

CAP Ag Action Manitoba - Research and Innovation Activity
 Projects approved since 2018

Applicant Institution	Project Title	Project Length	Project Start Date	Project End Date
151 Research Inc.	Stored grain spoilage monitoring with 3D imaging	3 Years	2018	2021
Agriculture and Agri-Food Canada	Investigating the potential of avenanthramides on glycemic control - a novel marketable attributes for Manitoban oats	2 Years	2018	2020
Agriculture And Agri-Food Canada	Genomics research for improving rust resistance in wheat, a component of the Genome Canada project '4D Wheat'	3 Years	2020	2023
Agriculture and Agri-Food Canada	Evaluation of genetic resistance and commercial fungicides for the management of <i>Fusarium</i> head blight on barley and oat	3 Years	2019	2023
Agriculture and Agri-Food Canada	Assessment of polyphenolic and fatty acid profiles in current Canadian barley grain and malt and investigation of brewers' spent grain as a source for bioactives in improving human metabolic health	2 Years	2021	2023
Assiniboine Community College	Weather based Fungicide Application Decision Support Tool (FADST) for managing white mould in dry beans in Manitoba	2 Years	2021	2023
Brandon University	Soil health assessment for enhanced productivity and resilience for cattle grazing systems in Manitoba grasslands	3 Years	2019	2022
Brandon University	Infrastructure for analysis of soil carbon, a companion project for the CAP-Ag Action funding study: soil health assessment for enhanced productivity and resilience for cattle grazing systems in Manitoba grasslands	1 Year	2022	2023
Canadian Hemp Trade Alliance	Defining best management practices & technologies for safer storage, aeration & drying of whole hemp plants and seeds	3 Years	2019	2022
Canadian Malting Barley Technical Centre	Development of malting and brewing analytical services at CMBTC	1 Year	2018	2019
Canadian Malting Barley Technical Centre	Assessment of new malting barley varieties for production and malting selection in Manitoba	3 Years	2020	2023
Canadian Malting Barley Technical Centre	Expanding Capacity, Enhancing Automation & Creating Efficiencies at the Canadian Malting Barley Technical Centre	1 Year	2021	2022
Cytophage Technologies Inc.	Creating bacteriophage to replace antibiotics in disease prevention within Manitoba's swine industry	3 Years	2019	2022
Cytophage Technologies Inc.	Evaluation of modified bacteriophage for the treatment and prevention of bacterial diseases in swine	2 Years	2021	2023
Direct Farm Manitoba	Economic impacts of farmers' markets in Manitoba	1 Year	2020	2021
DL Seeds Inc.	Building capacity for new traits in canola	1 Year	2018	2019
Ducks Unlimited Canada	Prairie ecosystem services project: Quantifying the contribution of wetlands in livestock production landscapes	2 years	2021	2023
Ducks Unlimited Canada	Maximizing the potential of high-yielding winter wheat in Manitoba	1 Year	2022	2023
EcoPoxy Inc.	Ecopoxy bio-based resin technology development	3 Years	2018	2021
Function Four Ltd.	Smart apiary management - using embedded sensors, machine learning, and AI to optimize production, improve product quality, economic diversification	3 Years	2019	2022
Genome Prairie	Genome360 SeekNET: Manitoba agricultural next generation sequencing network	2 Years	2020	2023
Horizon Lab Ltd.	Milk measurements to enhance health of dairy cows	2 Years	2018	2020
International Institute for Sustainable Development	Reducing agriculture's climate risks and impacts through better water retention management and spatial hydrologic modeling	3 Years	2020	2022
International Institute for Sustainable Development	Targeted action - Improving outcomes from agricultural BMPs in Manitoba's watersheds	3 Years	2019	2022
Manitoba Beef Producers	Cattle: A natural systems solution to effectively utilize resources and mitigate climate change in Manitoba	1 Year	2022	2023
Manitoba Canola Growers Association	Next generation biosurveillance in canola	3 Years	2018	2021
Manitoba Crop Alliance	Corn population and row spacing project	2 Years	2018	2020
Manitoba Crop Alliance	A comprehensive, multidisciplinary, multi stakeholder approach to the development of tools and techniques to manage extreme moisture	3 Years	2019	2022
Manitoba Crop Alliance	Enhancing pre-harvest sprouting tolerance in wheat	3 Years	2019	2023
Manitoba Crop Alliance	Optimizing pre-harvest sprouting tolerance in malting barley	2 Years	2018	2020
Manitoba Crop Alliance	ROI of variable rate fertilizer prescriptions	2 Years	2019	2021
