

**AGCSATech**

# **FYTOGREEN AUSTRALIA**

## **THE EVALUATION OF SUMMER TURF GROWTH ON FYTOFOAM<sup>®</sup> TREATED SOIL COMPARED WITH NON TREATED SOIL**

**Final Report**

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**AUSTRALIAN GOLF  
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#### INTRODUCTION

Fytofoam® is an aminoplast resin which is produced with a hardener under pressure. It improves soil characteristics such as structure, moisture retention, aeration and stimulates grass growth.

A trial was undertaken to evaluate the effectiveness of injecting Fytofoam® into a heavy soil type in promoting turf growth during summer.

The trial was undertaken on a sportsfield over a four week period. Assessments were undertaken at weekly intervals following the first assessment. The first assessment was conducted approximately 7 days after the last mowing of the sportsfield.

#### METHODOLOGY

1. **Product:** Fytofoam®
2. **Trial Location:** Thomastown East Reserve, Leslie Street, Thomastown.
3. **Turf Type:** Perennial ryegrass (*Lolium perenne*)
4. **Treatments:**

Treatment		Rate
1	Untreated Control	-
2	Fytofoam®	Injected to a depth of 6 cm

5. **Plot size:** 3.0 m x 0.45m (width of hand mower)
6. **Replicates:** Three (3) replicates
7. **Design:** Randomized plot design within the Fytofoam® treatment area and the adjacent untreated control area.

A trial area was established on one portion of the sportsfield where Fytofoam® had been injected to a depth of 6 cm. There was some inconsistency in performance of the product over the trial area, possibly due to initial dosage rates, and therefore representative areas of consistent growth within the trial area were chosen to conduct this trial.

- 8. Assessments:** Treatments were assessed on four occasions at weekly intervals for clipping yield.

This was done by mowing a strip 3m x 0.45m with a rotary walk behind mower set at a height of 30mm. Clippings were then collected. The fresh weight of clippings were determined and then dried at 65°C and the dry weight determined.

Strips were cut on average at weekly intervals.

Treatments were also assessed visually for:

- Turf density (%)
  - 0 = no turf cover – bare ground
  - 30 = very little turf cover = majority bare ground
  - 60 = acceptable turf cover
  - 90 = complete turf cover – no bare ground visible
  
- Turf quality (0-9)
  - 0 = extremely poor quality
  - 6 = acceptable turf quality
  - 9 = excellent quality

## RESULTS

**Table 1: Dry weight of clippings (average of 3 replicates).**

Treatment	11/2/04 7 DALM (g/1.35m <sup>2</sup> )	18/2/04 7 DALM (g/1.35m <sup>2</sup> )	24/2/04 6 DALM (g/1.35m <sup>2</sup> )	3/3/04 8 DALM (g/1.35m <sup>2</sup> )
Untreated Control	12.3	4.3	2.7	3.0
Fytofoam <sup>®</sup>	47.3	15.0	7.7	9.0
<b>LSD (p&lt;0.05)</b>	<b>18.5</b>	<b>5.3</b>	<b>2.7</b>	<b>1.9</b>

