

Nebraska Soybean Board



11/8/2019

Year-End Summary Research Report Form For Multi-Year Projects

Please use this form to summarize the practical benefits of your research project and what has been accomplished.

Your answers need to convey why the project is important and how the results impact soybean production.

Note that this form must be submitted with the 4th Quarter Report in all multi-year projects.

Project Title: Soybean Row Spacing and Nitrogen Management On-Farm Research in Nebraska, 18R-27-1/1 #1730

Principal Investigator: Strahinja Stepanovic

Year: 2 of 3 (For example: Year 1 of 3, Year 2 of 2)

1. What was the focus of the research project or educational activity?

OBJECTIVE 1. To quantify the impact of planting date, seeding rate, row spacing, and nitrogen management on dicamba-tolerant soybean yield and yield quality in western NE.

OBJECTIVE 2. To develop scientific-based resources for growing irrigated soybean in a semiarid environment.

OBJECTIVE 3. To increase adoption of soybeans in western Nebraska for a more sustainable agricultural production.

2. What are the major findings of the research or impacts of the educational activity?

MAIN RESEARCH FINDINGS:

- Planting soybeans earlier increases soybean yield potential by 0.64 - 1.4 bu/ac per day.
- Planting soybeans in 15 inch rows yielded 0-11 bu/ac higher soybean planted in 30 inch rows.
- Increasing seeding rates over 90,000 seeds/ac did not increase soybean yield regardless of the row spacing, planting date or nitrogen management.
- Late season N fertilization (through the pivot) at R5 did not provide yield increase in soybeans.
- Applying compost showed great potential for increasing yield and profit in early planted soybeans.

3. Briefly summarize, in lay terms, the impact your findings have had, or will have, on improving the productivity of soybeans in Nebraska and the U.S.

Based on survey results from Cover Your Acre conference, 110 soybean farmers (~35 from Nebraska) planted 8 days earlier, tried narrow rows and reduced seeding rate by 30,000 seeds/ac in 2019 growing season. Very similar survey numbers were noted at August Field Day.

I received many good comments from field day attendants about doing research on soybeans in western NE, and particularly expanding the research program to evaluate 12 fertility programs for irrigated soybeans including chicken manure and biological products.

4. Describe how your findings have been (or soon will be) distributed to (a) farmers and (b) public researchers. List specific publications, websites, press releases, etc.

Published seven Crop Watch articles in past two years. Easiest way to access it is through my Crop Watch page: <https://cropwatch.unl.edu/author/strahinja-stepanovic-extension-educator>

A number of popular farm journals publicized research results such as Nebraska Farmer: • Optimizing soybean profits in western NE:

<https://www.farmprogress.com/crops/optimizing-soybean-profits-western-nebraska>

Had a poster at NACAA conference and am having a presentation at ASA conference

5. Did the NE soybean checkoff funding of your project, leverage additional State or Federal funding support? Please list sources and dollars approved.

No. I've been focused on generating data and publicizing it as soon as possible.

I increased collaboration with research groups at Lincoln. Mostly helping them gather some information on important state-wide soybean projects, such as Soybean Benchmarking Project by Dr. Grassini and soybean grain quality project conducted by grad students.

I am looking forward to attend soybean sessions at ASA conference this year and initiate conversations about potential collaborations.

Please e-mail this report to the Agriculture Research Division (jmonagham2@unl.edu).