

Utilising slurry on grazed grass and compaction control

George Fisher
and
Chris Duller

British Grassland Society



WHY?

- Useful nutrients (NPK – S)
- Spread slurry around the farm
- Avoid overloading maize and silage fields with P and K

Concerns...

- Rejection
- Grass growth
- Soil condition



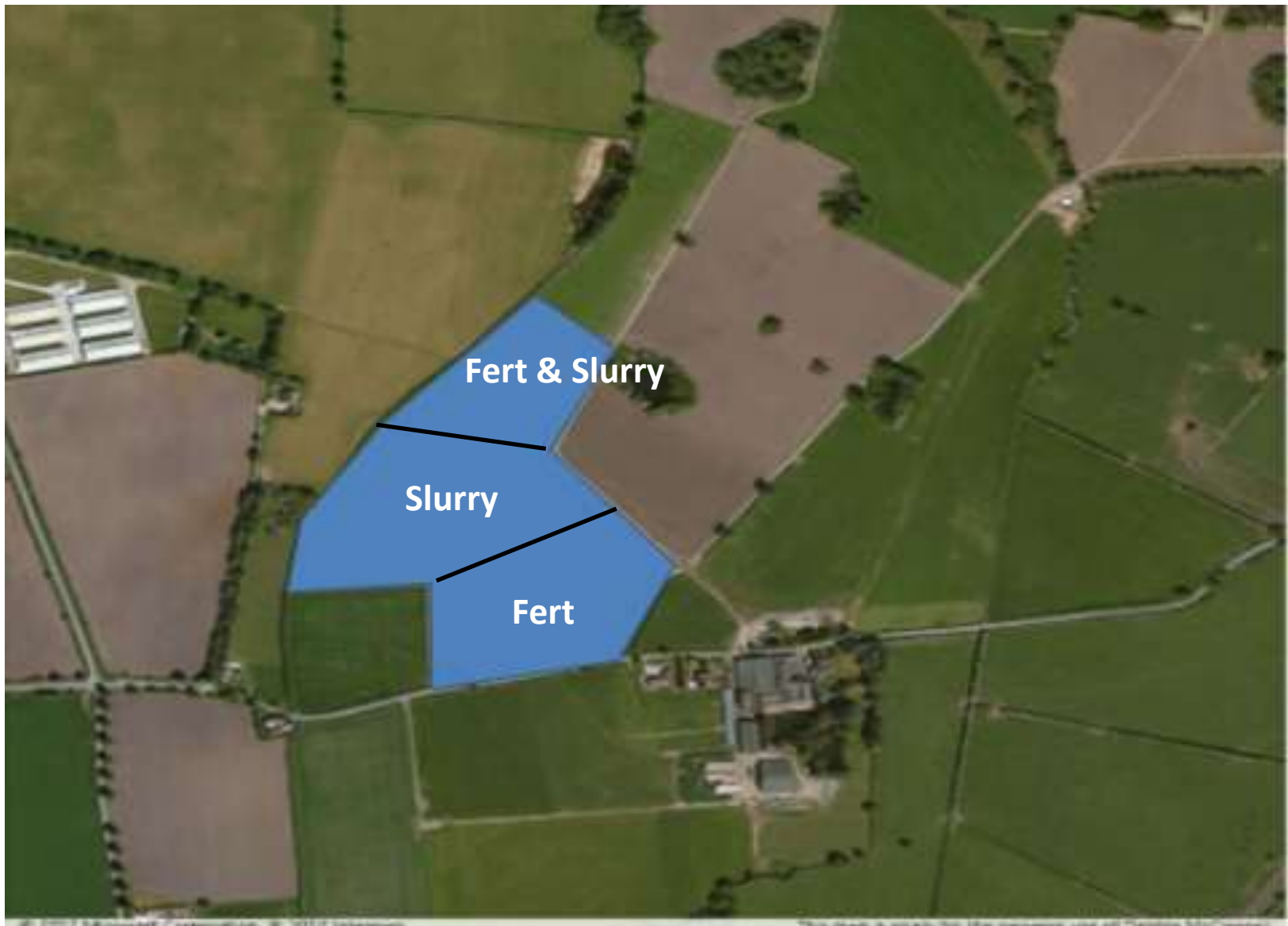
Handling slurry in NVZs – some reminders!

