

2016 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 <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
Canola	Canola Performance Trial	To evaluate the adaptability of current and newly registered herbicide-tolerant canola varieties under standard irrigation management and appropriate herbicides for prairie growing conditions. Information developed is used to update ICDCs <i>Crop Varieties for Irrigation</i> .	ICDC and Canola Council of Canada
Canola	Contans Control of Sclerotinia for Irrigated Canola	Sclerotinia can be difficult to control in irrigated rotations because of the large number of irrigated crops grown that are susceptible to the disease. The project will demonstrate control of sclerotinia using a biological pest that attacks the sclerotia bodies resident in the soil. The advantage for this control mechanism is the labor saving which allows the irrigator to devote his time to other activities during the growing season.	ICDC
Canola	ICDC Irrigated Canola Variety Trial	To evaluate the adaptability of current and newly registered canola varieties under standard irrigation management for prairie growing conditions. Information developed is used to update ICDCs <i>Crop Varieties for Irrigation</i> and provides producers with criteria for selecting the most appropriate variety for irrigated production conditions on the prairies.	ICDC and partial ADF funding
Canola	Western Canada Canola/Rapeseed Recommending Committee Trials * WCCRRC XNL1 Trial * WCCRRC XNL2 Trial * WCCRRC XNL3 Trial	To evaluate the adaptability of new canola varieties under standard irrigation management for prairie growing conditions. Information developed is used to support registration of new canola varieties suited to irrigated conditions on the prairies and to update ICDCs <i>Crop Varieties for Irrigation</i> .	ICDC and Western Canada Canola
Canola	Yield Response of Canola with Foliar Boron Applied at Early Bolting Stage	demonstrate the impact on canola yield from application of foliar boron fertilizer at early bolting stage	ADOPT
Corn	Corn Variety Demonstration for Grain Production	Demonstrate corn varieties suitable to growing conditions in LDDA for silage yield under irrigation and dry land	ADOPT
Corn	Corn Variety Demonstration for Silage and Grazing	Demonstrate corn varieties suitable to growing conditions in LDDA for silage yield under irrigation and dry land	ADOPT

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Corn	Grain Corn Fertility and Variety Field Trial	Demonstrate yield response of a liquid starter fertilizer (6-22-2) on different corn varieties under irrigation. The difference in yield of new, low heat unit requirement corn variety will be demonstrated as well	ADOPT
Dry Bean	Demonstration of Narrow Row vs Wide Row Irrigated Dry Bean Production	Demonstrate the effect on narrow row spacing (10") has versus traditional wide row spacing (20") in irrigated dry bean production	ADOPT
Dry Bean	Demonstration of Narrow vs. Wide Row Dry Bean Production	Demonstrate the differences between narrow and wide row dry bean production by evaluating agronomics and yield. Replication of ADOPT 20150414 project alongside the dry bean regional trial at Riverhurst in exchange for the use of the land.	ICDC
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.	CDC (U of S)
Dry Bean	Irrigated Bean Variety Trial - Narrow Row (IBVTNR)	To evaluate the adaptability of current and newly registered dry bean varieties using narrow row production under standard irrigation management for prairie growing conditions. Information developed is used to update ICDCs Crop Varieties for Irrigation.	ICDC and partial ADF funding (AAFC Lethbridge)
Dry Bean	Irrigated Bean Variety Trial - Wide Row (IBVTWR)	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 and partial ADF funding (AAFC Lethbridge)
Faba Bean	Evaluating Inoculant Options for Faba Beans	Determine the best inoculant option for faba bean grown in various soil/climatic zones of Saskatchewan	SPG
Faba Bean	Faba Bean Fungicide Product x Timing Study	Investigate the merits of foliar fungicide applications on faba bean in western Canada as a function of stand density and environment	SPG
Faba Bean	Faba Bean Seeding Rate	Provide growers and agronomists with current and unbiased seeding rate recommendations for faba bean production on the prairies.	SPG, AgriARM Sites
Flax	Flax Desiccant Trial	Three treatments will be demonstrated. 1) Glyphosate preharvest applied at 356 g/ac and 45 l/ac water volume, 2) Diquat preharvest applied at 0.8 l/ac and 90 l/ac water volume. Swathing will be added as a treatment if the grower will agree with it.	ICDC
Flax	Flax Fungicide Demonstration	Demonstrate the yield benefit of applying foliar fungicide on flax to control PasmO on an irrigated field	ADOPT

