

# OMAFRA – U of G Partnership Research Program - Approved Projects 2013/'14

DERIVED FROM APPENDIX A: 2013/14 OMAFRA – UOFG PARTNERSHIP RESEARCH PROGRAM, SUMMARY OF FULL PROPOSALS RECOMMENDED FOR FUNDING

## Table of Contents – Approved Projects 2013/'14

Agricultural and Rural Policy.....	2
Bioeconomy – Industrial Uses.....	2
Emergency Management.....	2
Environmental Sustainability .....	3
Food for Health .....	3
Products and Value Chains .....	3
Production Systems – Animals.....	4
Production Systems – Plants.....	4

## Agricultural and Rural Policy

### Approved Projects 2013/'14

1. **Wayne Caldwell** - Land Use Planning and Agriculture: Measuring Farmland Availability
2. **John Fitzgibbon** - An evaluation of the implications of private water supply and waste water systems for Rural Ontario Municipalities
3. **Alan Ker** - Modelling Ontario's Regulated Marketing Systems for Policy Analysis
4. **Ying Cao** - Government Business Risk Management (BRM) Program Participation and the Threshold Effects of Repayment on Farm Business Survival
5. **Wayne Caldwell** - Best Practices in the Use of Nature/Natural Systems to Create New Economic Activity and Rural Community Resilience
6. **Brady Deaton** - A Farmer Panel: A value-to-rent measure for Ontario farmland
7. **Ken McEwan** - Analysis of Variability within the Ontario Swine Sector
8. **Getu Hailu** - Cost Competitiveness of Ontario Food Industries: Productivity and Capacity Utilization
9. **Glenn Fox** - Spatial Stochastic Modeling of Water Use Efficiency in Ontario Agriculture

## Bioeconomy – Industrial Uses

### Approved Projects 2013/'14

1. **Rob Nicol** - A New Yeast Process for Valorizing Biodiesel Crude Glycerol and Ethanol Stillage
2. **Amar Mohanty** - Biodegradable and Biobased Engineering Materials through New Green Chemistry for Agricultural Film and Sustainable Materials Uses
3. **Amar Mohanty** - Substituting Carbon Black through Agro-derived Bio-Black for Green Automotive Products
4. **Alfons Weersink** - Development of Agricultural Biomaterials Industry in Ontario
5. **David Wolyn** - Development of Russian Dandelion as a New Rubber-Producing Crop for Ontario
6. **John Dutcher** - Creating a Technical Knowledge Platform to Validate Personal Care Applications of PHYTOSPERIX Polysaccharide Nanoparticles

## Emergency Management

### Approved Projects 2013/'14

1. **Rob Deardon** - Complex mathematical and statistical modelling of between-farm disease transmission in the Ontario swine industry
2. **Robert Friendship** - Characterizing Streptococcus suis from clinical cases and healthy-carrier pigs
3. **Nicole Nemth** - Assessment of the potential disease risks posed by wild turkeys (Meleagris gallopavo) to domestic poultry flocks in Ontario
4. **Mary Ruth McDonald** - Origin, biology and management of Hops Down Mildew: a threat to hops, cucumbers and other crops
5. **Keith Warriner** - Microbiological Risks and Mitigation Strategies in the Application of Recycled Sand Bedding used in Dairy Operations
6. **David Kelton** - Responsible antibiotic use on Ontario dairy farms – approaches, outcomes and attitudes

7. **Jonathan Newman** - Creation of an insect pest risk assessment tool for Ontario agriculture
8. **Brandon Gilroyed** - Fate of invasive and herbicide resistant weed seeds after anaerobic digestion

## Environmental Sustainability

### Approved Projects 2013/'14

1. **Manish N. Raizada** - An Early Season Nitrogen Test to Help Ontario Cereal Growers Decide Whether or Not to Side-Dress with Nitrogen Fertilizer
2. **Claudia Wagner-Riddle** - Designing and Assessing On-farm Strategies for Reducing the Carbon Footprint of Ontario Milk Production
3. **Laura Van Eerd** - Long-term Cover Crop Research: Maintaining and Monitoring Soil Health
4. **Claudia Wagner-Riddle** - Improving Nitrogen Management Tools for Reduced Environmental Losses from Corn Production
5. **Anna Crolla** - Characterizing the Environmental Quality of Dairy Feed Crop Production: Integrating Greenhouse Gases and Water Quality
6. **Ivan O'Halloran** - Characterization of management impacts on P loss to tile drains

