

TURF TRIAL INFORMATION

Sierrablen®
Plus
Pearl

GOLF GREEN ESTABLISHMENT TRIAL



SUMMARY

- Trial designed to compare different fertilisers for the establishment of creeping bentgrass on USGA rootzone.
- Independent Trial completed at NIBIO.
- Sierrablen Plus Pearl Renovator 11-11-5 provided significantly improved turf establishment up to week 6 over other fertiliser options.
- The use of Sierrablen Plus Pearl Renovator 11-11-5 significantly reduced Nitrogen leaching between weeks 3-12 and showed a reduced trend in P leaching. Indicating improved nutrient efficiency.



Image 1: Trial overview at week 3. Treatments labelled

METHODS

A randomised and replicated (x3) field trial conducted independently by NIBIO, Landvik, Norway, examined 5 granular fertiliser options for establishment of *Agrostis stolonifera* surface over a USGA rootzone.

The trial area had lysimeters in place to collect drainage water and measure nutrients leached.

The trial started in June 2020 and assessments of % cover, turf quality, colour and density were made for 12 weeks, by which time the surface was fully established.

Growing conditions were good, with average soil temperatures above 17°C, however rainfall was nearly double the 30-year average for June and July.

Drainage water was collected through the trial and N & P measured.

TREATMENTS INCLUDED AND RATES APPLIED

Treatments	Technology	Analysis	Rate (g/m ²)	NPK (oxide)
T1	Conventional NPK	8-12-8	62.5	50-75-50
T2	Organo-mineral NPK	8-12-8	62.5	50-75-50
T3	MU-N + Conventional NPK	18-22-5	28	50-62-14
T4 Sierrablen Plus Pearl	CRF N & Pearl NP & Conventional NK	11-11-5	45.5	50-50-23
T5	Conventional NPK Plus Pearl NP	5-28-0 8-12-8	50 31	25-140-0 25-37-25

Table 1. Treatments included and rates applied

RESULTS

1

Turf Coverage progression was significantly greater for Sierrablen Plus Pearl Renovator, up to week 6 (Image 1: week 3, Image 2: week 5). Turf quality was significantly greater from week 4 to week 6 after sowing (Table 2). Higher than average rainfall potentially meant that initial granular applications of conventional nutrition were leached from the high sand-based rootzone.

Treatments	Turf coverage (%)				Turf quality (1-9)		
	Week 3	Week 4	Week 5	Week 6	Week 4	Week 5	Week 6
T1	23 a	28 c	80 c	92 b	1 c	4 c	6.3 c
T2	47 b	50 b	86 bc	95 ab	3 b	4.5 bc	6.5 bc
T3	35 bc	32 bc	85 bc	96 ab	1.5 c	4.5 bc	6.8 ab
T4 SBP Pearl	60 a	80 a	95 a	99 a	5 a	6.5 a	7 a
T5	45 b	45 bc	92 ab	96 ab	3.5 b	5.8 ab	7 a

Table 2. Key trial results (n=3), Means which do not share a letter are significantly different (P<0.01)

2

Drainage water analysis demonstrated **significantly reduced N leaching** from Sierrablen Plus Pearl treatments (Table 3), and also a lower trend of P leaching. The combination of CRF Nitrogen and Pearl 'root-activated' phosphorus reduced leaching of nutrients into drainage water in comparison to other technology fertilisers. Making this a nutrient efficient approach for turf establishment.