- ✓ No spreading from 15 Oct to 15 Jan (31Jan!)
- ✓ No more than 250 kg total N/ha from slurry on any one field in a calendar year (**104 m³/ha**)
- ✓ Nmax (available slurry N + fert N) = 300 kg/ha
- ✓ Exclusion zones – 50m for springs/boreholes and 10m (6m?) for watercourses
- ✓ 50 m³/ha in one application (30 m³/ha in Feb)
- ✓ No further application within 3 weeks

(1 m³/ha = 90 gals/acre)



The demo at The Orchards



The slurry at The Orchards

Slurry	DM (%)	Total N (kg/m ³)	Total P ₂ O ₅ (kg/m ³)	Total K ₂ O (kg/m ³)	Total SO ₃ (kg/m ³)
RB209	6	1.6	1.2	3.2	0.7
RB209	10	2.6	1.8	4.0	1.0
The Orchards	7.2	2.4	0.73	3.6	0.5



Available N in 30m³/ha of The Orchards slurry

Application method	Aug - Oct	Nov - Jan	Feb - Apr	Jun - Sep
Splash plate	22	18	25	18
Band spread	25	16	29	22
Shallow injection	22	22	32	25

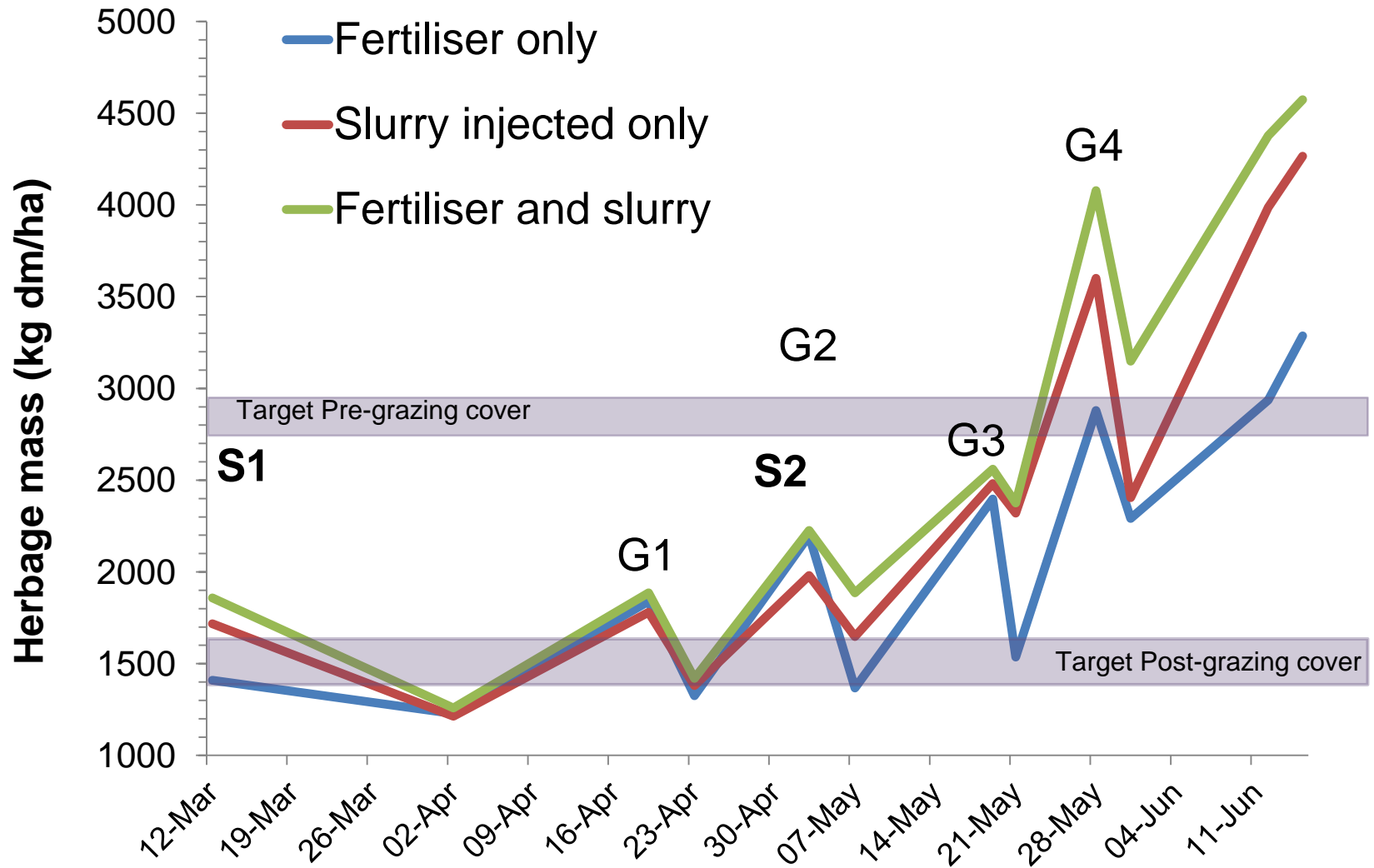


The demo at The Orchards

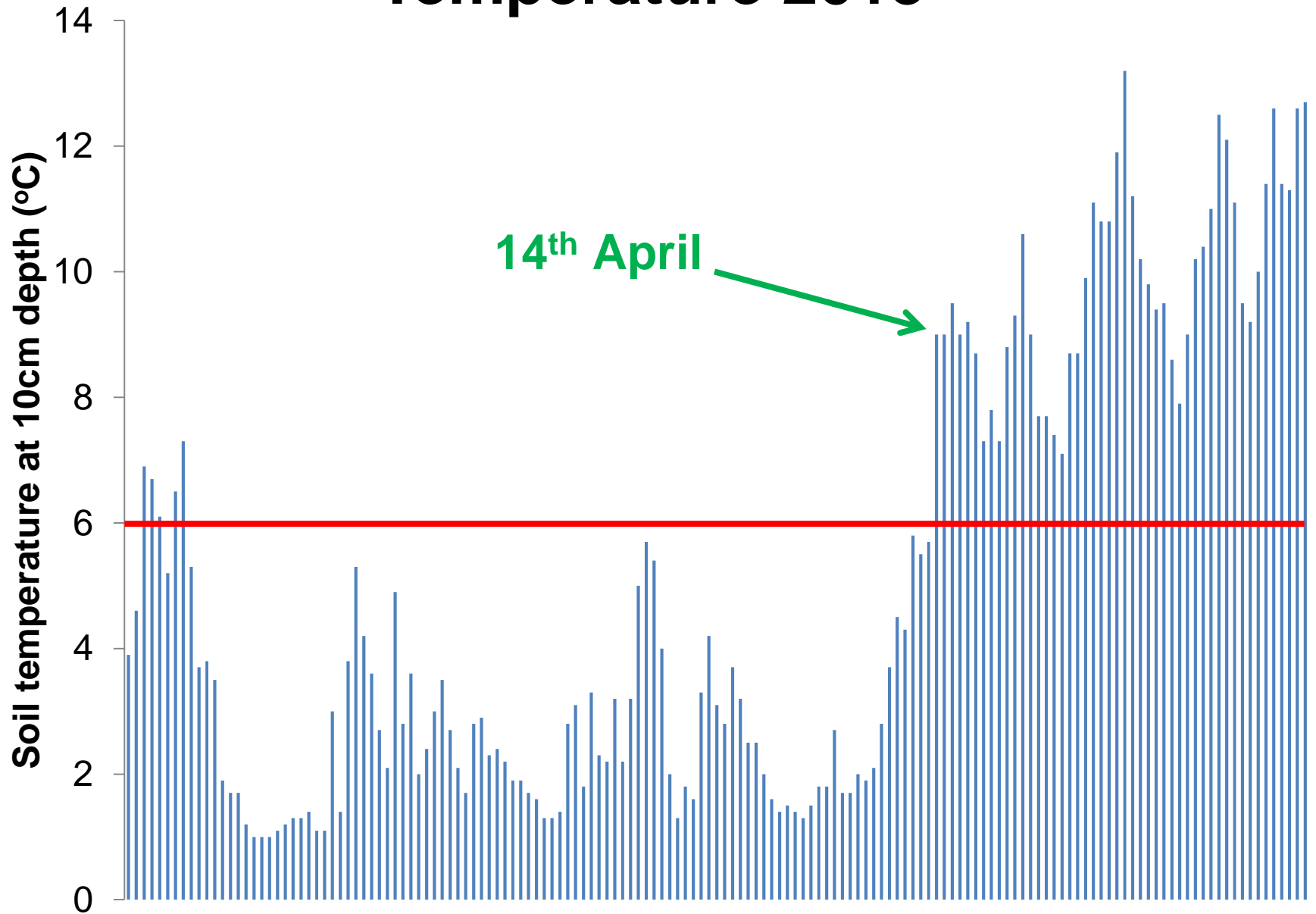
Management	Fertiliser	Inject slurry	Fertiliser and inject slurry
Slurry on 28 th Jan	All treatments had band spread application of slurry		
Nutrients applied 11 th March	90 kg N/ha	30m ³ /ha <i>(32 N, 11 P, 98K, 8S)</i>	90 kg N/ha
Grazing 1 – 19 th to 23 rd April	All treatments grazed with dairy cows		
Nutrients applied 1 st May	90 kg N/ha	30m ³ /ha <i>(32 N, 11 P, 98K, 8S)</i>	30m ³ /ha <i>(32 N, 11 P, 98K, 8S)</i>
Grazing 2 – 3 rd to 7 th May	All treatments grazed with dairy cows		
Grazing 3 – 19 th to 21 st May	All treatments grazed with dairy cows		
Grazing 4 – 28 th May to 2 nd June	All treatments grazed with dairy cows		
Nutrients applied 4 th June	All treatments received fert 50 kg N/ha for silage cut		
June / July	Due to rejection in slurried plots after Grazings 2 and 3, all plots were shut-up for a silage cut.		



