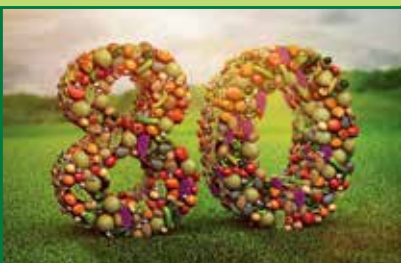


IT JUST GOT A WHOLE HEAP BETTER

Emerald[®]

NOW EVEN BROADER SPECTRUM CONTROL WITH LOW RATES

- Dollar Spot
- Anthracnose
- Helmo Diseases
- Gray Leaf Spot
- Pythium
- Algae



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Emerald® AT A GLANCE

Product Name:	Emerald®
Type	Fungicide
Active Constituent	500g/L Fluazinam
Resistance group	29
Formulation	Suspension Concentrate (SC)
Pack Size	1L
Mode of action	Contact

Emerald® RATES

1-1.5L per hectare
10mL-15mL per 100m²
For all diseases

WHAT IS Emerald®

Emerald is a new generation broad spectrum contact fungicide. Emerald is the perfect partner to use in rotation with Dacogreen WeatherShield to deal with troublesome diseases.

Colin Campbell (Chemicals) have been developing Emerald for a number of years to bring a new active ingredient (Fluazinam), that is broad spectrum and versatile, to use in an ever changing climate.

HOW DOES Emerald® WORK

As mentioned Emerald is a contact fungicide and is a multi site mode of action. This means Emerald disrupts the production of energy at multiple metabolic sites within the fungal cell. Resistance risk is very low due to this. Emerald is (FRAC) Group 29 Fungicide.

