Knowledge Exchange Day: KTT in Action

Knowledge Translation and Transfer Panel
Undergraduate Student Experiential Learning Program

Joanne Handley
OMAFRA
Background

- The Ontario Agricultural College (OAC) and the Agriculture Development Branch (ADB) OMAFRA proposed the development of a third-year undergraduate student experiential learning program to support knowledge translation and transfer.
- The program would address identified needs:
  - Increase capacity for delivery of KTT and address industry priorities.
  - Strengthen relationship between University of Guelph researchers and Agriculture Development Branch (ADB) staff.
  - Expand student opportunities for practical application of education.
  - Development of expertise and understanding of adult education.
  - Recruit qualified personnel, increase capacity and prepare for succession.
  - Introduce students to career opportunities in the Ontario Public Service.
Key Program Elements

- Five OAC students hired in 2010 and paired with OMAFRA staff mentors, located in Ridgetown, Simcoe and Guelph.
- Projects included: Lavender Oil Extraction, Selenium Supplementation in Ruminants, Ontario Soil Health Project, Dairy Heifer and Calf Management, Raspberry Pest Management.
- Students involved along full continuum - data collection, analysis, translation and transfer of information.
- Information disseminated through a variety of mediums:
  - infosheets, presentations, speaker panels, literature reviews, development of interactive website modules and content, magazine articles and poster presentations.
  - Events included Soil Diagnostic days in eastern and western Ontario, Large Flock Operators Seminar, Fruit and Vegetable Convention.
- Program will continue in 2011, priority projects being identified now, student recruitment Feb/Mar.
- Faculty mentor identified for each student, provided academic guidance and guidance in project analysis.
Highlights of Results

• Addressed several industry priorities and provided additional capacity to deliver on industry needs.
• Increased student’s awareness of the value of KTT to the agriculture industry and strengthened the student’s leadership, project management and communication skills.
• Student’s gained a broader view of the importance and the opportunities to apply KTT in the agri-food industry.
• The linkage of OMAFRA and UofG mentors to the student/project resulted in increased awareness of industry needs, research priorities and identification of future opportunities for collaboration on projects.
Calf-ETERIA

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Calf-ETERIA
Managing for the Future
What is Calf-ETERIA ?

• **Calf-ETERIA**: Using Calf health and productivity as a template for an Evaluation of Translation and Extension of Research Information for Agriculture

**Team Members:**

- Ken Leslie – Project Coordinator
- Tom Wright – Project Co-Coordinator
- Vivianne Bielmann – Project Manager

- Trevor DeVries
- Mario Mangeon
- Brian Lang
- Bill Grexton
- Blair Murray
- Harold House
- Betty Summerhayes
- Ian Rumbles
- Mark Carson
- Trevor DeVries
- Mario Mangeon
- Brian Lang
- Bill Grexton
- Blair Murray
- Harold House
- Betty Summerhayes
- Ian Rumbles
- Mark Carson
Project Objectives

• Benchmark current dairy calf and heifer management practices
• Develop 3 approaches to undertaking KTT initiatives to improve awareness of, and encourage adoption of, known optimal management techniques to increase economic performance and health of animals raised for replacement stock
• Evaluate and quantify both the animal health and economic performance subsequent to their initial benchmark
• Disseminate case-study based benefits of optimal management systems to demonstrate both financial and animal health improvements to all Ontario dairy producers through producer meetings, print and web-based media
• Evaluate and quantify financial and animal health impact to measure success and determine value on both a per farm and whole-industry basis.
Three KTT Approaches

- Calf and Heifer management clubs
- Web-based KTT for BMP’s for calves & heifers
- Interactive Learning Initiatives
# Project Milestones

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Develop Survey Instrument</td>
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<td>2</td>
<td>Distribute Survey to Ontario Dairy Producers</td>
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<td>3</td>
<td>Survey data entry, analysis and interpretation</td>
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<td>4</td>
<td>Develop and Organize plan for “Calf Management Club”</td>
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<td>5</td>
<td>Develop, plan and implement “Web-based Learning Modules”</td>
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<td>6</td>
<td>Develop, plan and implement “Interactive Learning Initiative”</td>
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<td>7</td>
<td>Analyze data collected from the three approaches</td>
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<td>8</td>
<td>Analyze financial and animal health impact</td>
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<td>9</td>
<td>Submit Final Report to OMAFRA</td>
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Collaborators
Steve Roche
Steve Roche, Dept. of Pop. Med.