The demo at The Orchards

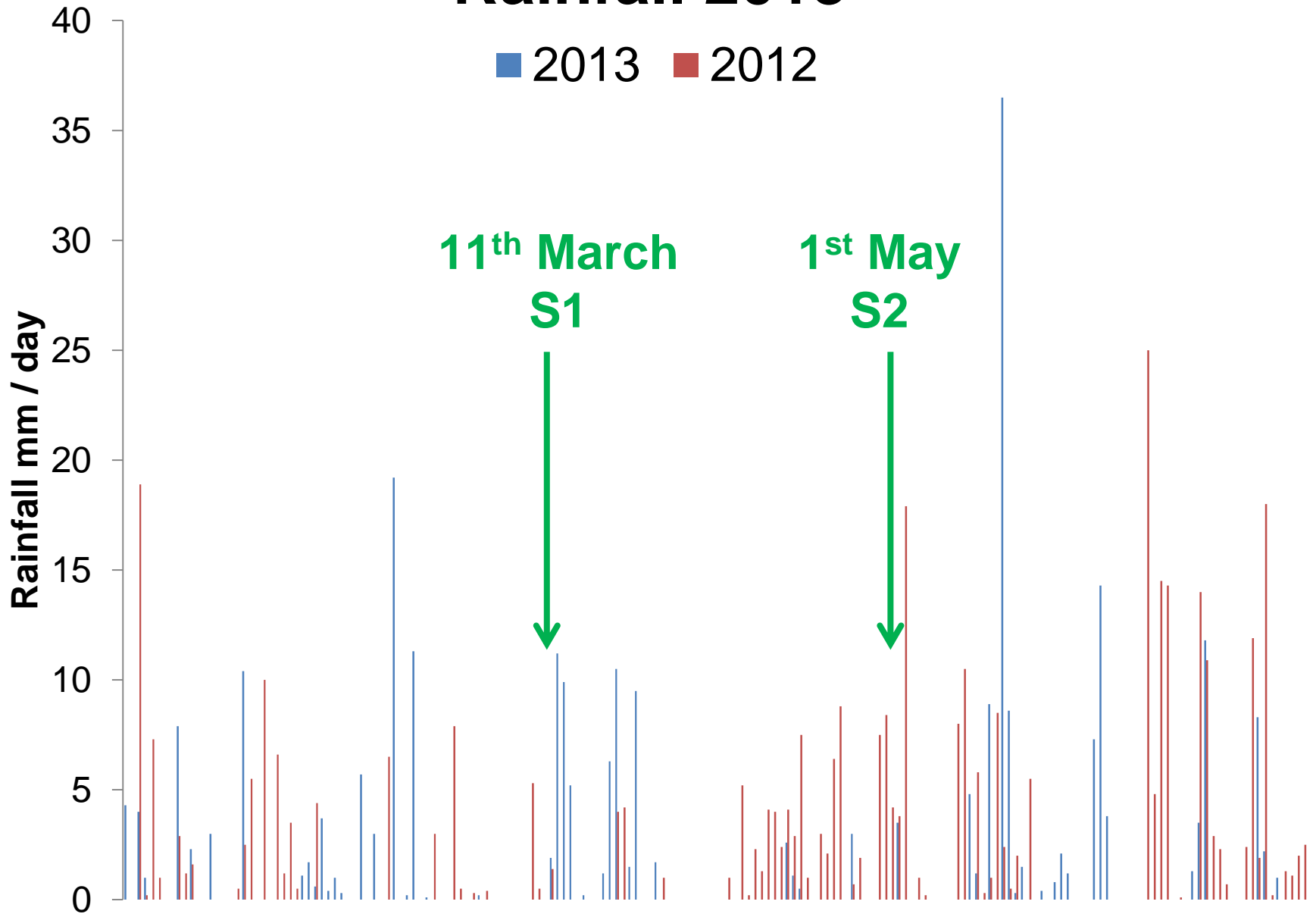


Temperature 2013



Rainfall 2013

■ 2013 ■ 2012



31st May



Fert only
2,300 kg DM/ha



Slurry only
2,400 kg DM/ha



Fert & Slurry
3,150 kg DM/ha

Results so far...

- First early application of slurry by injection was handled by cows OK with equal utilisation across the treatments.
- Second application didn't leave enough time (and it was dry) for slurry to be washed into soil and caused rejection which was compounded in following grazings.
- Early application of slurry for cow grazing worked, but more than that doesn't suit this system?



Tips...

- Get your slurry analysed.
- Apply as much as you can in the growing season .
- Think of slurry as a resource.
- Apply your slurry widely across the farm.
- Try and leave at least 3 to 4 weeks before grazing.
- Work to a nutrient management plan.
- Follow NVZs regs.

