## 2011 Workshop Agenda
### December 9-10, 2011. Rundlestone Lodge. Banff. AB

**Friday, December 9, 2011**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>12.30 - 1.00 pm</td>
<td>Registration and Coffee</td>
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<tr>
<td>1:00 – 1:15 pm</td>
<td>Introduction and opening remarks</td>
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<td>Richard Gray, University of Saskatchewan</td>
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<tr>
<td>1:15 – 2.00 pm</td>
<td>Roundtable Introductions</td>
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<td></td>
<td><em>Each member in attendance will provide background on their research interests and current research projects that relate to innovation and regulation</em></td>
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<td></td>
<td>Funded student research projects</td>
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<td><em>Students in attendance will provide their name, name of the university and the supervisor and a brief overview of their research project</em></td>
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### Innovation Systems Analysis Panel Session

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<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>2.00 - 2.45 pm</td>
<td>Agricultural Innovation Analysis Framework</td>
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<td>Murray Fulton, University of Saskatchewan</td>
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<td>2.45 - 3.15 pm</td>
<td>Dynamics of Innovative system for funding R&amp;D in Australia</td>
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<td>Katarzyna Bolek, University of Saskatchewan</td>
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<tr>
<td>3.15 - 3.30 pm</td>
<td>Discussion</td>
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<td>3.30 - 4.00</td>
<td>Networking Break/ Coffee</td>
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### Regulatory System Analysis Panel Session

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<th>Time</th>
<th>Session</th>
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<tr>
<td>4.00 - 4.30 pm</td>
<td>Co-regulation: A Possible Approach to Regulate Food Safety</td>
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<td>Rim Lassoued, University of Saskatchewan</td>
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<td>4.30 - 5.00 pm</td>
<td>Discussion</td>
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<td>5.00 pm</td>
<td>Workshop adjourns for the day</td>
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<tr>
<td>6.30 - 8.30 pm</td>
<td>Dinner and Key Note Speaker - Martin Entz, University of Manitoba</td>
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<tr>
<td>7.30-8.30 am</td>
<td><strong>Breakfast</strong></td>
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<td>8.30-9.00 am</td>
<td><strong>Coordination &amp; Commercialization Panel Session</strong></td>
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<td>Public-Private Partnerships (P3s) for the Management of Networked Agricultural Innovation Systems</td>
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<td>Bill Boland, University of Saskatchewan</td>
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<td>9.00-9.30 am</td>
<td>Neighborhood and Farmers’ Characteristics Effects on the Adoption of Zero Tillage Technology in the Canadian Prairies: An Empirical Analysis</td>
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<td>Lana Awada, University of Saskatchewan</td>
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<td>9.30-10.00 am</td>
<td>Discussion</td>
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<tr>
<td>10.00-10.30 am</td>
<td><strong>Networking Break/ Coffee</strong></td>
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<tr>
<td>10.30-11.00 am</td>
<td><strong>Innovation Impact &amp; Measurement Panel Session</strong></td>
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<td>IPR and Levy Funded Research</td>
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<td>Richard Gray, University of Saskatchewan</td>
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<td>11.00-11.30 am</td>
<td>Re-examination of the Impact of Intellectual Property Rights on Seed Exports</td>
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<td>Victoria Galushko, University of Regina</td>
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<td>11.30-12.00 am</td>
<td>Discussion</td>
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<tr>
<td>12.00-1.30 pm</td>
<td><strong>Lunch</strong></td>
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<td><strong>Breakout Session: Research Plans and Areas of Collaboration</strong></td>
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<tr>
<td>1.30-2.15 pm</td>
<td>AAFC Economic and Policy Research Priorities on Innovation</td>
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<td>Tabitha Rich, Agriculture and Agri-Food Canada</td>
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<td>2.15-3.30 pm</td>
<td>Discussion: <em>member selection, student membership, future workshop themes, communications strategy etc.</em></td>
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<tr>
<td>3.30-4.00 pm</td>
<td><strong>Networking Break/ Coffee</strong></td>
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<tr>
<td>4.00 pm</td>
<td>Workshop Adjourns</td>
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CURRENT INNOVATION-RELATED RESEARCH AND RESEARCH INTERESTS OF CAIRN MEMBERS

DEREK BREWIN

DEPARTMENT OF AGRIBUSINESS AND AGRICULTURAL ECONOMICS, UNIVERSITY OF MANITOBA.

