains Thiophanate methyl – a newer systemic fungicide molecule for the Australian turf industry.
- Non-strobilurin based. Can be used in rotation with strobilurin based fungicides, particularly in the summer months.
- **Easy to position for maximum disease control. All 3 active ingredients will be effective when used as a foliar applied fungicide for leaf diseases, or as a soil applied fungicide for root diseases.**

GROUP	1	29	3	FUNGICIDE
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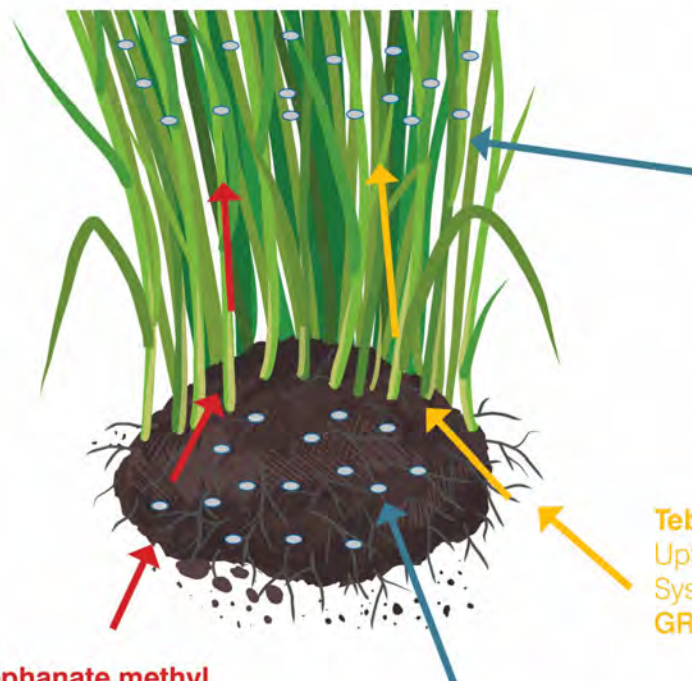


Tri-Active Control Technology

GROUP 1 | 29 | 3 FUNGICIDE



Clean Sweep Trio
Fungicide



Fluazinam
Contact - binds to leaf
(when applied as foliar)
Superior rainfast properties.
GROUP 29

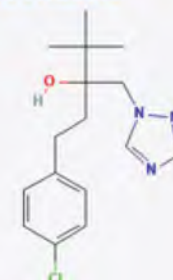
Tebuconazole
Uptaken by roots.
Systemic upwards in plant
GROUP 3

Thiophanate methyl
Uptaken by roots
Systemic upwards in plant
GROUP 1

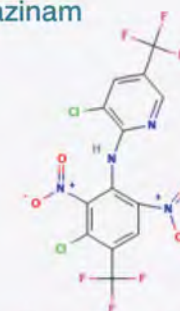
Fluazinam
Remains active in soil up to 32
days.
(when applied as soil drench)
GROUP 29

indigo
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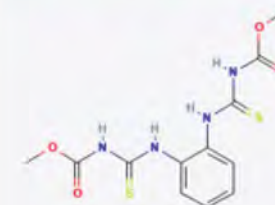
Tebuconazole



Fluazinam



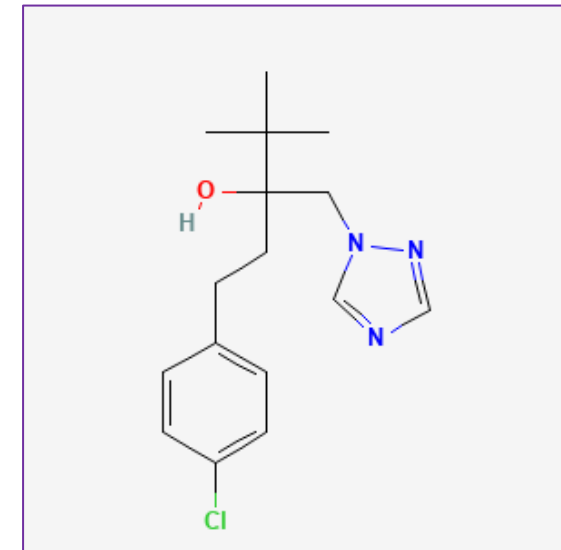
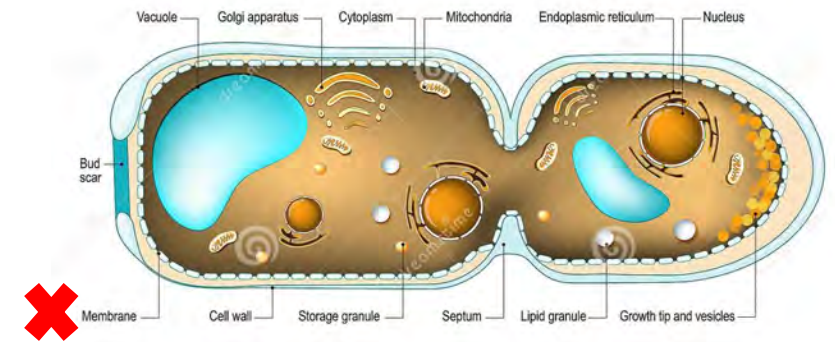
Thiophanate methyl



Mode of Action: Tebuconazole

- Tebuconazole is a systemic fungicide that once absorbed by roots and leaves moves upwards (acropetal) within the plant.
- Tebuconazole possesses curative, protective and eradicant activity when controlling turfgrass fungi. Tebuconazole is a Group 3 fungicide.
- It works in controlling turf pathogens by disrupting the fungi's membrane function.
- It is classified as a DMI inhibitor as it stops the demethylation step in the biosynthesis of ergosterol, a vital component of cell walls (membrane) in many fungi.

