

# Determining an Optimum Soybean Seeding Rate

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## Objective

Understanding the yield and economic impact of varying soybean seeding rates within Ohio. Information from these trials are being used to improve management recommendations for growers.

## Study Design

Field studies were implemented in a strip trial design with a minimum of three replications. Stand counts were taken approximately 4-6 weeks after planting to verify treatments and plot yields and moistures were collected using a combine equipped with a calibrated yield monitor.

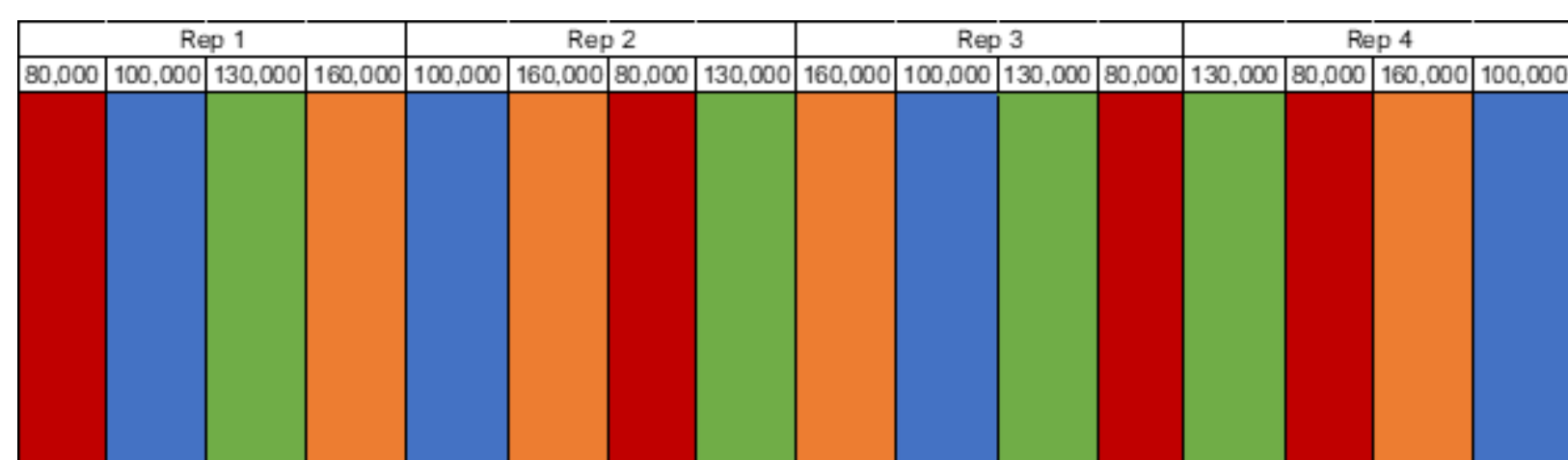
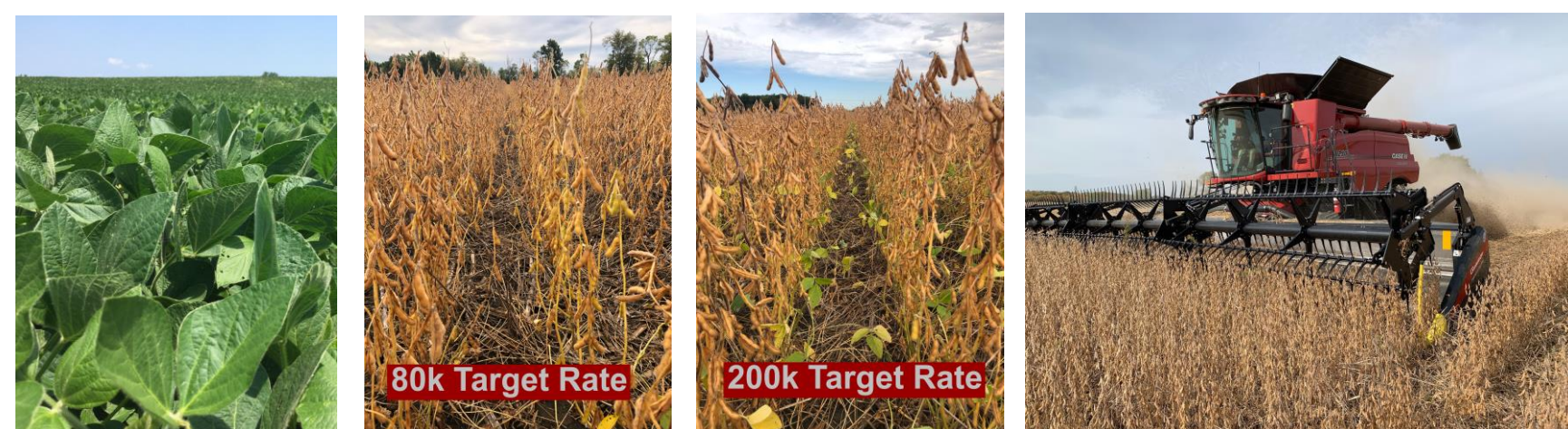


