

OMAFRA – U of G
Partnership KTT Funding
Program - Approved
Projects Summer 2012

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Successful Projects Summer 2012

Tina Widowski - Animal Welfare for Decision Makers

Executive Summary:

Animal welfare has been pushed to the forefront in the last 18 months in Canada. Retailers and others within the agri-food chain have made husbandry decisions (i.e., eliminating certain practices) which will profoundly change the livestock industry in Ontario. In addition, governments are under increasing public pressure to adopt new legislation or revise existing regulations. Industry is under pressure to revise codes of practice to meet international standards and carry out on-farm assessments of animal welfare. The pace of change has been rapid – advisory staff, including OMAFRA staff, may not be aware of the science and discussion around many of these changes. If government is to support sustainable agriculture within Ontario, there is an urgent need to understand the issues surrounding the shift in animal welfare and to be able to use this understanding to influence change in a way that keeps Ontario competitive in the global economy.

We are proposing to develop, deliver and evaluate a series of five ½ day workshops on all aspects of animal welfare (i.e., understanding animal welfare, current animal welfare/cruelty legislation, how to measure animal welfare, international trends in animal welfare) for government decision makers and others involved in policy. The workshops will provide an opportunity for face-to-face discussion with leaders from around the world via-conference and other interactive technologies. The series of workshops will also be used as the basis for the development of future resources for decision makers including webcasts of presentations and videoclips of workshop highlights. In addition, this project will include participants in other levels of government, including the federal government.

Helen Hambly - Sourcebook of Best Practices in KTT/Extension with a Focus on Performance Measurement/Evaluation

Executive Summary:

This project addresses performance measurement for agricultural innovation by identifying best practices leading to the development of methods and a framework for future assessments within OMAFRA.

Performance measurement of agricultural research, development and extension has been undergoing important changes in recent years. Innovation was historically oriented towards a linear “technology push” model whereby governments (still the main contributors of public agricultural R&D) make investment decisions in the form of public policies, and subsequently, organizational level planning efforts that generate interventions in the form of programs and projects operating with defined resources and specific time scales.

Changes involving 1) demand-driven scientific knowledge and technology, 2) re-organization of science for cost-effectiveness and accountability, including the reform of extension (KTT), and 3) increased interactions between public and private sectors have led to revisiting performance measurement systems. Over the long run, high-performing innovation systems need to establish internal management processes that can define objectives and indicators of success, achieve and communicate results and be

attentive to resource constraints. Accounting for uncertainty and appreciating the complexity of agricultural innovation systems are also necessary. Performance measurement is no longer a static exercise but a more dynamic, learning process. Performance measurement and the information collection process that underlies its methods and framework are expected to be time and cost-effective, engage stakeholders and be respond to investment decision makers needs.

Claudia Wagner-Riddle - Innovative Video and Web-based Knowledge Transfer Techniques for Beneficial Greenhouse Gases Management Practices for Ontario Dairy Farms

Executive Summary:

A five-year research project on the farm-scale assessment of greenhouse gas mitigation from dairy farms is currently underway, led by Professor Claudia Wagner-Riddle and funded by dairy industry partners and Agriculture and Agri-Food Canada under their Agricultural Greenhouse Gases Program (AGGP). To ensure that practical and efficacious management practices are deployed to Ontario dairy farmers for implementation, one of our KTT strategies is to provide a suite of best management practices (BMPs) that couple environmentally sustainable practices with greenhouse gas mitigation. This proposal will leverage the resources and expertise of the AGGP project to develop three videos, produced in collaboration with the University of Guelph SPARK program, to provide easily-accessible information (via internet or smartphone) to Ontario dairy producers. The short videos will cover BMPs such as nutrition and feeding management, manure application to fields, and the benefits of anaerobic digesters. Dairy farmers tend to be younger than other types of farmers and are generally comfortable with the use of the internet, and, increasingly, with smartphones for activities such as monitoring herd performance. The benefits of this proposal include increased awareness of sustainable, cost-effective production practices (a priority for Dairy Farmers of Canada), delivery of practical, user-friendly and science based information from the AGGP project geared to Ontario dairy producers, and protection of the Ontario environment (water quality, soil health, air quality) through optimal on-farm use of nutrients and reductions in greenhouse gas emissions. Research Theme priorities from Environmental Sustainability and Production Systems are supported.

