

TURF TRIAL INFORMATION

GREENMASTER® LIQUID
ADVANCE



Greenmaster Liquid Advance program reduces disease incidence for fine turf

SUMMARY

- Five-month trial of Greenmaster Liquid Advance (GMLA) nutrition, containing the registered biostimulant package of MTU® & pidolic acid was compared with original Greenmaster Liquid (GML).
- Applications of GMLA at two rates in a program over five months clearly demonstrated improved turf color and turf quality with an increase from 2 to 4 kg N/week in the summer (July–October), and from 1 to 2 kg N/week in the winter (October–November).
- Applications of GMLA at two rates in a program over five months clearly demonstrated reduced disease incidence of Anthracnose (*Colletotrichum cereale*) & *Microdochium nivale* when compared with original GML at matched nutrition rates.
- Internal trial completed at Harrogate Golf Club assessing turf characteristics for a golf green.

METHODS

An internal five-month trial located on a golf green at Harrogate Golf Club was completed from June to November 2025. A partially shaded green comprised of an *Agrostis capillaris* / *Poa annua* sward with known susceptibility to disease outbreaks was utilized for the trial. Liquid fertilizer applications were made to the trial plots (Table 1) in a randomized complete block design with four replicates. Nutrition only was added for summer applications (July–October), however H2Pro FlowSmart @ 10 L/ha (penetrant wetting agent) and Pro Iron Effect (10 L/ha) were added to each application in autumn (October–November). Turf quality (1–10 scale), turf color (1–10 scale) and turf disease incidence (% affected) assessments were made fortnightly.



	July–October applications every 14 days		October–November applications every 14 days	
		Rate kg N/ha/week		Rate kg N/ha/week
T1	Untreated Control		Untreated Control	
T2	GMLA High N 33-0-0 (2 & 1)	2	GMLA Cal-Mag 11-0-0	1
T3	GMLA High N 33-0-0 (4 & 2)	4	GMLA Cal-Mag 11-0-0	2
T4	GML High N 33-0-0 (2 & 1)	2	GML Cal-Mag 11-0-0	1
T5	GML High N 33-0-0 (4 & 2)	4	GML Cal-Mag 11-0-0	2

Table 1: Treatment applications.

RESULTS

Mean turf quality was significantly greater ($P<0.05$) than control for higher rate N treatments (T3 & T5) on nearly every assessment occasion (8/9). Higher rate N treatments demonstrated significantly greater ($P<0.05$) turf quality than lower rate N treatments in general (5/9). GMLA treatments (T2 & T3) demonstrated significantly greater turf quality than GML treatments (T4 & T5) on three occasions (data not shown).

Mean turf color was significantly greater ($P<0.05$) than control for higher rate N treatments (T3 & T5) on most assessment occasions (6/9). Higher rate N treatments demonstrated significantly greater ($P<0.05$) turf color than lower rate N treatments occasionally (3/9). GMLA treatments (T2 & T3) demonstrated significantly greater turf color than GML treatments (T4 & T5) on three occasions (data not shown).

The presence of anthracnose (*Colletotrichum cereale*) was identified throughout the trial, and addition of nutrition generally significantly reduced the disease with higher rates of nitrogen application showing greater reduction (Table 2). At the lower rate of nutrition there was rarely a difference between GMLA and GML however, at higher rates of nutrition GMLA demonstrated significantly reduced amounts of disease when compared to the matched nitrogen of GML.

Mean Anthracnose Incidence (%)

		25-Jul	15-Aug	29-Aug	12-Sep	26-Sep	24-Oct	14-Nov	21-Nov
T1	Untreated Control	15.0a	9.0 a	13.5 a	10.0 a	6.3 a	14.8 a	16.5 a	11.8 a
T2	GMLA (2 & 1)	7.0 b	2.8 bcd	4.8 cd	4.0 b	4.0 b	3.8 bcd	0.0 c	0.0 c
T3	GMLA (4 & 2)	5.8 bc	2.0 cd	2.3 de	1.8 de	1.8 de	2.0 cd	0.8 c	0.5 c
T4	GML (2 & 1)	7.3 b	6.0 ab	9.5 b	4.5 b	4.5 b	2.0 cd	0.5 c	1.5 c
T5	GML (4 & 2)	7.0 b	3.3 bcd	6.3 c	3.5 bc	3.5 bc	7.3 b	11.5 b	7.0 b

Table 2: Mean anthracnose incidence (%). Results sharing a letter are identified as not significantly different.

The presence of *Microdochium nivale* was identified on the last four assessment dates (Table 3) and increased in severity from October to November. The addition of nitrogen in all treatments significantly ($p<0.05$) reduced the incidence of the disease. On the last two assessment dates GMLA reduced the presence of the disease to a significantly ($P<0.05$) greater extent than GML treatments.

Mean Microdochium Incidence (%)

		17-Oct	24-Oct	14-Nov	21-Nov
T1	Untreated Control	3.3	8.8 a	12.8 a	9.5 a
T2	GMLA (2 & 1)	3.3	3.0 b	4.0 c	3.3 c
T3	GMLA (4 & 2)	2.3	5.5 b	3.5 cd	3.5 c
T4	GML (2 & 1)	2.8	2.8 b	11.0 a	7.5 b
T5	GML (4 & 2)	3.8	5.5 b	8.3 b	6.5 b

Table 3: Mean microdochium incidence (%). Results sharing a letter are identified as not significantly different.

CONCLUSIONS

The trial work demonstrates the expected improved turf quality and turf color achieved on a golf green from increasing the rate of N slightly during a summer and winter period. Also apparent is the reduction in anthracnose experienced from similar N increases. The trial also demonstrates a significant reduction in disease incidence, of both anthracnose and microdochium when applying a program of improved Greenmaster Liquid Advance, now containing a biostimulant package, in comparison to matched nitrogen inputs of the original product. This difference could potentially be due to improved photosynthesis and a reduction in stress experienced for GMLA plots allowing for better disease resilience.