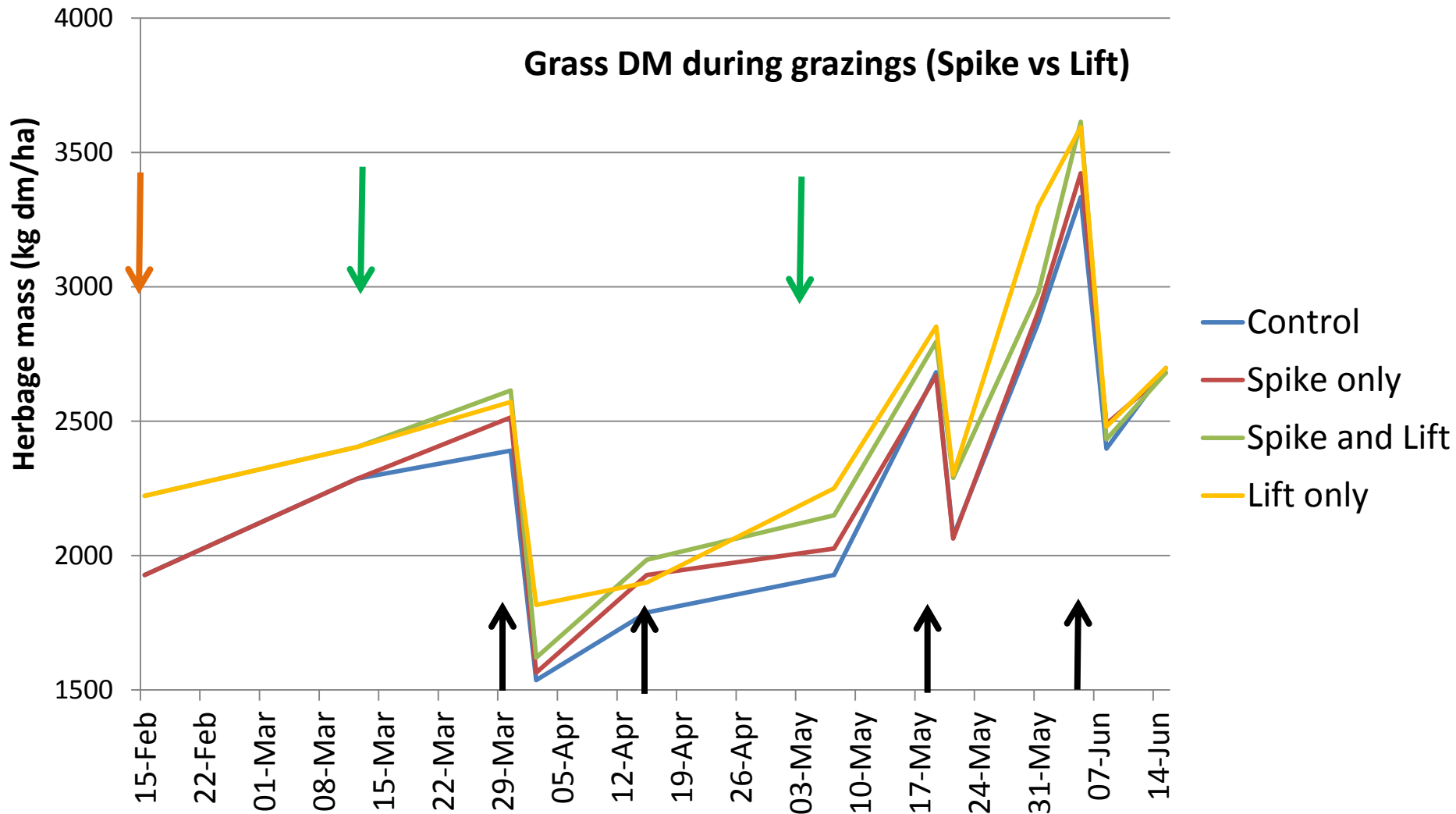








Grass DM during grazings (Spike vs Lift)



Thanks to the Brown family...



...especially Ryan



Thank you for your attention