The perfect partner with Dacogreen WeatherShield.

With variable weather conditions turf managers need to know what they put out will be effective. Dacogreen has proven this time and time again with it's unique sticking properties. Now we have Emerald.

Emerald binds to the plant very quickly. Once spray is dry product is rainfast (usually within 2 hours). Emerald does not wash off the plant unlike other contact fungicides. The Emerald formulation holds fungicide to the surface of leaf blades even after irrigation and heavy rains. In the below rain fastness study, plants treated with 2 fungicides (Emerald and Daconil® Weatherstik) were subjected to an artificially simulated rainfall events (20 mm/hr) at 2 hours and 24 hours following fungicide application.

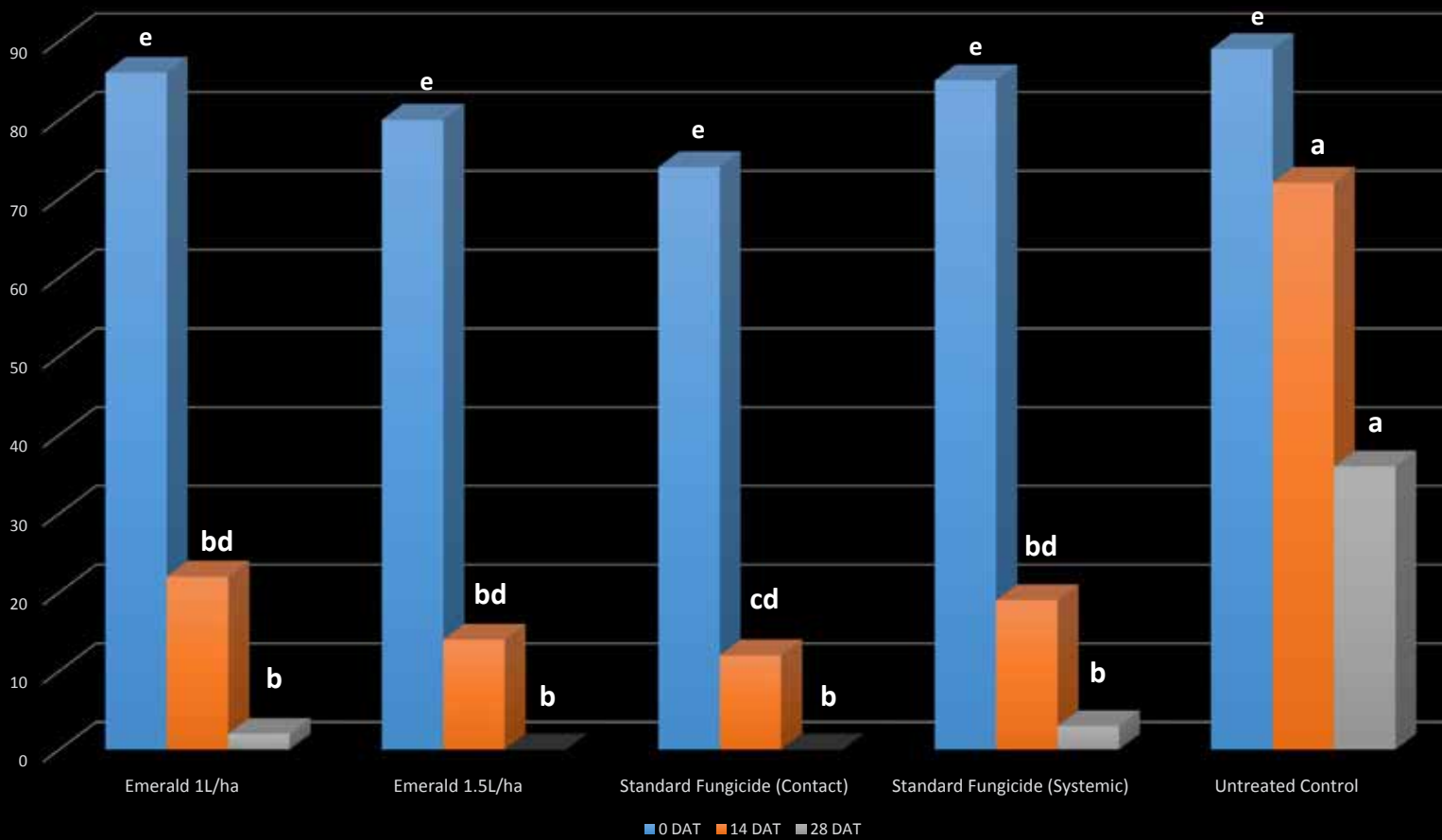
In the study, the plant leaves were then inoculated with disease spores, incubated then placed in ideal growing conditions for 3 days. Following this period the plant leaves were assessed for disease presence and control achieved by the fungicides. The results below indicate that disease control was achieved with both PPM rates of both products, indicating that Emerald was equivalent to Daconil Weatherstik when it comes to rainfast properties