Manitoba Crop Alliance	Short and long term strategies for mitigating the effects of excess moisture on wheat yield and quality	3 Years	2018	2023
Manitoba Crop Alliance	Beneficial practices for soil and water quality, excess water management and drought resiliency in an undulating soil-landscape in Southwestern Manitoba	3 Years	2020	2023
Manitoba Crop Alliance	Development of long type confection sunflower hybrids	3 Years	2018	2021
Manitoba Crop Alliance	Development of long type confection sunflower hybrids - Phase 2	3 Years	2020	2023
Manitoba Crop Alliance	Application of antimicrobial peptides to increase cereal crops resistance to fungal pathogens	2 Years	2021	2023
Manitoba Crop Alliance	Effect of using low ground pressure (LGP) traffic systems for seeding on soil compaction and cereal yields in heavy clay soils affected by extreme moisture conditions	2 Years	2021	2023
Manitoba Crop Alliance	Crop rotation affects disease suppressive soil microbiomes	2 Years	2021	2023
Manitoba Crop Alliance	Grain Dryer Efficiency	2 Years	2021	2023
Manitoba Forage and Grassland Association	Investigating the influences of soil health and land drainage on the hydrologic behavior of the Assiniboine River Basin	1 Year	2019	2020
Manitoba Forage Seed Association	Alfalfa blossom blight fungicide control	2 Years	2019	2021
Manitoba Forage Seed Association	Alfalfa blossom blight fungicide control	1 Year	2018	2019
Manitoba Forage Seed Association	Effects of plant growth regulator application timing on perennial ryegrass	2 Years	2019	2021
Manitoba Forage Seed Association	Effects of trinexapac-ethyl (TE) on established annual ryegrass and fescue seed crops	3 Years	2020	2023
Manitoba Horticulture Productivity Enhancement Centre	Yield improvements for Manitoba's potato industry	3 Years	2018	2021
Manitoba Horticulture Productivity Enhancement Centre	Increasing the competitiveness of Manitoba's potato industry through decreasing yield variability	2 Years	2021	2023

Manitoba Horticulture Productivity Enhancement Centre	Improvements to the soils of Manitoba's Potato Industry Through Decreasing Wind Erosion	1 Year	2022	2023
Manitoba Horticulture Productivity Enhancement Centre	Improvements to Manitoba's Potato Industry Through Variable Rate Irrigation (VRI)	1 Year	2022	2023
Manitoba Pork Council	Suspended burlap strip for sow enrichment in farrowing: Effect on sow behaviour and piglet performance	1 Year	2018	2019
Manitoba Pulse & Soybean Growers	Assessment of pre- and post-emergent rolling of non-stony soybean fields	2 Years	2018	2020
Manitoba Pulse & Soybean Growers	Building knowledge and achieving genetic improvements to overcome the effect of drought and salinity on soybean	3 Years	2019	2023
Manitoba Pulse & Soybean Growers	Defining pathogen related soil quality targets for annual legumes to pursue through crop rotation	3 Years	2019	2022
Manitoba Pulse & Soybean Growers	Development of an integrated weed management (IWM) package to mitigate and manage glyphosate-resistant weeds in soybean	3 Years	2019	2023
Manitoba Pulse & Soybean Growers	Development of superior <i>Rhizobium spp</i> strains to support biological nitrogen fixation in dry bean	3 Years	2019	2023
Manitoba Pulse & Soybean Growers	Economic and environmental potential of growing dry pea and soybean in a common rotation	3 Years	2019	2022
Manitoba Pulse & Soybean Growers	Evaluation of the risks associated with wireworm to soybean production	3 Years	2018	2021
Manitoba Pulse & Soybean Growers	First 3 years of 5 year study into the management of root rot of pea in Manitoba	3 Years	2018	2021
Manitoba Pulse & Soybean Growers	Impacts of land rolling on soil erosion	2 Years	2018	2020
Manitoba Pulse & Soybean Growers	Inter-cropping practices for yellow pea	3 Years	2019	2022
Manitoba Pulse & Soybean Growers	Overcoming the discount of low protein in Manitoba soybean: Determination of the impact of genotype, environment and year on soy protein quality	2 Years	2019	2021
Manitoba Pulse & Soybean Growers	Investigating pea crop rotation length and sequence for sustainable protein production in Manitoba	3 Years	2020	2023
Manitoba Pulse & Soybean Growers	Evaluating the feeding value of Western Canadian soybean for layers, pullets, broilers, and swine	3 Years	2020	2023
Manitoba Pulse & Soybean Growers	The next generation of Prairie herbicide-resistant weed surveys and biovigilance	2 Years	2020	2022
Manitoba Pulse & Soybean Growers	Effect of the frequency of soybean in the crop rotation on <i>Rhizobium</i> and the soil microbial community	3 Years	2020	2023
