

PERFORMANCE SEED TRIALS

Nutrient Plus Product Trial



Compare the growth and performance of barley treated with Nutrient Plus through different methods:

- Seed treatment
- In-furrow application at seeding
- Foliar application
- Seed treatment + in-furrow
- Seed treatment + in-furrow + foliar application
- No Nutrient Plus treatment



Task	Timeline	Details
Seeding	June 6	153 lb/ac 1" depth
Maintenance	May 20 - June 20	Urea 100 lb/ac S15 80 lb/ac Glyphosate (pre-seed) 1 L/ac Fluroxypur 240 mL/ac Clopyralid 84 mL/ac MCPA Ester 281 mL/ac
Harvest	Sept. 26	Straight-cut



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Legend: Control (No treatment) = NT, In-furrow = IF, Foliar = F, Seed + in-furrow = SF, Seed + in-furrow + Foliar = SFF, Seed treatment = ST

Plant emergence counts did not differ significantly between treatments 14 days after seeding but showed a trend ($p = 0.06$) to higher emergence plant counts in plots which received all 3 applications (Seed + In-furrow + Foliar) compared to control and Foliar Only.

Plant density was not significantly different between treatments.

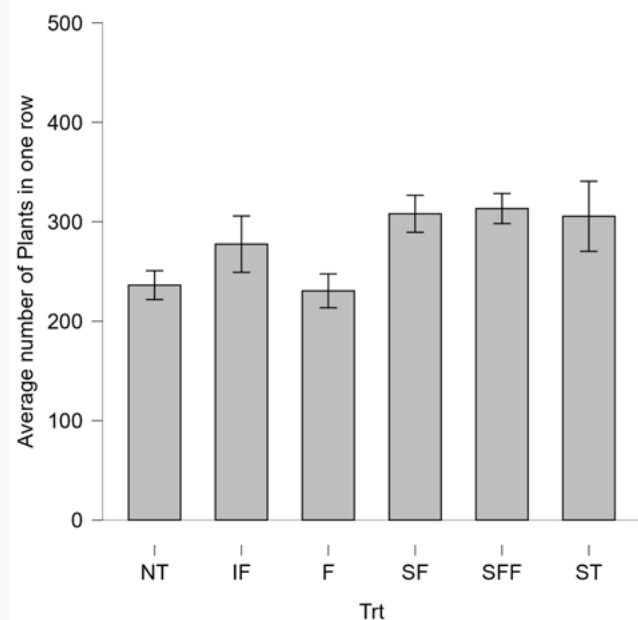


Figure 1. Emergence counts of barley 14 days after seeding

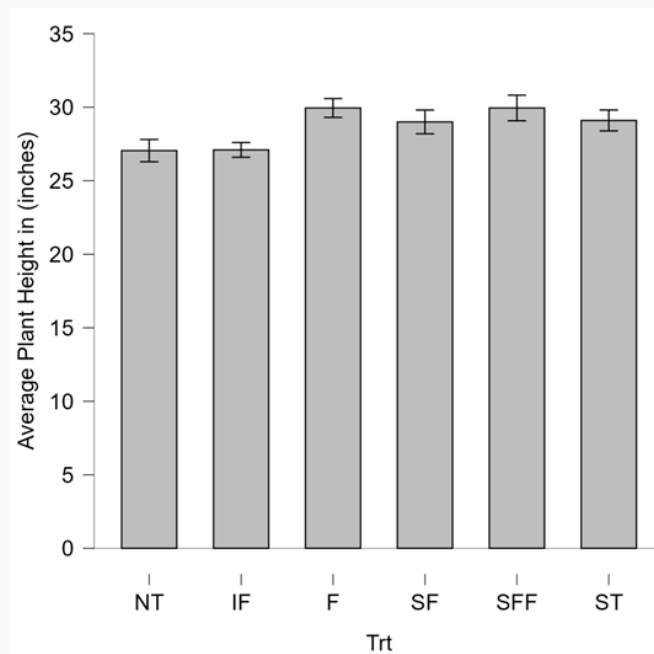


Figure 2. Barley plant height at maturity

Barley plant heights at the 50% heading stage showed that the plants that received all 3 applications were significantly taller than the plants that received only the in-furrow application. At maturity, the plants that received all 3 applications and just foliar were significantly taller than the control and in-furrow treatments.