John Fitzsimons - Social Media for Engaging Stakeholders, Mapping and Mobilizing Rural Assets in the Headwaters Region (Dufferin County, Town of Caledon & Town of Erin)

Executive Summary:

The self-defined Headwaters region is a collection of 10 rural Ontario municipalities (Dufferin County, Town of Caledon & Town of Erin) with a combined population of just over 120,000 residents. For the past number of years, under the direction of the regional tourism association, there has been a concerted effort to develop a regional, collaborative approach to support each of these rural municipalities and the businesses in the area, recognizing that each individual jurisdiction has limited resources to undertake these types of initiatives in isolation.

There are currently a number of initiatives underway to leverage the collective assets and mobilize opportunities to support rural economic development activities that capitalize on the rural and agricultural heritage of the area. Specifically, the partners in these initiatives are working to map assets in the areas of equine, arts/culture/heritage and local food, with the ultimate goal of identifying clusters of economic growth potential, as well as recognizing gaps and opportunities that may be exploited to further enhance the economic sustainability of these rural areas.

Tourism has been identified as a growth sector not only in provincial strategies, but also in each of the partner regions in the Headwaters region. This project will allow for integration and meaningful interpretation of mapped assets and of data in consumer web platforms that will highlight “market-ready” businesses in each of the defined product sectors, and will allow for the development of agricultural and rural tourism “trails”, as well as support enhanced consumer marketing.

Aggregate data collection is underway for each of these identified rural sectors, but there needs to be a collective and scalable means to communicate this data using mapping on a shared platform, that will allow for data to be updated regularly and become a dynamic tool for assessing rural economic opportunities. Specifically, with limited resources (both human and financial) the platform developed should be based on shared technology and consistent with KTT standards so that each sector group and/or municipal partner can take advantage of the technological base, rather than needing to recreate a platform for their specific needs.

Qusay Mahmoud - Design, Development and Evaluation of a mobile animal health and welfare diagnostic App “Preventing Heat Stress in Livestock and Poultry”

Executive Summary:

This project will design, develop, launch and evaluate a heat stress in livestock and poultry mobile diagnostic App. This project builds on previous research done to measure heat stress in livestock (swine and cattle) and poultry (laying and turkey hens). This mobile app will support decision making as it offers timely access to pertinent information resulting in better professional judgement and fewer livestock and poultry mortalities.

The “Preventing Heat Stress in Livestock and Poultry App” will allow the producer to calculate heat stress based on temperature and relative humidity data accessible from the livestock or poultry barn. The resulting calculation will identify the level of heat stress and provide methods to reduce heat stress and improve animal comfort to help maintain feed intake and overall productivity. The mobile App will

integrate research and production information from OMAFRA publications and University of Guelph research on livestock housing. This KTT project supports OMAFRA's key strategic priorities as it creates an innovative market-focused tool to enhance farm productivity and profitability.

[Andy Robinson - Undergraduate Student Experiential Learning Program](#)

Executive Summary:

The Ontario Agricultural College (OAC) of the University of Guelph and the Agriculture Development Branch of the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) propose the continuation of a third-year student experiential learning project to support agri-food knowledge mobilization. The program is intended to provide an opportunity for senior undergraduate students enrolled in programs in OAC at the University of Guelph to be engaged in knowledge mobilization activities.

The proposed continuation project will involve five, third year student summer placements at OMAFRA offices across Ontario. During the placement period (May-August) selected students will work under the day-to-day direction and guidance of an OMAFRA Specialist in the Agriculture Development Branch in consultation with an OAC faculty member. The projects will focus on one or more of the three following theme areas: production systems, bioeconomy and environmental sustainability. Activities during the placement period will focus on the development of the required skills to engage in successful knowledge mobilization activities. This skill set development will focus on leadership skills, (through both team work and independent leadership activities), enhanced communication skills (both written and verbal), project planning and project management. The students will apply these skills to an identified knowledge translation and transfer activity associated with the work of the OMAFRA specialist.

