

**Project Title:** #1725 Elucidating gene networks controlling oil and protein reserves

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VB

**Contractor & Principal Investigator:** University of Nebraska-Lincoln/Tom Clemente

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**Reporting Period:** Final 2017

## **I. Statement of project objectives**

1- Gain insight on gene call that resides on chromosome 20 that maps to a position in the soybean genome that influences protein content in soybean

The plasmid pPTN1379 carries a genetic element designed to down-regulate expression of a gene call on chromosome 20 of soybean this is associated with seed protein levels. A total of 19 transgenic events have been established in the greenhouse. Progeny have been planted on 9 of these events, with the remaining seed from the other 10 to be sown shortly. Molecular characterizations have been initiated and monitoring of protein/oil levels will be conducted in the T2 populations.

A USDA/APHIS interstate movement permit will be filed shortly to allow the seed to be shipped to Illinois for further characterizations. We will keep the Board abreast of the outcome of the characterizations and what if any influence this gene call has on the QTL, which it underlies, that has been associated with total protein level of soybean seed.