

Washington Oilseed Commission 2021 Progress Report

Project No.: n/a

Project Title: Stockosorb to Improve Winter Canola Stand Establishment and Assessing Spring Canola on Acid Soils

Personnel: Aaron Esser, WSU Extension Agronomist, 205 W Main, Ritzville, WA 99169.
aarons@wsu.edu (509) 660-0566.

Reporting Period: This is the 1st year (2020-21) of a one-year project that is being rolled into a three-year project given the results.

Accomplishments: The Stockosorb study was established on September 3, 2020. Mercedes winter canola was seeded at 5 lb/ac with 10 lb/ac Stockosorb and without Stockosorb (check). The trial was a randomized complete block design with 9 replications. Plots were 5.5 feet wide and 24 feet long. The trial received no fertilizer at planting and solution 32 and thiosul were stream jetted on at 39-0-0-8 on September 25, 2020. Additional fertilizer was planned for the spring but given the dry condition no application was applied. Four days after planting a storm blew through and covered some rows and uncovered other rows limiting the treatment effects. Plant counts were completed 10, 20 and 30 days after planting to look at stand establishment over time. Yield was collected with a small plot combine on July 23, 2021. All data has been collected and statistically analyzed from the first year.

The assessing spring canola on acid soils study was initiated on April 14, 2021 with soil sampling the calcium carbonate study prior to seeding. Soil samples were collected at 0-3", 3-6" and 6-12" and examined soil pH and exchangeable aluminum. BY5125 CL canola was seeded at 5 lb/ac (11 seeds/ft sq) and it was fertilized at 7-12-0-2 was applied with the seed an average of 72-0-0-6 was applied deep.

The second year of the Stockosorb study has been established with two additional treatments that include a late seeding and a seed coated with a water absorbent material. The first seeding date was August 16, 2021, and the second seeding date was on August 27, 2021. Phoenix winter canola was seeded at 5 lbs/ac with 10 lbs/ac Stockosorb and without Stockosorb (check). A third treatment was added that includes Phoenix coated with a water absorbent product provided by Smith Seed Services in Halsey, OR. The trial is a RCBD with 4 replications. Plots are 5.5' x 24' and no fertilizer was applied at seeding. Solution 32 and thiosul were stream jetted on at 50-0-0-4 on October 20, 2021. Additional fertilizer will be applied in the spring. Plant counts were completed 10, 20 and 30 days after planting to look at stand establishment over time.

Results: In the 1st year of the Stockosorb study (Table1), there was no significant difference in stand establishment 10, 20 and 30 days after planting averaging 4.8, 7.2 and 8.6. No difference was detected in harvest yield between the two treatments with an average yield of 2,252 lbs/acre. In the assessing spring canola on acidic soils study, a severe frost on May 8, 2021, killed over 90% of the canola and no meaningful harvest data could be obtained. In the 2nd year of the Stockosorb study (Table 2), there was no significant difference in stand establishment between the three treatments 10 days after planting averaging 4.2 plants/ft². Twenty days after planting the coated treatment had 6.4 plants/ft² which was significantly more plants than the stockosorb and check treatments with only 3.6 and 3.8 plants/ft². Thirty days after planting the coated treatment averaged 5.5 plants/ft² (a frost event happened between 20 and 30 days after planting and some mortality was noted) which was significantly more than check with only 3.2 plants/ft². The Stockosorb treatment averaged 3.8 plants/ft² and was not different from

either the coated or check treatments. No differences were detected in stand establishment between the early and late treatments (data not presented), however it was noted that the late seeding had increased frost damage.

Table 1. Year 1 stand establishment and yield of Mercedes winter canola seeded with and without Stockosorb, a water absorbent material at the WSU Wilke Research and Extension Farm.

Treatments	Stand Establishment (plants/ft ²)			Yield (Lbs/Acre)
	10 DAP†	20 DAP	30 DAP	
Check	5.7	8.4	9.2	2,227
Stockosorb	3.8	5.9	8.0	2,276
P value	n.s.	n.s.	n.s.	n.s.

† DAP is days after planting.

Table 2. Year 2 stand establishment of Phoenix winter canola seeded with and without Stockosorb and coated with a water absorbent material at the WSU Wilke Research and Extension Farm.

Treatments	Stand Establishment (plants/ft ²)		
	10 DAP†	20 DAP	30 DAP
Check	3.4	3.8 b	3.2 b
Stockosorb	4.2	3.6 b	3.7 ab
Coated	4.9	6.4 a	5.5 a
LSD (P<0.10)	n.s.	1.4	1.8

† DAP is days after planting.

Publications: Nothing has been published at this time.