Figure 1. Trial layout with four seeding rate treatments and four replications.



## Results

Yield results were not significantly different in any year. Statewide, only 23% of the treatments tested resulted in a yield loss greater than 5%. These yield differences often do not offset the additional cost associated with increased seeding rates.

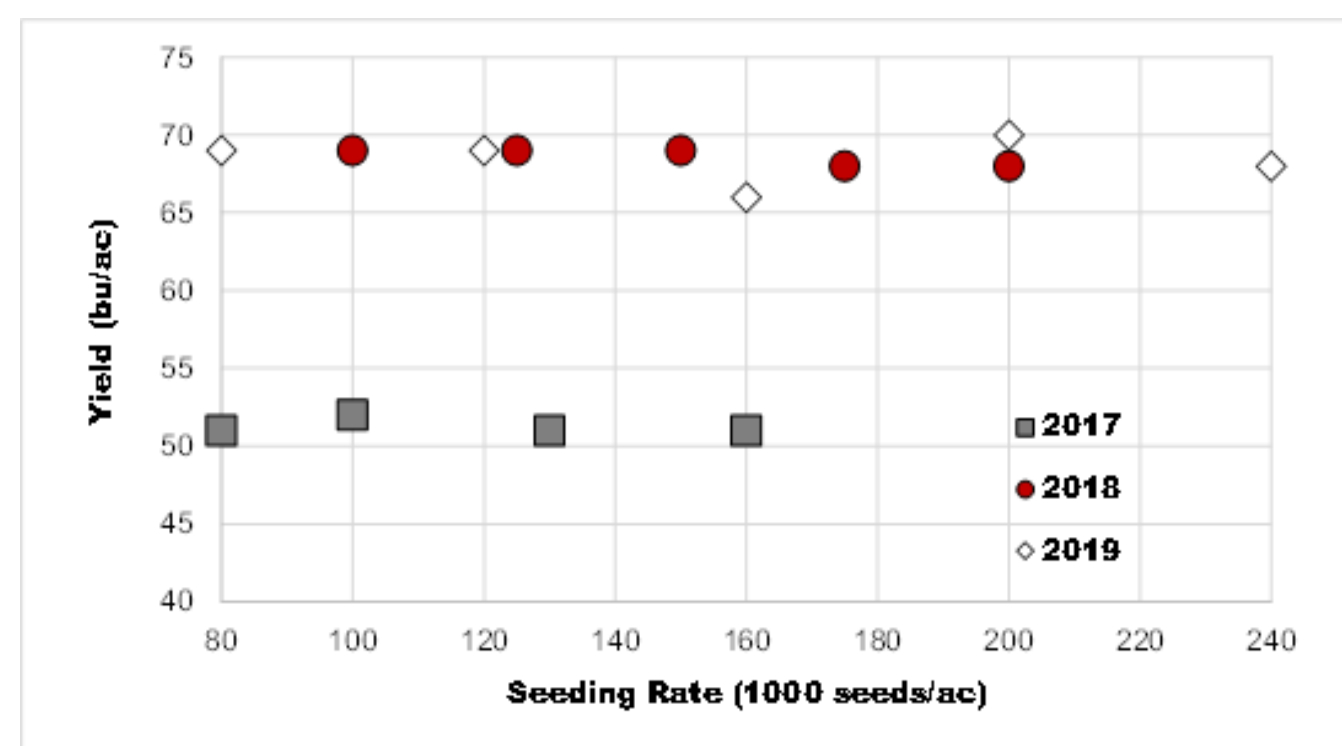


Figure 2. Yield results by seeding rate in the Tuscarawas County trials conducted in 2017-2019.