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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	AC Slatlander Green Wheatgrass Saline Tolerance Study	Determine seeding rate effects under differing salinity levels, determine the effects of time of seeding, compare direct vs. conventional seeding, evaluate flooding tolerance, evaluate nitrogen fertilization of AC Saltlander	ADF (AAFC Swift Current)
Forage	Application of foliar K ₂ O _S to irrigated alfalfa grown for forage	The project will demonstrate impacts of foliar K and S fertilization on alfalfa	ICDC
Forage	Copper and Zinc Fertilization of Alfalfa	Determine the forage yield response of an alfalfa stand to fertilization with copper and zinc when PK and S are also fertilized.	ADOPT
Forage	Defining Agronomic Practices for Forage Corn Production in SK	Develop and refine seeding and fertility recommendations for corn silage production.	ADF (PAMI)
Forage	Demonstration of scarification methods for cicer milkvetch seed	The objective of the project is to assess practical methods by which producers can scarify cicer milkvetch seed on-farm. Scarification is a technique used to improve the uniformity of germination in cicer milkvetch by abrading the impermeable seed coats to allow uptake of moisture from the soil.	Sk Forage Council ADOPT
Forage	Hybrid Brome Variety Evaluation	This trial is to evaluate new hybrid brome varieties	ICDC
Forage	Perennial Forage Grass and Legume Species Demonstration	A demonstration of perennial forage grasses and legumes	ADOPT
Forage	Phosphorus Potassium and Zinc Demonstration at Lodge Creek	Demonstrate potential for alfalfa production at gravity irrigated alfalfa fields in Southwest Saskatchewan	ADOPT
Forage	The relationship between quality and yield in perennial forages	The objective is to demonstrate the relationship between forage yield/maturity and forage quality.	ADOPT
Fruit	Strawberry and Raspberry water and fertilizer management demonstration	Proper water and fertilizer application (fertigation and tensiometers) would serve to maximize growth, yield, fruit quality, profitability, and efficient use of fertilizer and water resources will make the industry more sustainable. This project will also demonstrate differences between standard cultivars and newer genotypes under Saskatchewan growing conditions.	Saskatchewan Fruit Growers Association ADOPT

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Fruit	Use of photoselective netting to improve productivity of dwarf sour cherry, haskap, and Saskatoon berry	Israeli fruit producers have employed the use of photo-selective netting to enhance orchard productivity, increase growth rate, reduce disease and insect pressure, and improve fruit quality. The quality of the light that is modified by the netting enhances various plant metabolic or physiological systems, so plants can grow more vigorously and more productively. In addition; the netting reduces pest pressure (through exclusion), and protects plants from the drying effects of winds, hail, etc.	Saskatchewan Fruit Growers Association ADOPT
Irrigation	Evaluation of Fungicide Through Pivot with Low-Volume Nozzles		ICDC
Lentil	Application of Alpine Molybdenum to the Seedrow of Irrigated Lentil	The project will demonstrate the benefit of soil band applied molybdenum to irrigated lentil.	ICDC
Lentil	Evaluation of Granular Zinc Applied to Low Soil Test Levels on Irrigated Lentils	To evaluate the response of irrigated lentils to zinc fertilizer on low testing soil.	ICDC
Lentil	Irrigated Lentil Production	To evaluate lentil growing practices under irrigation	ICDC
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	Evaluation of Phostrel on Field Peas	To evaluate the benefit of applying Phostrol fungicide to field peas for suppression of Aphanomyces root rot.	ICDC
Pea	Evaluation of Phostrol on field peas	To evaluate the benefit of applying Phostrol fungicide to field peas for suppression of Aphanomyces root rot.	ICDC
Pea	Management of Irrigated Marrowfat Field Pea	Demonstrate irrigation scheduling and phosphate fertility practices for production of marrowfat field pea.	ADOPT
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.	CDC (U of S)
Rye	Demonstration of Fall Rye as an Irrigated Crop	Evaluate hybrid rye varieties growing potential and provide producers with a side-by-side comparison between dry land and irrigated production	ADOPT
Soil	Increasing the Efficiency of Nitrogen Application for Irrigated Crops	There are a number of benefits to a producer when adopting a fall-timing approach to fertilization. The major benefit is saving labour for the producer in spring. Other benefits include improved mineralization of nutrients in fall, higher soil moisture over winter to reduce risk of erosion, better pricing for fertilizer nutrients in fall, reduced cost of application by using the irrigation pivot.	ADOPT

