TURF TRIAL INFORMATION

Two applications of **eqo.**s controlled release fertilizer provides significantly better turf quality for professional sports pitches when compared with slow release and inhibited nitrogen

SUMMARY

- Independent summer fertilizer trial completed at STRI, Bingley, UK
- Completed in 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 250 kg N /ha from two applications during the trial period.
- All three fertilizers significantly improved (P<0.01) mean turf quality, mean turf colour and NDVI during the 16-week trial.
- **Eqo.**s controlled-release nitrogen significantly improved (P<0.01) turf quality and turf colour and NDVI on two occasions after the initial application then on four occasions after the second application when compared with the competitor products.

METHODS

An independent summer fertilizer trial was conducted at STRI trials ground, Bingley, UK. A *Lolium perenne* professional sports pitch sward over a high sand percentage rootzone was maintained as a professional sports pitch for the trial over 16 weeks during the summer 2023. Three fertilizer technologies were compared (table one), applied twice, once at the trial start (June 5th) and again at week six (July 18th), to provide a total application rate of 250 kg N /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	39 × 2	250
SRF	Slow-release fertiliser containing Methylene urea and Isobutylidene diurea	20-5-8	62.5 × 2	250
Inhibited	Urea containing DCD nitrification inhibitor	46-0-0	27 ×2	248

RESULTS

One month after first application, **eqo**.s treated plots showed a significantly ($p<0.01$) greater mean turf colour which remained at week six (figure 1). Four weeks after the second treatment application in week eight **eqo**.s treated plots showed significantly greater ($p<0.01$) mean turf colour which lasted until the end of the trial week 16. Mean turf quality followed a similar trend (figure 2), with a similar response from all three treatments up to week four. Following this the **eqo**.s treatment showed a significantly ($p<0.01$) higher mean turf quality value at week four and week six. Following the second treatment application at week eight **eqo**.s treated plots showed a significantly greater mean turf quality from week 12 right through to the end of the trial at week 16. NDVI results showed similar responses (data not shown). The differential turf response was clearly visible at week 12 from drone images taken of the trial (image 1) and by week 15 only the **eqo**.s plots were clearly showing better visual turf colour than the control.

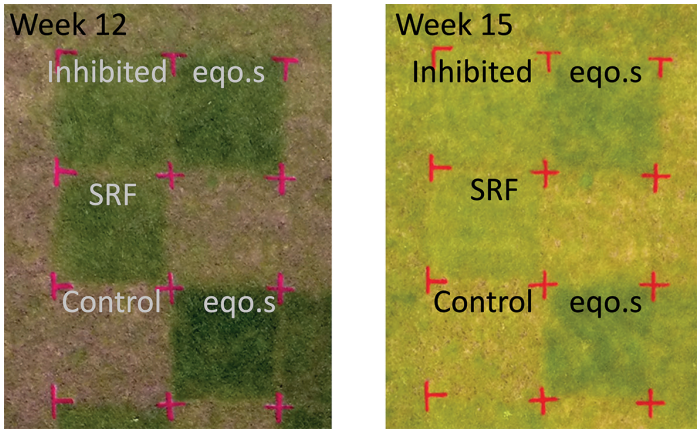

Image 1: Drone image from week 12 and week 15 showing turf response from a section of the trial area. Summer fertilizer trial STRI.

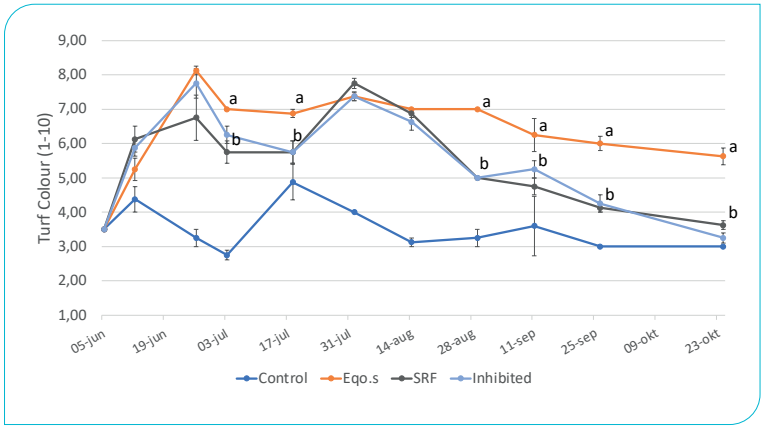

Figure 1. Mean Turf Visual Colour (1-10). Error bars indicate standard error of the mean. Treatment points sharing a letter indicate no significant difference.

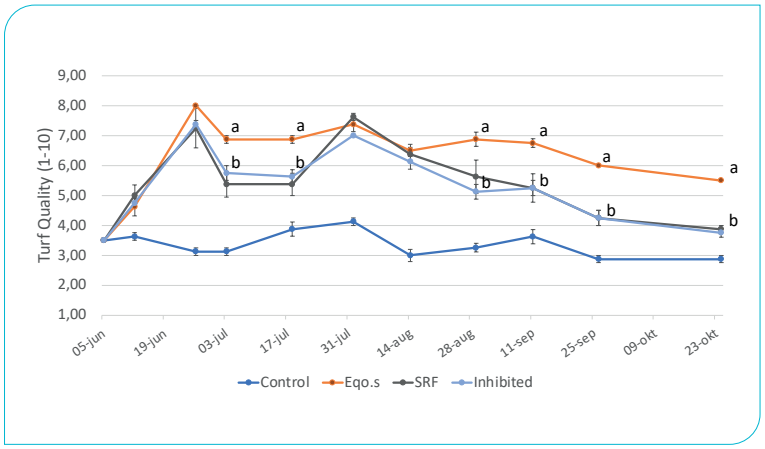

Figure 2. Mean Turf Visual Quality (1-10). Error bars indicate standard error of the mean. Treatment points sharing a letter indicate no significant difference.

CONCLUSION

A comparison of three fertilizer types, each supplying 250 kg kg N /ha from two applications over 16 weeks clearly demonstrated different turf responses. By day 28 the **eqo**.s coated nitrogen fertilizer was providing significantly greater turf colour and turf quality, and following the second application a clear difference was apparent right through until week 16. The trial clearly illustrates the advantage to turf managers in terms of turf quality and colour provided by selecting a coated controlled release fertilizer such as **eqo**.s over slow release and inhibited nitrogen fertilizer types.

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

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