Treatments	Technology	Total N (mg)	Total P (mg)
T1	Conventional NPK	11711 a	409
T2	Organo-mineral NPK	8952 ab	923
T3	MU-N + Conventional NPK	7158 b	821
T4 Sierrablen Plus Pearl	CRF N & Pearl NP & Conventional NK	4035 c	380
T5	Conventional NPK Plus Pearl NP	8483 b	597

Table 3. Mean total N & P analysed in drainage water (n=3). Means which do not share a letter are significantly different (P<0.01)

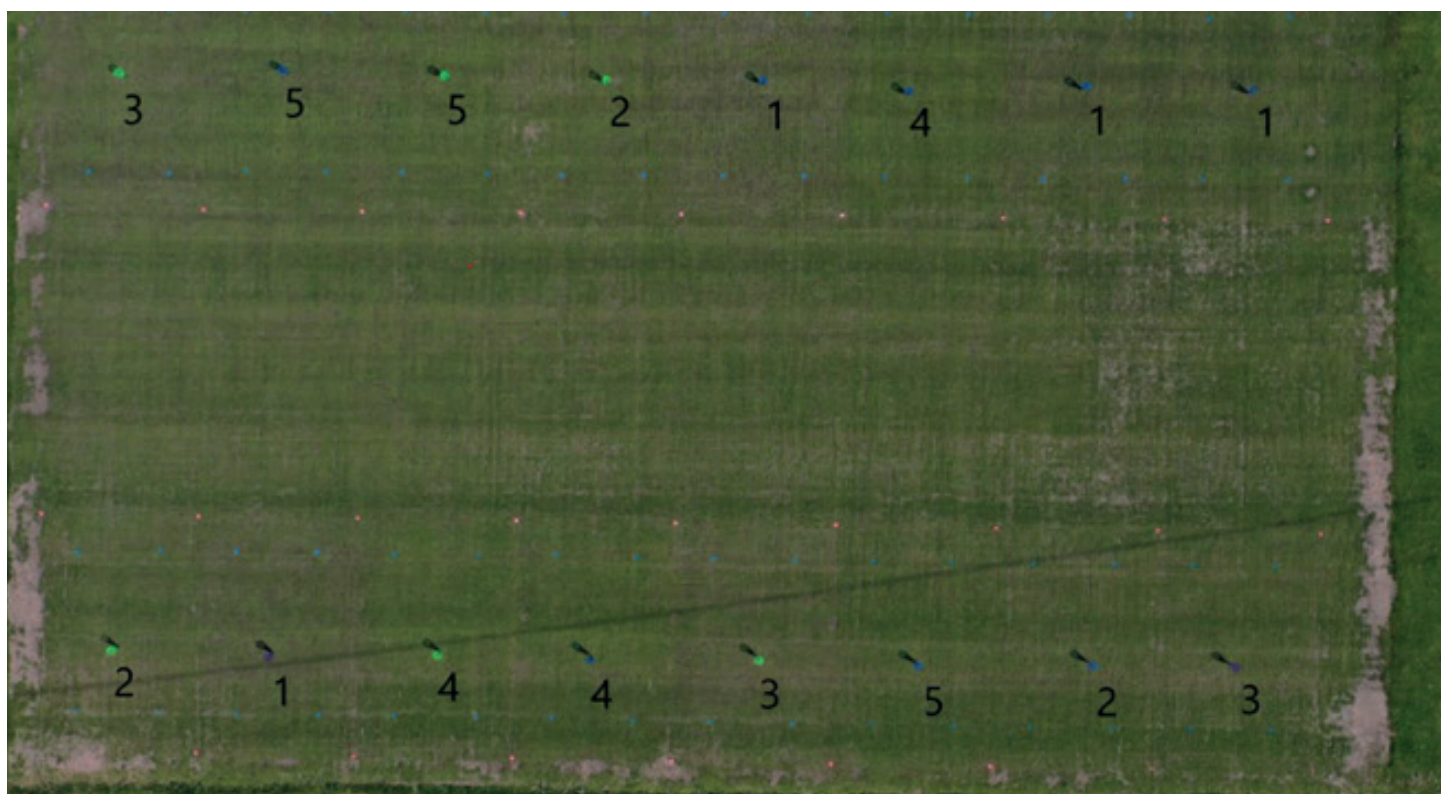


Image 2: Trial overview at week 5. Treatments labelled