



# Nitrogen Efficiencies from Mid-row Banding (MRB)

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Previous research has indicated only 42% of the fertiliser you apply is utilised by the crop with the remaining leached, volatilised or washed away. Mid-row banding of N may prove a more efficient method of applying N. Benefits from mid-row banding include the same or higher yields from 20-30% less nitrogen being applied, improved nitrogen use efficiency and reduced acidification rates with the main aim of improving profitability.

In 2020, SCF investigated the use of mid-row banding to determine if this application method improved nitrogen use efficiencies. One of the trials we had implemented was a small plot experiment in South Stirlings with different top dressed and mid-row banded treatments. Thanks again to Direct Seeding and Harvest for their help at seeding time. Also, thanks to CSBP for applying the in-season mid-row banding treatments with their specialist trial machine. Treatments consisted of a combination of either nil, top dressed (125kh/Ha area) or mid row banded urea (125 kg/Ha) at seeding and top dressed, or mid row banded Flexi-N (100 L/Ha) at tillering.

All treatments yielded significantly more than the control treatment of nil urea at seeding and top-dressed Flexi-N at tillering. Combining one top dressing and one mid-row banding application was not significantly different to each other. However, the combination of mid-row banding and top-dressed urea yielded significantly more than the other treatments. The combinations of two top dressings or two mid-row bandings were statistically equivalent. For a comprehensive breakdown of the trial site, method, and results, look out for this trial in our 2020 trials review booklet due out in April.

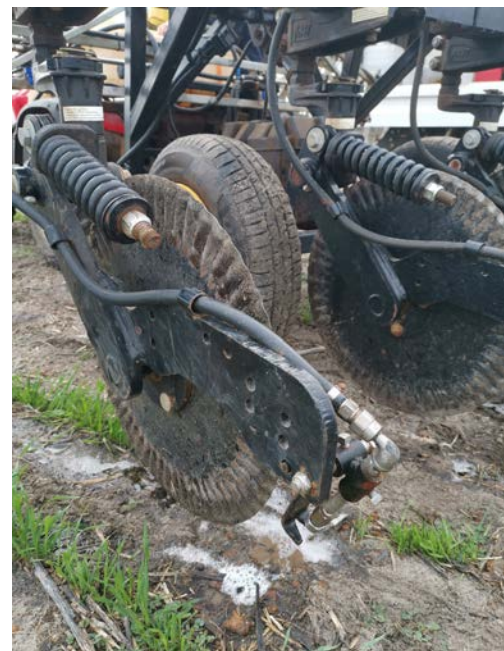


Figure 1: Close up of CSBP's trial mid-row banding machine. Wheat Tillering in a plot trial located in South Stirlings (29/7/2020).



Figure 3: Minimal damage that is inflicted by running the mid-row banding disc directly over the plant row (29/7/2020).

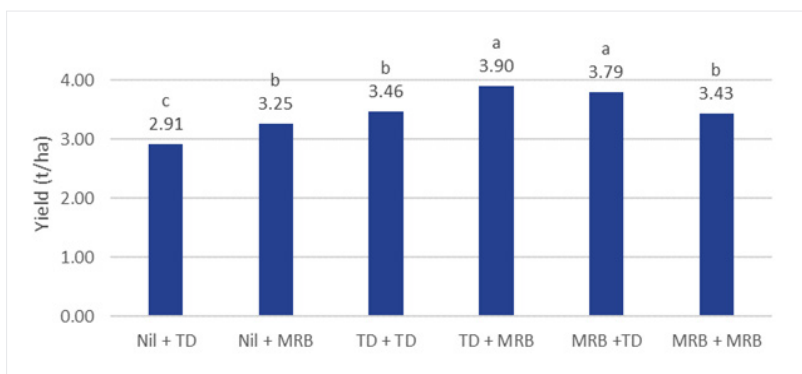


Figure 2: Grain yield results from a combination of top dressing (TD) and mid-row banding (MRB) at seeding and tillering in a plot trial located in South Stirlings.