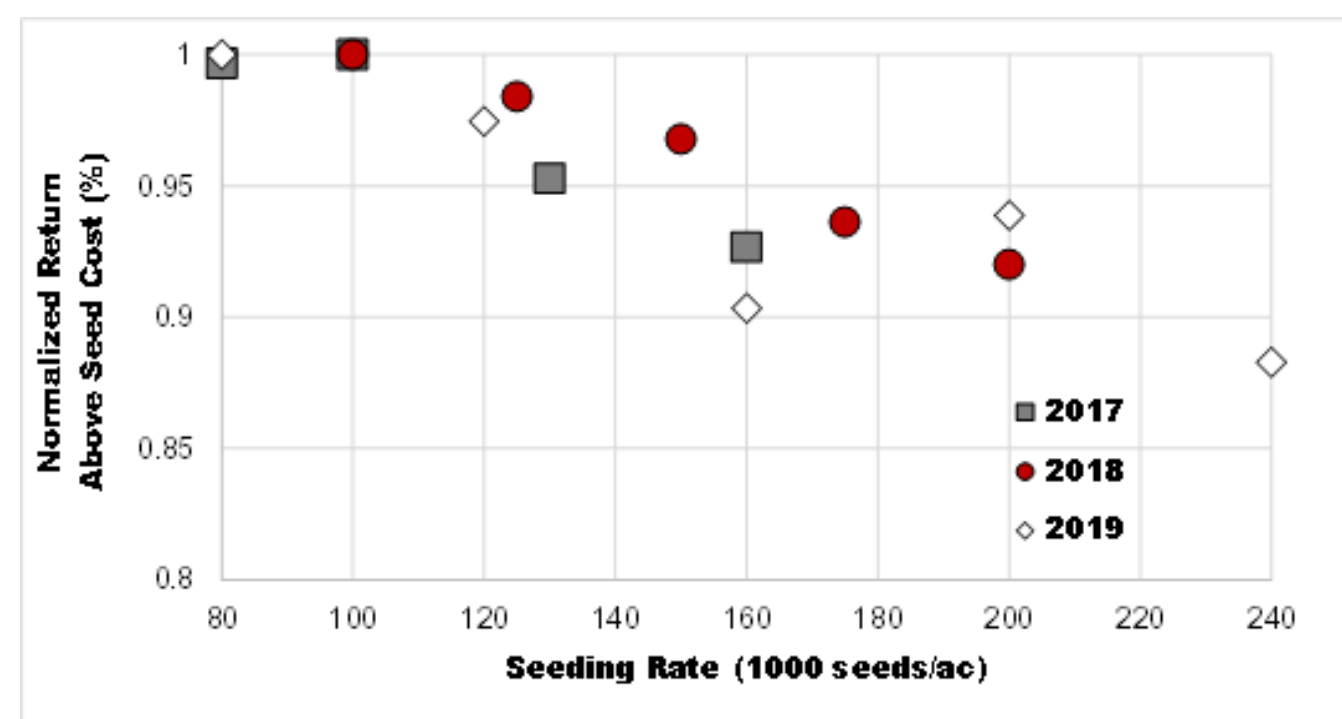


Figure 3. Normalized return above seed cost for soybean seeding rate trials conducted in Tuscarawas County in 2017-2019.

## Conclusions

Our research has shown that reducing soybean seeding rates can be accomplished without negatively impacting final yield. We have determined that if farmers reduced their seeding rate by 20,000 seeds per acre, assuming no reduction in yield, Tuscarawas County soybean growers could save \$17.12 per acre for a total savings of \$246,528.

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## Acknowledgments

Thank you to our eFields Partner Farms for your collaboration on these trials. Special thank you to Durbin Farms and Spillman Farms in Tuscarawas Co.