FUNGAL CELL



GROUP 3 FUNGICIDE

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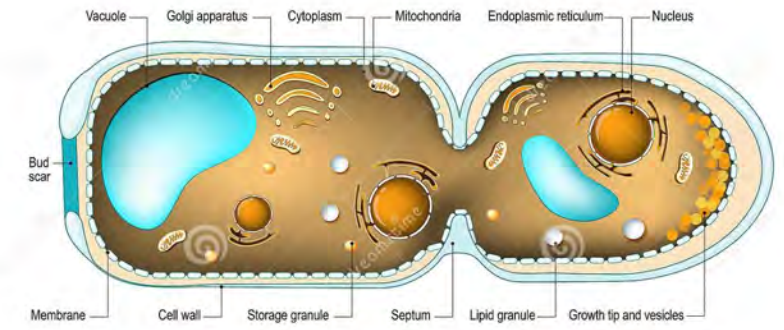
Mode of Action: Fluazinam

- Fluazinam, a member of the pyridinamine family, disrupts the energy production in the fungus by restricting ATP production, a key molecule used for production of physiological processes in fungal cells.
- Fluazinam has only minor systemic activity. It has stronger protectant / preventative properties than curative activity, however data indicates that with multiple applications curative control can be achieved.
- Fluazinam is the only registered fungicide for turf in FRAC group 29. It has no known resistance and as a multi-site contact, it has very low risk of developing resistance.
- Fluazinam has good soil activity, with soil half life of up to 32 days.

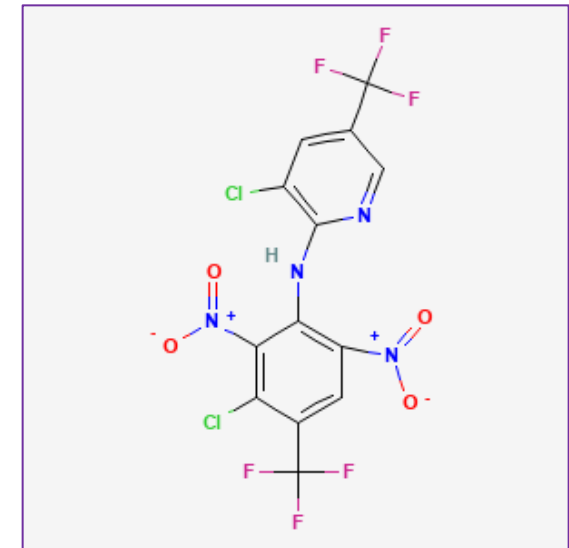
GROUP 29 FUNGICIDE

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FUNGAL CELL



Multiple Site Activity



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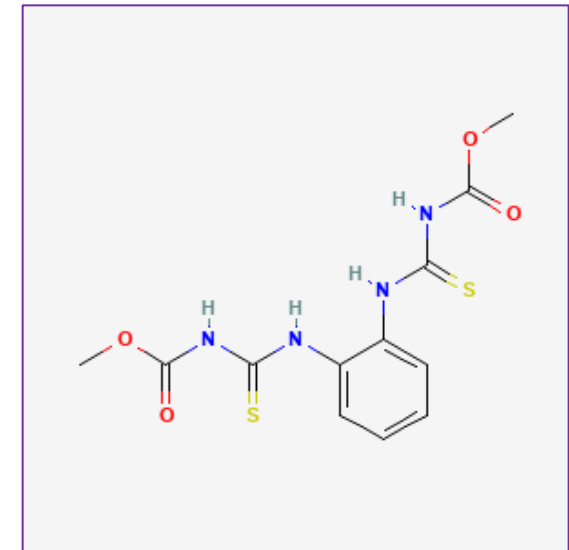
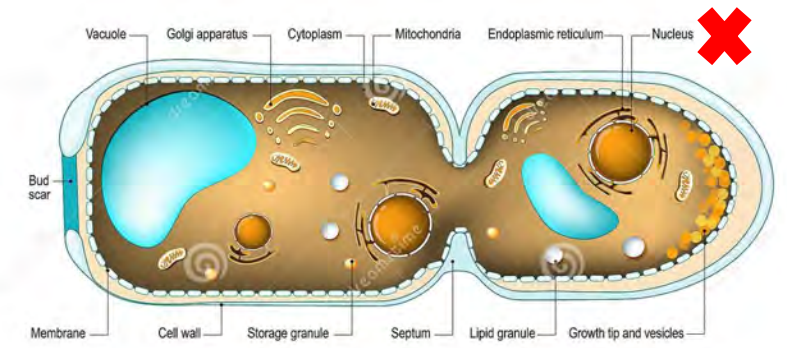
Mode of Action: Thiophanate methyl

- Thiophanate-methyl is a member of the benzimidazole group of fungicides. It is a broad spectrum systemic fungicide with protective and curative action, and is absorbed by the roots and leaves of turf.
- Thiophanate methyl is a tubulin inhibitor fungicide falling into the FRAC Group 1.
- It's Mode of Action is the inhibition of microtubule assembly.
- Thiophanate methyl breaks down to carbendazim and methyl within the plant and soil. In mammals, Thiophanate methyl does not metabolise to carbendazim.

