



Saving N for a rainy day

Nitrogen management after a dry finish

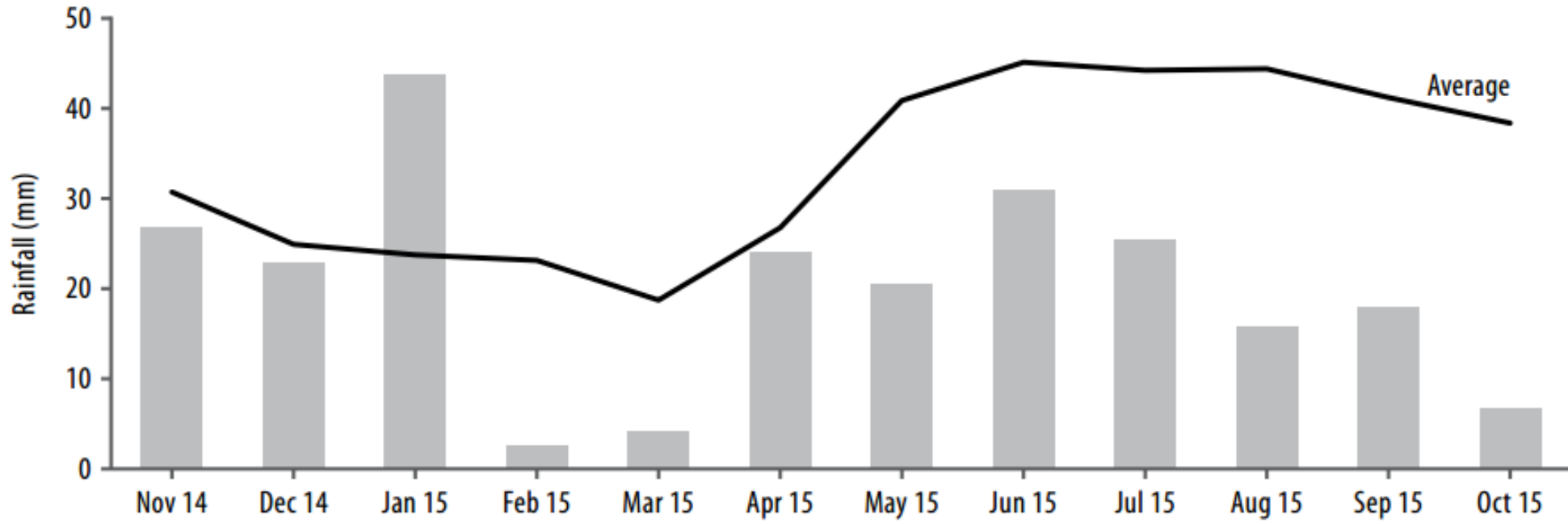
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N management is easy when you own a crystal ball

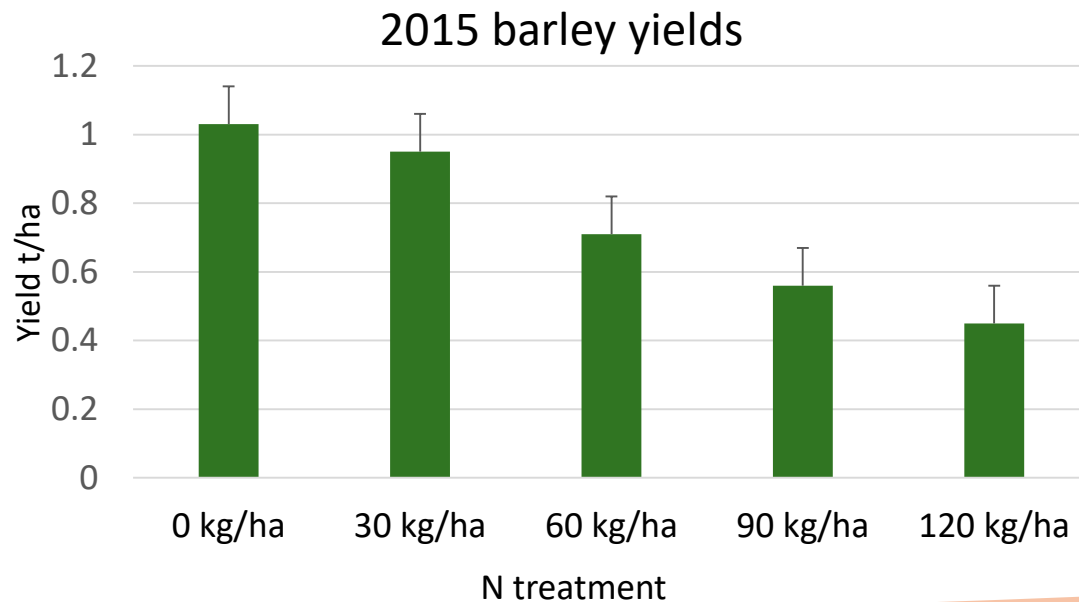
- Over-application and haying off can happen when you don't
- What does this mean for effective N management in the subsequent season?
- How much is leftover?
- Is the 'leftover' N a silver lining that can contribute meaningfully to subsequent crop outcomes?