Barley yield ranged from 39 to 83 bu/ac and showed significant variation between varieties ($p < 0.001$).

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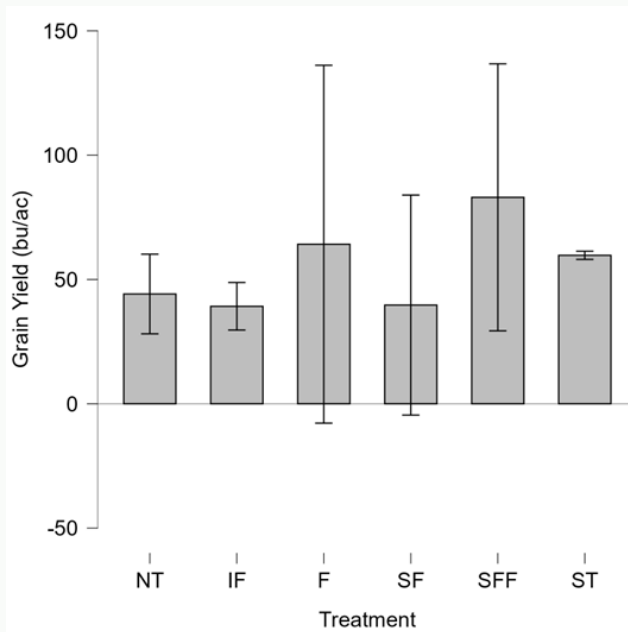
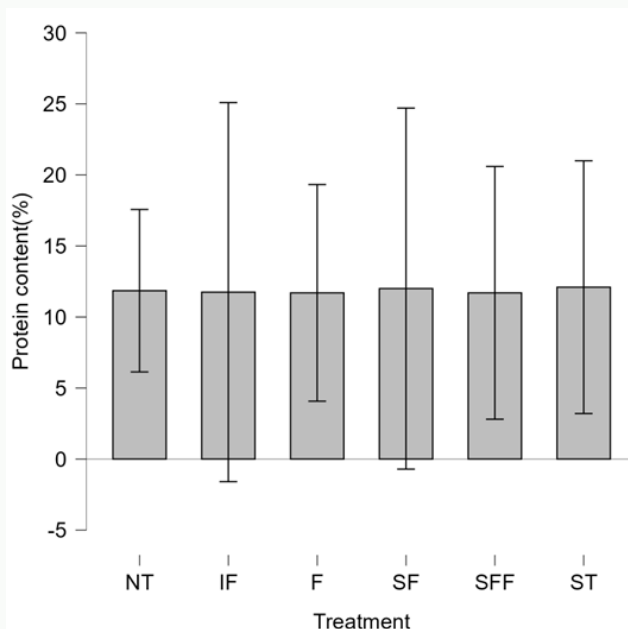


Figure 3. Barley yield (bu/ac)



The best performing treatment combinations appear to be the No Treatment (In-furrow) and (Seed + In-furrow) compared to the (Seed + In-furrow + Foliar) treatment.

The Seed Treatment is also beneficial compared to other combinations, but it does not yield significantly higher yields compared to the top-performing treatments.

The various Nutrient Plus application methods do not significantly affect protein content in barley ($p = 0.99$), despite some minor numerical differences across the treatments (with Seed treatment having the highest value at 12.1% and other treatments hovering around 11.7%-12%). Therefore, no application proved significantly better at increasing protein content in the crop. Under the conditions of this trial, product application methods do not have a strong influence on grain quality. These findings suggest that farmers may not see a notable increase in protein content from different application methods, and they might focus on other factors like yield or cost-efficiency instead.

Figure 4. Barley protein content (%)