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Soil	Reclamation of Na Affected Soils	The project will demonstrate several approaches to replacement of sodium on the exchange complex of heavy textured soils at Ponteix and Miry Creek.	ICDC
Soil	Understanding Soil Variability of Nutrients for Irrigated Soils	Certain soil nutrients have been shown to be deficient in irrigated crop production in small areas of the field. The yield response of these nutrients is very cost effective if application is limited to deficient areas. The challenge is limiting the application to responsive areas. Variable rate application technology is now available to both determine where and how to apply the fertilizer. ICDC would like to demonstrate this practice on a 130 ac pivot that will be sown a cereal or oilseed in 2016.	ICDC
Soybean	Developing Nitrogen Management Recommendations for Soybean Production in Saskatchewan	The proposed research will determine the best management practices to ensure adequate N supply and maximum economic yields for soybean production in Saskatchewan to help growers grow this crop in the most economically, agronomically and environmentally sustainable manner possible	SPG, AgriARM sites
Soybean	Developing Phosphorus Management Recommendations for Soybean Production in Saskatchewan	Improve P management recommendations for soybeans in Saskatchewan by investigating crop response to monoammonium phosphate (MAP; 11-52-0) rates and placement methods	SPG, AgriARM sites
Soybean	MPSG Soybean Regional 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 <i>Crop Varieties for Irrigation</i> . Two trials: irrigated vs. dry land.	ADF & MAFRI partial AIP
Soybean	Soybean Fungicide Demonstration	Demonstrate yield benefit of applying foliar fungicide on soybean to control Sclerotinia on an irrigated field	ADOPT
Soybean	Soybean Inoculation	Investigate various inoculation strategies with soybean	ADF & WGRF
Soybean	Soybean Plant Populations and Row Spacings	Investigate optimal seeding rates for solid seeded and wide row soybean	ADF & WGRF
Soybean	Soybean Seeding Date and Seed Treatment Study	Investigate optimal dates of planting for irrigated soybean, with and without seed treatment	ADF & WGRF
Specialty	Burger & Fries Farm	The Farm is designed to increase agricultural awareness within the community and among youth. It will be an interpretive and educational tool for teaching school children about where food comes from and the important role that modern agriculture and technology play in food production. All planned activities and tours have been connected to key outcomes and indicators from the Saskatchewan Curriculum for grades 3 and 4.	Agriculture Awareness ICDC