PPM (Concentration of Fungicide in spray solution)	% Disease Control following simulated rainfall at 2 and 24 hours after fungicide treatment.	
125	Emerald	Daconil® (Dacogreen WeatherShield has similar properties due formulation)
125	88	88
31	56	50

Ref: Komyoji et al "Biological Properties of a New Fungicide, Fluazinam" J.Pesticide Science 20:129-135 (1995).

Trial Work for Emerald[®]

Emerald Efficacy Helminthosporium



NOTE: Look at all treatments on a specified day. For example look at all orange columns together. Do NOT compare the different colour column to each other.

About the trial

Turf type: Green couch fairway.

This trial was conducted on a fairway where helminthosporium pressure is typically high during winter. Heavy dews were present throughout the trial period. Helminthosporium pressure was moderate to high during the trial period. Two applications were made 14 days apart for all treatments

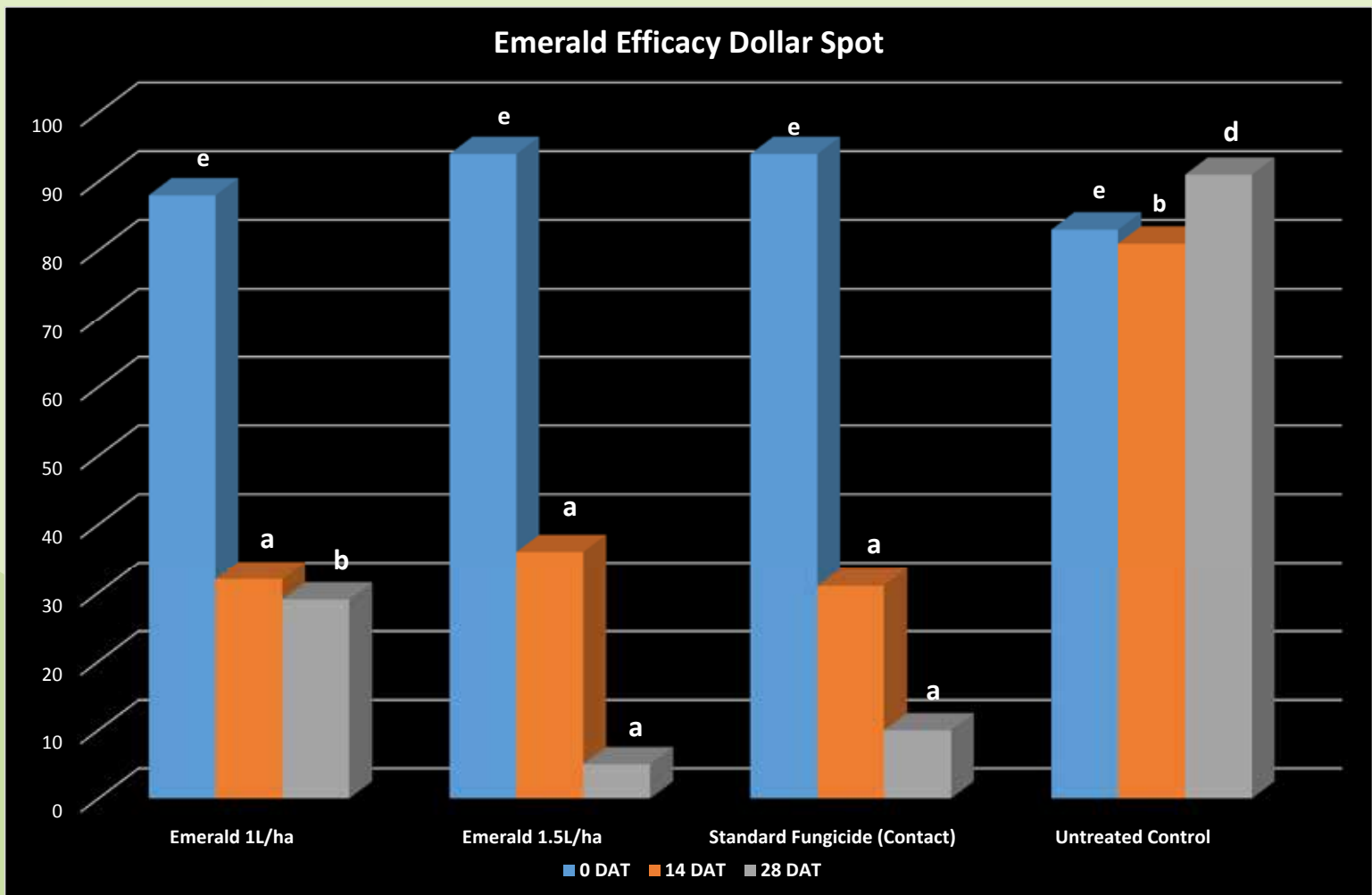
Conclusions from trials

Starting from a high rate of infection (close to 100%), all treatments needed 2 applications to reduce disease to a minimum level.

Emerald performed statistically the same as the standard for both contact and systemic products.



Trial Work for Emerald[®]



NOTE: Look at all treatments on a specified day. For example look at all orange columns together. Do NOT compare the different colour column to each other.

About the trial

Turf type: bent grass green.

Dollar Spot pressure was extreme during the trial period as indicated from untreated control. The site has history of dollar spot.

Two applications were made 14 days apart for all treatments

Conclusions from trials

All treatments needed 2 applications to reduce disease to acceptable level

Emerald significantly better at the 1.5L/ha rate than the 1L rate.

Emerald second application of 1.5L rate performed statistically the same as the standard treatment.

