

# **FYTOGREEN AUSTRALIA**

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

**Final Report**

**October 2003**

**by  
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### THE EVALUATION OF EARLY SPRING TURF GROWTH ON FYTOFOAM® TREATED SOIL COMPARED WITH NON TREATED SOIL

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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.

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 17 days after the last mowing of the sportsfield (August 26<sup>th</sup>).

#### 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 one week intervals apart from the first assessment where the entire ground had not been mown for some time due to a break down in machinery. Therefore days after last mowing refers to the number of days since the grass in the trial area was last mown.

Treatments were also assessed visually for:

- Turf density (0-9)  
0 = very little turf cover – high proportion of bare ground  
9 = 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	1 <sup>st</sup> Week 17 DALM (g/1.35m <sup>2</sup> )	2 <sup>nd</sup> Week 7 DALM (g/1.35m <sup>2</sup> )	3 <sup>rd</sup> Week 7 DALM (g/1.35m <sup>2</sup> )	4 <sup>th</sup> Week 6 DALM (g/1.35m <sup>2</sup> )
Untreated Control	1.7	1.7	8.0	1.3
Fytofoam <sup>®</sup>	20.3	8.7	24.3	6.7
LSD (p<0.05)	9.1	ns	ns	3.0

\* DALM = Days after last Mowing

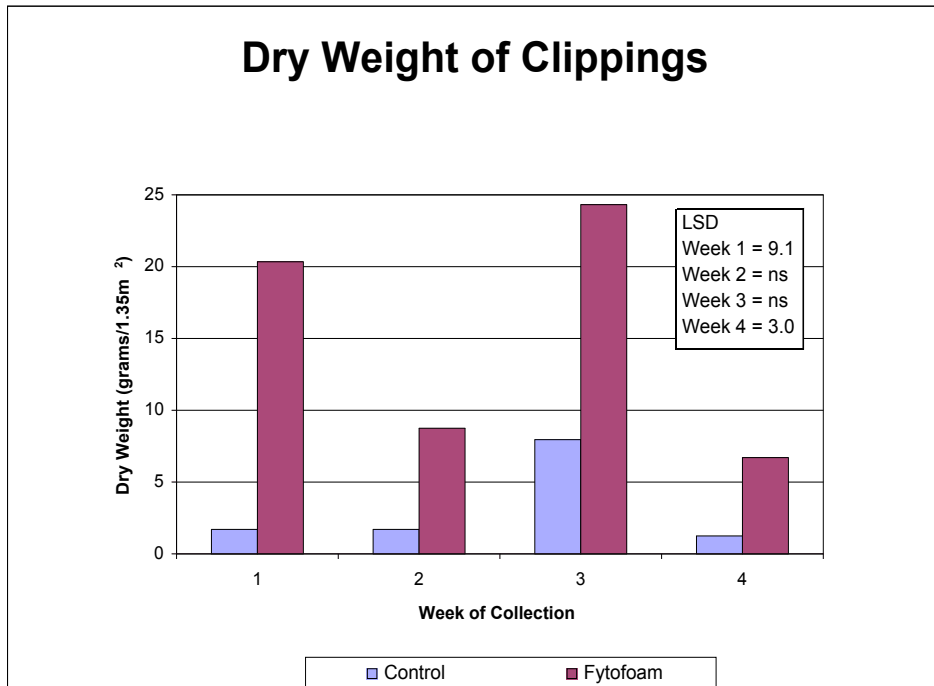
**Table 2: Turf Quality (0-9)**

Treatment	1 <sup>st</sup> Week	2 <sup>nd</sup> Week	3 <sup>rd</sup> Week	4 <sup>th</sup> Week
Untreated Control	4.7	4.7	4.3	4.3
Fytofoam <sup>®</sup>	7.0	7.0	6.7	7.0
LSD (p<0.05)	0.5	0.5	0.8	0.5

**Table 3: Turf Density (0-9)**

Treatment	1 <sup>st</sup> Week	2 <sup>nd</sup> Week	3 <sup>rd</sup> Week	4 <sup>th</sup> Week
Untreated Control	4.7	4.3	4.3	4.3
Fytofoam <sup>®</sup>	7.7	7.7	7.3	7.7
LSD (p<0.05)	0.8	0.8	0.8	0.8

**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 at week 1 and 4. The other assessments showed that the Fytofoam<sup>®</sup> treatment produced more clippings but were not statistically significantly greater than the untreated control. Statistical significance relies on each replicate within a treatment being consistent or low variability. One of the replicates in the Fytofoam<sup>®</sup> treatment produced far less clippings than the other two replicates and this has produced a non significant result. The variability could be due to distribution of Fytofoam<sup>®</sup>, soil variation and turf variation.

The Fytofoam<sup>®</sup> treatment produced turf that was significantly higher in turf quality and density for each assessment period compared to the untreated control.

The results indicate that Fytofoam<sup>®</sup> can be an effective tool in preventing excessive turf loss over the winter and early spring period with growth rates that could match damage from winter sports. This may reduce the need for spring time overseeding due to less of the turf being lost due to excessive use over a period of limited turf growth.

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

The Fytofoam<sup>®</sup> treatment provided a more consistent turf quality and density whereas the untreated control at no time was at an acceptable turf quality and density.