

## Nebraska Soybean Board

### 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 will impact soybean production.

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

**Project # and Title:** #705: Improving Water Use Efficacy in Soybean

**Principal Investigator:** Katarzyna Glowacka

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

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

The focus of the first year of this multi year project was to generate the unique soybean lines with overexpression of photosynthesis-related protein, PsbS, for increasing the water use efficiency in soybean.

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

The major findings of the project was that we were able to generate the first generation (T0) of transgenic soybean plants which overexpressed physiologically functioned PsbS protein.

**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.**

The transgenic lines overexpressing the PsbS protein have the potential to lead to development of soybean germplasm with superior water use efficiency that will conserve soil moisture and secure productivity if the crop becomes water limited.

**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.**

In year 2 of the project after testing the selected transgenic lines in the greenhouse and/or field the results will be published in an academic journal and in public formats, including UNL websites and local news, to disseminate the water-saving advantages of the generated soybean lines to the public.

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

No.

Please email this completed form to the Agriculture Research Division ([jmcmahon10@unl.edu](mailto:jmcmahon10@unl.edu)) based on the reporting schedule given to you. If you have any questions, please call Jen McMahon at the ARD 2-7082.