





NEW RESEARCH COMMITMENTS 2023-2024

Manitoba Crop Alliance (MCA) entered into funding agreements for the following new research projects in our 2023-24 fiscal year. The amount reflected in the "Committed Dollars" column represents the total funding over the lifetime of the project. Projects vary in length, from one year to projects ending in 2030. For more information about MCA's research program, visit mbcropalliance.ca.


Project Title	Principle Investigator	Committed Dollars	End Date
WHEAT AND BARLEY 			
Combining higher anthocyanin levels, enhanced quality and improved disease resistance in the purple wheat	Pierre Hucl	\$18,400	May 15, 2027
An accelerated disease phenotyping system to select wheat germplasm resistant to FHB and stripe rust	Randy Kutcher	\$32,200	June 15, 2026
Marker-assisted pre-breeding for alternative semi-dwarfing genes and anther extrusion in durum and bread wheat	Curtis Pozniak	\$5,750	Feb. 28, 2027
Identifying microbial inocula to increase salt tolerance in barley	Jon Bennett	\$17,755	June 15, 2027
Searching for resistance to bacterial leaf streak in wheat (<i>Triticum</i> spp.) and barley (<i>Hordeum</i> spp.)	Randy Kutcher	\$11,500	Dec. 30, 2026
RO CET – Rapid, on-farm, cost-efficient electrochemical testing for mycotoxins in feed	Sabine Kuss	\$82,888	March 31, 2027
Characterization of a genomic region controlling spikelet number and improved fertility under drought stress in wheat	Gurcharn Singh Brar	\$103,500	Jan. 31, 2026
2023-28 Canadian National Wheat Cluster	CWRC	\$631,385	March 31, 2028
Imaging for improving Fusarium-damaged kernel and deoxynivalenol resistance in Canadian wheat	Samia Berraies	\$10,000	May 1, 2026

Project Title	Principle Investigator	Committed Dollars	End Date
WHEAT AND BARLEY 			
Developing tools to detect late maturity a-amylase in Canadian wheat for creating germplasm resilient to environmental stress	Sijo Joseph	\$22,950	March 31, 2026
High-yielding wheat varieties via screening for water use efficiency and drought tolerance under different thermal conditions	Guillermo Hernandez-Ramirez	\$25,300	March 31, 2026
Searching novel genes for resistance to rusts, bacterial leaf streak and tan spot in wheat	Gurcharn Singh Brar	\$48,300	March 31, 2026
TILL-D: A sequence-configured Aegilops tauschii TILLING (targeted local sesions in genomes) resource for wheat improvement	Gurcharn Singh Brar	\$103,500	March 31, 2027
2023-28 Canadian National Barley Cluster	CBRC	\$104,780	March 31, 2028
Falling Number in CWRS wheat	MCVET	\$55,046	Jan. 31, 2027
Assessing seed to seedling transmission of Xanthomonas translucens causing BLS of cereals to establish inoculum thresholds	Randy Kutcher	\$20,638	April 15, 2027
Improving the resistance of Canadian wheat to preharvest sprouting	Belay Ayele	\$209,091	March 31, 2026
Discovering moisture: the unknown potential of coleoptile length in wheat under dry seeding conditions	Martin Entz	\$34,328	March 31, 2026
Improve uniform maturity in barley – opportunities for nitrification inhibition	Hiroshi Kubota	\$58,707	March 31, 2026
Unraveling wheat sprouting to boost the market for Manitoba wheat (MANI-S-WHEAT)	Cristina Molina Rosell	\$190,504	March 31, 2027
Diversification Centres – winter cereals intercropping 2023	Joanne Thiessen Martens	\$29,591	Oct. 31, 2025

Project Title	Principle Investigator	Committed Dollars	End Date
WHEAT AND BARLEY 			
A critical assessment of ultra-early seeding system for western Canadian barley	Ana Badea	\$152,250	Dec. 31, 2028
Digital phenotyping to accelerate wheat breeding	Steven Shirtliffe	\$36,625	June 1, 2028
Functional use of core pathogenicity genes to develop mitigation strategies against FHB of wheat	Hossein Borhan	\$17,147	Dec. 15, 2026
Targeted improvement of winter hardiness in winter wheat	Andriy Billichak	\$43,422	March 31, 2027
Diversification Centres – Optimizing nitrogen fertility in winter wheat & determining nitrogen emissions by fertility application method in winter wheat	Alex Griffiths	\$15,000	Dec. 31, 2024


