2021 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 ICDCs ***Crop Varieties for Irrigation*** and provides producers with criteria for selection of the most appropriate variety for irrigated production conditions on the prairies.	ICDC & SVPG
Barley	Can winter barley be grown in central Saskatchewan?	To assess the risk of growing winter barley in central Saskatchewan. Four winter barley varieties were seeded on September 10, 2021, each variety will be compared to growth and winter survival of Goldrush winter wheat seeded at the same time. Each variety is seeded at low and high seeding rates and with or without a dual fungicide/insecticide seed treatment.	Sask Barley ADOPT
Canola	Canola Performance Trial	To evaluate the adaptability of current and newly registered herbicide tolerant canola varieties using appropriate herbicides and irrigation for each.	Canola Council
Canola	Straight Cut Canola Performance Trial	To evaluate the adaptability of current and newly registered herbicide tolerant canola varieties that lend themselves to straight cut harvesting.	Canola Council
Cereals/Annual Forages	Crop Rotation Benefits of Annual Forages preceding Spring Cereals	Evaluate winter and spring cereals as potential options for cover crops following the harvest of row crops on irrigated land.	ADOPT
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
Dry Bean	Dry Bean Regional Trial	To evaluate the adaptability of current and newly registered dry bean varieties using wide row production under standard irrigation management for prairie growing conditions. Information developed is used to update ICDCs Crop Varieties for Irrigation.	ICDC & SPG
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

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Dry Bean	Effect of Tillage Management and Seeding Date on Dry Bean Establishment and Yield.	The objective of this project is to 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 ICDCs Crop Varieties for Irrigation.	ICDC & SVPG
Fall Rye	Demonstration of Fall Rye as an Irrigated Crop - Irrigation vs Dryland	Evaluate hybrid rye varieties growing potential and provide producers with a side-by-side comparison between dry land and irrigated production.	ICDC
Faba Bean	Faba bean agronomy to enhance yield, hasten maturity, and reduce disease	To demonstrate: 1) 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; 3) the capacity for foliar fungicide applications to reduce disease, enhance yield and potentially delay maturity.	SPG
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 ICDCs Crop Varieties for Irrigation and provide producers with criteria for selection of the most appropriate variety for irrigated production conditions on the prairies.	ICDC & SVPG
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
Fruit	Apple Scoinwood 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)

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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 ICDCs Crop Varieties for Irrigation.	ICDC & SVPG
Pea/Lentil	Demonstrating Effects of Insecticide Application Timing and Seeding Date on Pea Aphid Damage to Lentils and Field Peas	To demonstrate and compare the effects of applying insecticidal control of pea aphid prior to and after flowering in lentils and field peas; and demonstrate the effects of seeding date on the effects of pea aphid damage to lentils and field peas.	SFP
Pea	Pea Regional Variety Trial	To evaluate the adaptability of current and newly registered pea varieties under standard irrigation management for prairie growing conditions. Information developed is used to update ICDCs Crop Varieties for Irrigation.	ICDC & SVPG
Pea	Production management strategies to improve field pea root health in Aphanomyces contaminated soils	To evaluate multiple management strategies to reduce the effect of aphanomyces on field pea root health and yield production.	SPG
Silage/Grain Corn	Developing Target Yield Nitrogen Fertilizer Recommendations for Irrigated Silage and Grain Corn	To determine nitrogen uptake & N fertilizer use efficiency for silage and grain corn under irrigated and dryland production.	ADF
Soil	Influence of K Fertilizer on Yield and Seed Quality of Malt Barley and Spring Wheat	To conduct trials with typical soil testing potassium K levels to evaluate the effects of K fertilizer rate and placement on yield of malt barley and spring wheat, the influence of K fertilization on seed quality characteristics and to assess the impact of K fertilization on crop lodging.	ADOPT
Soil	Canola seed safety and yield response to novel P sources in Saskatchewan soils	To demonstrate canola response to increasing rates of struvite (ie. Crystal Green), alone or in a blend, relative to other common phosphorus fertilizer formulations with a focus on stand establishment and seed yield.	ADOPT
Soil	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

