TURF TRIAL INFORMATION

Eqo.s Controlled Release Fertilizer demonstrates improved turf quality over other nitrogen forms from a single application

SUMMARY

- Independent summer fertilizer trial completed at STRI, Bingley, UK
- Completed 2023 on *Lolium perenne* sward over sand dominated rootzone.
- **Eqo.**s controlled-release nitrogen was compared with competitor slow release and inhibited nitrogen products, at a 110kg N ha application rate over the trial period.
- All three fertilizers significantly improved (P<0.01) mean turf quality, mean turf colour and mean NDVI during the course of the 14-week trial.
- **Eqo.**s controlled-release nitrogen significantly (P<0.01) improved mean turf quality, mean turf colour and mean NDVI from 28 days through to 84 days when compared with slow release and inhibited nitrogen applied at the same rate.

METHODS

An independent summer fertilizer trial was conducted at STRI trials ground, Bingley, UK. A *Lolium perenne* sward over a high sand percentage rootzone was maintained as a professional sports pitch for the trial over 14 weeks during the summer 2023. Three fertilizer technologies were compared (table one), applied once at the trial start at a rate of 110 kg/ha (the additional nutrients present in the SRF product were not equalized). The treatments were replicated four times in 1m x 1m plots following a randomised complete block design, as part of a larger fertilizer trial. Visual assessments of turf quality and turf colour on a 1-10 scale, alongside NDVI readings by handheld meter were made fortnightly through the trial between June and October.

TABLE 1: TRIAL TREATMENTS

Treatments	Nitrogen type	Analysis	Rate (gm^2)	Total N applied (kg N /ha)
Control	N/A			
Eqo.s	Coated controlled release fertilizer	32-0-0	34.5	110
SRF	Slow-release fertiliser containing Methylene urea and Isobutylidene diurea	20-5-8	55	110
Inhibited	Urea containing DCD nitrification inhibitor	46-0-0	24	110

RESULTS

Initial response in mean turf colour was strongest for the Inhibited N (figure 1), but by day 14 all three fertilizers provided an equal turf response. By day 28 turf response was significantly ($p<0.01$) better for **eqo**.s treated turf. This significantly greater response remained for **eqo**.s until week 12. Mean turf quality followed a similar trend (figure 2), with inhibited N providing a stronger response at day 7 which equalled out by day 14. At day 28 the **eqo**.s N treatment showed a significantly higher quality value right through to week 12. NDVI results showed similar responses (data not shown). The differential turf response was clearly visible at week 6 from drone images taken of the trial (image 1).

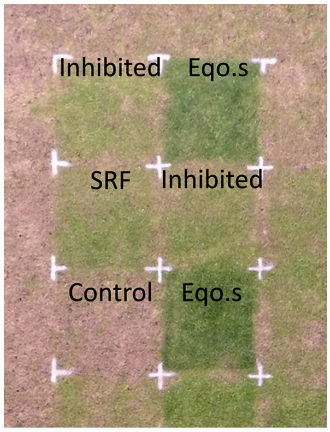

Image 1: Drone image from week 6 of a section of the summer fertilizer trial, STRI.

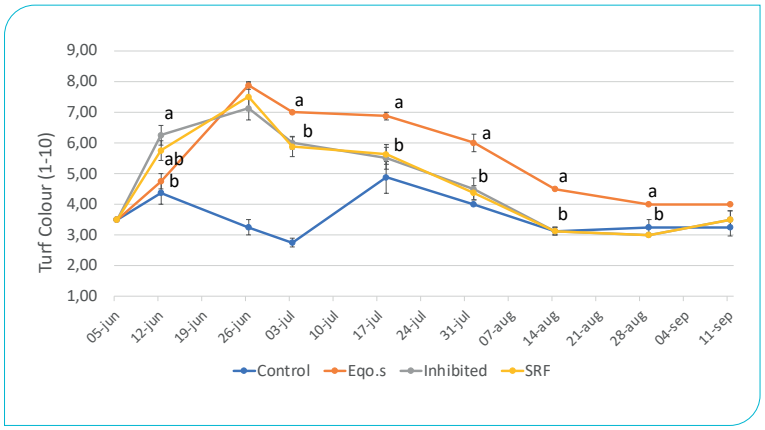

Figure 1. Mean Turf Visual Colour (1-10). Error bars indicates standard error of the mean. Treatment points sharing a letter indicate no significant difference.

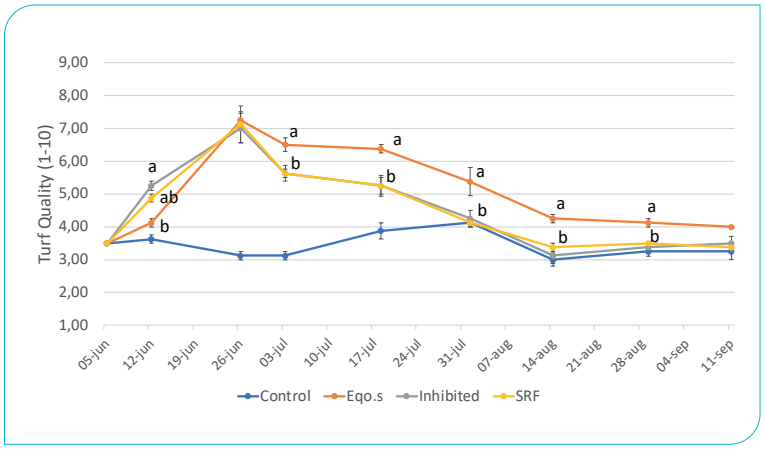

Figure 2. Mean Turf Visual Quality (1-10). Error bars indicate standard error of the mean. Treatment points sharing a letter indicate no significant difference.

CONCLUSION

A comparison of three fertilizer types, each supplying 110 kg N /ha over 14 weeks clearly demonstrated different turf responses. Initial responses at day 7 were greatest for inhibited nitrogen. This suggests the inhibitors do not restrict N availability to the grass plant to any great extent. Turf response at day 14 had equalled out for all three fertilizer types. By day 28 the **eqo**.s coated nitrogen fertilizer was providing significantly greater turf colour and turf quality. This difference remained apparent through until after day 84 (12 weeks). The trial clearly illustrates the advantage to turf managers in terms of turf quality and colour provided by selecting a coated fertilizer such as **eqo**.s over other fertilizer types.

See www.icl-growingsolutions.com and link to **eqo**.s pages.

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