

2022 ICDC Research Program



Crop	Project Title	Objectives & Justification	Funding Source
Barley	Saskatchewan Variety Performance Group Regional Barley Trials	To evaluate the adaptability of current and newly registered barley varieties (2-row & 6-row) under standard irrigation management for prairie growing conditions. Information developed is used to update ICDC's <i>Crop Varieties for Irrigation</i> and provides producers with criteria for selection of the most appropriate variety for irrigated production conditions on the prairies.	ICDC & SVPG
Barley	Influence of Potassium Fertilizer on Yield and Seed Quality of Malt Barley & Spring Wheat – a Continuation	Evaluate the effects of K fertilizer and placement on yield of malt barley and spring wheat; evaluate the influence of K fertilization on seed quality characteristics and to assess the impact of K fertilization on crop lodging	ADOPT
Barley	Enhanced Barley variety trial- Plant Growth Regular	Demonstration to compare the responsiveness of 3 malt and 3 feed barley varieties to a plant growth regulator applied at early stem elongation (Zadoks 30-33).	ADOPT & Sask Barley
Barley	Enhanced Barley variety trial- Fungicide	The objective of this demonstration is to compare the responsiveness of 3 malt and 3 feed barley varieties to fungicide applied at heading (FHB timing).	ADOPT & Sask Barley
Barley	Enhanced Barley variety trial-Fertility	The objective of this demonstration is to compare the N responsiveness of 3 malt and 3 feed barley varieties, which are gaining popularity based on 2021 seeded acres (Canadian Grain Commission).	ADOPT & Sask Barley
Canola	Canola Performance Trial - Conventional	To evaluate the adaptability of current and newly registered herbicide tolerant canola varieties using appropriate herbicides and irrigation for each.	Canola Council
Canola	Canola Performance Trial – Straight Cut	To evaluate the adaptability of current and newly registered herbicide tolerant canola varieties that lend themselves to straight cut harvesting.	Canola Council
Cereals	Fungicide Timing to Mitigate Fusarium Head Blight in Cereal Crops	Effect of fungicide timing on Fusarium head blight (FHB) in winter wheat, spring wheat, durum wheat, and barley.	SaskWheat Alberta Wheat WGRF
Cereals	Teraxxa Treatments of Cereals for Wireworm Control	To determine the impact of broflanilide-based seed treatments applied to cereal crops on wireworm populations both in the year of application and in subsequent growing seasons.	SFP

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Corn	ShieldEx in Corn	Chance to have a look at ShieldEx in Corn in Western Canada with a focus on volunteer canola and kochia	Gowan
Corn Silage/Grain	Developing Target Yield Nitrogen Fertilizer Recommendations for Irrigated Silage and Grain Corn	To determine nitrogen uptake & nitrogen fertilizer use efficiency for silage and grain corn under irrigated and dryland production.	ADF
Dry Bean	Dry Bean Pod Height	To identify proper seeding rate to increase the pod height and harvestability of dry bean.	ADF
Dry Bean	N Fertilizer Rate Response in Irrigated Dry Bean	Determine nitrogen fertilizer rate yield responses for pinto market class irrigated wide row dry bean production. Determine whether ESN nitrogen fertilizer is beneficial compared to urea as a fertilizer nitrogen source for irrigated dry bean production.	ADF
Dry Bean	Effect of Tillage Management and Seeding Date on Dry Bean Establishment and Yield.	Evaluate the relationship between stubble management – and consequently, soil warming – and seeding date on the establishment and yield of solid seeded dry bean grown under irrigation.	SFP
Durum	Saskatchewan Variety Performance Group Regional Durum Trial	To evaluate the adaptability of current and newly registered CWAD wheat varieties under standard irrigation management for prairie growing conditions. Information developed is used to update ICDC's Crop Varieties for Irrigation.	ICDC & SVPG
Faba Bean	Faba bean agronomy to enhance yield, hasten maturity, and reduce disease	To demonstrate the ability of early seeding to optimize yield and allow for earlier faba bean harvest; 2) the effects of higher seeding rates on disease development, maturity and yield, and the capacity for foliar fungicide applications to reduce disease, enhance yield and potentially delay maturity.	SPG
Faba Bean	When does it pay to apply fungicide to faba beans in sk and what does the weather have to do with it?	To determine the effect of late season fungicide application, when a second fungicide application maybe best order to improve/preserve faba bean yield and quality and if fungicide application timing should be based on visible symptoms and/or weather events rather than growth stage.	ADF
Fall Rye	Fall Rye Variety Eval for Irrigation vs Dry Land Production	To evaluate the adaptability of current and newly registered Fall rye varieties under standard irrigation and dryland for prairie growing conditions.	SVPG
Flax	Saskatchewan Variety Performance Group Regional Flax Trials	To evaluate the adaptability of current and newly registered flax varieties under standard irrigation management for prairie growing conditions. Information developed is used to update ICDC's <i>Crop Varieties for Irrigation</i> and provide producers with criteria for selection of the most appropriate variety for irrigated production conditions on the prairies.	ICDC & SVPG