Manitoba Pulse & Soybean Growers	Understanding how soil health affects soybean yield and protein and how those effects vary by factors the grower can and cannot control	3 Years	2020	2023
Manitoba Pulse & Soybean Growers	Development of improved diagnostics tools for pathogens of soybean	3 years	2020	2023
Manitoba Pulse & Soybean Growers	Manipulating weed seed production through phenology-based weed control	2 Years	2021	2023
Manitoba Pulse & Soybean Growers	Optimizing nitrogen and phosphorus management for dry bean in Southwestern Manitoba	2 Years	2021	2023
Manitoba Pulse & Soybean Growers	Pea seed mortality due to air seeder damage	1 Years	2021	2022
Manitoba Pulse & Soybean Growers	Frequency of soybean in Manitoba crop rotations	2 years	2021	2023
Manitoba Pulse & Soybean Growers	Analysis of the carbon intensity of current annual legume production methods and their adaptation potential for the future low carbon economy	2 years	2021	2023
Manitoba Pulse & Soybean Growers	Development and evaluation of a fully-automated, made-in-Manitoba data rover for the rapid collection of ground-level phenotypic data related to abiotic stress tolerance in soybean	2 years	2021	2023
Manitoba Pulse & Soybean Growers	Purchase of a near infrared (NIR) spectrometer for crop protein research	2 years	2021	2023
Manitoba Pulse & Soybean Growers	Purchase of a near infrared (NIR) spectrometer for crop protein research	1 Year	2022	2023
Manitoba Pulse & Soybean Growers	Purchase soil probe to increase capacity of MSPG's On-Farm Network testing program.	1 Year	2022	2023
Maple Leaf Foods Inc.	Freedom farrowing crate options in existing sow facilities	1 Year	2018	2019
Maple Leaf Foods Inc.	Developing a next generation agriculture biosecurity system to enhance the Canadian pork industry	1 Year	2020	2021
Minto BioProducts Ltd.	Using fungal endophytes for enhanced production of agricultural crops in saline areas in Manitoba	3 Years	2020	2023
Morden Community Development Corporation	Validating opportunities and building local capacity for digital agriculture	2 Years	2021	2023
MSP Starch Products Inc.	MSPrebiotic biomarker discovery - mining microbiome and metabolomic data to link prebiotic consumption to improved parameters in healthy people	2 Years	2020	2022
N49 Genetics Inc.	Temperature controlled plant growth facilities to screen early maturing soybean germplasm for enhanced germination, seedling vigor and stress tolerance in Northern latitudes	2 Years	2021	2023
Natural Fibre Technologies Ltd.	Demonstration of a novel low cost mobile decortication system to create an expansive hemp processing industry in Manitoba	1 Year	2021	2022
New Era Ag Technologies Inc.	Assessing the effects of wood ash as a soil amendment to control clubroot and on the growth and yield of wheat, canola, soybeans, and field peas in North West Manitoba soils	3 Years	2020	2023
Parkland Industrial Hemp Growers Co-op Ltd.	Hemp specialty variety development	3 Years	2018	2021
Parkland Industrial Hemp Growers Co-op Ltd.	Hemp variety development	2 Years	2021	2023
Peak of the Market	Characterization of the soil biological, chemical, and environmental factors related to the incidence of tuber blemishes on (Dark) Red Norland	2 Years	2019	2021
Peak of the Market	Seed management of Sangre for optimal performance	3 Years	2018	2021
Prairie Agricultural Machinery Institute	Effect of an integrated grain storage management system without in-bin sensors for natural air drying in the Canadian Prairie climate	1 Year	2021	2022
Prairie Agricultural Machinery Institute	Develop double cut header system for hemp	1 Year	2018	2019
Prairie Agricultural Machinery Institute	Pneumatic grain conveying in seeding equipment	2 Years	2019	2022
Prairie East Sustainable Agriculture Initiative Inc	Strengthening Tile Drainage Research facility at PESAI site	1 Year	2022	2023
Prairie Mountain Hops	Construction and purchase of industrial hops cooler building, hops drier building, electrical power upgrades and routing and purchase of industrial hops processing equipment including harvester pelleting machine and vacuum packaging equipment	2 Years	2018	2020

Prairie Skyline Ventures Ltd.	Development of functional foods containing buckwheat bioactive for the management of blood sugar levels in diabetes	1 Year	2022	2023
Prairie Skyline Ventures Ltd.	Characterization of an active ingredient in buckwheat with glucose lowering properties	1 Year	2018	2019