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Specialty	Demonstration of Potential Irrigated Crops (Quinoa, Hemp, Borage, Marrowfat Pea, Niger)	Demonstration to evaluate crop growing potential and provide producers with side-by-side comparison between dryland and irrigated production	ADOPT
Vegetable	Demonstration of Field Grown Bunching Onion	comparison of bunching onion varieties The objectives are to demonstrate the potential to provide season long supply of bunching onion commercially in Saskatchewan and provide opportunities for producers and buyers to see the crops being grown	SVGA ADOPT
Vegetable	Demonstration of Field Grown Slicing Cucumbers	A comparison of registered slicing cucumber varieties. The objectives are to: a) demonstrate the potential to grow slicing cucumbers commercially in Saskatchewan. b) provide opportunities for producers and buyers to see the crops being grown.	SVGA ADOPT
Vegetable	Demonstration of Field Grown Spanish Onions	comparison of Spanish onion varieties to demonstrate the potential to Spanish onion commercially in Saskatchewan and provide opportunities for producers and buyers to see the crops being grown	SVGA ADOPT
Vegetable	Demonstration of Fingerling Potatoes	Demonstrate the potential to grow fingerling potatoes commercially in Saskatchewan and provide opportunities for producers and buyers to see the different varieties available for production	SVGA ADOPT
Vegetable	Demonstration of Sequential Plantings of lettuce for season long supply	Demonstrate the potential to provide season long supply of fresh lettuce for market and provide opportunities for producers and buyers to see the crops being grown	SVGA ADOPT
Vegetable	Demonstration of Sweet Potato Production in High Tunnels	Demonstrate the potential to grow sweet potatoes commercially in Saskatchewan and provide opportunities for producers and buyers to see the crops being grown	SVGA ADOPT
Vegetable	Green and Chili Pepper Trial	comparison of Peppers grown in high tunnels and in field to: demonstrate the potential to peppers commercially in Saskatchewan, provide opportunities for producers and buyers to see the different varieties available for production and compare production quality and yield in high tunnels vs. low tunnel in field	SVGA ADOPT
Vegetable	Regional Trial - little potatoes		Little Potato Company
Vegetable	Varieties for Tomato and Cucumber Production in High Tunnels	comparison of greenhouse and field tomato and cucumber varieties grown in high tunnels to: demonstrate the differences in field and greenhouse tomatoes and cucumbers grown in high tunnels and provide opportunities for producers and buyers to see the different varieties available for production	SVGA ADOPT

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Wheat	Demonstration of Plant Growth Regulator Application in Irrigated Wheat Production	The objective of this project will be to demonstrate the effect an application of a plant growth regulator will have on irrigated spring wheat production. This project will demonstrate the optimal stage of application and fertility levels for irrigated wheat crop. This project will be based on a similar project carried out by ICDC in 2014 and 2015.	ICDC and MoA
Wheat	ICDC Irrigated Wheat Variety Trial	To evaluate the adaptability of current and newly registered wheat varieties (CWRS, CWSWS, CWES, CWAD, CPSR) 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 and ADF Partial
Wheat	Improving Fusarium Head Blight Management in Durum Wheat in SK	To improve fungicide timing in durum wheat for the control of fusarium head blight.	ADF (U of S)
Wheat	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
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	Soft White Spring Wheat Coop Trial	To evaluate the adaptability of new soft white wheat and durum germplasm under standard irrigation management for prairie growing conditions. Information developed is used to support the registration of new soft white wheat varieties suited to irrigated conditions on the prairies and to update ICDCs Crop Varieties for Irrigation .	ICDC and partial ADF funding (AAFC Lethbridge)
Wheat	Winter Wheat Variety Evaluation for Irrigation vs Dry Land Production	Identify the top producing or best adapted varieties of winter wheat for irrigation production.	ADOPT

Funding Source Abbreviations:

- AAFC – Agriculture and Agri-Food Canada
- ADF – Agriculture Development Fund
- ADOPT – Agricultural Demonstration of Practices and Technologies
- AIP – Agri-Innovation Program
- AgriARM – Agriculture-Applied Research Management
- CDC – Crop Development Centre
- ICDC – Irrigation Crop Diversification Corporation
- MAFRI – Manitoba Agriculture, Food and Rural Initiatives
- MoA – Ministry of Agriculture (Saskatchewan)
- PAMI – Prairie Agricultural Machinery Institute
- SPG – Saskatchewan Pulse Growers
- SVGA – Saskatchewan Vegetable Growers Association
- SVPG – Saskatchewan Variety Performance Group
- U of S – University of Saskatchewan
- WGRF – Western Grains Research Foundation