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Curatol 120SC

Insecticide

Specialist Weevil Control for Turf Professionals

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Product Overview Curatol 120SC at a Glance

- Target Pest: Argentine Stem Weevil (*Listronotus bonariensis*)
- Active Ingredient: 120 g/L Spinosad
- Formulation: Suspension Concentrate (SC)
- New active for the Australian turf market.
- Group 5 Insecticide (Unique Mode of Action)
- Registered for use on: Golf courses, sports fields, and other fine turf areas.

Why Curatol? Key Advantages:

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- Fast knockdown (within 3 days)
- Non Scheduled Chemistry
- Exhibits Translaminar Activity
- Residual control up to 4 weeks (Takes population time to rebuild)
- Dual activity on both larvae and adults
- Excellent fit in IPM programs – low toxicity to beneficials
- Low odour, rainfast once dry, easy to mix and apply.

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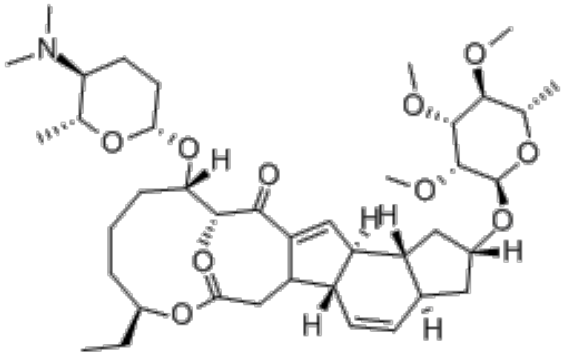
Origins of Spinosad



- Spinosad was discovered in 1982 by scientists at Eli Lilly and Company.
- It was isolated from a rare, naturally occurring soil bacterium called *Saccharopolyspora spinosa*.
- Produces a family of compounds called spinosyns, which are secondary metabolites with potent insecticidal properties.
- Spinosad is composed primarily of two spinosyns: Spinosyn A (about 85%) & Spinosyn D (about 15%).
- Spinosad is produced by fermenting *S. spinosa* in a controlled environment.
- The spinosyns are harvested, refined, and formulated to make the insecticidal products.

https://www.youtube.com/watch?v=7866pqzY0jY

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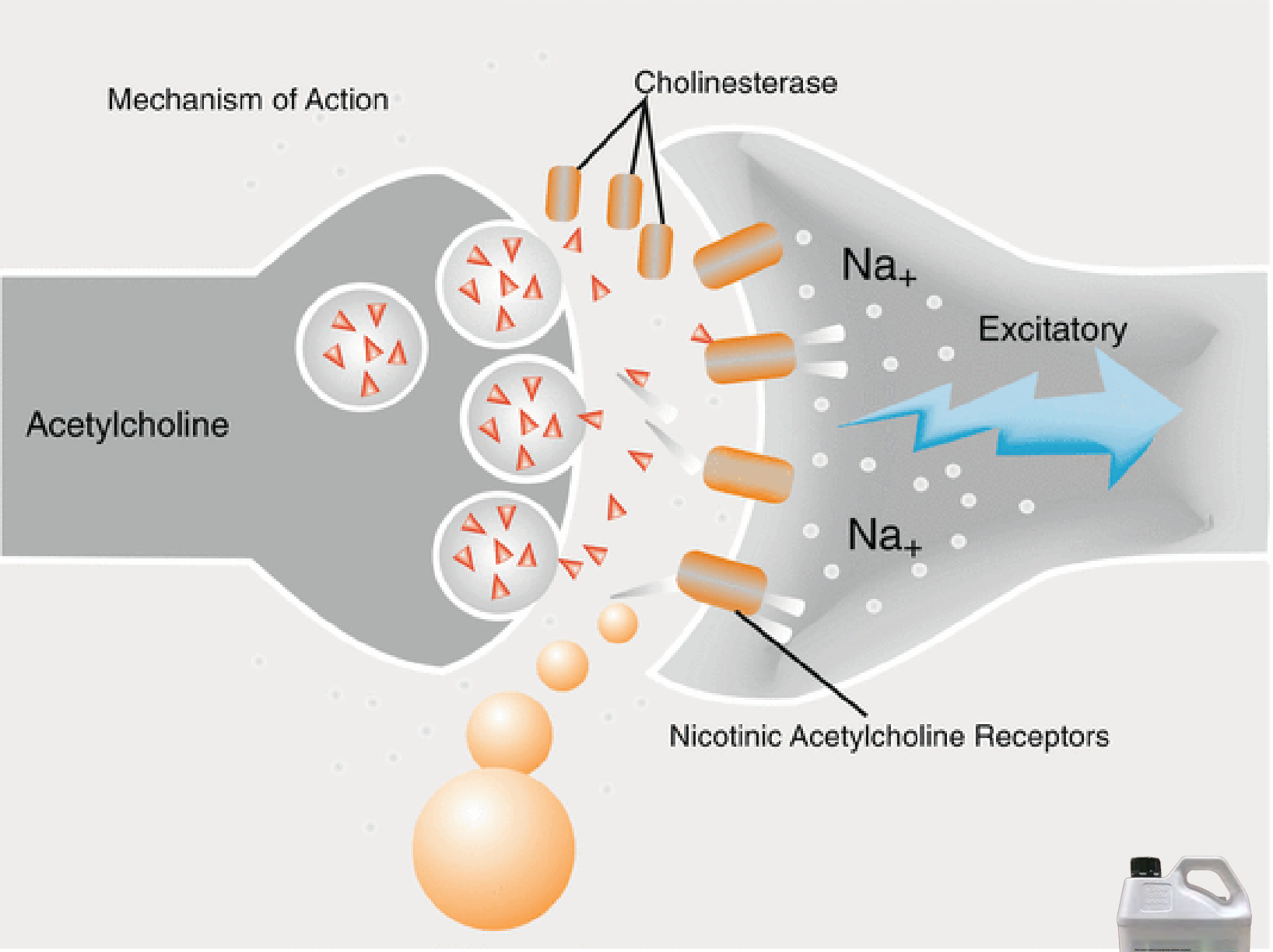