Participatory Approach to Accelerating the Adoption of Practices and Procedures to control Johne’s Disease on Ontario Farms

Project Leader: Dr. Dave Kelton
Al Dam
Assisting Animal Welfare – Development of a Decision Tree Tool to Assist in Poultry Management

Al Dam
Provincial Poultry Specialist
Ontario Ministry of Agriculture
Food and Rural Affairs (OMAFRA)
Should This Bird Be Loaded?

What is the sign of a compromised bird?

- a bird with reduced capacity to withstand the stress of transportation, due to injury, fatigue, infirmity, poor health, distress, or any other cause.

- determination can be used as a tool by producers and livehaul to prevent those birds from being transported.
- what is best for the bird from a welfare standpoint?
Guidelines for Transporting Compromised Cattle, Sheep & Goats

Federal Transportation Regulations

DO:
- Segregate animals of different breeds, ages, or if incompatible
- Provide for proper ventilation
- Have sufficient headroom for animals
- Either strew the vehicle with hay, straw, or wood shavings, in addition to adequate footholds, in addition to appropriate footwear
- Ensure that animals unload after at least 12 hours and unload after at least 12 hours, if necessary
- Ensure that transported animals are provided with suitable food
- Ensure that animals segregated during transport are provided with suitable food

DO NOT:
- Transport a sick or injured animal, unless the animal is to be treated on the farm
- Continue to transport an animal that is unwell and unferrous, or unwell and uncomfortable to transport
- Mishandle an animal on load
- Use goads or prods on the animal
- Load or unload animals in a wet or slippery environment
- Crowd animals to such an extent that they are not able to move freely

Source: Transporting Livestock

SHOULD THIS PIG BE LOADED?
Guidelines for Transporting Pigs

Euthanize
- Non-ambulatory, Lameness Class 4 & 5 (see box below)
- Fractures of limbs or spine
- Any case where pigs are unable to eat or drink due to injury or disease
- Chronic "poor-doers" or emaciated (extremely thin) pigs (see reverse)
- Pigs suffering from severe non-responsive disease
- Prolapsed uterus
- Arthritis involving multiple joints
- Nervous disorders, such as rabies must be reported to CFIA; contact your vet before euthanizing
- Hernia that impedes movement, is painful, or touches the ground
- Severe recent injury

Assess/Seek Veterinary Advice
- Fever due to disease process
- Sows likely to farrow during transport or upon arrival at the market or farrowed within 48 hours
- Pigs showing signs of:
  - Exhaustion
  - Heat stress
  - Weakness
  - Porcine stress syndrome
  - Total blindness (consider on-farm slaughter)

Transport With Special Provisions Direct to Slaughter

As Soon As Possible
- Abscess and local infections
  - (no fever)
- Recent prolapse of vagina or rectum
- Lameness Classes 1, 2 (see reverse)
- Penile or vulva injury
- Severe dewclaw injury
- First stage anorexia or weight loss (no fever)
- Frost bite

These pigs must walk on their own and travel in a small compartment, individually or with one quiet pig.

Animals with multiple conditions may not be fit to transport.

Non-ambulatory Animals
- Unable to stand without assistance, or unable to move without being dragged or carried.
  Commonly called "downers."
- Lameness Class 4 & 5 should not be loaded or transported, except for veterinary treatment. Lameness Class 3 not recommended for transport.
- Animals should not be loaded if at risk of going down en route.
- Animals that cannot bear weight on all four limbs are at greater risk of going down in transit.

Emergency On-Farm Slaughter
If an animal is fit for human consumption but not fit for transport (i.e. injured but not sick) emergency on-farm slaughter may be an option. Please consult with your provincial government for more information on the availability of emergency on-farm slaughter in your province.
Poultry Loading Decision Tree

- Develop Decision Trees for all Supply Managed Feather commodities
- Partnership of University of Guelph, OMAFRA, Poultry Industry Council, Ontario Farm Animal Council and the poultry industry marketing boards and processors
- Look at current research, consultation with industry on a provincial and national level
- Disseminate to all industry players
- KTT Funding will allow us to hiring of students, have industry meetings and consultations and develop print materials for industry over the 2yr life of project
Wayne Caldwell
Starts With: Strategies to Engage Agriculture and Recreation Along the Lake Huron Shoreline: A Community Based Approach to Solving Water Quality Issues

A STEWARDSHIP GUIDE FOR THE
LAKE HURON COASTLINE

Wayne Caldwell
School of Environmental Design and Rural Development

Enhancement and Expansion of the Rural Landowner’s Stewardship Guide
Built With Strong Community and Provincial Partnerships

We are grateful for the support received from the following organizations in preparing this manual.