[Linda Hawkins - Research-Practice Design Charrette: Strengthening a program agenda for connecting children and youth to good food](#)

Executive Summary:

The proposed project is based on a partnership between the University of Guelph's Institute for Community Engaged Scholarship (ICES) and Sustain Ontario. It will facilitate multi-stakeholder dialogue and planning around a program agenda for connecting children and youth with good food. The project is demand-driven and based on needs and priorities identified by Sustain Ontario and collaborators in Ontario's newly emerging Children and youth Food Network. It will use a design charrette approach, which encourages: collection, organization and sharing of expert knowledge; cooperation between a variety of different stakeholders; and development of creative and concrete plans to address complex issues. Throughout the planning, execution and follow-up stages of the charrette, actors from research, policy and different fields of practice (food and farming, education and health) will be actively engaged.

The project will build upon existing momentum to promote healthy eating and the consumption of Ontario farm products among children and youth so that these practices become lifelong consumer habits. By facilitating dialogue between different stakeholders as well as the synthesis and dissemination of existing information, the project will build the capacity of actors working to connect children and youth to good food, strengthen linkages between them, and create opportunities to advocate for further policy innovations. Outcomes will include the development and testing of curriculum modules

and a resource guide for extra-curricular activities, as well as the creation of briefs for use in policy advocacy. These products will all contribute to the goal of encouraging children and youth to adopt healthy eating habits that reduce the risk of obesity-related illnesses and offer economic benefits for Ontario farmers.

[Peter Kevan - Honey & Pollen Plants for Ontario's Beekeepers: An Annotated Electronic Floral Calendar](#)

Executive Summary:

Floral calendars are highly useful to beekeepers for understanding yearly cycles in the flow of nectar for honey production and availability of pollen. This information helps beekeepers maximize honey production while maintaining colony health. Some older resources containing relevant information have been available historically, but these books are no longer in print or easily accessed. A web and app-based floral calendar that allows beekeepers to quickly access what plants of use to beekeepers are in bloom when and where, and what their value to beekeeping is, would represent a valuable tool to modern beekeepers.

Our project is to itemize the important nectar (honey), pollen, and propolis (bee glue) plants of Ontario, note when and where they bloom, and comment on their value. A database will be assembled and made user friendly through access by drop-down menu searches. Coupled with the data base will be pictures of the plants in flower for ease of identification by beekeepers using the system. The database will be available both online through the University of Guelph and as an app for mobile devices.

This project enhances and supports OMAFRA research priorities related to production systems and product quality improvement.

[Mike von Massow - Enhancing Best Practices through a Social Media Community of Practice for Farmers interested in Value Added Opportunities](#)

Executive Summary:

This project capitalizes on farmers' use and need for multi-media and social media tools as demonstrated by the recent IPSOS Reid Web Browsing and Social Media Study (2012).

The goal to provide a Virtual Community or a social media Community of Practice (CoP) focused on farm-based value-added activities. Industry advisors, specialists, experienced and novice farmers will be able to use various real time synchronous (e.g. text chat, webinar, audio conference) and asynchronous communication tools (e.g. blogs, online forums, social networking) to share knowledge and experiences related to best practices for business management.

Social media tools accelerate transfer and use of knowledge through expanding "reach" from one expert to many users and also the exponential sharing from one user to another.

Metrics, surveys and focus groups will be used to assess effectiveness of tools and strategies. The CoP compliments new OMAFRA training initiatives -Exploring Value Added Opportunities one-day workshop and e-learning program to be launched Fall 2012.

This project has three key outcomes— **one** to expand the dissemination and exchange of best practices for business planning, **two** to determine effective social media tools and strategies for an effective Community of Practice for farmers and **three** to enhance farmers’ capacity to leverage social media technologies.

