**WASHINGTON OILSEEDS COMMISSION**
**PROGRESS REPORT FORMAT FOR 2020 PROJECTS**
**Project No.:**
**Title:** Grazing, Mowing, and Growth Regulators as Methods for Improving Winter Canola
**Personnel:** Isaac Madsen, Ph.D. (PI)
**Reporting Period:** June 2020 - October 2020

**Accomplishments:**

During the first year of this trials we have completed observations on grazing studies and established observations on grazing, plant growth regulator (PGR), and companion cropping studies. During the summer of 2020 we harvested two grazing trials near Dusty and Wilbur. Additionally, we established observations on three PGR studies in La Crosse, Ritzville, and Davenport. The La Crosse and Davenport locations are small plot experiments, while the Ritzville location is a large-scale strip trial established using farm scale equipment. At Davenport, the small plot study includes additional treatments including companion cropping with oats and mowing to simulate grazing. Additionally, winter survival observations were established in a grazing study being conducted by a grower near Almira. The types of observations collected in this study were comprised of stand count and plant dimensions at a minimum and include leaf area index and water usage at select locations. Over 500 individual plants have been marked and measured as a part of this study. The measurements were collected are crown height, crown width, canopy width, and leaf count. Stand counts and individual plants will be re-examined in the spring for winter survival data.

**Results:**

1. **2019-2020 Grazing trials:** The 2019-2020 grazing trials demonstrated the effect of seeding date and grazing on yield. At Dusty, where a May planting date was used, the only plots which made it to harvest where ones which were severely grazed. The rest of the field succumbed to fall drought. At Wilbur, a grazed July planting was compared to a non-grazed August planting. The non-grazed plots (2841 lbs/A) had higher yields than the grazed (1816 lbs/A).
2. **2020-2021 PGR Studies:** Plant stand, Leaf Area Index, and Plant Dimension Measurements were collected at Davenport, Ritzville, and La Crosse on early seeded canola treated with PGR and compared to the control of no PGR on early seeded canola. The initial plant dimension measurements indicate that there is some effect of PGR on crown height and width. The effect appears to vary by location, with less noticeable effect at the earliest seeded location near Ritzville and a greater effect at a slightly later seeding near La Crosse. Winter survival and harvest data will be collected for these trials in the Spring and Summer of 2021.
3. **2020-2021 Oat Companion Crop Studies:** Initial observations from the oat companion cropping studies indicate that the presence of oats may result in increased crown height.

**Publications:**

Madsen, I., 2020. Mixed Canolage – Companion Cropping of Dual-Purpose Winter Canola. 2020 Field Day Abstracts. Page 28.