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Soybean	Soybean Regional Variety Trial	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 ICDCs ***Crop Varieties for Irrigation***. Two trials: irrigated vs. dry land.	SK Pulse Growers
Soybean	Conventional Soybean Variety Trial	To evaluate the adaptability of conventional soybean varieties under standard irrigation management.	SPG
Specialty	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
Specialty	Specialty Agriculture Crop Demonstration	To provide opportunities for new producers and buyers to see these specialty crops grown in Saskatchewan's growing conditions.	HSSA
Spring Wheat	Demonstrating Spring Wheat Phosphorus Fertilizer Response on a Severely Phosphorus Deficient Irrigated Field.	Evaluate the yield response of spring wheat to varying rates, time and placement of phosphorus fertilizer on a deficient phosphorus soil under irrigated production.	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 ICDCs ***Crop Varieties for Irrigation***.	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 ICDCs ***Crop Varieties for Irrigation***.	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
Wheat	Central Bread Wheat Registration Trial - irrigated vs dryland	To evaluate experimental CWRS wheat pursuant for registration requirements; Assess entries for suitability to irrigated production; and Update ICDC's annual Crop Varieties for Irrigation guide.	SeCan
Wheat	Can Farmer Saved Seed Perform As Well As Certified Seed?	Evaluate the impact of various lots of farm saved HWRS wheat to certified seed.	SK Wheat Dev. Com.

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Winter Wheat	Winter Wheat Variety Evaluation for Irrigation vs. Dry Land Production	To identify the top producing or best adapted varieties of winter wheat for irrigation production.	ICDC
Vegetable	Demonstration of Short Season Varieties of Sweet Potato	To demonstrate the potential to produce short season varieties of sweet potato in Saskatchewan. This project will also compare growing these varieties in high tunnels and field conditions.	SVGA (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)
Vegetable	Determining Sizes Profiles of Saskatchewan Grown Cantaloupe for a retail market	To demonstrate the potential of growing cantaloupe for Saskatchewan's fresh retail market, creating a size profile for Sask retailers to categorize locally grown cantaloupe and determining self-life of vine ripened cantaloupe.	SVGA (ADOPT)
Vegetable	Potential to use Sequential Plantings to extend the Harvest Period of Pickling Cucumbers	To demonstrate the potential to use sequential plantings to extend the harvest period and thereby increase production and processing efficiency in once-over mechanically harvested pickling cucumbers grown in Saskatchewan	SVGA (ADOPT)
Vegetable	Demonstration of Efficacy of Bumble Bee, honey bee and leafcutter bee on pickling cucumber	To compare the efficacy of three commercially available pollinator species for improved fruit set, size, evenness and quality on a pickling cucumber crop. To demonstrate the benefit and practice of incorporating commercially available pollinator to pickling cucumber production.	SVGA (ADOPT)
Vegetable	Identification of Onion Cultivars Suited to Saskatchewan Production Conditions and Market Requirements	To identify cultivars of onions which have the superior agronomic traits needed by the growers, along with the quality attributes expected by the buyers. To test field performance, storage characteristics and consumer quality of the onion cultivars presently favored by Saskatchewan growers against the latest new lines being released by the major vegetable seed companies.	SVGA (SFP)
Vegetable	Demonstration of a new product for the control of wireworms in potato	The objective of this project will be to demonstrate the potential to use the new product Cimegra for control of wireworms in potatoes in Saskatchewan.	SSPGA/ADOPT
	Evaluating Cover Crop Options Following Row Crop Harvest on Irrigated Land	To evaluate winter and spring cereals as potential options for cover crops following the harvest of row crops on irrigated land.	ADOPT

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	Demonstration of Irrigation Scheduling Using Remote Sensor Technology	To demonstrate to Saskatchewan irrigators how remote sensor technology can assist with irrigation scheduling and improve the profitability of their operations.	ADOPT
	Crop Diagnostic School	Online Training and accurate diagnostic skills to Agrologists, producers and Certified Crop Advisors in Saskatchewan.	MoA

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