Kalkee



2015

- Barley nitrogen response trial
- 6 varieties, 5 N rates



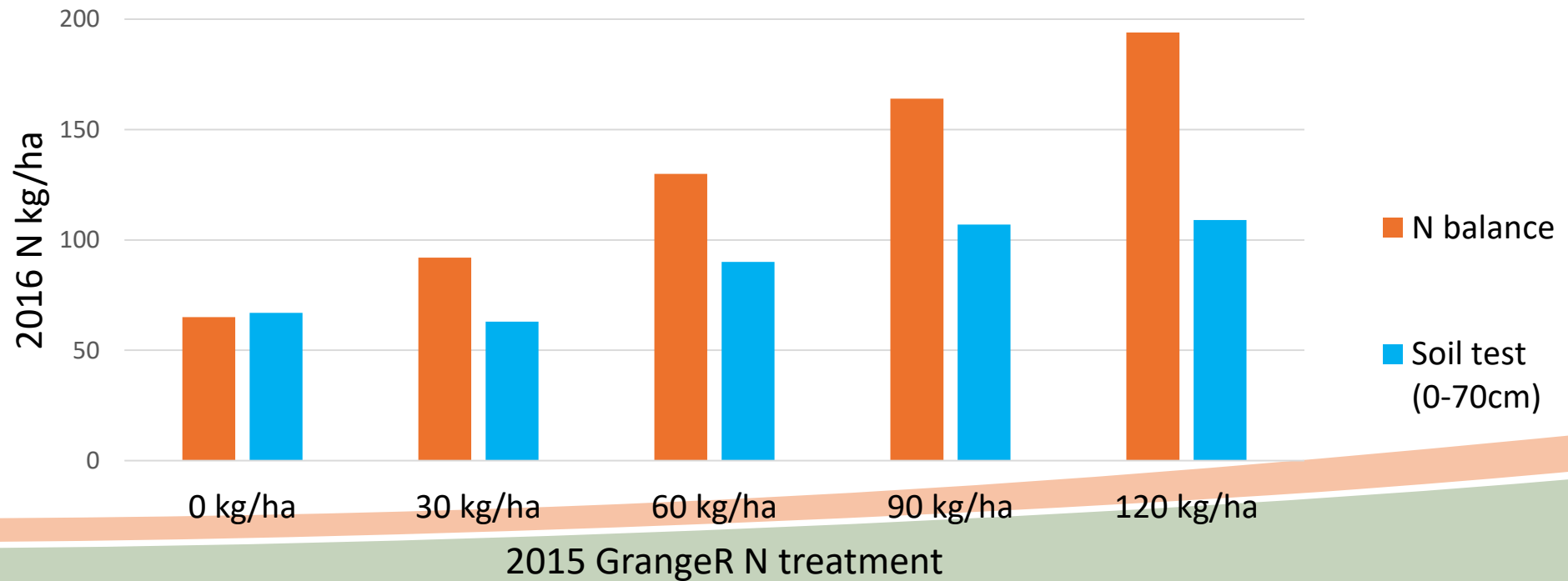
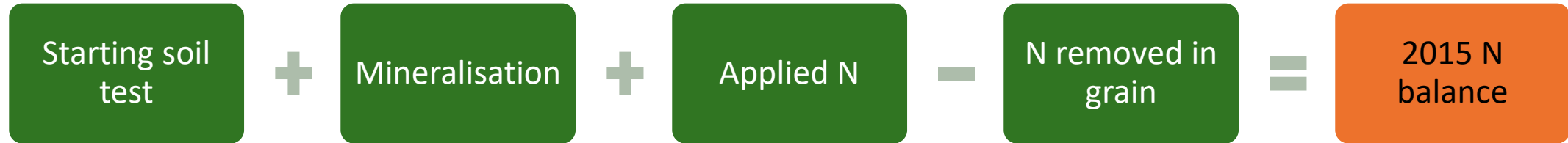
Stats: $P < 0.001$, $LSD = 0.11$, $CV = 25.2\%$



