

Hypothesis: Can Sweetgrass offset a 15% reduction in mineral N application compared to CAN as measured by dry matter yield and forage quality?

Objective: To evaluate the effect of balanced nutrition on a reduced N rate on grass DM yield

Crop: Grazed grass

Location: Farm, North Tipperary

Date: 2022

Researcher: Internal Gouldings & Origin trials staff

Trial code: N15(2)/2022



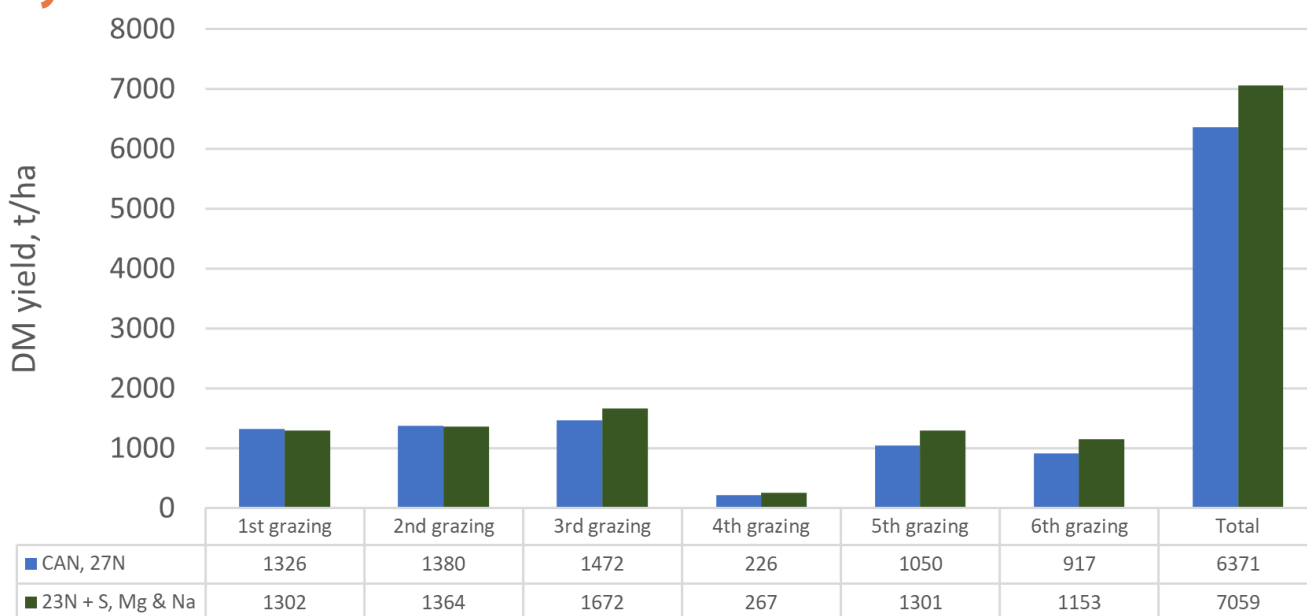
Background:

Site: pH 6.0, P index 2, K index 3

Treatment 1: CAN (27 N); total N applied was 304kg/ha

Treatment 2: Sweetgrass (23 N + 2 S, 1.2 Mg, 5 Na); total N applied was 259kg/ha ie 14.8% less N than CAN

Results: Farm trial, North Tipperary, 2022. DM yield at reduced N rate



Conclusions: At 15% less total N compared to straight CAN, Sweetgrass:

- ✓ Increased DM yield by 0.688 mt per ha (+ 10.7%)
- ✓ Additional DM is worth €137.60 per ha (based on DM value of purchased concentrate at €200pt)
- ✓ Increased N uptake, nitrogen use efficiency, DM content, crude protein, digestibility and energy
- ✓ Sweetgrass reduced greenhouse gas emissions by 14.8%