WASHINGTON OILSEEDS COMMISSION PROGRESS REPORT FORMAT FOR 2019 PROJECTS Project No.: Title: Winter Canola Stand Establishment and Winter Survival Personnel: Isaac Madsen, Ph.D. (PI) Reporting Period: October 2020 - October 2021

Accomplishments:

In 2021 small pot experiments assessing the potential of the Stockosorb wetting agent were continued. In the past the lab experiments have focused on comparing the root growth of canola seedlings planted with Stockosorb in furrow. The lab trials completed during 2021 assessed the emergence of canola from small pots. The data from these experiments are still currently being analyzed. In addition to the lab experiments conducted during 2021, a variety of field data was collected. For the spring canola emergence and stand analysis, the large-scale variety trials continue to be used as a platform for collecting stand count data and correlating stand count with yield.

Results:

1. Lab experiments: In the initial lab experiments Stockosorb was shown to increase germination in slightly drier soils.



2. Stand establishment counts and winter survival observations:

- a. Winter survival data was collected at points established in the fall of 2019 and 2020 and survival plant counts were taken in locations where winter canola was companion planted with spring oats. In both the 2019-2020 and 2020-2021 growing seasons oats appeared to improve the uniformity of the winter canola stand, but decreased winter survival.
- b. Spring canola stand counts were taken at the spring 2020 strip variety trials and stand establishment was related to yield. An initial takeaway is that there appears to be varietal difference in emergence and stand establishment when seed size is corrected for. Additionally, in the 2020 spring canola trial in Cloverland, plant counts were frequently below 1 plant/ft² and yields of >2900 lbs/A were achieved.

Publications:

Madsen, I. J. (2021) Plant Density and Pod Count Variation Within Large-Scale Variety Trials. 2021 Field Day Abstracts: Highlights of Research Progress (pp. 56). Pullman