This project will strengthen Ontario agriculture and the rural economy through improved implementation of best practices by farmers involved in value added activities.

Wayne Caldwell - The Application of Innovative Web-Based Engagement for Community Projects

Executive Summary:

Community participation is paramount to a meaningful decision-making process. Several “publics” exist in a given community however, not all choose to participate in municipal studies or projects. Among these publics are: seasonal residents (cottagers, vacationers), youth, ethnic minorities and immigrants who may find the current means of public engagement difficult to access.

Social media offers greater opportunities to reach wider populations because of easy access through use of internet. Many municipalities are reluctant to use social media for consultation because the “how” to use these new tools and apply them in the local context are not well understood.

This KTT proposal will link rural municipalities with community projects and in need of consultation to targeted populations with resources at the University of Guelph. Students from the School of Environmental Design and Rural Development (SEDRD) will assess the opportunities and challenges of utilizing social media in consultation. Accordingly, as applied within a local context, and guided by a representative of the local municipality, liasons -Brownynne Wilton (University of Guelph) and Elin Gwyn (OMAFRA), and a faculty lead, as part of student course-based projects, student will develop opportunities and strategies to reach targeted populations through the use of social media. A second Phase of the student projects will be the development of strategies and analysis of their success at a local level. Accordingly, the lessons learned and best practices concerning the use of social media by rural municipalities can be identified. Thus, there is mutual benefit to municipalities and students, who will develop professional experience.

Gayle Ecker & Jeff Thomason - The next steps for the Equine Guelph KTT program to reach the grassroots and associations of the equine industry

Executive Summary:

The horse industry is a wide-spread, highly diverse group. Reaching out to this industry is difficult given the multiple layers and various organizations that exist. Equine Guelph (EG) has been methodically developing an effective KTT outreach program. Previous KTT funding allowed EG to first complete a survey to determine KTT needs and priorities, then to develop a multi-media approach to deliver this information to industry based on the survey results. This proposal represents the logical “next step” in taking the KTT materials produced in the previous phase “out to the streets” (directly to industry members) through the multimedia outreach and social networking channels along with a display at equine events. This step continues to provide important KTT opportunities for dissemination of

information generated by the UofG equine research program to support animal health and rural information needs.

This project continues building the KTT program - extending the reach of research communications through a cost-effective manner with “high visibility” at equine events, including one targeted directly to end-users delivering research updates using multimedia approaches and a “multiple venue” extension/transfer program.

Equine Guelph will develop “Equine Update 2013” as a launch event for its 10th anniversary including a specific “Report on Research” display that will be taken to equine events, including QR codes as part of EG’s traveling education display and tailored presentations to racing and non-racing associations.

[Robert Friendship](#) - The development and evaluation of the effectiveness of different KTT methods to transfer research knowledge of animal welfare and on-farm food safety to Ontario pork producers

Executive Summary:

There are growing public concerns regarding animal welfare and food safety as they relate to pork production in Canada and around the world. Despite a great deal of research effort and success in these two areas, there are substantial gaps in the transfer of knowledge to producers. The first objective of this project is to develop material that translates research-based knowledge of animal welfare and food safety using clear language and then to transfer this information to pork producers and swine industry service workers using a variety of formats such as electronic newsletters, pictorial bulletins, social media strategies (SMS), virtual groups, blogs, webinars, and townhall meetings. The second objective will be to assess the cost and effectiveness of the various delivery formats. Pork producer knowledge regarding animal welfare and food safety will be assessed before KTT activities begin and afterwards to determine whether there was an uptake of new information and also the participants will be asked about the source of the information that they used to answer the survey. This work supports three OMAFRA Research Themes including Production Systems, Emergency Management, and Agricultural and Rural Policy.