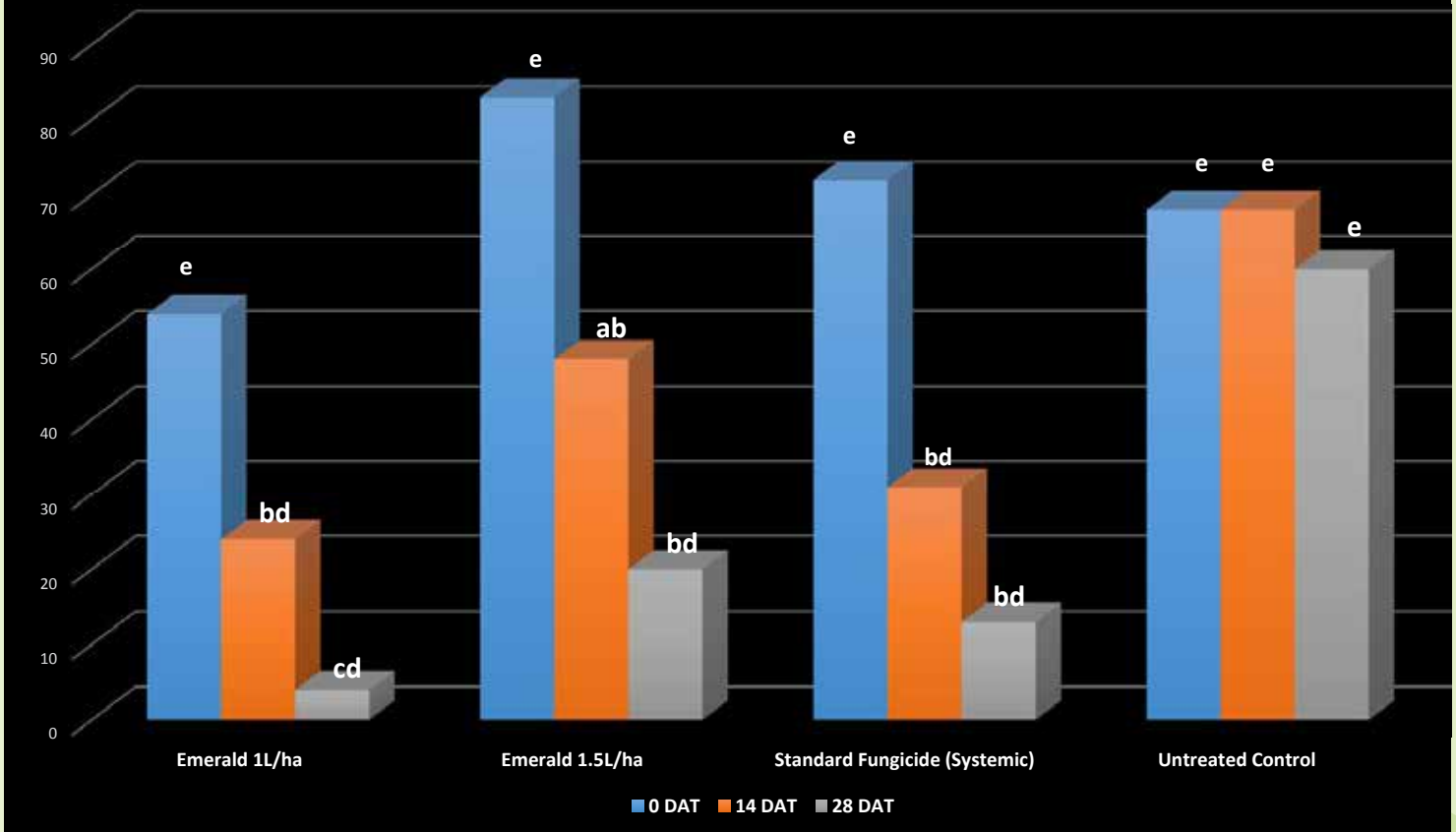


"When nothing else worked Emerald did. It was the only chemical I could control dollar spot with. It's not just a new active ingredient but a new chemical group."

Shane George Superintendent

Trial Work for Emerald[®]

Emerald Efficacy Anthracnose



NOTE: Look at all treatments on a specified day. For example look at all orange columns together. Do NOT compare the different colour column to each other.

About the trial

Turf type: bent/poa green mix.

Disease pressure was high during the trial period as indicated from the untreated control. The site has a history of anthracnose.