GROUP 1 FUNGICIDE

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Anthracnose



Black Helminthosporium



Brown Patch



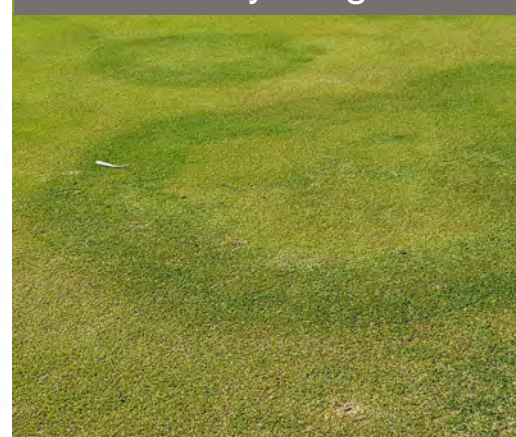
Dollar Spot



ERI



Fairy Ring



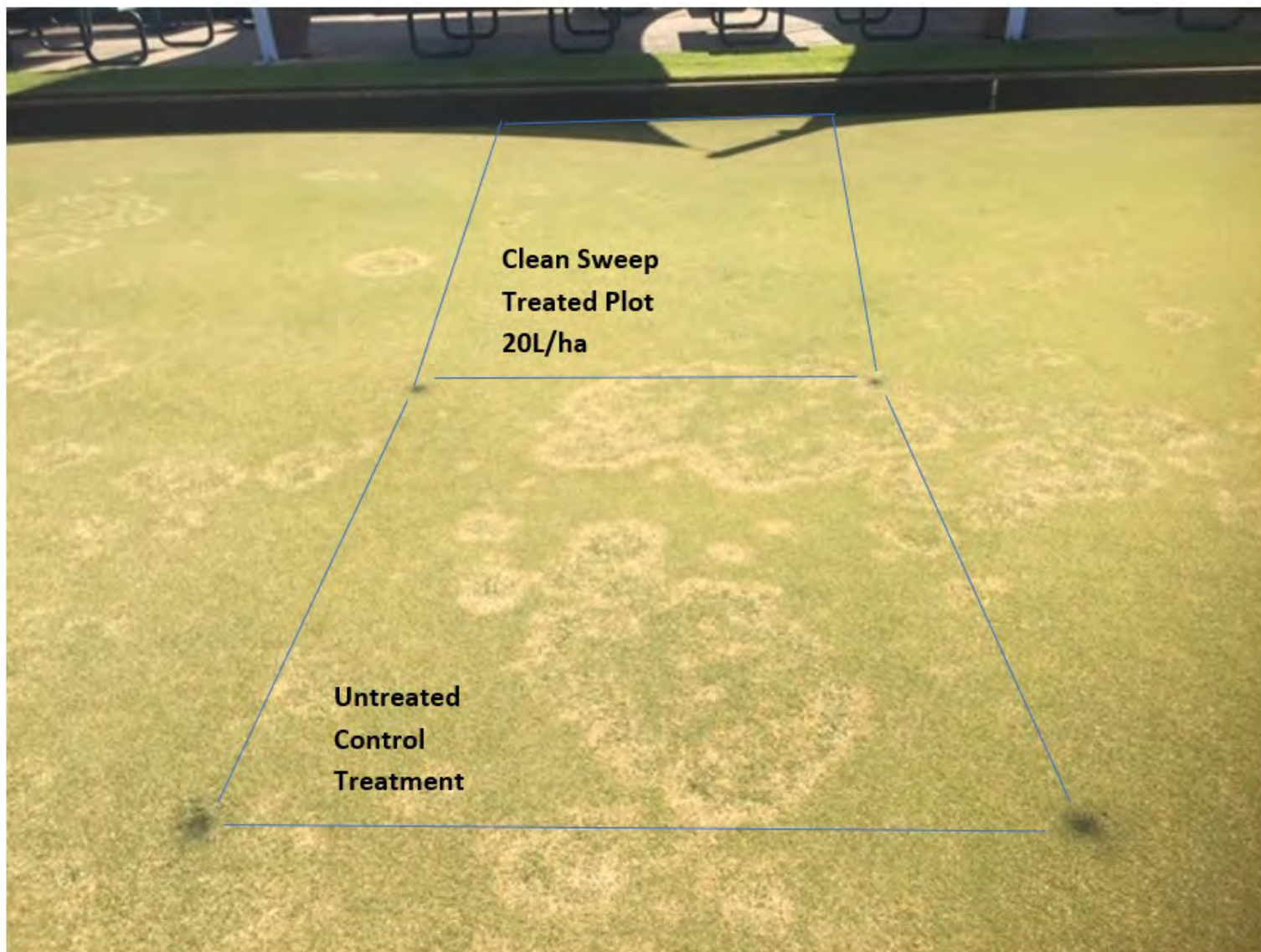
White Helminthosporium



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Key Diseases Controlled

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Impressive Early Curative ERI Control

*Field Trial conducted by Independent Field Trial
Contractor – Gcenseo.*

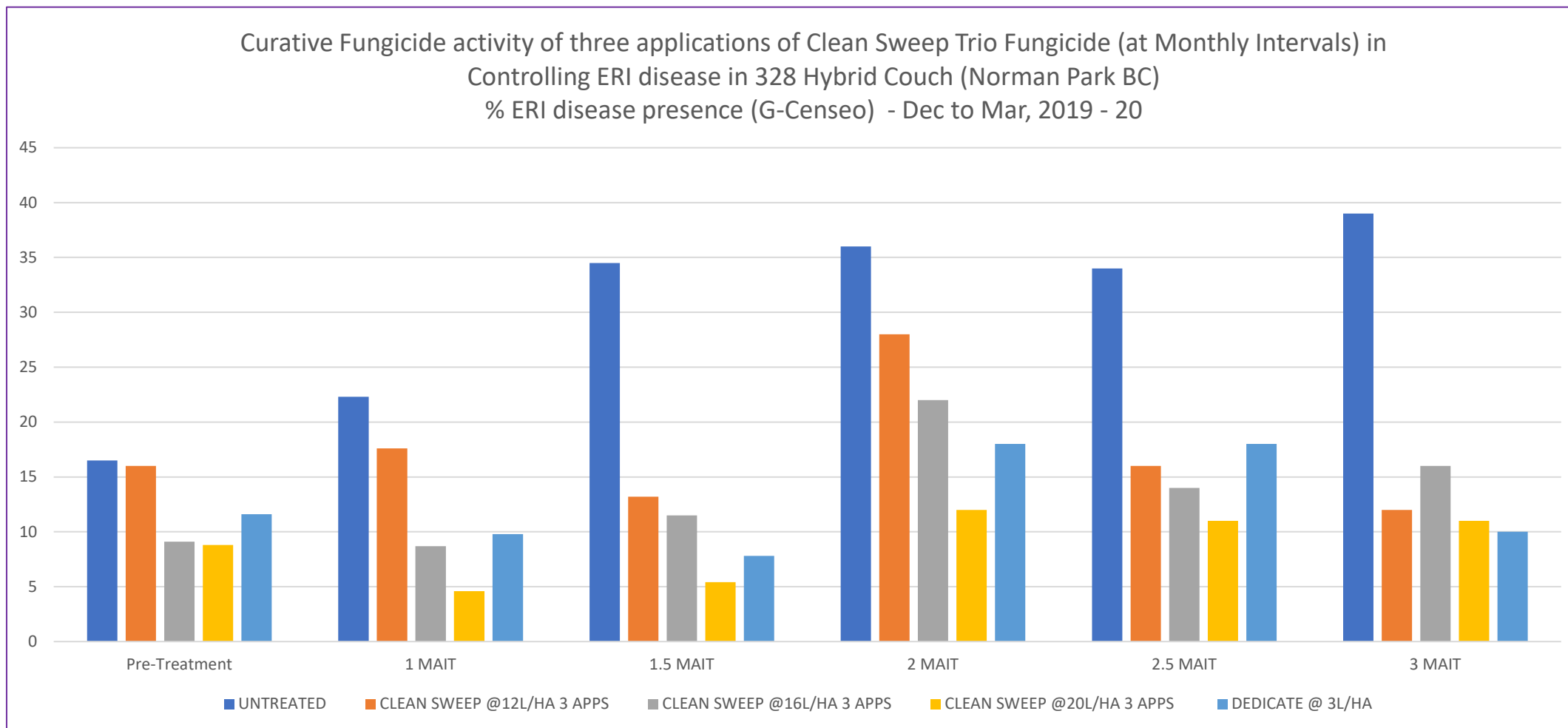
Trial was applied as Curative applications on the 6th
December, 2019. 3 applications of ProForce Clean
Sweep Trio were applied monthly at the rate of 20L/ha.