Mode of Action: How Spinosad Works

- Disrupts nicotinic acetylcholine and GABA receptors
- Causes hyperexcitation, paralysis and death
- Ingested > Contact (but both active pathways)
- Stops feeding almost immediately; death in 1–3 days
- Exhibits translaminar properties.
  - Adding a surfactant to the spinosad solution can help it penetrate leaf tissues more effectively.

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Argentine Stem Weevil Lifecycle Targeting the Right Stage Matters:

- 6–8 week lifecycle
- 3–4 generations per year
- Eggs laid in stems → larvae feed internally → pupate in thatch → adults emerge & feed
- Larval stage = most damaging (stem boring)

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Seasonal Program Fit - When to Use Curatol:

Month	Pest Activity	Curatol Timing
Sept	Adults emerging	1st application
Oct–Nov	Active larvae	Follow-up to keep numbers in check
Dec–Jan	Peak pressure	Peak Season application
Feb–Apr	Decline	Reduce populations at end of season

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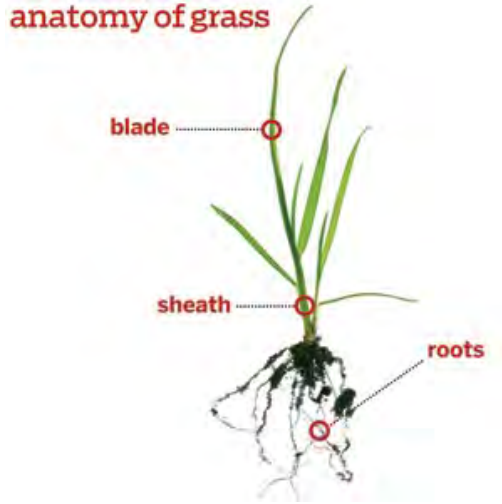
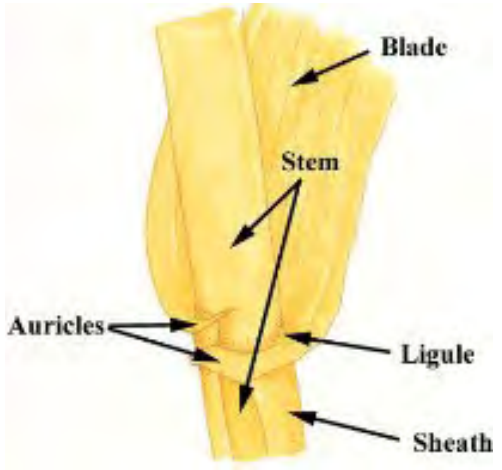
Image courtesy of Mark McNeill, Agresearch Lincoln, NZ.





