



**on-farm network**  
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# Soybean Seeding Rate Trials

Evaluating different soybean seeding rates on-farm

**Long-term Results (2012 – 2024)**

## Trial Information:

- 132 trials from 2012 to 2024.
- Seeding rates tested are the farmer's traditional practice vs. 30,000 seeds/ac higher and lower.
- All other crop management activities are the same (row spacing, weed control, fertility, etc.).
- Most common comparisons have been 130 vs. 160 vs. 190,000 seeds/ac and 150 vs. 180 vs. 210,000 seeds/ac.
- Equipment: 58% of trials have used an air seeder and 42% have used a planter.
- Row spacings: 51% on narrow rows (7–12"), 31% on intermediate rows (15–20") and 18% on wide rows (22–30").

## Supporting Data:

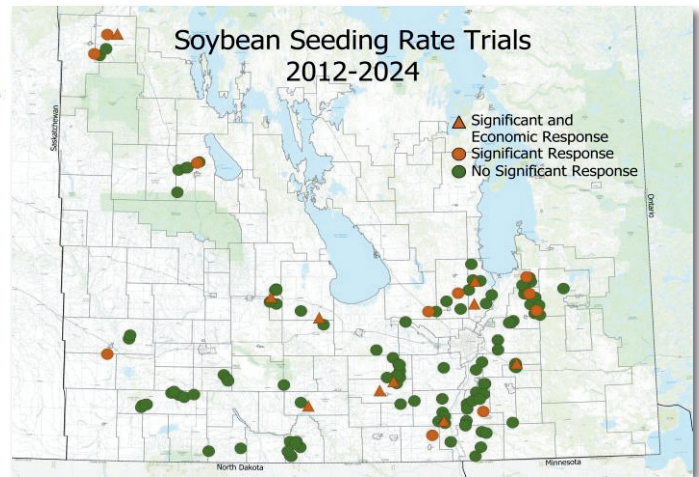
- Plant counts are recorded during V-stages and R-stages.
- Average early-season establishment has been 81% (range: 31–119%) and average late-season survivability has been 76% (range: 26–122%).
- Higher seeding rates were typically associated with lower percent establishment and more mortality throughout the growing season.
- Average survivability with planters has been 82% and 80% with seeders.

## Yield Results:

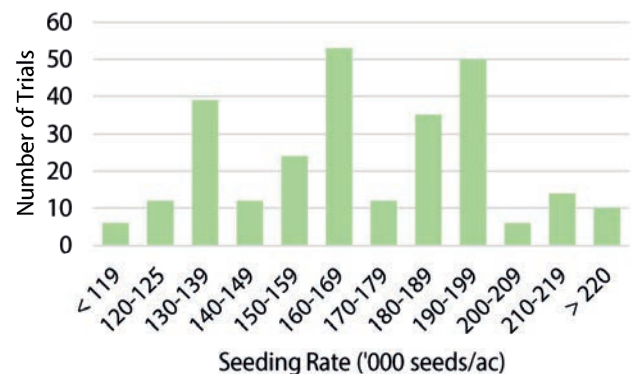
- 84% of the time, changing soybean seeding rate has not changed soybean yield.
- There have been 21 trials where a significant yield response occurred (16% of the time). Of those responses, 15 were economical where the yield increase was large enough to pay for the increased seed cost (81% of the time).
- Environment has played the biggest role in determining soybean yield in these trials.
- The outcome of seeding rates and the resulting plant stands established in the field have been farm-specific.

## Recommendations from this Research:

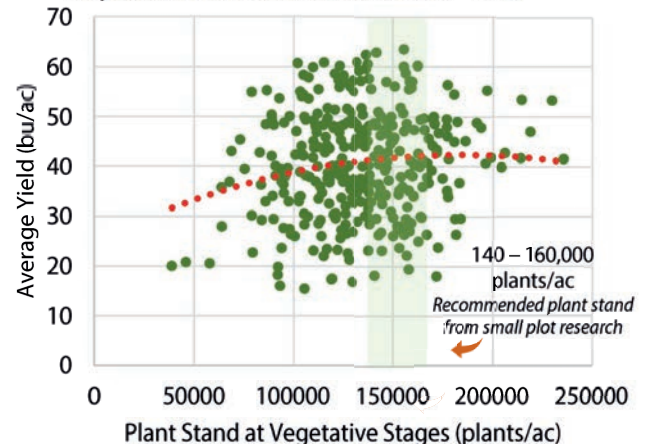
- Evaluate living plant stands in every field, every year and relate those plant counts back to your seeding rate. Are there areas where you can improve survivability on your farm? (Survivability (%) = plant count / seeding rate)
- Seeding rates of 150 to 190,000 seeds/ac have maintained soybean yield in these trials.



Distribution of Seeding Rate Treatments Across Trials



Early Season Plant Stand vs. Yield (2012-2024)



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