Trial Location: Norman Park Bowls Club.

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Excellent ERI Curative Performance

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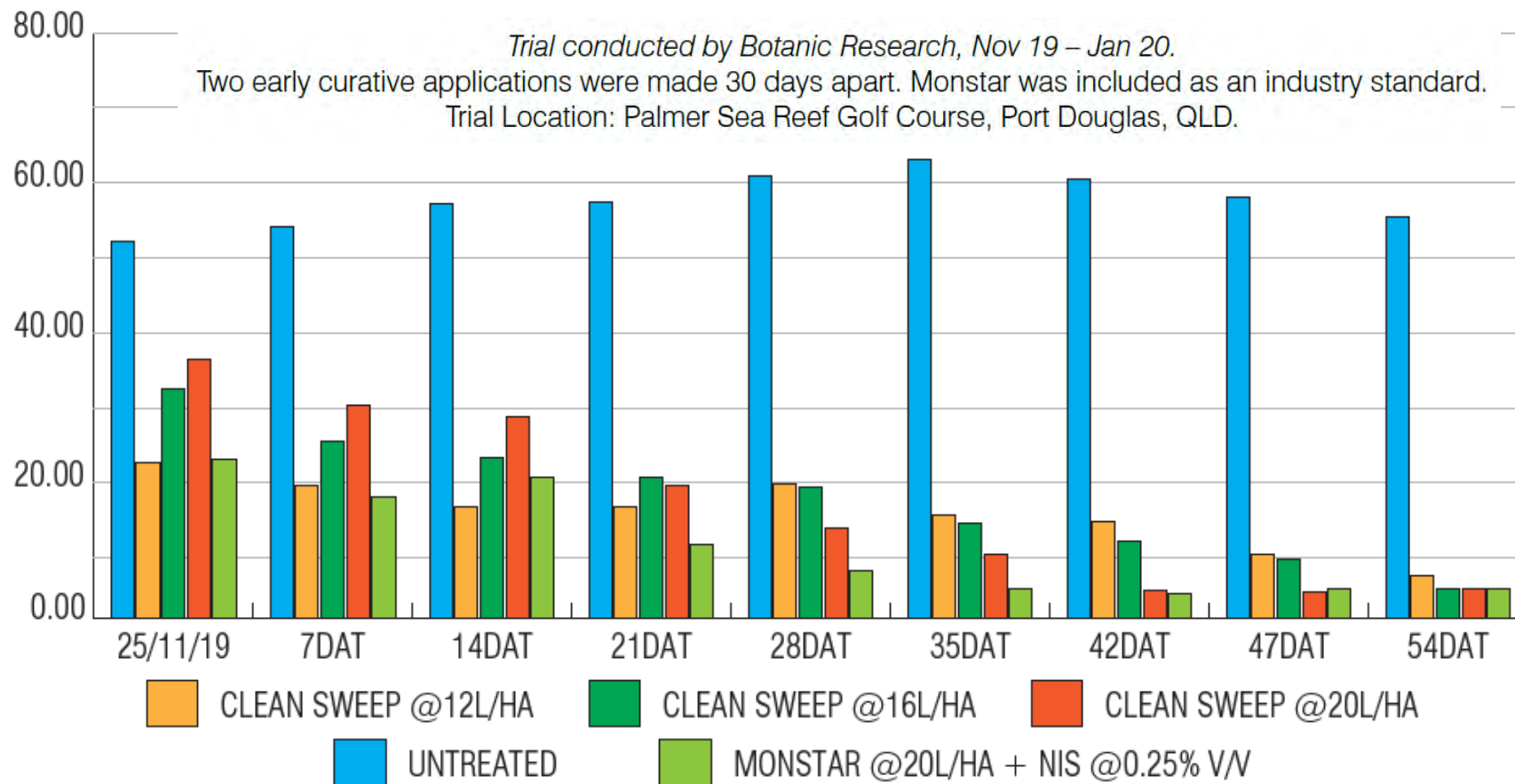


Effective Curative Fairy Ring Control

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% Fairy Ring Activity

Early curative control of Fairy Ring with ProForce Clean Sweep Trio Fungicide and an industry Standard versus an untreated control