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Flax	Lygus in flax	Demonstrate the efficacies of products that are currently registered for Lygus and the effect of weather on Lygus in flax	SFP
Forage	Varietal Assessment of Forage Seed Production	To assess seed yield for the forage seed crops commonly grown in Saskatchewan; evaluate forage seed as a possible irrigated cash crop; explore potential turf grass varieties as a possible diversification opportunity for the forage seed sector; and enable the SRP chair for forage breeding to evaluate seed production of new lines and compare to current commercial varieties.	SFP
Forage	Demonstration of Barley Underseeded with Ryegrass for Forage Production – Irrigated & Dryland Production.	To demonstrate the forage yield benefit of under seeding ryegrass with spring seeded forage barley as compared to monocropping of each species.	ADOPT
Fruit	Apple Scionwood and Dwarf Apple Rootstock Productivity and Disease Resistance	To display compatibility of the most desirable apple scionwood with hardy dwarfing apple rootstock in Saskatchewan.	Saskatchewan Fruit Growers Association (ADOPT)
Fruit	Methods to Improve Productivity of Sour Cherry Suffering from Blind Wood	To project is to treat University of Saskatchewan sour cherry cultivars with ProGibb 40 SB to display and quantify impact on spur formation and increase in bloom potential.	Saskatchewan Fruit Growers Association (ADOPT)
Mustard	Hybrid brown mustard vs yellow vs canola on irrigation	To demonstrate growing hybrid and composite mustard under irrigation in Saskatchewan.	ADOPT & Sask Mustard
Oat	Saskatchewan Variety Performance Group Regional Oat Trial	To evaluate the adaptability of current and newly registered oat varieties (feed & forage) under standard irrigation management for prairie growing conditions. Information developed is used to update ICDC's <i>Crop Varieties for Irrigation</i> .	ICDC & SVPG
Pulses	Demonstration of Lupin as an Alternative to Field Pea or Lentil	Demonstration to evaluate two varieties, two species as an alternative legume crop to be incorporated into producers' crop rotations. The objective of this demonstration is to determine how adapted lupin is for growing under irrigation in Saskatchewan conditions. Additionally, we will try to identify ideal seeding rates for growing lupin locally.	ADOPT
Pulses	Expanding Rotational Options using New and Novel Pulse Crops	To provide producers with economic and agronomic information on non-tradition pulse crops that may be adapted to the various regions in the AgriARM network where they are demonstrated.	SPG