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Argentine Stem Weevil

Distribution, Population Dynamics and Damage

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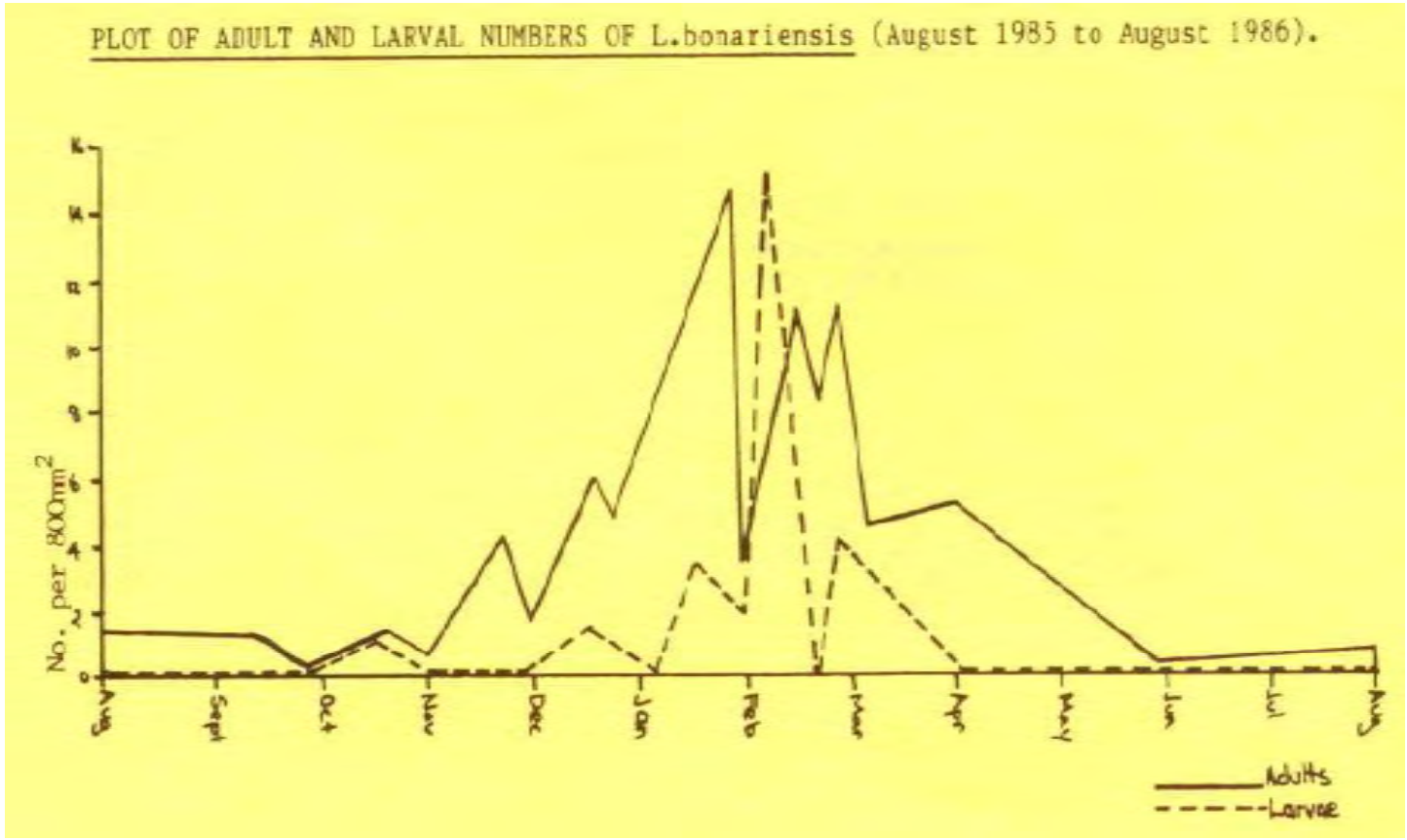
ASW Distribution in Australia