Two applications were made 14 days apart for all treatments

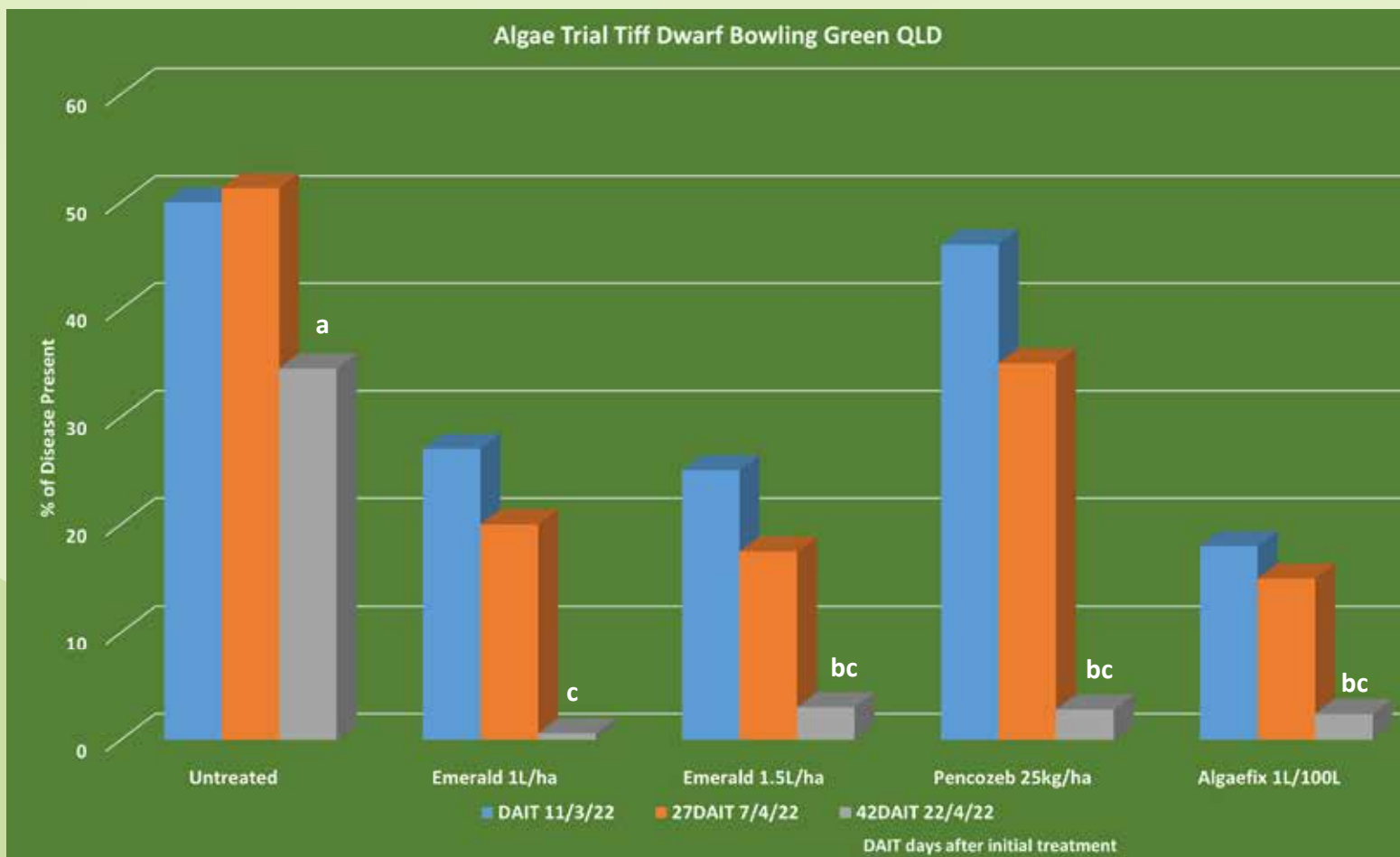
Conclusions from trials

All treatments needed 2 applications to reduce disease to acceptable level

Emerald (both rates) performed statistically the same as the standard systemic fungicide treatment.



Trial Work for Emerald



NOTE: Look at all treatments on a specified day. For example look at all orange columns together. Do NOT compare the different colour column to each other.

About the trial

Turf type: tiff dwarf bowling green.

Good disease pressure was present during the trial as indicated by the untreated plots throughout. One application was made. No cultural practices were undertaken during the trial to test all treatments to their full ability.