Recent Activity:

- Firm Level Innovation in Food Processing – with Monchuk, and Alasia - CAES annual meeting (CAIRN Funded)
- Marketing of new traits – Pulse Canada
- Review of UK and Norwegian plant breeding incentives

Future Interests:

- Flexibility in firm level R and D investments
- Plant breeding in the private sector – spillover effects with breeding and on farm (CAIRN Funded)

MURRAY FULTON

JOHNSON-SHOYAMA GRADUATE SCHOOL OF PUBLIC POLICY, UNIVERSITY OF SASKATCHEWAN

Current innovation-related research:

I am currently supervising two PhD students that are looking at innovation. Lana Awada is looking at a cost-benefit analysis of the adoption of zero-tillage and the factors that explain the adoption decisions by farmers. Zhihua Xiao is looking at the way in which farmers make decisions about R&D levies and differentiates this from how society examines the
benefits and costs of R&D. I am also doing work on the governance structures of major science initiatives (MSIs), including what makes differentiates MSIs in terms of the commercialization of new products. I have ongoing research on governance and innovation in multistakeholder organizations in the social economy sector; this work looks at the role of mission and aspirations in driving innovation.

Viktoriya Galushko
Faculty of Arts (Economics), University of Regina.

Research interests:

Over the last five years my research interests evolved around application of intellectual property rights (IPRs) in crop breeding and their impact on sharing of research materials among breeders and implications of IPRs for future innovation. Apart from the link between IPRs and subsequent research, I did a theoretical analysis of incentives for innovation under patents and plant breeders rights that are claimed to be a weaker form of protection than patents.

Current innovation-related research:

I have a number of on-going projects that are related to innovation and are financed from various sources.

1. An investigation of commercialization practices that Canadian universities employ; what challenges universities face when commercializing their technologies, what government policies are out there to facilitate technology transfer, and why some universities are more successful than others; perception of technology transfer offices and work that they do by [life-science] faculty.

2. The link between intellectual property rights and seed exports (technology diffusion).

3. Social network analysis of the global wheat breeding industry within the Canadian Triticum Advancement through Genomics (CTAG) project. Later on this project will investigate the role of partnerships (private-private, public-private, and public-public) in wheat breeding research globally to suggest an appropriate research funding model for the Canadian wheat sector.
Richard Gray

Department of Bioresource Policy, Business and Economics
University of Saskatchewan.

Current innovation-related research:

- Network Lead for the Canadian Agricultural Innovation and Regulation Network (2009-2013)
- Western Grain Research Foundation Grant to examine crop research commercialisation systems
- Co-investigator with Viktoria Galushko in the GELs component of the Canadian Tritcalium through Genomics project (CTAG) lead by Curtis Posniak.

Cami Ryan

Department of Plant Sciences and Department of Bioresource Policy, Business and Economics, University of Saskatchewan.

Current Research Projects:

- Total Utilization of Flax Genomics (TUFGEN) - the intellectual property and regulatory challenges of innovative crop varieties
- Centerless governance for the management of a global R&D process: Public-Private Partnerships and Plant Breeding in Australia and Canada (in collaboration with the Institute of Agriculture, University of Western Australia, the Academy of Social Sciences in Australia (ASSA) and VALGEN).

Pending work:

As a recent recipient of the Australian Executive Endeavour Award, this funding will be used to support a collaborative research project with the GRDC in Australia in 2012. I will be working side-by-side with the GRDC staff and the Panels to acquire and share knowledge about
agricultural innovation and adoption practice in Australia. The collective goal is to understand what drives growers to adopt new technologies, how they are influenced by GRDC strategies and mandates and to document and measure impacts of changes in practice.