\* DALM = Days after last Mowing

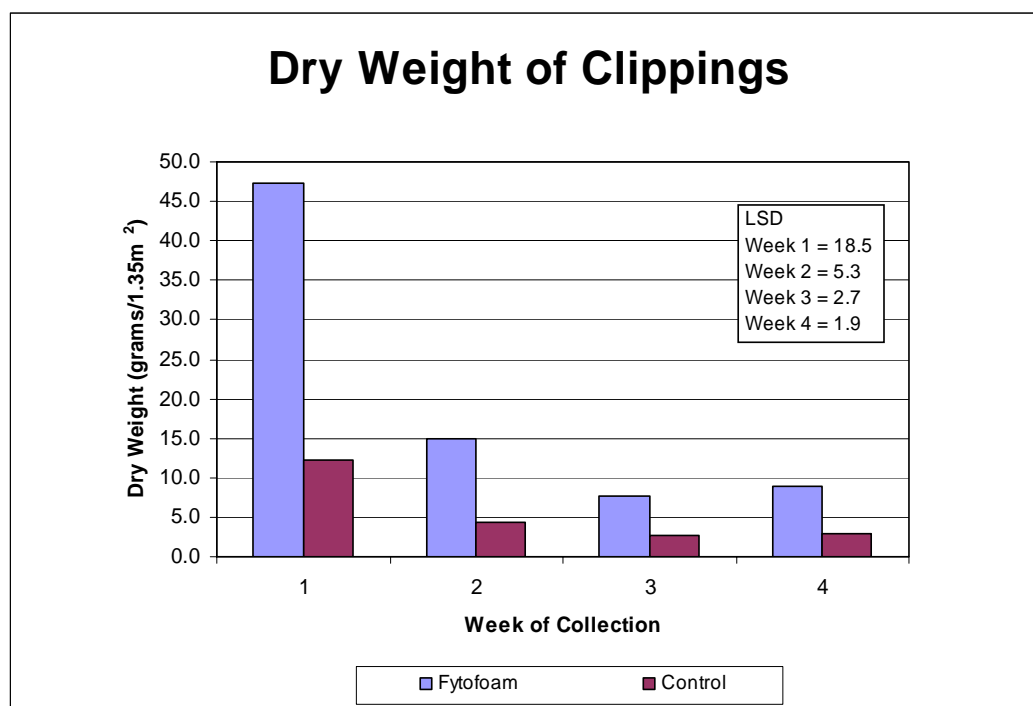
**Table 2: Turf Quality (0-9)**

Treatment	11/2/04	18/2/04	24/2/04	3/3/04
Untreated Control	5.3	5.3	4.7	5.3
Fytofoam <sup>®</sup>	6.7	7.0	6.7	7.2
<b>LSD (p&lt;0.05)</b>	<b>ns</b>	<b>0.5</b>	<b>0.8</b>	<b>0.6</b>

**Table 3: Turf Density (%)**

Treatment	11/2/04	18/2/04	24/2/04	3/3/04
Untreated Control	50.0	50.0	46.7	51.7
Fytofoam <sup>®</sup>	73.3	78.3	76.7	78.3
<b>LSD (p&lt;0.05)</b>	<b>10.7</b>	<b>10.7</b>	<b>11.9</b>	<b>7.6</b>

Figure 1: Dry weight of clippings (average of 3 replicates).



## CONCLUSIONS

The results of this trial showed that the Fytofoam<sup>®</sup> treatment produced significantly greater amounts of grass clippings compared with the Untreated Control for all 4 weeks that the trial was conducted. The higher collection of clippings at the first week of collection compared to the other 3 weeks was due to a lower cutting height of the trial area compared with the oval.

The Fytofoam<sup>®</sup> treatment produced turf that was significantly higher in turf density throughout the trial. Turf quality was significantly greater for the Fytofoam<sup>®</sup> treated area on all but the first assessment. The quality rating was conducted prior to the turf being cut and the higher height of grass may have contributed to no significant result being recorded.

The results indicate that Fytofoam<sup>®</sup> can be an effective tool in providing acceptable turf cover and quality over the stressful summer months when cool season turf is notorious for losing turf density and declining in quality. The ground was initially not irrigated at the start of the summer due to stage 2 water restrictions that had been imposed. However by the start of the trial the ground was being watered to a limited extent. The presence of the Fytofoam<sup>®</sup> would appear to have provided better utilization of the water than the non treated soil providing significantly greater clipping yields, turf density and quality.

The higher clipping yields were not only attributed to greater vertical growth of the ryegrass but also due to a greater density of turf that the Fytofoam<sup>®</sup> treatment provided.

These attributes could prove significant in providing sportsfields with optimal cover with reduced irrigation inputs leading up to the commencement of winter sports. This will inevitably produce better playing conditions during the winter.

## APPENDIX 1

### PHOTOGRAPHS



Photograph 1: Method of collecting clippings.



Photograph 2: Example of general condition of trial area at time of assessments.