Ashfield-Colborne Lakefront Association
Ausable-Bayfield Conservation Authority
Bluewater Shoreline Residents Association
Canada Ontario Agreement
Canadian Water Network
County of Huron
Ducks Unlimited
Environment Canada
Environmental Farm Coalition
Friends of the Bayfield River
Grand Bend Community Fund
Great Lakes Aquatic Habitat Fund
Huron Stewardship Council
Municipality of Central Huron
Ontario Farm Coalition
Ontario Ministry of Agriculture, Food and Rural Affairs,
   New Directions Research Program
Ontario Ministry of Natural Resources,
   Natural Spaces Program
Ontario Nature
Ontario Soil & Crop Improvement Association (OSCIA)
Rotary Club of Grand Bend Ontario, Inc.
TD Canada Trust Friends of the Environment Foundation
University of Guelph
Wildlife Habitat Canada
Delivered with:
The Future With: KTT

- Existing Use
- Why or why not is it used
- What has worked and what can make the guide more useful
- Make appropriate revisions, and promote use
- Community of Practice
Knowledge Synthesis and Translation (KST) in Agri-Food Public Health

Andrijana Rajić

with Scott McEwen and others

KTT in Action, February 04, 2011

‘The CIHR defines KT as ‘a dynamic and iterative process that includes the synthesis, dissemination, exchange and ethically-sound application of knowledge to improve the health of Canadians, provide more effective health services and products and strengthen the healthcare system’. This definition highlights the importance of knowledge synthesis in knowledge translation activities’. Dr. Jeremy Grimshaw
KST Tradition in Science

Medical, social science, business and ecology

Cochrane Collaboration
clinical/public health guidelines

Long in health science

None in agri-food public health

Abdominal decompression for suspected fetal compromise/pre-eclampsia
Abdominal decompression in normal pregnancy
Absorbable staples for uterine incision at caesarean section
Absorbable synthetic versus catgut sutures in repair of perineal lacerations
Absorbable products for preventing urinary incontinence
Acetaminophen for osteoarthritis
Acetyl-L-carnitine for dementia
Acetylcholine for Bell's palsy (idiopathic facial palsy)
Active chest compression-decompression for cardiopulmonary resuscitation
Active placebo versus antidepressants for depression
Active versus expectant management in the third stage of labour
Acupuncture and electroacupuncture for the treatment of PA
Acupuncture for Bell's palsy
Acupuncture for chronic asthma
Acupuncture for idiopathic headache
Acupuncture for induction of labour
Acupuncture for lateral elbow pain
Acupuncture for low-back pain
Acupuncture for smoking cessation
Acyclovir for treating varicella in otherwise healthy children and adolescents
Addition of anti-leukotriene agents to inhaled corticosteroids for chronic asthma
Addition of intravenous aminophylline to beta-agonists in adults with acute asthma
Adenotonsillectomy for obstructive sleep apnoea in children
Adhesive for fixed orthodontic brackets
Adjuvant chemotherapy for localised resectable soft tissue sarcoma in adults
Adrenergic for prevention of morbidity and mortality in preterm infants with cardiovascular compromise
Adrenergic drugs for urinary incontinence in adults
Advanced trauma life support training for ambulance crews
Advanced trauma life support training for hospital staff
Advice on low-fat diets for obesity
Advice to reduce dietary salt for prevention of cardiovascular disease
Advice to stay active as a single treatment for low-back pain and sciatica
Aerobic exercise for women during pregnancy
Aerobic exercise interventions for adults living with HIV/AIDS
Aerosolized insulin for pre-term infants with (or developing) chronic lung disease
Air versus oxygen for resuscitation of infants at birth

EPHPP (Effective Public Health Practice Project), 2001.

Our Search/2004-5
KST Momentum in Agri-Food Public Health!