2016

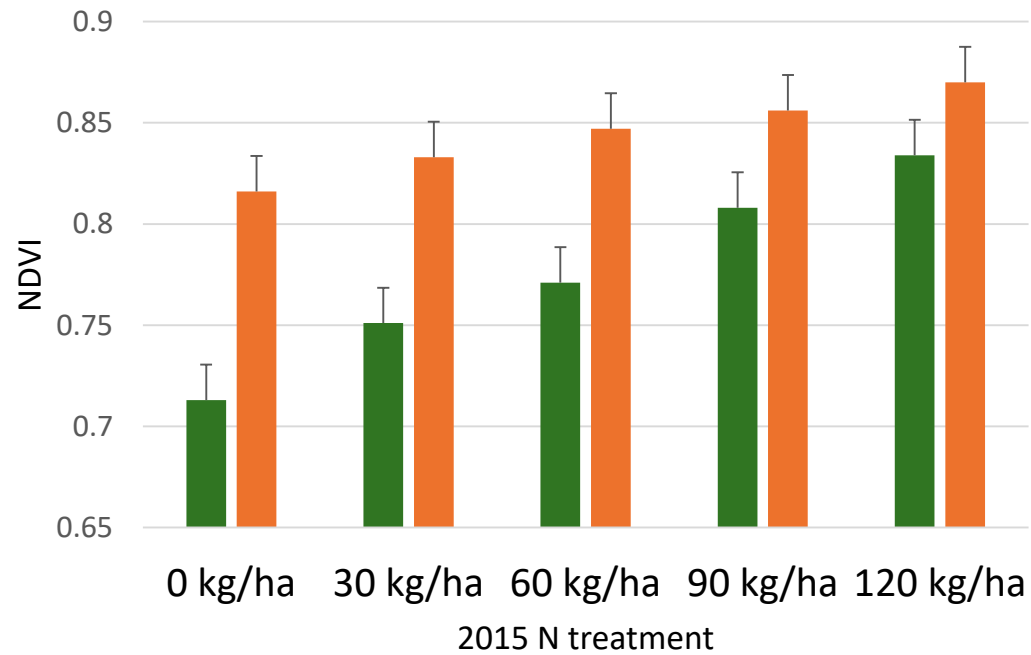
- Grenade CL Plus Wheat sown over all 2015 plots
- Half received 41kg N/ha at GS 15/22, other half received none
- Soil testing, NDVI, yield + quality

How much N was available at the start of 2016?



How did it affect crop N responses?

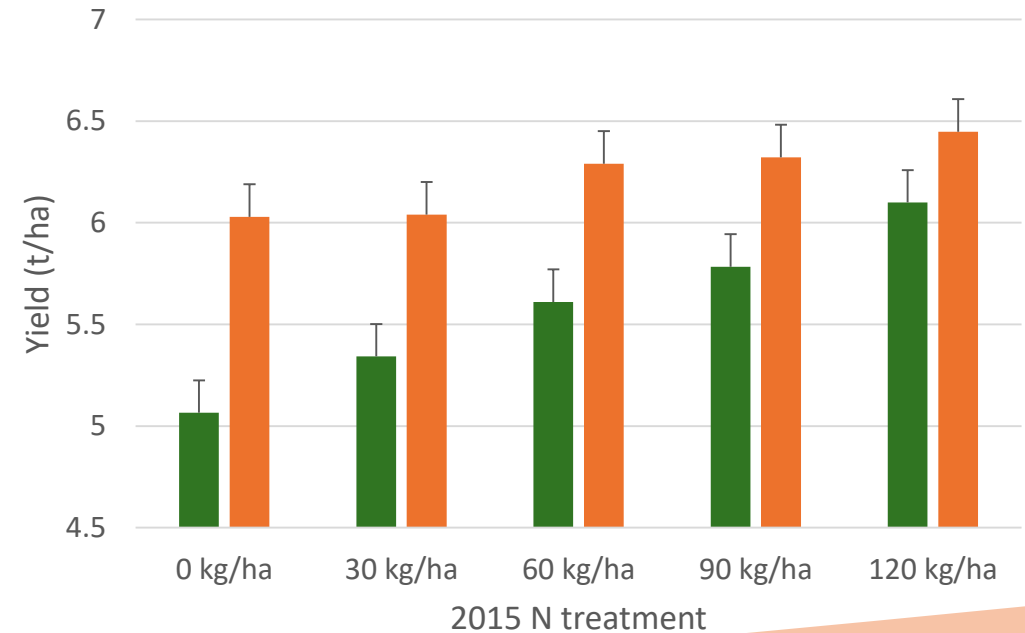
GS37 NDVI



■ -N in 2016 ■ +N in 2016

Stats: P=0.001 , LSD=0.01755 , CV=4.1%

Yield



■ -N in 2016 ■ +N in 2016

Stats: P=0.001 , LSD=0.16 , CV=5.5%



Take home messages

- Nitrogen applied to crops that have hayed off can contribute to crop biomass and yield in the subsequent season.
- When haying off is severe, an N balance based on paddock history may be inaccurate.
- Conservative N management delivered the best economic returns over the two years of the trial.