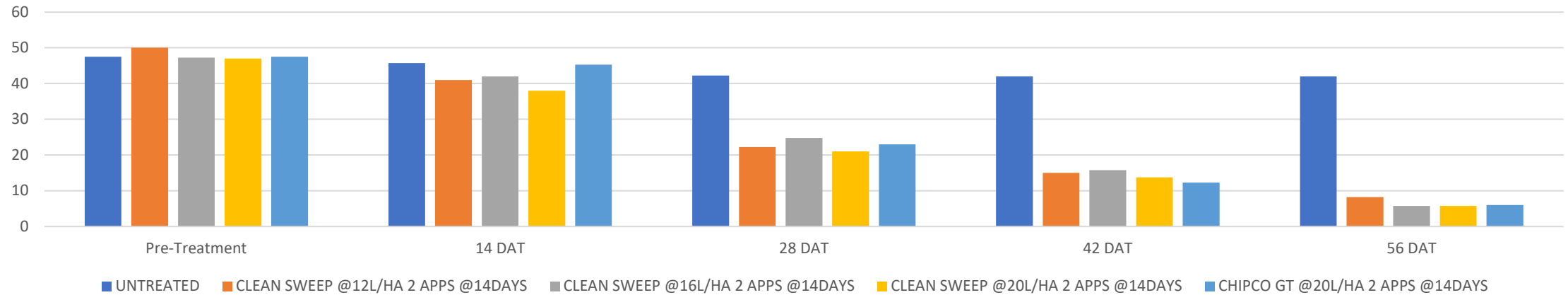


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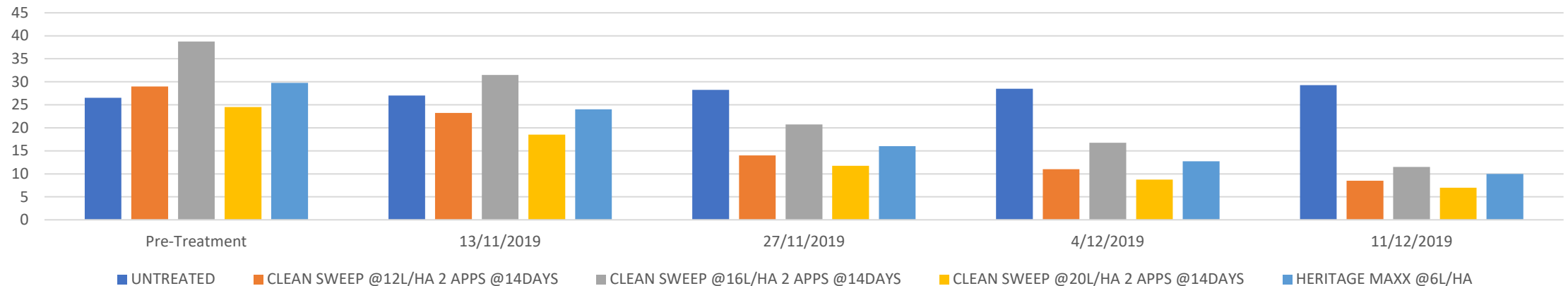
Reliable Anthracnose Curative Control

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Fungicide

Curative Fungicide activity of two applications of Clean Sweep Trio Fungicide (14 days apart) in Controlling Anthracnose disease in Bentgrass (Cronulla GC)
% Anthracnose disease presence (Westgate) - October, 2019

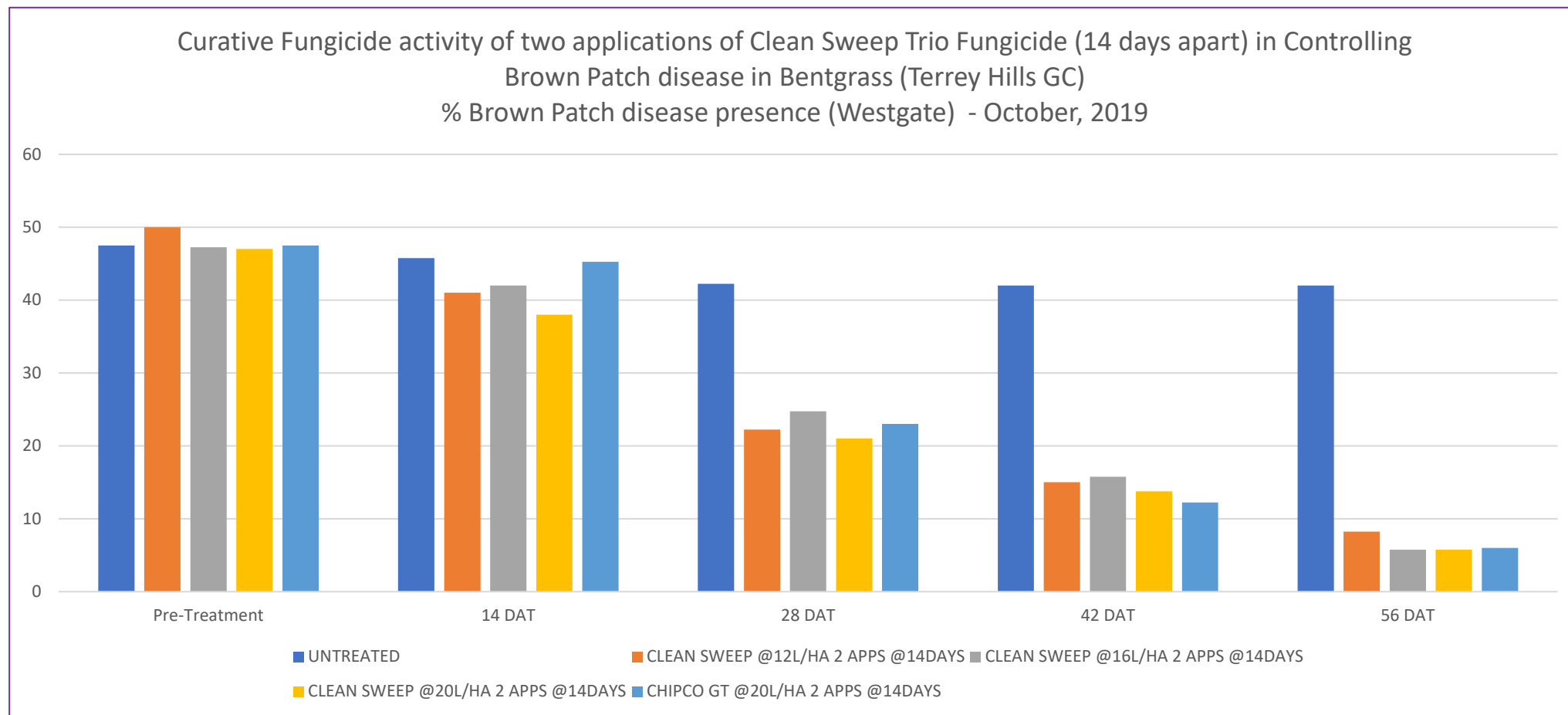


Curative Fungicide activity of two applications of Clean Sweep Trio Fungicide (14 days apart) in Controlling Anthracnose disease in Bentgrass (Pymble GC)
% Anthracnose disease presence (Westgate) - October, 2019



