

Productivity Highlights

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Late Flexi-N applications can boost wheat protein

Background

Many areas in Western Australia produce wheat with low protein content due to:

- Increased length of cropping rotations.
- Leaching of nitrogen (N) applied at seeding – especially in wet years.
- Declining soil nitrogen reserves.

CSBP has conducted a number of trials investigating the ability of Flexi-N to increase wheat protein content when yields are not limited by moisture in spring.



Trial harvest at Kojonup in 2002.

Key Results

- Dry seasonal conditions at most sites resulted in low yield potentials and high protein contents – in these cases, late application of Flexi-N was not advantageous.
- At some sites, late Flexi-N application caused some scorching of the flag leaf – particularly when rates above 70L/h were used and crops were under moisture stress.
- Nevertheless, there were significant increases in grain protein when Flexi-N was applied late - increasing most returns by between \$26 and \$126 per hectare.

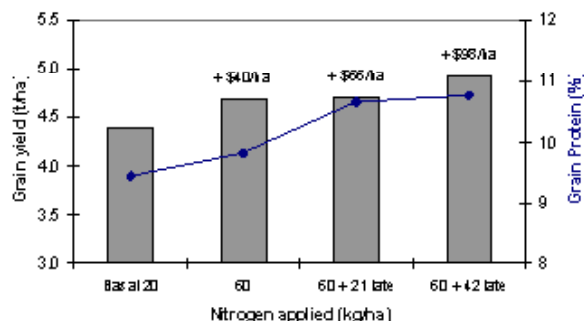
Summary

- Customers may be able to boost wheat protein content and profits by the late application of Flexi-N (30 to 60 L/h) in high yield situations.
- More work is being conducted to predict the benefits of late Flexi-N application and investigate ways to avoid leaf scorch.
- Nitrogen strategies should primarily be based on achieving yield potential so that this is not compromised.



Application of Flexi-N at flag leaf stage to plot on right.

Late Flexi-N application at Buntine increased wheat yield, grain protein and profit



Late Flexi-N application at Kojonup increased wheat grain protein and profit