[Karen Landman](#) - Nourishing Ontario: Community Food Project/Hub toolkit website, typology development and information dissemination project

Executive Summary:

The proposed project will develop a website to disseminate the knowledge gathered into a toolkit for OMAFRA under KTT project number 299531 about food hubs and other community projects. The website, ‘Nourishing Ontario’ (working name), will also be used to foster an online community of interest that will include: 1. The more than 350 stakeholders who have participated in the on-going project; and 2. Extend the network to bring new participants from community colleges and universities into the project. The goal is to develop a web of interconnected food community businesses, producers and organizations to facilitate learning from each other’s successes and challenges as organizations work to develop community and regional food initiatives. This will strengthen the market presence for Ontario food in local communities. As well, based on the literature review, interviews and case study

work from the food hubs project, we will develop a typology of food hubs so that communities understand the scope of opportunities possible through community food projects/hubs.

David Kelton - Developing Dialogue and Resources to Raise Awareness and Education Concerning Livestock Emergencies and Humane Euthanasia Methods

Executive Summary:

There are always circumstances and unfortunate instances where farm animals may have been injured or must be euthanized. Examples of livestock emergencies include truck rollovers, barn fires and loose animals. These examples can all prove to be a very dangerous reality in today's predominantly urban society with little or no knowledge on how to deal with farm animals. The livestock sector across North America has identified a significant gap in the area of educational resources for farmers, transporters, processors, government and first responders with respect to handling livestock in emergency situations. This is an important area to address for many reasons, including human safety, animal welfare, and the industry's public image.

This proposal will address three main objectives:

1. To develop specific and targeted training resources for livestock emergencies.
2. To promote and distribute resources to the appropriate target audiences.
3. To assess the resources and determine additional gaps by the intended audience(s).

David Kelton - Enhancing the provincial response to an agricultural emergency through training in Incident Command System (ICS) for livestock and poultry industry organizations

Executive Summary:

In the event of a serious animal disease outbreak or other agricultural emergency, the response will be led by the provincial and/or federal government. However, affected stakeholders such as industry organizations will also play an important role in the response and subsequent recovery. Because the federal and provincial governments in Ontario follow the Incident Command System (ICS) for emergency management, it is important for all participants in the response to be familiar with ICS in order to manage the emergency in an efficient and coordinated manner.

The project will deliver a one-day instructional workshop on ICS in the context of an agricultural emergency to participants from the major livestock and poultry commodity organizations and the supporting service and supply sector in Ontario. Using an interactive format, participants will understand the concepts of ICS, their potential roles and responsibilities within a provincial response, and what they may expect from government and each other during an emergency. By expanding the awareness and understanding of ICS among industry, the response to incidents will be better coordinated and more effective, improving the likelihood of a successful resolution with minimal impact on animal health, public health or the economy. This project also supports the Emergency Management theme of research under the OMAFRA/U of Guelph Agreement.

John Barta - Fostering proactive coccidiosis control management in the poultry industry by developing a self-guided, interactive training module and promoting on-farm usage

Executive Summary:

Coccidiosis, caused by *Eimeria* parasites, is an “everyday” problem to the poultry industry and can impact poultry gut health and performance. Prophylactic drugs were the prevention program of choice; however, resistance and drug-residues concerns may limit future use. Unfortunately, stopping prophylactic drug use will put commercial poultry at risk for coccidiosis outbreaks and alternate methods, such as vaccination, are becoming the main replacement. However, vaccination requires the end-user (e.g. producer) to have knowledge of the parasite to achieve the method’s full potential but the intricacies of parasite management can be perceived as complex by the end-user. In-person training by vaccine companies is expensive and labour intensive and is thus not practical. This project will provide a novel, self-guided educational tool for poultry workers who have direct involvement with *Eimeria* management, whether in the hatchery or in the barn. First, in consultation with the poultry industry, especially Ontario workers, best practices will be established. Following these consultations, the tool will be assembled by students with interest in poultry health and welfare and with input and feedback from producers. By tapping the knowledge and expertise of researchers, students and industry partners, this KTT project will foster enhanced understanding of the parasite and best practices to initiate proactive *Eimeria* management by the end-users.