Solid Brown Patch Curative Performance

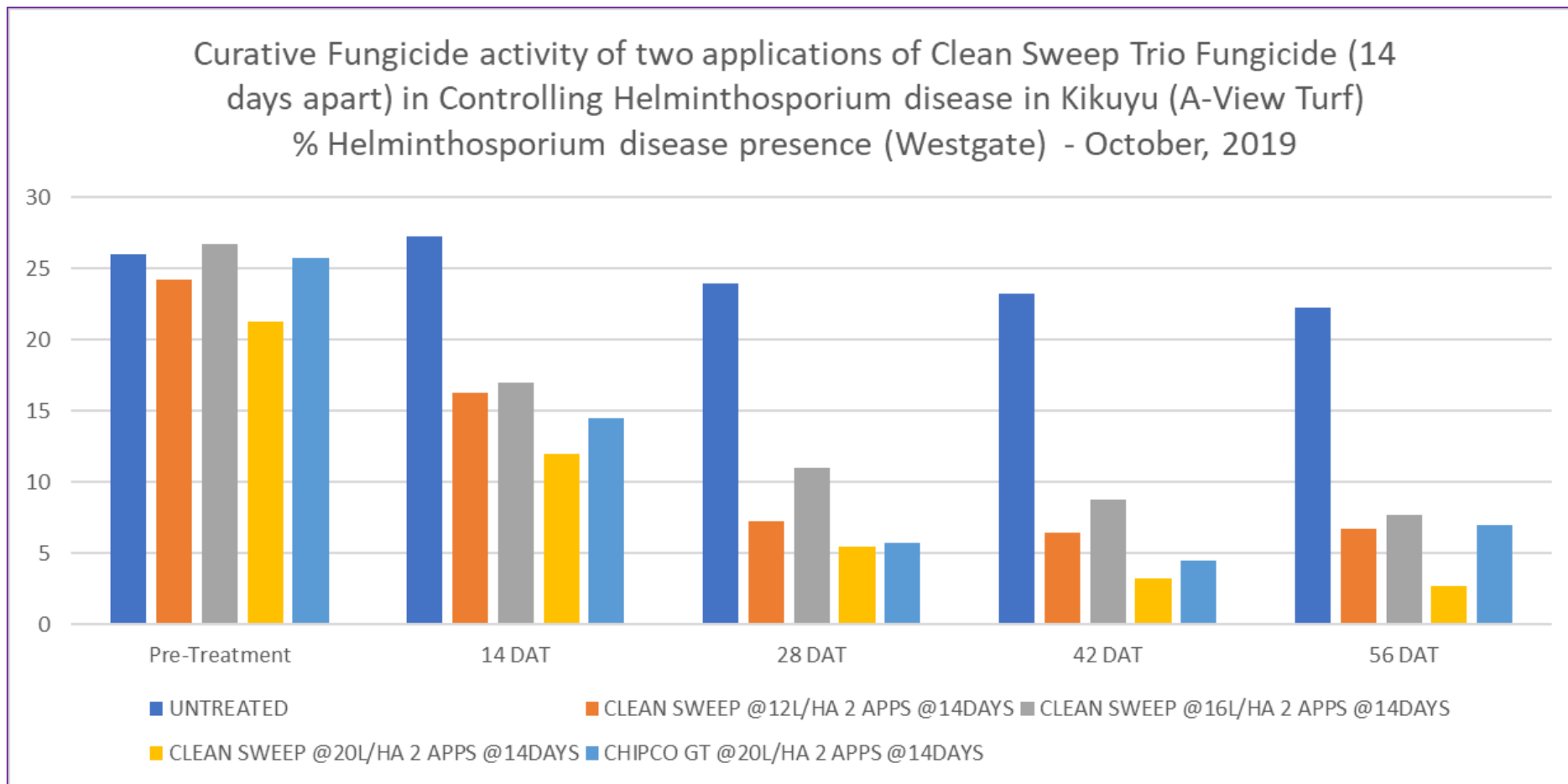
ProForce
Clean Sweep Trio
Fungicide



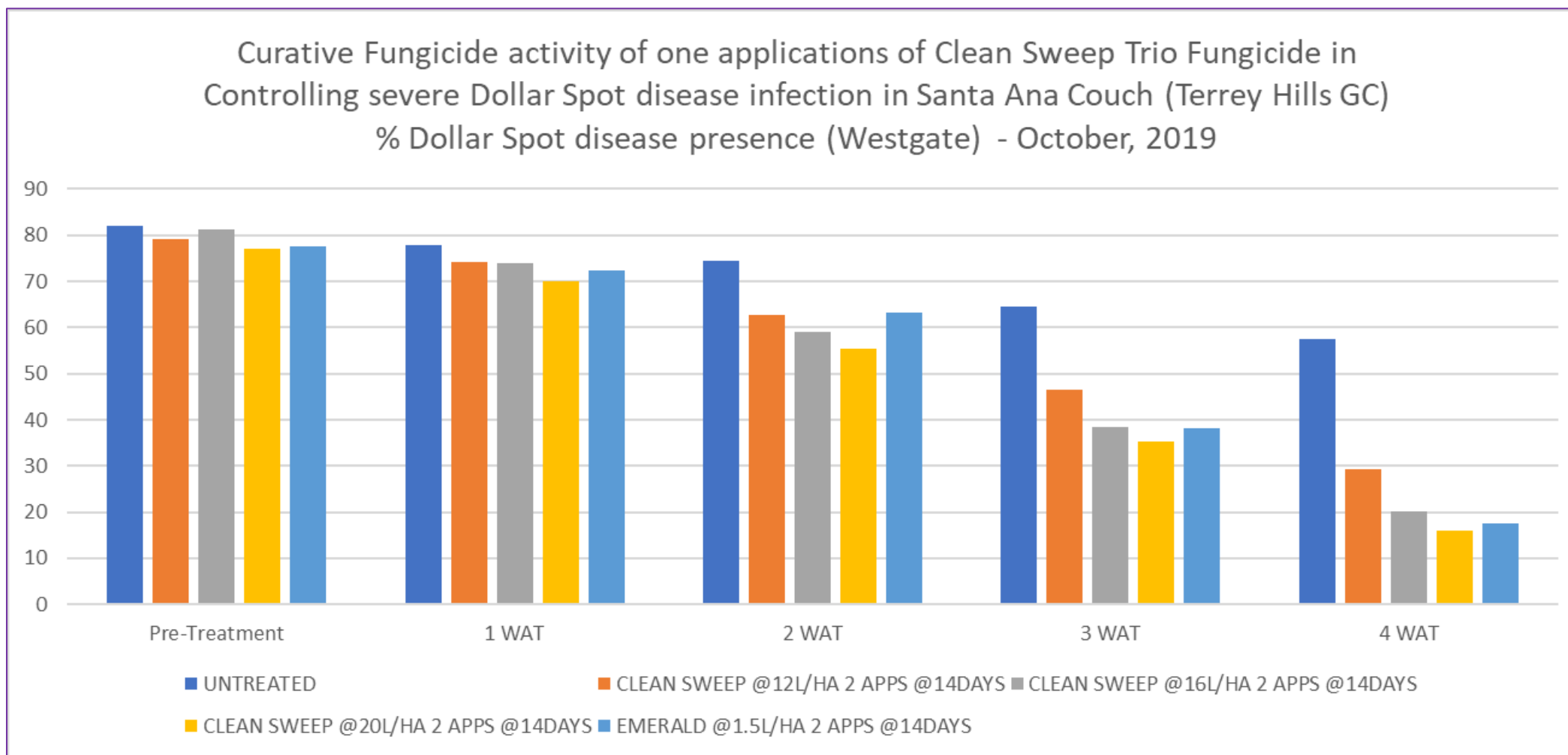
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Good Helminthosporium Curative Performance

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Efficient Dollar Spot Curative Performance



Clean Sweep Trio Fungicide – Use Rates

SITUATION & CROP	DISEASE	RATE/HA	CRITICAL COMMENTS
Turf including but not limited to golf greens, tees and fairways, bowling clubs, sports fields, racetracks, turf farms and other managed turf situations	Dollar Spot (<i>Sclerotinia homeocarpa</i>), Helminthosporium Disease (<i>Bipolaris</i> , <i>Drechslera</i> & <i>Exserohilum</i> spp.), Anthracnose (<i>Colletotrichum</i> spp.), Brown Patch (<i>Rhizoctonia solani</i>)	12-20 L/ha in 400-800 L of water per hectare	<p>Preventative applications: Spray when conditions are favourable for disease development. Make a second application 14-21 days later if conditions continue to favour disease development.</p> <p>Early curative applications: Spray as soon as possible after first symptoms are detected. Use rates towards the higher end of the range and shorten intervals.</p> <p>DO NOT mow or water treated area until turf or lawn is thoroughly dry, ideally allow 24 hours.</p> <p>Brown Patch: If hyphae are detected in the root zone use 1000 L/ha water.</p>
	Fairy Ring (<i>Basidiomycete</i>)	20 L/ha in a minimum of 1000L of water per hectare	Apply preventatively when conditions are favourable for disease development or as an early curative as soon as possible after first symptoms are detected. Make a second application 21-28 days later. The use of a quality non-ionic soil surfactant is recommended prior to or at the time of application. Irrigate following application to position the fungicide into the rootzone, where the disease is active.