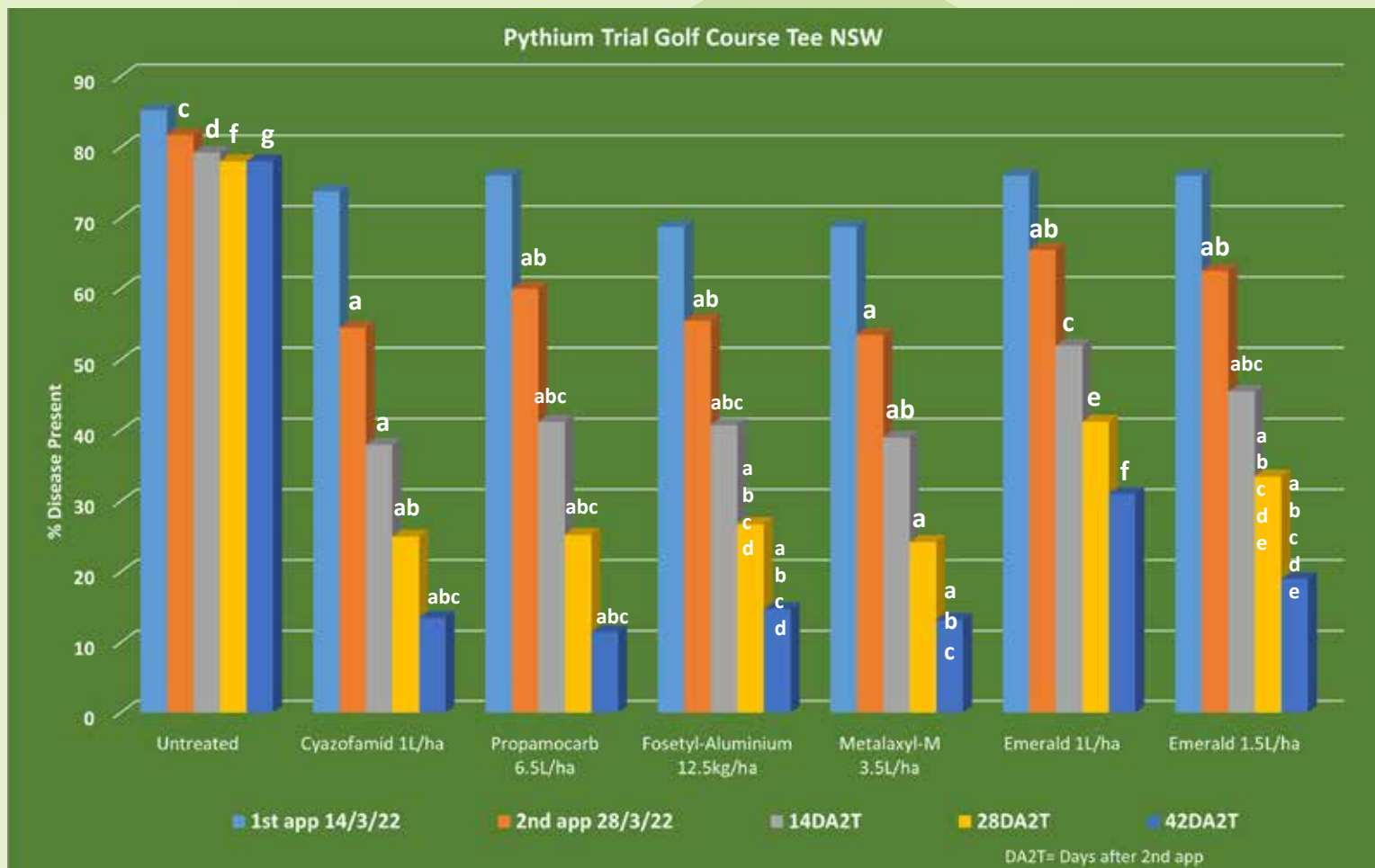
Conclusions from trials

Statistically no treatments were different from the untreated until 6 weeks (42 days) after the initial spray. Being tiff dwarf and running into autumn where growth dramatically slows this is not uncommon. Emerald stopped the disease however recovery took sometime to show the full results. You can see between 27-42 days the amount of algae in the treated plots reduced dramatically. Emerald performed just as well as standard products of Pencozeb and Algaefix.

Emerald has the added bonus of controlling other diseases over these products as well. There is no growth regulation with Emerald and low use rates makes it a perfect fit to control algae in golf and bowls greens as well as sports fields.

Our Emerald fungicide now brings even better value and a broader spectrum of disease control which is unmatched in the turf industry. Put Emerald in your program today.

Emerald[®] Algae & Pythium



NOTE: Look at all treatments on a specified day. For example look at all orange columns together. Do NOT compare the different colour column to each other.

About the trial

Turf type: golf course tee highly maintained.

Good disease pressure was present during the trial as indicated by the untreated plots throughout and the start of the treatments. Two applications were made 14 days apart of all treatments.

Conclusions from trials

The untreated control did not reduce much at all indicating high pressure pythium damage throughout.

Just before application 2 was applied (28/3/22) (orange bars) an assessment was undertaken and showed that Emerald was performing on par with other standard pythium treatments.

Even though **Emerald 1L** did reduce pythium statistically vs untreated this treatment did not perform as well as the standard products.

Emerald 1.5L rate performed just as well against standard pythium products at the conclusion of the trial 6 weeks after the 2nd application.

Note that couch recovery slowed as this trial started in autumn and finished in May where couch growth dramatically slows and starts going dormant.

Emerald is a new mode of action in the fight against pythium and can easily be used in your program and a perfect tank mix partner with Magellan and Proplant for a broader spectrum pythium and general disease control.

80 years and growing



Horticulture

Post Harvest

Turf

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