• LFZ-PHAC/McMaster
  • First KS guide for agri-food public health
• Funding: OMAFRA, CPC, NCCEH, PIC, HC, OP, SAF, PAHO
• Research translation
  > 20 peer-reviewed publications
  > 10 technical reports
  > 65 presentations
• Training Intelligence
  > 350 trained professionals
• Graduate Student Cluster
KS for KT: Do probiotics reduce *Salmonella* in chicken?

KT for end-users

- CF3 reduced the risk of *Salmonella* colonization by 47% or in 47 out of 100 chickens CE
- intuitive for producers!
KTT Grant (2010-12)

• Broad/complex questions
• Scoping studies
  – Map rapidly the key concepts underpinning a complex research area and the main sources/type of evidence available (Arksey and O’Malley, 2005)
  – Develop format applicable to agri-food public health
    • Test it on 3 relevant, broad issues
    • Engage relevant stakeholders
    • Linkages with systematic review, risk assessment
• Evaluate an up-take of published SR-MA by their end-users
• Cross-campus linkages and sharing knowledge
• Visual, plain language posters
• Quebec Street Mall Showcase
• Open to Everyone
• Local & International Projects
• Multi-partner, new & established partnerships
• RSVP to sreiblin@uoguelph.ca

www.csahs.uoguelph.ca/pps
Event Sponsors:
• Institute for Community Engaged Scholarship
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• Office of the President at University of Guelph

www.csahs.uoguelph.ca/pps
Michele Guerin
Increasing Poultry Biosecurity: Instructional DVD for Producers

U of G – Drs. Michele Guerin, Gregoy Bedecarrats, Éva Nagy

Poultry Industry Council - Tim Nelson, Sarah Thomson

Arkell Research Station - Brad Rogers
Background

- Procedures, guidelines and regulations exist
  - National Avian On-Farm Biosecurity Standard

- Major factor limiting their adoption...
  - Lack of appropriate communication, awareness and understanding

- Farmers learn by seeing practical examples
  - Risks associated with having multiple visitors to a poultry farm leads to lack of opportunity
Approach / Tools

- Evaluate biosecurity techniques
  - Brainstorming by U of G and OVC Poultry Clubs on main issues and disease threats
- Develop educational DVD
  - Arkell Research Station – neutral, all commodity types
- Buy-in - invite producers to participate
  - Promote and educate about strategies that can be used on their own farm
  - Train the trainer - opinion leaders will then serve as ambassadors to their peers
Dissemination

- Communicate issues, solutions and best practices to end-users at popular industry-oriented events
- Evening event - large audience of reps from industry, academia and government
- Full-day event targeting producers
  - Purposefully-selected location
  - Producers have opportunity to interact with researchers and veterinarians to discuss biosecurity issues and best practices and consult the educational material produced
- DVD and factsheets mailed to all 4,000 producers in Canada
Collaborative research initiative created by:

- Schlegel-UW Research Institute for Aging (RIA)
- University of Guelph
- University of Waterloo
- MaRS Landing

A-HA’s researchers hold expertise in the areas of applied nutrition & dietetics, nutritional science, food science, and human health.

By exploring linkages between agriculture, food, nutrition and human health A-HA aims to realize innovative opportunities for Ontario’s agri-food and health sectors to improve health and well-being of older adults.
Agri-food for Healthy Aging (A-HA): Building connections and advancing knowledge within the agri-food, nutrition and health sectors

KTT Approach:

1. Share research results in agri-food and nutrition as they apply to aging, with numerous stakeholders from the agri-food, nutrition and health sectors.
2. Increase collaborative research and dissemination opportunities that demonstrate linkages between agriculture, food and nutrition for healthy aging.
3. Build connections and partnerships with new audience stakeholders.
4. Train Highly Qualified Personnel (HQP).

OMAFRA Project # 299509
Key Activities/Successful Examples:

1. Create and communicate A-HA KTT resources
   • Annual newsletter
   • Website, listserv
   • Social media – Facebook, Twitter, Blog

2. Plan and execute A-HA KTT events
   • Health Professionals’ Forum at the Royal Agricultural Winter Fair (Nov 2010)

3. Build partnerships with new audience/stakeholders to advance knowledge
   • Nutrition Community of Practice within the Seniors Health Research Transfer Network (SHRTN)

4. Train HQP
   • Occurs throughout all A-HA activities.

OMAFRA Project # 299509
Questions?