	Ectotrophic Root infecting Fungi (ERI) including Couchgrass Decline and Take All Patch	20 L/ha in a minimum of 1000L of water per hectare	<p>Preventative applications: Spray in early Spring and late Autumn, after renovation and recovery of active growth. Make a second application 1 month later. Ongoing monthly treatments may be required.</p> <p>Early curative applications: Spray as soon as possible after first symptoms are detected. Make a second application 1 month later.</p>

ERI & Fairy Ring Management Considerations

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Fairy Ring Management Considerations: Preventive fairy ring control can be much more effective and consistent over curative measures. For effective Fairy ring prevention, multiple fungicide applications need to be applied prior to soil temperatures reaching 21°C (Using a 5-day average soil temperature at a 5cm depth) in Spring. Ideal application timing for the initial application is between 15 – 18°C. Preventative fungicide applications in cooler climates can be initiated when soil temperatures reach 12°C. Repeat applications of ProForce Clean Sweep Trio at 3-4 weekly intervals will obtain the best results.

ERI Disease Management Considerations: Timely preventative applications are more effective than curative treatments. Initiate applications in Spring before temperatures reach 18 degrees Celsius (*Magnaporthe*). Make 3 applications at monthly intervals before key disease symptoms occur. Initiate applications in Autumn when air temps reach 26°C and RH 75% or higher. Position the product into the rootzone for most effective performance.



Maximising Performance



Leaf and Crown Diseases

eg. Dollar Spot, Helminthosporium, Anthracnose, Brown Patch

- Application volume should be adequate to ensure thorough and even coverage of the turf leaves and penetration into the crowns. Ideal application volumes should be between 400 - 800 L/ha.
- For best results use coarse [Turbo Teejet* or AIXR Teejet* (11004 or 11005)] nozzles, at 5 km/h and 3 bar pressure.
- In higher cut turf (>15 mm) a significant spray shielding effect can occur, impacting negatively on spray penetration and even coverage at low application volumes.
- Good control requires good coverage. Application should be made in sufficient water to ensure thorough coverage.