Project Title	Principle Investigator	Committed Dollars	End Date
FLAX 			
Integrated approaches for genetic improvement of flax*	Bunyamin Tar'an	\$130,400	March 31, 2028
Enhancing genetic gain for yield, biotic and abiotic stress tolerance in flax	Bunyamin Tar'an	\$72,995	March 31, 2028
Advancement of microbial reduction and techno-functional properties of oxidatively decontaminated and stored flax seed	Jitendra Paliwal	\$150,000	March 31, 2026
Flax co-operative trials in Manitoba	MCVET	\$10,527	Dec. 31, 2024


*Project funded under the Diverse Field Crops Cluster.

Project Title	Principle Investigator	Committed Dollars	End Date
WHOLE FARM 			
The prairie crop disease monitoring network	Kelly Turkington	\$6,000	May 15, 2028
2024 Wheat and Barley Fertilizer Use Survey	Fertilizer Canada	\$9,400	July 31, 2024
Greenhouse gas program for diverse field crops*	Kate Congreves	\$93,658	March 31, 2028
Optimizing crop rotations to enhance agronomic, economic and environmental performance	Ramona Mohr	\$120,855	March 31, 2027
Real-time decision support: linking optimal nitrogen management practices to soil moisture conditions**	Ramona Mohr	\$93,400	March 31, 2028
The prairie weed monitoring network: building a strong biovigilance foundation**	Charles Geddes	\$35,500	March 31, 2028
Testing the cover crop hypothesis across Prairie Canada	Yvonne Lawley	\$15,000	March 31, 2024
Building resilient soils with cover crops in Manitoba	Afua Mante	\$126,066	March 31, 2028
The effect of integrated crop management on weed phenology and weed persistence	Dilshan Benaragama	\$140,450	March 31, 2026
Soil and water management R&D site in an undulating landscape – monitoring, evaluation and knowledge transfer	David Whetter	\$52,253	March 31, 2028


*Project funded under the 2023–28 Diverse Field Crops Cluster.

**Project funded under the 2023–28 Integrated Crops Agronomy Cluster.

Project Title	Principle Investigator	Committed Dollars	End Date
WHOLE FARM 			
Research in agri-food competitiveness and effectiveness in Canada	Deans Council – AFVM & CFA	\$2,000	Oct. 31, 2024
LGP traffic systems	Lorne Grieger	\$39,165	March 31, 2027
Bugs in a jug	David Rourke	\$21,582	March 31, 2027
Does controlled traffic farming reduce soil compaction, contribute to climate change mitigation and adaptation, as well as improve crop yield stability?	Stephen Crittenden	\$83,989	March 31, 2027
Innovations to control troublesome weeds	Steve Robinson	\$37,500	March 31, 2027
Agronomist in Residence – Special Crops	N/A	\$1,347,492	Jan. 31, 2030
Grain dryer efficiency	Lorne Grieger	\$72,771	March 31, 2027

SUNFLOWERS 			
Reducing combine header losses during sunflower harvesting	Lorne Grieger	\$69,575	March 31, 2027
Determination of the impact of genetic and environmental factors and their interactions on the protein quality of sunflower seed	Dr. J. House Lab	\$306,788	March 31, 2026
Herbicide and disease resistant sunflower hybrids: a climate smart crop*	MCA	\$1,423,459	March 31, 2028

*Project funded under the 2023–28 Diverse Field Crops Cluster.

Project Title	Principle Investigator	Committed Dollars	End Date
CORN 			
Residue management practices to optimize corn production	Ramona Mohr	\$92,840	March 31, 2028
Getting the jump on spring corn growth	Malcom Morrison	\$45,012	March 31, 2027
Developing short-season corn inbreds with abiotic and biotic stress tolerance/resistance***	Aida Kebede	\$81,507	March 31, 2028
Cover crops and 4R strategies to mitigate GHG emissions***	Craig Drury	\$207,610	Aug. 31, 2028

TOTAL COMMITTED FUNDING IN 2023-24		\$6,968,351	
---	--	--------------------	--

***Project funded under the 2023-28 Canadian Field Crops Research Alliance, Cropping System Cluster.