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Soybean	Short Season Soybean Regional Variety Trial – Herbicide Tolerant	To evaluate the adaptability of new soybean varieties under standard irrigation management for prairie growing conditions. Information developed is used to support the registration of new soybean varieties suited to irrigated conditions on the prairies and to update ICDC's <i>Crop Varieties for Irrigation</i> .	SPG
Speciality	Hemp Seeding Date Demonstration for Grain Production	Demonstrate different seeding dates of 3 varieties of conventional hemp in order to show producers the ideal time for seeding in various Saskatchewan locations.	SFP
Speciality	Regional Adaptation and Response to Nitrogen of Hemp and Quinoa in Saskatchewan	To gain experience with and information on the overall productivity and adaptation two Speciality crops, hemp and quinoa across a range of soil climatic zones in Saskatchewan. To demonstrate the overall yield response of hemp to increasing N fertilizer rates and overall yield response of quinoa to increasing N fertilizer rates.	ADOPT
Speciality	Lentil and camelina intercropping	To demonstrate if an intercrop can be used to increase the area suitable to produce lentils. Specifically, increasing production in higher moisture environments (irrigation, black soil zone) where disease and/or maturity concerns have limited production. This demonstration will compare lentils and camelina to lentils & camelina as an intercrop.	ADOPT
Speciality	Demonstrating seeding methods to improve yield and maturity in camelina	This project will investigate optimal seeding depth for no-till camelina seeded with an air seeder with a narrow hoe opener, determine optimal target plant densities for maximizing yield, even establishment, and uniform maturation under no-till conditions.	ADOPT
Spring wheat	Top Dressing Nitrogen Fertilizer on Frozen or Snow Covered Soils in Saskatchewan	To develop Saskatchewan specific data showing the loss of production and economic risks associated with broadcast applications of nitrogen fertilizers on frozen or snow covered soils.	SFP
Spring Wheat	Demonstration of Wireworm Control in Spring Wheat	To demonstrate and evaluate the effectiveness of seed treatments, particularly Texraxxa F4, on the control of wireworm activity with wheat.	ADOPT
Spring Wheat	Managing Drought Risk with Split Applications of N in Spring Wheat	To demonstrate the efficacy of various rates and timings of split applied N relative to placing all the N down at seeding. Split applications of N are anticipated to be more efficacious when applied early and to a higher base soil and fertilizer N available at seeding.	ADOPT
Vegetable	Growing Methods to Assist in the Expansion of the Garlic Industry in Saskatchewan	To compare appropriate varieties of garlic for fresh market and for processing. To try to control garlic bulb size through different management techniques. To evaluate agronomic protocols for establishment of garlic from bulbils. To compare processing quality of garlic rounds compared to standard bulbs.	SVGA (SFP)

Crop	Project Title	Objectives & Justification	Funding Source
Vegetable	Screening Cauliflower and Broccoli Cultivars for Heat Tolerance	To evaluate cultivars of broccoli and cauliflower for their suitability to production in Saskatchewan under standard and heat stressed conditions.	SVGA (ADOPT)
Wheat	Saskatchewan Variety Performance Group Regional Wheat Trials - Hex 1 Wheat	To evaluate the adaptability of current and newly registered CWRS wheat varieties under standard irrigation management for prairie growing conditions. Information developed is used to update ICDC's <i>Crop Varieties for Irrigation</i> .	ICDC & SVPG
Wheat	Saskatchewan Variety Performance Group Regional Wheat Trials - Hex 2 Wheat	To evaluate the adaptability of current and newly registered CPSR, CWHWS, CWES, CWGP and CWHWS wheat varieties under standard irrigation management for prairie growing conditions. Information developed is used to update ICDC's <i>Crop Varieties for Irrigation</i> .	ICDC & SVPG
Wheat	Development of Field-Ready Cultivars of Canada Western Soft White Spring Wheat	To performance test for improved productivity, nutrient and water-use efficiency.	AAFC
Winter Barley	Can winter barley be grown in central Saskatchewan?	To demonstrate the risks of growing winter barley in central Saskatchewan, even with optimal agronomic practices of including a seed treatment, vigorous seed, and high seeding rates.	Sask Barley ADOPT
Winter Wheat	Saskatchewan Variety Performance Group Regional Wheat Trials – Winter Wheat	To evaluate the adaptability of current and newly registered winter wheat (CWRW) varieties under standard irrigation and dryland for prairie growing conditions.	ICDC & SVPG

Funding Source Abbreviations:

- AAFC – Agriculture and Agri-Food Canada
- ADF – Agriculture Development Fund
- ADOPT – Agricultural Demonstration of Practices and Technologies
- ICDC – Irrigation Crop Diversification Corporation
- MoA – Ministry of Agriculture
- SCA – Saskatchewan Cattlemen Association
- SPG – Saskatchewan Pulse Growers
- SFP – Strategic Field Plan
- SSPGA – Saskatchewan Seed Potato Growers Association
- SVGA – Saskatchewan Vegetable Growers Association
- SVPG – Saskatchewan Variety Performance Group