Prairie Skyline Ventures Ltd.	Characterization of an active ingredient in buckwheat with glucose lowering properties	1 Year	2019	2020
Red River College	Development of value-added food platform technologies using plant-based proteins sources including bean, soy and hemp	2 Years	2019	2021
Richardson International Limited - Innovation Centre	Richardson Innovation Centre - equipment	1 year	2018	2019
Rourke Farms Ltd	Regenerative organic no till farming systems using novel green and brown seeding systems for Manitoba farms	1 Year	2022	2023
Schweitzer-Mauduit Canada	Flax shive briquettes for biomaterial applications	1 Year	2018	2019
Schweitzer-Mauduit Canada	Research and development of natural twines for large square balers	2 Years	2019	2021
SeCan Association	Accelerated development of high yielding, disease resistant, spring wheat varieties for Manitoba (ADWM)	3 Years	2018	2021
SeCan Association	Building climate resilient wheat varieties for Manitoba	2 Years	2021	2023
Souris River Watershed District	Integrated water resources management in the Whitewater Lake Watershed	2 Years	2021	2023
Southeast Resource Development Council	Screening varieties of purple potatoes, purple carrot and lingonberries to identify high bioactive/antioxidant levels	3 Years	2020	2023
Southeast Resource Development Council	Field trials for growing wild rice on inland paddies	3 Years	2020	2023
St. Boniface General Hospital Inc.	Effects of dietary flaxseed on memory and cognition	3 Years	2019	2023
St. Boniface General Hospital Inc.	Flaxseed prevents broken hearts in breast cancer (CANFLAX study)	3 Years	2019	2023
St. Boniface General Hospital Inc.	Pea protein sustains muscle mass in weight loss	3 Years	2018	2021
St. Boniface General Hospital Inc.	The effect of flax milk on arterial hypertension. Evaluation of blood pressure response by 24 hour ambulatory blood pressure monitoring	2 Years	2019	2021
St. Boniface General Hospital Inc.	Can processing technique and/or inclusion of protein isolates alone or in combination with animal protein enhance the benefits of functional foods containing Manitoba grown beans?	3 Years	2020	2022
Steve's Livestock Transport Ltd.	The utilization of advanced transport technology for Isowean piglet transportation	2 Years	2018	2020
Steve's Livestock Transport Ltd.	The utilization of autonomous robotic technology to reduce water use during washing and disinfection of swine transport trailers	2 Years	2021	2023
Topigs Norsvin Canada Inc	Advancing female reproductive knowledge and management practices for optimal lifetime productivity and embryo transfer success	1 Year	2022	2023
Topigs Norsvin Canada Inc	Innovative application of artificial intelligence, machine learning, behavioural science and genomics to enhance resource efficiency for environmental sustainability of sow farms in Manitoba using welfare friendly production (SREW)	1 Year	2022	2023
Topigs Norsvin Canada Inc.	Improving competitiveness and sustainability of pork production through increase in feed efficiency, improved carcass quality and higher animal welfare standards by innovative application of microbiome profiling, computed tomography and genomics	3 Years	2018	2021
Trouw Nutrition Canada Inc.	Reducing the environmental impacts of swine production using a novel feed formulation strategy aimed at improving production efficiency of sows by improving the nutrient utilization, number of weaned piglets and gastrointestinal health	2 Years	2021	2023
University of Alberta	Evaluation of red osier dogwood extract as alternative to antibiotics to improve growth and health of newly weaned calves	2 Years	2019	2021
University of Manitoba	Building Analytical Capacity in Soil Fertility and Environmental Sustainability Research at the University of Manitoba	1 Year	2022	2023
University of Manitoba	Capital equipment to enable wheat breeding and quality research at the University of Manitoba	1 Year	2022	2023
University of Manitoba	Investigation of a novel biological mechanism of action specific to the plant-sourced omega-3 fatty acid alpha-linolenic acid	1 Year	2022	2023
University of Manitoba	Noxious Amaranthus weed identification using molecular markers	1 Year	2022	2023
University of Manitoba	Multiplex CRISPR/Cas9-mediated genome editing of functional genes in Brassica napus to advance plant resistance to biotic and abiotic stresses	1 Year	2022	2023
University of Manitoba	Sustainable Groundwater Management of the Assiniboine Delta Aquifer	1 Year	2022	2023
