

In recent years, warmer and drier spring conditions in SK have allowed earlier seeding of canola than what was typically recommended (mid to late May). While previous research has often found yield increases with early May seeding as compared to late May or early June, considerations such as spring frosts, flea beetle pressure, and soil temperature need to be evaluated when selecting a seeding date. Furthermore, seeding rate may be an important factor to consider when selecting an earlier seeding date, where mortality could be higher and flea beetle pressure could vary. To evaluate the effects of seeding date and rate in canola a demonstration was conducted at Melfort, Swift Current, and Outlook in 2023-2025, Prince Albert in 2023, and Scott in 2024 and 2025. Treatments included an ultra early, typical, and late seeding date at a 1X (80 seeds/m²) and a 2X (160 seeds/m²) rate. The demonstration was small plot with four replications. Data collection included soil temperature at seeding, days to emergence, plant density, flea beetle defoliation, maturity, seed yield and oil. Ultra early seeding dates ranged from April 24 to May 12, typical from May 6 to June 1, and late from May 22 to June 12. Despite ultra early seeding, soil temperatures were usually near or above 5°C in all years, suggesting soils were warm enough for canola emergence. Days to emergence was usually increased with late April seeding as compared to May, but stands were only significantly reduced 25% of the time with ultra early seeding as compared to typical. Increasing seeding rate from 1X to 2X always increased stands, but there was rarely an interaction with seed date, suggesting that an earlier seed date did not benefit more than a typical seed date from an increased seed rate. Flea beetle defoliation was quite low at most sites and years (0-35%), but there was a significant difference between seed dates 58% of the time. Ultra early seeding significantly increased flea beetle damage 33% of the time, while late seeding decreased damage 25% of the time as compared to typical. An increased seeding rate decreased flea beetle damage 17% of the time, but only by an average of 2-6%.

Days to maturity was often increased with earlier seeding, but earlier seed dates still matured at an earlier calendar date, resulting in earlier harvest timing. An increased seed rate hastened maturity 33% of the time, but only by an average of 1-2 days. Ultra early seeding significantly increased yields 33% of the time, while 17% of the time it reduced yields as compared to typical. Late seeding reduced yields at all sites in 2023, and one site in 2024 and 2025. The effect of seed date on oil was variable, but on average, oil was often greater with earlier seed dates as compared to late. Lastly, seed rate rarely affected oil, but did increase yield at 2 sites in 2024 by an average of 2-3 bu/ac. Overall, results of this trial suggest that earlier seeding of canola often resulted in better yields than late seeding; however, flea beetle pressure was typically higher with earlier dates, which could cause management concerns in years with heavy flea beetle pressure. Overall, canola response to seed date was very dependent on site conditions, where years with warm springs and dry and hot summer conditions (2023) often resulted in better yields from earlier seeding, while cool springs (2024), and cooler and wetter summers (2025) were more favourable for typical and later seeds.

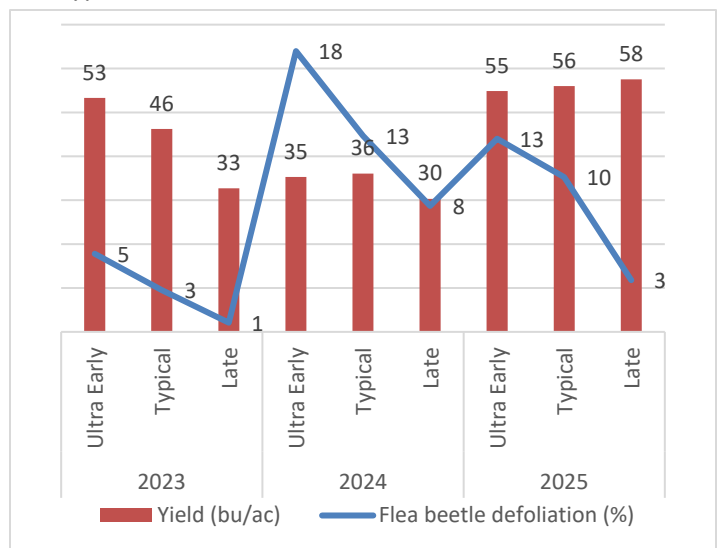


Figure 1. Yield and flea beetle damage averaged across all sites in the project

Thank you to the ADOPT program and SaskOilseeds for funding this demonstration.