Argentine Stem Weevil; 1985 - 1986

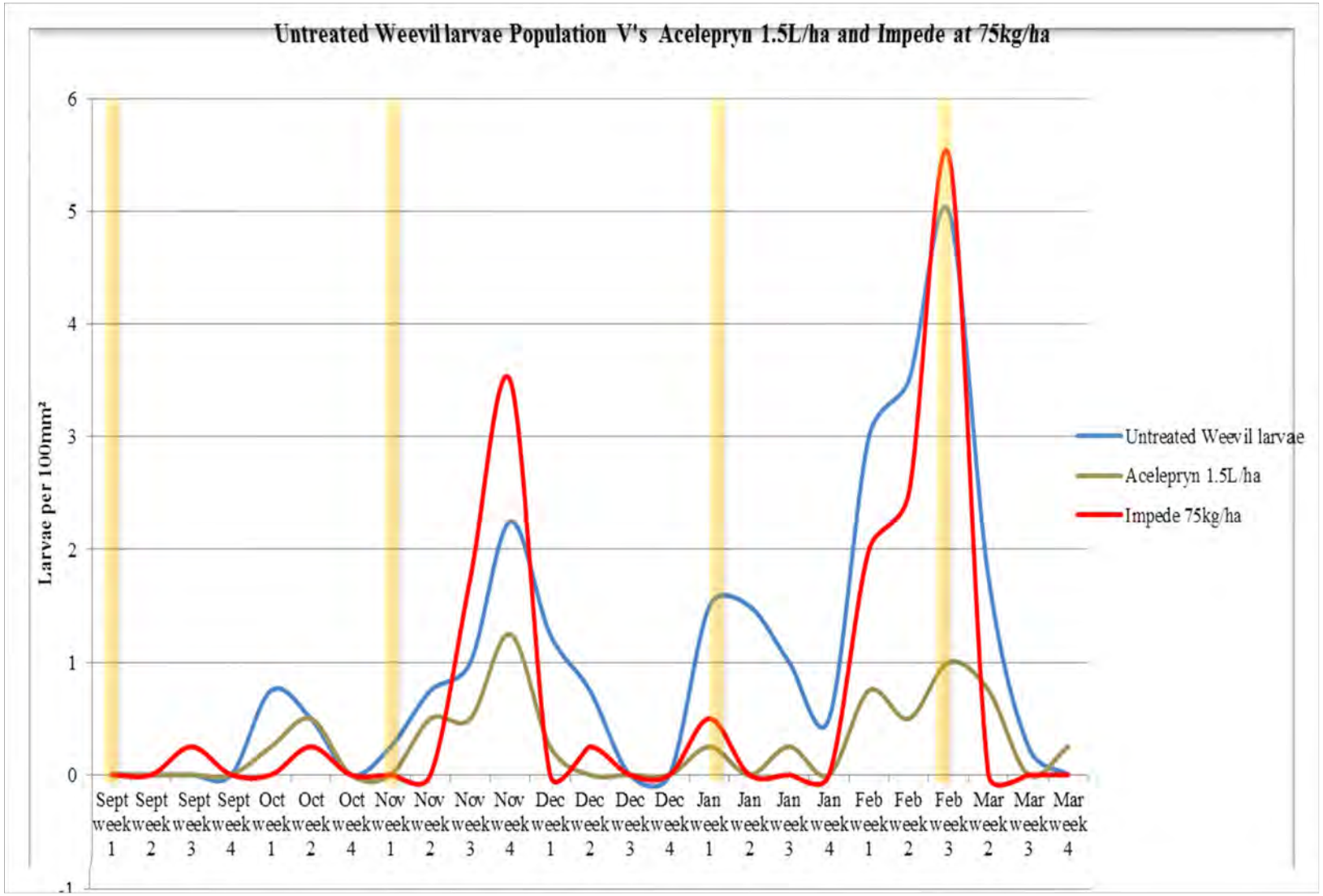


LIFECYCLE LENGTH

From Egg to Adult – 65 days
Egg 7 days
Larva 41 days
Pre-pupa 7 days
Pupa 10 days

Michael Gibian 1985-86
Conducted at Lane Cove Golf Course

ASW Larvae Populations @ Cromer GC



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2012 / 2013 Season

Dr Pat Vittum

ASW Damage

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ASW Damage

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Label Claims

Situation	Pest	Rate	Critical Comments
Bentgrass (including Golf Courses, Sports Fields, and other sport and recreational Bentgrass areas)	Argentine Stem Weevil (*Listronotus bonariensis*)	4 L/ha	See Insect Monitoring in the General Instructions. Spray when peak adult numbers are observed, when larvae are first detected in clippings or first visual symptoms appear typically around late September to January. Early application is essential to minimise damage to turf due to feeding. Apply up to three applications of ProForce CURATOL 120 SC per season. ProForce CURATOL 120 SC has not been tested on all turf species.

