

ADOPT

Agricultural Demonstration of Practices and Technologies

Final Report – Jan 31, 2011

ADOPT Project #20090004

Optimum Camelina Seeding Dates

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Objectives

This project evaluated most suitable spring seeding dates for their effect on camelina establishment, maturity and yield.

Rationale:

Camelina is a new crop to Saskatchewan with little known about its crop husbandry. Seeding date is one of the agronomic factors that effects crop establishment and yield potential of camelina. As camelina is a small seeded crop with poor weed competition early in its lifecycle, seeding date plays a large role in producing a competitive crop early in the season. Fall seeding and very early spring seeding may produce a healthy competitive crop.

Materials and Methods:

The project began in the spring of 2010 at the CLC. It included five seeding dates in large plot demos, with a min 2 reps to ensure demo is showing consistent results. Measurements to be taken include germination, emergence counts, flowering and maturity dates, height, grain yield, and kernel weight.

Seeding rate targeted for camelina was 400 seeds per metre square (5 lbs/acre). Spring Seeding dates will show the spring frost tolerance and competitiveness of early emerged crops.



Results:

Originally proposed seeding dates	Actual Seeding Dates	Data collected
April 27, 2010	May 12, two replicated plots	Excellent crop emergence on May 17 Flowering started June 23 rd – yield not collected due to only 1 comparison
May 4	May 17, two replicated plots	Crop emerged on May 21 Flowering started June 28 th – yield data not collected due to only 1 comparison
May 11	May 27, two replicated plots	Seeding followed by very heavy rains. Plots started to emerge very poorly on June 13 th caused by the heavy rains – no data collected
May 18	June 1, two replicated plots	Once again heavy rains followed seeding causing drown out – no data collected
May 25	5 th date not seeded due to lateness	None

Heavy rains and wet conditions delayed the start of this project and interfered with the ability to meet project objectives.

The seeding dates of both May 27th and June 1st were followed by heavy rains making it impossible to observe any results.

Conclusion

The growing conditions in 2010 made it difficult to conduct this trial due to excessive precipitation and our saturated soils. Our initial seeding date of late April was not permissible due to these conditions. May 12 was the soonest this demo could start with untimely weather at the end of May as well. Both of the



latest seeding dates experienced heavy rains following seeding drastically affecting emergence. With not all seeding dates achieved, results are inaccurate.

Tech Transfer:

Field Days:

Conservation Learning Centre – Annual Field Day – July 13th - 82 people
 Conservation Learning Centre – producer visits during growing season – 3 people

Presentation by **Curtis Braaten** (Conservation Learning Centre) in March at Crop Talk 2011 in Prince Albert – 60 in attendance

Report on the project to be posted on our website
www.conservationlearningcentre.com

Supporting Information

Acknowledgements:

We would like to express our gratitude to the Ministry of Agriculture for the funding support and in-kind support with this project. To recognize the ADOPT program and the Ministry we had signage at the sites.

Abstract

This project evaluated most suitable spring seeding dates for their effect on camelina establishment. Camelina is a new crop to Saskatchewan with little known about its crop husbandry. This project looks at the benefits of early spring seeding. As camelina is a small seeded crop with poor weed competition early in its lifecycle, seeding date plays a large role in producing a competitive crop early in the season. Fall seeding and very early spring seeding may produce a healthy competitive crop that may increase yields and enhance maturity.

Our 1st seeding date was scheduled for April 27th, but with the wet spring of 2010, our plans were delayed. The weather allowed for 4 of the scheduled seeding dates which were duplicated at the CLC in Prince Albert. Our wet spring of 2010 hampered our results. We received -1C on May 26th with no noticeable effects with the plots already seeded.

Finances

Budget reporting categories:

	Expenditures	Total (\$)
Salaries and Benefits		
• Students/contracts	700	1000
• Postdoctoral / Research		



Associates		
• Technical / Professional Assistants	2100	2500
Consultant Fees & Contractual Services	100	600
Rental Costs		
• Rentals		500
Materials / Supplies	650	650
Project Travel		
• Field Work		
• Collaborations/consultations	400	400
Other		
• Field Day	600	600
• Administration	300	300
• Miscellaneous		
Total	4850	6550

Description of Finance Amounts

Contractual Service: prepare final report

Technical/Professional Assistants:

all labour to conduct trial at demo locations calculated at \$350/treatment (min 2 reps) = \$3500.

Equipment Rental: \$500 for weigh wagon was budgeted but was not required as no plot combine was accessed for harvest. This cost was applied to student salaries conducting maintenance.

Materials and Supplies:

Camelina seed, chemical, fertilizer, bags, tags - \$300

Signs for demos \$250,

Flags/posts for field marking = \$100

Administration - \$300

Field Days – field day at \$600

Note: This project did come under budget as a result of initial seeding date being impacted due to weather conditions.