University of Manitoba	Enhancing Production, Health and Welfare of Group-Housed Dairy Cows through Real-time Monitoring of Animal Behaviour	1 Year	2022	2023
University of Manitoba	Assessing the impact of tile drainage and water management on yield and quality of canola and soybean	3 Years	2018	2023
University of Manitoba	Biobed for managing pesticide rinsate with on-farm testing under Manitoba conditions	3 Years	2019	2022
University of Manitoba	Breeding and development of intermediate wheatgrass as a perennial grain crop for Western Canada	3 Years	2019	2023
University of Manitoba	Preserving soil health on farmed clay soil in Manitoba	3 Years	2019	2022
University of Manitoba	CombCut control of herbicide escapes in soybean	1 Year	2018	2019
University of Manitoba	Cost-effectiveness analysis of the anti-inflammatory effects of flax oil	2 Years	2019	2021
University of Manitoba	Cover crops and cropping systems innovation for Manitoba	3 Years	2019	2022
University of Manitoba	Developing rapid molecular diagnostic tools for detecting herbicide resistant weed biotypes	2 Years	2019	2021
University of Manitoba	Effect of plant growth regulators on Fusarium head blight infection of spring wheat	3 Years	2019	2022
University of Manitoba	Enhancing tolerance to iron deficiency	3 Years	2018	2021
University of Manitoba	Frequency of soybean in Manitoba crop rotation	3 Years	2018	2021
University of Manitoba	Investigation of health promoting effects of Manitoba-grown Red Osier Dogwood as an alternative to antibiotics in nursery pig production	2 Years	2019	2021
University of Manitoba	IWM in narrow-row field beans	2 Years	2018	2020
University of Manitoba	Linking Fusarium traits to malt quality defects	3 Years	2019	2023
University of Manitoba	Manitoba agricultural policy and economic analysis internships	3 Years	2019	2022

University of Manitoba	Mitigating free asparagine, acrylamide precursor	3 Years	2018	2023
University of Manitoba	Mitigating soybean harvest losses through enhancing podding height	3 Years	2018	2023
University of Manitoba	Perennial forage grain for fall grazing of beef cattle	3 Years	2019	2022
University of Manitoba	Strategic supplementation for cattle performance	2 Years	2019	2021
University of Manitoba	Supervision of autonomous agricultural machines	3 Years	2018	2021
University of Manitoba	The role of gut microbiome and diet type in determining the efficiency of feed utilization in swine	3 Years	2019	2022
University of Manitoba	Tools for cultivar-specific plant stand optimization in wheat	2 Years	2019	2021
University of Manitoba	Integrated management of Varroa and its interacting stressors to enhance winter survival of honey bees	3 Years	2020	2023
University of Manitoba	Smart vertical farm for health in Northern communities	3 Years	2020	2023
University of Manitoba	Optimization of struvite as a phosphorus fertilizer in Manitoba crop rotations	3 Years	2020	2023
University of Manitoba	Assessing the relationship between tick abundance on pastures and on cattle, and the risk ticks represent to cattle and livestock workers	3 Years	2020	2023
University of Manitoba	Novel locally-sourced high-quality protein feeds for cattle	3 Years	2020	2023
University of Manitoba	Efficacy and safety of white button mushrooms	2 Years	2019	2021
University of Manitoba	In-vitro evaluation of Manitoba-grown fruits for their health benefits in hypertension, diabetes and neurodegeneration	1 Year	2021	2022
University of Manitoba	Achieving full integration of microbiology into assessments of soil health in Manitoba	2 Years	2021	2023
University of Manitoba	Implementation of BMP protocols to manage irrigation and controlled drainage to conserve water and nutrients within agricultural lands	2 Years	2021	2023
University of Winnipeg	Integrating root traits into measures of soil health in wet meadow rangelands.	1 Year	2022	2023
University of Winnipeg	Evaluating the effectiveness of soil amendments in reducing P losses from manured soils with snowmelt flooding	1 Year	2022	2023
University of Winnipeg	Socioeconomic impact of a legume-based health care intervention for treating peripheral artery disease	2 Years	2020	2021
University of Winnipeg	Impacts of cattle grazing on the proliferation of foxtail barley and the function of wet meadow rangelands in Manitoba	2 Years	2019	2021
University of Winnipeg	Evaluating the effect of grazing on rangeland and soil health in wet meadow rangelands in Manitoba	2 Years	2021	2023

Projects with 2023 end date are expected to be finalized by Dec 31, 2022