## Food for Health

### Approved Projects 2013/'14

1. **Nina Jones** - Exploring the linkage between soy consumption and kidney health
2. **Rickey Yada** - Early potatoes: a possible food source to improve Ontarians' health through phytochemicals and starch content affecting glycemic index and glycemic load
3. **Alejandro Marangoni** - Novel strategies for the functional replacement of trans and saturated fats in finished food products
4. **Jayasankar Subramanian** - Optimizing a cryodrying technology to develop golden prunes with enhanced health attributes from novel Yellow European Plums (YEPs)
5. **Bonnie Mallard** - Assessing the Bioactivity of Immune-Related MicroRNAs in Colostrum and Milk from High and Low Immune Responder Cows on Intestinal Epithelial Cells
6. **Cezar Khursigara** - Look who's talking too: defining probiotic interactions with gut microbiota and their hosts
7. **Yoshinori Mine** - Prevention of obesity-related disorders by dietary bioactive peptides

## Products and Value Chains

### Approved Projects 2013/'14

1. **George Van der Merwe** - Developing high quality sparkling wines with regional identity in Ontario
2. **Loong-Tak Lim** - Freshness indicator for intelligent packaging applications

## Production Systems – Animals

### Approved Projects 2013/'14

1. **Trevor DeVries** - Improving cow health and enhancing nutritional quality of milk through knowledge of dairy cow behaviour
2. **Brandon Lillie** - Identifying pigs with disease resistance robustness that can be fed low cost reduced animal-protein diets without compromising health and performance
3. **Jeff Caswell** - Stimulating innate immune responses to prevent bacterial pneumonia in cattle
4. **Zvonimir Poljak** - Within-herd dynamics of influenza in nursery herds and effective methods for elimination
5. **Terri O'Sullivan**- Investigation of the prevalence of heart lesions in market hogs that die in-transit and testing for a genetic association
6. **Kees de Lange** - Nitrogen (N) nutrition for growing pigs, to increase flexibility in feed formulation, reduce N losses into the environment and improve gut health
7. **Jeff Thomason** - Can horses modulate their mechanical interaction with the ground surface to mitigate potentially harmful properties of the surface?
8. **Shayan Sharif** - Probiotics for enhanced poultry health
9. **Gregory Bedecarrats** - Optimizing Lighting for Precision Broiler Breeder Feeding
10. **Kees de Lange** - Precision feeding of gestating sows using electronic sow feeders to reduce environmental impact and feed costs, while improving sow welfare and productivity
11. **John Cant** - Reducing dietary protein costs while maximizing milk production in dairy cows
12. **Tina Widowski** - The effects of alternative feeding strategies for broiler breeders

## Production Systems – Plants

### Approved Projects 2013/'14

1. **J. Alan Sullivan** - Integrated Breeding and Production Systems for Novel Ornamentals for Ontario
2. **Mehrzad (Milad) Eskandari** - Development of New High-yielding and High-quality Soybeans with New SCN-resistant Sources for Ontario
3. **Cynthia Scott-Dupree** - Improved monitoring and management of carrot rust fly and carrot weevil in vegetables grown in southern Ontario
4. **Darren Robinson** - Integrating residual herbicides and cover crops for weed management in vegetable production systems
5. **Alireza Navabi** - Pyramided Anthracnose Resistance in High-Yielding Dry Bean (*Phaseolus vulgaris* L.) Germplasm for Ontario Growers

6. **Bill Deen** - Evaluation of rotation complexity effects on yield stability under moisture extremes using Elora and Ridgetown long-term trials
7. **Istvan Rajcan** - Organic soybean breeding
8. **Karl Peter Pauls** - Yield/Anti-Yield Gene Alleles in Dry Bean
9. **John Zandstra** - Evaluation of new Vineland plum varieties in southwestern Ontario