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Application Best Practice to Maximise Curatol 120SC Performance:

Rate	Rate: 4 L/ha in 400–800 L water
Droplet Size	Coarse droplets; ensure crown penetration
Adjuvant	Using a surfactant / adjuvant (Octane / OptiSpread will enhance translaminar activity).
Mowing	Avoid mowing 24h before/after
Irrigation	Light irrigation (2–3 mm) post-application can help (if Weevil's are near crown/in soil).
Rotate MOA	Rotate with other IRAC groups to prevent resistance. Curatol is a great MOA rotation option.

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Field Trial Performance

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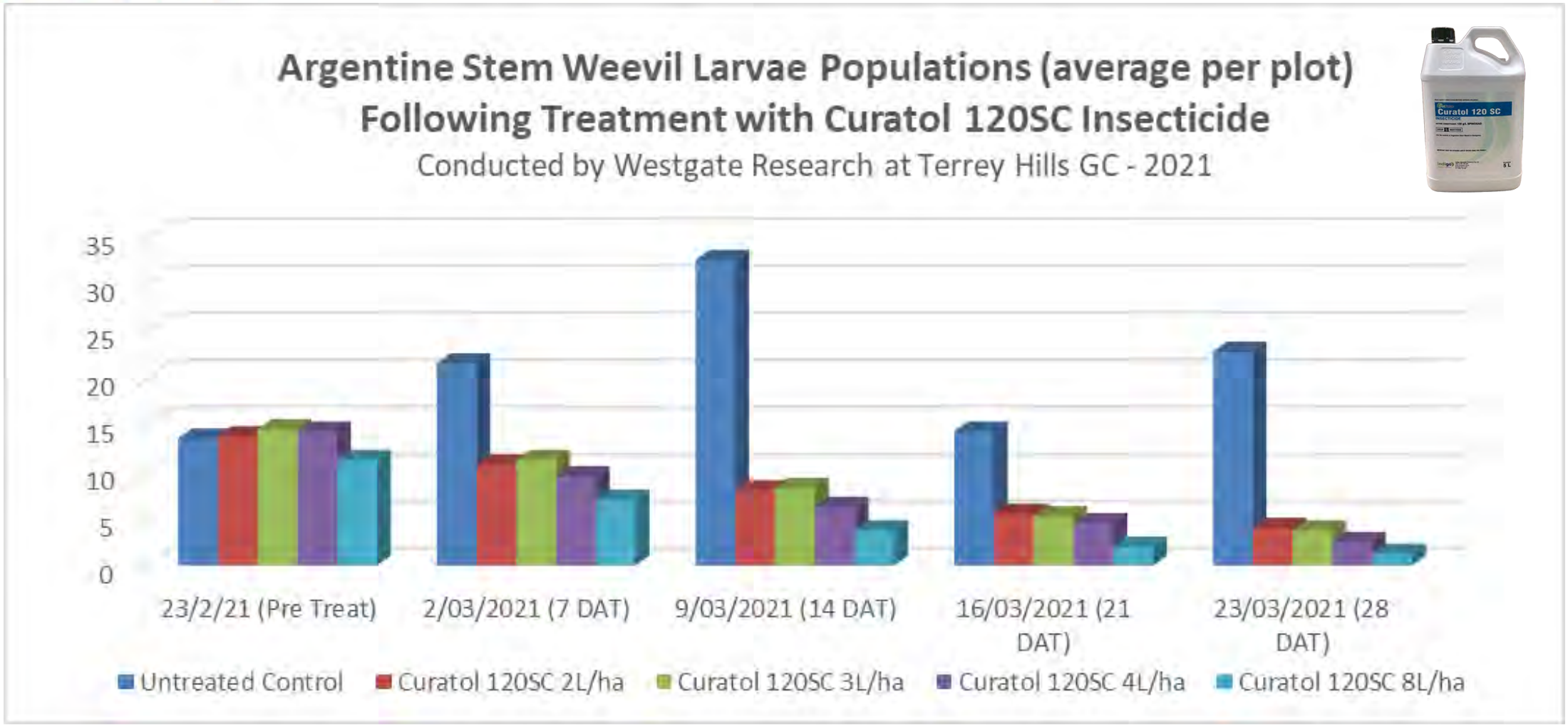
Field Performance