Root Infecting Diseases

eg. Fairy Ring, Ectotrophic Root Infecting Fungi (ERI), Brown Patch

- Apply in a minimum of 1000 L water/ha using coarse [Turbo Teejet* or AIXR Teejet* (11004 or 11005)] nozzles, at 3-4 km/h and 3 bar pressure and irrigate within 1 hour of application to wash the product into the upper root zone.

General Application Considerations

- Make preventative applications when conditions are favourable for disease development. Make a second application 14-28 days later if conditions continue to favour disease development.
- For early curative disease control, spray as soon as possible after first symptoms of disease activity are detected. Use rates towards the higher end of the range and shorten intervals to maximise control.
- Avoid mowing treated area until turf or lawn is thoroughly dry, ideally allow 24 hours.



Clean Sweep Trio

Fungicide

*Other
Fungicides
available
from Indigo
Specialty*



TURF & ORNAMENTAL FUNGICIDES

Product	Active Ingredients	Formulation	Pack Size	Mode of Action	Contact or Systemic Activity	Rate	QRC
ProForce Grenadier 800WG Fungicide	800g/kg Fosetyl-al	Wettable Granule	5kg	33	Systemic (both directions)	Turf: 125g/100m ² or 12.5kg/ha Ornamentals: 90g per 100L of water	
ProForce Regiment 550EC Fungicide	550g/L Propiconazole	Emulsifiable Concentrate	10L	3	Systemic (upwards)	Turf: 14-28mL/100m ² Boronia: 230-460mL/ha Perennial Ryegrass: 230mL/ha	
ProForce Shrapnel 600SL Fungicide	600g/L Propamocarb	Soluble Liquid	5L	28	Systemic (upwards)	Turf: 45-65mL per 100m ² (4.5-6.5L/ha) Ornamentals: 15mL/10L of water	
ProForce Solitaire 240ME Fungicide	240g/L Metalaxyl-M	Micro-emulsion Concentrate	1L, 5L	4	Systemic (upwards)	17-35mL/100m ² or 1.75-3.5L/ha	
ProForce Squadron Weatherace 720SC Fungicide	720g/L Chlorothalonil	Suspension Concentrate	10L	M5	Contact / Protectant	Turf: 130-200mL per 100m ² (13-24L/ha) Ornamentals: 100mL/100L of water	
ProForce Tombstone Duo Fungicide	200g/L Tebuconazole, 100g/L Trifloxystrobin	Suspension Concentrate	500mL, 1L	11 & 3	Systemic (upwards) + Translaminar	20-30mL in 8-16L of water per 100m ² or 2-3L/ha	
ProForce Voltar GT 250SC Fungicide	250g/L Iprodione (oil based)	Suspension Concentrate	5L	2	Locally Systemic (translaminar)	Turf: 90-180mL/4-150L of water per 100m ² or 9-18L/ha Ornamentals: 200mL/100L of water	
ProForce Voltar 500SC Fungicide	500g/L Iprodione	Suspension Concentrate	1L, 5L	2	Locally Systemic (translaminar)	Turf: 45-90mL/5-150L of water per 100m ² or 4.5-9L/ha Ornamentals: 100mL/100L of water	
Azo-Force 250SC Fungicide	250g/L Azoxystrobin	Suspension Concentrate	2.5L	11	Systemic (upwards) + Translaminar	12-23mL per 100m ² in 4-8L of water or 1.2-2.3L/ha	

Product	Active Ingredient	Anthrachnose	Black Helminthosporium	Brown Patch	Curvularia	Couch Decline	Dollar Spot	ERI	Fairy Ring	Fusarium	Grey Leaf Spot	Leptosphaerulina	Pythium	Red Thread	Rust	Spring Dead Spot	White Helminthosporium	Take All Patch	Rate
Azo-Force 250SC Fungicide	250g/L Azoxystrobin	•	•	•						•	•		•	•			•		12 - 23 / 100m ² (1.2 - 2.3L/ha)
ProForce Clean Sweep Trio Fungicide	119g/L Thiophanate-methyl, 37.5g/L Fluazinam, 36g/L Tebuconazole	•	•	•		•	•	•	•								•	•	120 - 200mL/100m ² (12 - 20L/ha)
ProForce Grenadier 800WG Fungicide	800g/kg Fosetyl aluminium												•						125g/100m ² (12.5kg/ha)
ProForce Pistol 600SC Fungicide	600g/L Thiram		•	•						•			•				•		16-20mL/100m ² (16 - 20L/ha)
ProForce Regiment 550EC Fungicide	550g/L Propiconazole						•								•	•			14-28mL/100m ² (1.4 - 2.8L/ha)
ProForce Shrapnel 600SC Fungicide	600g/L Propamocarb												•						45-65mL/100m ² (4.5 - 6.5L/ha)
ProForce Solitaire 240ME Fungicide	240g/L Metalaxyl-M												•						17-35mL/100m ² (1.75 - 3.5L/ha)
ProForce Squadron Weatherace 720SC Fungicide	720g/L Chlorothalonil			•			•				•								130 - 240mL/100m ² (13 - 24L/ha)
ProForce Tombstone Duo Fungicide	200g/L Tebuconazole, 100g/L Trifloxystrobin	•	•	•	•		•	•		•		•	•				•		20 - 30mL in 8 - 16L of water per 100m ² (2-3L/ha)
ProForce Voltar GT 250SC Fungicide	250g/L Iprodione		•	•			•			•						•	•		90 - 180mL / 4-150L of water per 100m ² (9-18L/ha)
ProForce Voltar 500SC Fungicide	500g/L Iprodione		•	•	•		•			•						•	•		45 - 90mL / 4-150L of water per 100m ² (4.5 - 9L/ha)



Clean Sweep Trio

Fungicide



SPECIALTY PRODUCTS

THANK YOU

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