

OMAFRA – U of G Partnership Research Program - Approved Projects 2015/'16

DERIVED FROM APPENDIX A: 2015/16 OMAFRA – UOFG PARTNERSHIP RESEARCH PROGRAM, SUMMARY OF FULL PROPOSALS RECOMMENDED FOR FUNDING

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Agricultural and Rural Policy

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1. **Alfons Weersink** - Economic and Environmental Tradeoffs of Ontario's Farming Systems
2. **Getu Hailu** - Dairy Industry Cost Structure, Productivity and Economic Efficiency: Enhancing Farm Level Long-term Competitiveness and Sustainability
3. **John Cranfield** - Developing an approach to measure and monitor local food consumption in Ontario
4. **Rakhal Sarker** - Effectiveness of the BRM-Programs in Achieving Desirable Outcomes and Long-term Sustainability of the Agri-Food Sector in Ontario
5. **Al Lauzon** - Exploring Precarious Rural Employment and Implications for Rural Communities
6. **Rakhal Sarker** - Enhancing Competitiveness and Long-term Sustainability of the Supply Managed Dairy Sector in Ontario

Bioeconomy – Industrial Uses

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1. **Rene Van Acker** - Dual cropping with camelina for the sustainable production of bioproducts and animal feeds in Ontario
2. **Manjusri Misra** - Utilization of food wastes in the design and engineering of value-added compostable containers
3. **Amar Mohanty** - Hybrid biocomposites from recycled polyamide and carbonaceous reinforcements for lightweight automotive applications
4. **Naresh Thevathasan** - Soil organic carbon and PGPR determination as influenced by biomass crops grown in Ontario and GIS database development
5. **Brandon Gilroyed** - Evaluation of a Novel Sugarcorn Feedstock for Production of Organic Acids
6. **Animesh Dutta** - Development of a carbon negative process for hydrogen enriched syngas, ethanol and co-products value chain from corn residues
7. **Brandon Gilroyed** - Carbon dioxide explosion as a pre-treatment for lignocellulosic biomass to improve biogas production using dry anaerobic digestion

Emergency Management

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1. **Shayan Sharif** - Development of strategies for control of avian influenza virus transmission
2. **Nicole Nemeth** - Risk assessment for the incursion and establishment of livestock orbiviruses in Ontario: Serosurveillance and characterization of current vector composition and distribution
3. **Andria Jones-Bitton** - Development of evidence-based mental health literacy program and emergency mental health response model for Ontario agriculture
4. **Leonardo Susta** - Detection and surveillance of significant pathogens in Ontario small poultry flocks
5. **Ernesto Guzman** - Efficacy and effects on bee health and behaviour of prebiotics and probiotics for the control of the emergent parasitic fungus *Nosema ceranae*

6. **Alfons Weersink** - Economic Impact Analysis of Disease Threats and Intervention Activities in the Swine Sector

Environmental Sustainability

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1. **Bill Van Heyst** - Assessment of an Air Treatment System for Enhanced Environmental and Biosecurity Measures on a Broiler Operation
2. **Claudia Wagner-Riddle** - Diverse cropping systems as a best management practice: Insight from lysimeters on soil health, air, and water quality
3. **Ivan O'Halloran** - Reducing soluble and particulate P losses through cover crops: effects of soil test P and cover crop species and maturity
4. **Nigel Raine** - Risk assessment of management practices on cucurbit farms in Ontario for the native specialist pollinator *Peponapis pruinosa* (squash bee)
5. **Mike Dixon** - Head to Head Comparison of Electrochemical and Conventional Advanced Oxidation Technologies for the Remediation and Recycling of Greenhouse Irrigation Water
6. **Chris Kinsley** - Development of cost effective technology to treat and reuse microbrewery wastewaters
7. **Richard G. Zytner** - Treatment of Fruit Wastewater Using an MBR
8. **Laura Van Eerd** - Evaluation of BMPs and spectral technology to optimize nitrogen use efficiency in sugarbeet production