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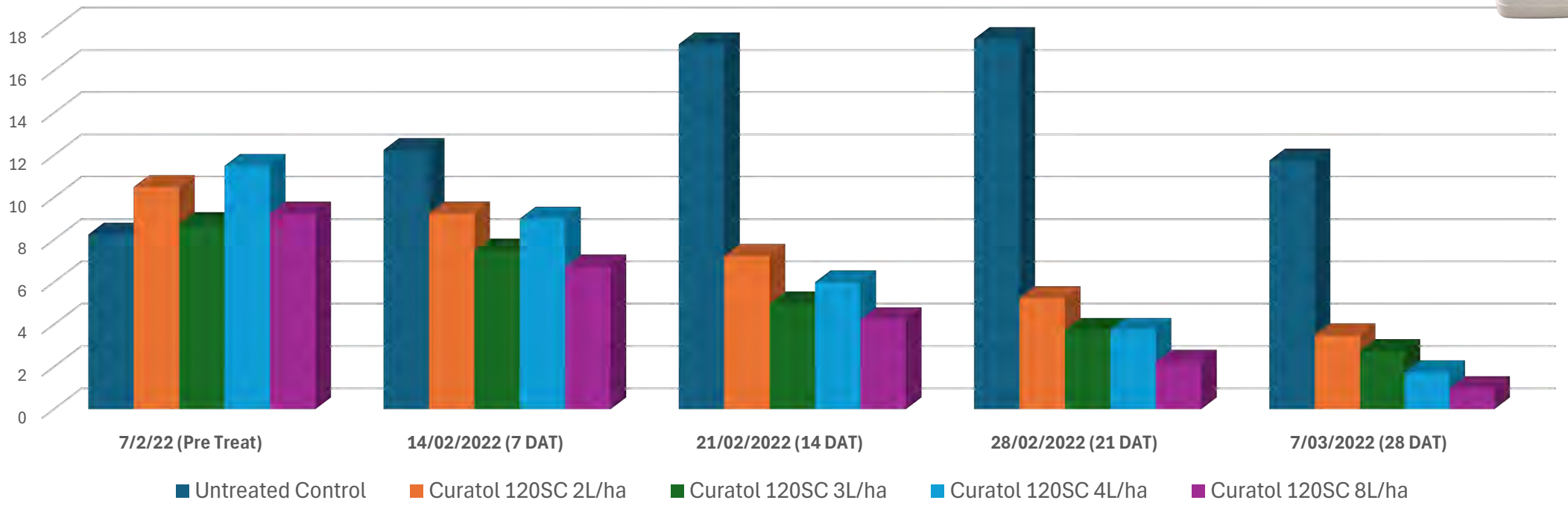
Field Performance

Argentine Stem Weevil Larvae Populations Following Treatment with ProForce Curatol 120SC Insecticide

Conducted by Westgate Research at Terrey Hills GC, 2022.



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USA Perspective

Commercial Turf Insect Control

T. L. Billeisen and R.L. Brandenburg, Entomology and Plant Pathology

Insect Control in Commercial Turf

Pest	Insecticide and Formulation	Amount per 1,000 sq ft	Precautions and Remarks
Annual Bluegrass Weevil	bifenthrin (Talstar, Taurus Trio, GardenTech Sevin Insect Killer Lawn Granules)	0.25 to 0.5 fl oz	Monitor for adults, apply at peak activity. Use GC formulation for golf courses. Repeated use will lead to resistance issues. Be sure to rotate with other active ingredients to avoid resistance.
	chlorantraniliprole (Acelepryn)	.28 fl oz	Apply approximately 7 to 14 days after adult emergence to target larvae.
	cyantraniliprole (Ference)	0.28 fl oz	Monitor for adults, apply at peak activity. Apply approximately 7 to 14 days after adulticide to target larvae.
	indoxacarb (Provaunt) SC	0.28 fl oz	Monitor for adults, apply at peak activity. Apply approximately 7 to 14 days after adulticide to target larvae.
	lambda-cyhalothrin (Scimitar, Cyonara)	0.23 fl oz	Monitor for adults, apply at peak activity.
	novaluron (Suprado)	See label	Apply approximately 7 to 14 days after adult emergence to target larvae
	spinosad (Conserve SC)	See label	Monitor for adults, apply at peak activity.
	tetraniliprole (Tetrino)	See label	Apply approximately 7 to 14 days after adult emergence to target larvae.
	zeta-cypermethrin, bifenthrin, and imidacloprid (Triple Crown)	See label	Monitor for adults, apply at peak activity.

