Hemp Seeding Date Demonstration for Grain Production

Hemp is an emerging crop that provides diversification opportunities for Saskatchewan growers. Hemp Seeding Date Demonstration for Grain Production was a three-year project funded under the Strategic Field Program through the Sustainable Canadian Agricultural Partnership. As pathogens such as fusarium in wheat and clubroot in canola continue to increase, producers will look for alternative crops they can grow profitably in their rotations. This project was conducted to discover optimum seeding dates for hemp at various locations in Saskatchewan. Having regional seeding date and variety recommendations is needed in order to ensure growers are equipped with the knowledge needed to successfully grow the crop.

Methodology

- Project locations: ICDC (Outlook), WARC (Scott), NARF (Melfort) and IHARF (Indian Head). Outlook was the only irrigated site.
- Three varieties: X59, Picolo and Katani.
- Three seeding dates: late May, mid-June and early July.
- Plots were seeded at 30 lb./ac with fertilizer applied in a sideband based on soil test results.
- Crop physiological maturity was determined when the seeds started to shatter but the plants were still green.
- Plots were direct combined.

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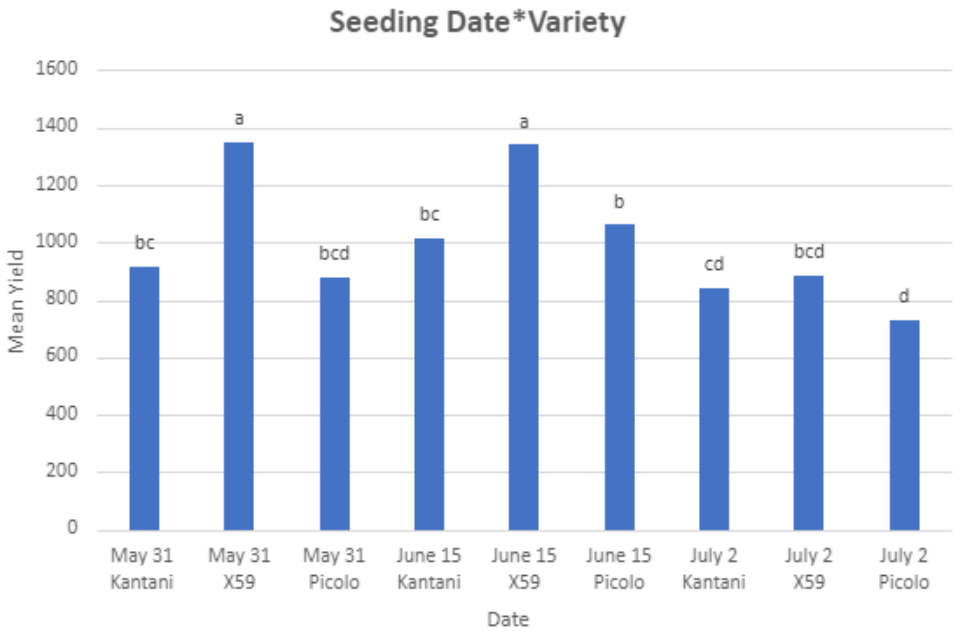
Results



Over the three years, X59 had the highest yield at late May and mid-June seeding date at ICDC.

- IHARF: X59 had highest yield at late May seeding date. The data is not represented.
- WARC: yield was variable throughout the three years with seeding date significantly influencing the yield. No significant interaction between the seeding date and hemp varieties. The data is not represented.
- NARF experienced unfavourable effects of drought conditions in 2021 and 2023 where the early July seeded plots germinated poorly. An analysis on the seeding date and hemp varieties was difficult due to missing and uneven data. The data is not represented.

Conclusion

After the completion of three years, it was determined the mid-June seeding date continued to deliver the best results with the variety of X59 producing the highest yield. Dry conditions throughout all four sites demonstrated the importance of considering site-specific seeding dates and weather conditions when growing hemp. Throughout the three years, researchers made notes of challenges associated with growing hemp. Deciding on the optimal maturity for harvest is complicated as harvesting too early can lead to high moisture dockages due to excessive debris. When this happens, cleaning and drying of the samples before storage is important. Delaying the harvest may result in its own challenges, such as the straw wrapping inside the combine. Hemp is also susceptible to bird damage which requires the farmer to monitor the crop closely before maturity. The full report of this project is available in ICDCs 2023 Research and Demonstration Report.

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