Food for Health

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1. **Alison M. Duncan** - Exploration of bean consumption in older adults
2. **Jess Haines** - Family Food Skills: Examination of associations between parental food skills and fruit and vegetable purchasing and intake among families with young children
3. **Lisa Duizer** - Putting more nutrition on the plate at a reduced cost
4. **David Ma** - Promoting healthy food choices through the understanding of the genetics of taste perception in participants of the Guelph Family Health Study
5. **Sylvain Charlebois** - Strategic Foresight and Healthy Food Futures for the Ontario Livestock Industry

Products and Value Chains

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1. **Jayasankar Subramanian** - Developing a novel hexanal based nanoformulation for enhancing shelf life of tender fruits
2. **Valerio Primomo** - Sweet Potato Slip Production: A New Business Opportunity for Ontario Propagators
3. **Alexandra Grygorczyk** - Igniting new market opportunities for Ontario's floriculture sector
4. **Lefa Teng** - Tapping into the Chinese Appetite: Driving Sales for Ontario Food Products in China

Production Systems – Animals

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1. **Robert Friendship** - Use of plant-based FaeG fed to newly weaned pigs to compete with F4+ E. coli for binding sites and prevent diarrhea
2. **Kees de Lange** - Evaluation of immuno-nutrients for pigs: leucine and w-3 fatty acids **John Cant** - Milk fat stimulation by amino acids
3. **Angela Canovas** - Improving selection efficiency by combining functional studies and a systems biology approach with the estimation of molecular breeding values in cattle
4. **Terri O'Sullivan** - Bioavailability and efficacy of NSAIDs when compounded (mixed) with iron dextran on pain relief following castration in piglets
5. **Ray Lu** - Novel molecular tools for farm management and animal production identification of stress genetic markers in pigs
6. **Robert Friendship** - Comparison of single timed artificial insemination in weaned sows using OvuGel or eCG/pLH to synchronise ovulation **nematode parasite infections**
7. **Stephen LeBlanc** - Controlling inflammation around calving to improve health in dairy cows
8. **Robert Friendship** - A prevalence study of common swine pathogens and an examination of risk factors and their association with productivity and drug use.
9. **Georgia Mason** - Surveying NFACC Codes Implementation and Attitudes to Welfare in Canadian Mink Farmers: Towards Guidelines for Best Practice for Cage Enrichment
10. **Alexandra Harlander** - Understanding feather pecking in laying hens: the gut-microbiome-brain connection
11. **John Lumsden** - Feed restriction and bacterial disease in rainbow trout
12. **Scott Weese** - Understanding and improving antibiotic use in dairy calves
13. **David Kelton** - Groundwater as a source of high iodine levels in milk
14. **Lucy Mutharia** - Rapid detection approaches to production-limiting flavobacterial diseases in Ontario fish aquaculture
15. **Trevor DeVries** - Manipulating dry cow diets to ensure consistency in feed intake across the transition period
16. **Ira Mandell** - Enhanced pasture-based production systems for cattle in the north: assessing cattle growth performance, meat quality, and forage productivity and quality

Production Systems – Plants

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1. **Cheryl Trueman** - Integrated management of bacterial diseases of fruiting vegetables in Ontario
2. **Mary Ruth McDonald** - Biology and Management of Celery Leaf Curl
3. **Katerina Jordan** - Cultural, biological and chemical management of downy mildew of hops
4. **Rebecca Hallett** - Pheromone-based technologies for management of the swede midge in Brassica crops
5. **J. Alan Sullivan** - Scab and drought tolerant potatoes for the Ontario producer and consumer
6. **Mary Ruth McDonald** - Integrated pest management of stem and bulb nematode on garlic
7. **François Tardif** - Alternative methods for the control of glyphosate resistant Canada fleabane

8. **Manish N. Raizada** - Greenhouse Testing of Novel Biocontrol Endophytes to Combat Powdery Mildew Disease in Ontario Cucumbers
9. **Jayasankar Subramanian** - Identification of genetic and molecular resistance for effective management of black knot in plums
10. **John Cline** - Identifying Premium European Cider Cultivars for Ontario based on Horticultural Orchard Management and Fermentation Parameters
11. **Lewis Lukens** - Barley trait development and germplasm enhancement to meet the needs of Ontario industry
12. **Clarence Swanton** - An integrated strategy for the control of linuron resistant pigweed species in carrots