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IPM Friendly & Environmental Benefits

- Fermentation-based active ingredient
- Low impact on mammals, birds, fish, crustacea
- Minimal effect on pollinators and beneficials when used as directed
- Non-scheduled product – safe and convenient handling

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Summary:

Why Choose ProForce Curatol 120SC Insecticide?

- Proven ASW control
- Fast and long-lasting action
- Fits easily into seasonal and resistance programs
- Turf-safe, user-friendly, and environmentally responsible

Curatol 120SC v Strikezone 200SC

Feature	Spinosad (Curatol 120SC Insecticide)	Indoxacarb (Strikezone 200SC Insecticide)
Chemical Group	**Group 5**	**Group 22A**
Mode of Action	Allosteric modulator of nicotinic acetylcholine receptors → causes hyperexcitation	Sodium channel blocker → causes paralysis
Poison Schedule	**Non scheduled**	**Poison (S6)**
Target Pest Stages	Strong on **larvae** Good Activity on adults	**Larvae** and **adults** (strong on both)
Key Turf Pests	Argentine Stem Weevil, Cutworms, Sod webworm.	Argentine Stem Weevil (larvae + adults), Cutworms, Lawn armyworm
Ingestion vs Contact	Strong **ingestion**, contact	**Ingestion** and **contact** activity
Speed of Action	Moderate (visible effect in 1–3 days)	Fast (paralysis often within hours)
Residual Activity	Short to Moderate (7 days typical)	Moderate to long (7–14+ days)
Selectivity	More selective to beneficials (e.g., predatory beetles, parasitoids)	Broader spectrum, may impact some beneficials
Resistance Risk	Moderate (resistance reported in some insect populations)	Moderate–High; rotate modes of action
Environmental Profile	Derived from natural soil organism (*Saccharopolyspora spinosa*) Low mammalian toxicity	Synthetic oxadiazine; low mammalian toxicity, but more persistent
Re-entry Interval (REI)	Short	Slightly longer than Spinosad, depending on label.
Rainfastness	Low–moderate (reapplication may be needed after heavy rain)	Moderate–good rainfastness

Curatol / Strikezone: Knockdown Approach to Argentine Stem Weevil Control

Season	ASW Activity	Recommended Insecticide	Target Stage	Notes
Late Winter (Aug)	Adults overwintering in thatch	**Chlorantraniliprole (Residual) or Tetraniliprole**	Adults	Monitor closely. Prepare for early spring hatch.
Early Spring (Sep)	Adults become active & begin laying eggs	**Strikezone (Indoxacarb)**	Adults & early larvae	Apply as adults emerge to reduce egg laying.
Mid–Late Spring (Oct–Nov)	First larval generation active	**Curatol (Spinosad)** (Rotate with Indoxacarb)	Larvae (inside stems)	Apply when larvae begin feeding. Scout with plug checks.
Early Summer (Dec)	Second generation developing	**Strikezone (Indoxacarb) + Tetraniliprole**	Larvae + adults	Stronger residual. Monitor adult flight.
Mid–Late Summer (Jan–Feb)	Peak overlapping generations	**Curatol (Spinosad)** or **Strikezone (Indoxacarb)**	Larvae	Use rotation to manage resistance. High-pressure period.
Autumn (Mar–Apr)	Declining population	**Spot treat or limit applications to impacted greens** if larvae persist	Larvae	Evaluate turf recovery. Reduce unnecessary spraying.
Winter (May–July)	Minimal activity	*No treatment should be required*	-	Adults remain dormant. Monitor for build-up in spring.

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Questions & Contact

Thank you!

For more information, please contact:

Indigo Specialty Products
Visit: www.indigospecialty.com.au

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