**Research Interests:**

Governance of institutions and issues particularly those that operate between science and society; the role of intellectual property structures and mechanisms in facilitating or inhibiting research and innovation; intellectual property management and flows of knowledge in research networks (biotechnology and genomics); knowledge management, technology transfer and innovation; social networks and network analysis; exploration of online advocacy (anti-tech) networks and internet activism.

Related CAIRN topics: Area 1 Primary Competitiveness and Productivity; Area A (innovation systems analysis); Area D Innovation Impact and Measurement.

**Stuart Smyth**

Department of Bioresource Policy, Business and Economics, University of Saskatchewan.

**Research Summary**

While the lead focus of my research is on innovation, this research is comprised of more specific research on intellectual property, technology transfer, regulation, governance and liability. Working in this area has been fruitful as I’ve been asked by Edward Elgar to organize a handbook on agriculture, biotechnology and development. I’m co-editing this with Peter Phillips and David Castle. The handbook will contain 50 chapters and should be available in 2013. I am also co-editor on a book with Springer that will undertake a methodological assessment of the various factors that can be included in a socio-economic consideration, as part of a regulatory framework under Art. 26 of the BSP. Finally, I was co-chair of the Genetically Modified Coexistence Conference (GMCC-11) that was held in Vancouver on Oct. 26-8. We had 175 delegates from 21 countries attend this successful event.
My research interests in intellectual property resulted in two publications over the past year. The first was a collaborative effort with Viktortiya Galushko and Richard Gray that examined IP barriers in canola research and the second was with Richard Gray on gene technology cross-licensing agreements and their possible impacts on the future of the biotechnology industry. Much of the research undertaken this year on this topic involves patent landscape analysis. I was involved in developing a patent landscape methodology and we are in the process of refining this and working towards getting this process drafted into a research paper.

My research on technology transfer as it relates to the transfer of technology from public institutions in Canada has resulted in an article that has been submitted for review. This article tries to establish some benchmarks from academia that would provide for an efficiency comparison. Essentially, I observe that technologies are being transferred, but without established operational benchmarks to compare this to, it is challenging to know what level of transfer could be deemed to be successful. Further collaborative efforts towards addressing this issue are underway with the University of Saskatchewan’s Industrial Liaison Office.

My work on regulation provided an in-depth review of the international regulatory framework for biofuels. This work was done in collaboration with Jeremy de Beer. This paper examines the legal and regulatory complexity of competing international regulations governing trade in biofuels between the agreements of the WTO, the CBD and the Roundtable on Sustainable Biofuels. The paper analyzes the implications of this complex framework for the production and international trading of biofuels.

On the governance research, I collaborated with Peter Phillips and William Kerr on a third article regarding the international governance of trade in products of biotechnology. This article examined the rise in the post-modernist view of international regulation and highlighted the movement away from science-based regulation. The paper clearly establishes the trans-Atlantic gap that exists in trade of biotechnology products.

Research on liability has continued as resulted in an invitation to present this research at the International Workshop on Socio-Economic Impacts of GM Crops in Seville, Spain. This workshop was jointly organized by the FAO and the JRC-IPTS.
Shelley Thompson

SJT Solutions, Southey Saskatchewan.

Recently completed projects in the areas of innovation and regulation include the following:

- An assessment of implementation options and development of recommendations pertaining to proposed food safety regulation in the US (with Albert Chambers and Sally Rutherford)
- An analysis of the economic impacts of US style Health Claims (with John Groenewegen and Carol Culhane)
- An assessment of tariff and non-tariff barriers for pulse flours and fractions (with Dave Spearin)
- Estimation of lost earnings resulting from unreliable transportation services in 2008 for lentils and peas (with Dave Spearin)

Another area that I work in is agricultural policy. Recently completed projects for the Canadian Agricultural Policy Institute are:

- An examination of returns to various types of agricultural policy expenditures
- An examination of the competitiveness of Canada’s agri-food sector (with Dave Sparling)
- An analysis of the transfer efficiency of Canadian agricultural policy (with Steve Clark)
- For the Canadian Agricultural Policy Institute, an analysis of why governments intervene in the agri-food sector (with Steve Clark)
**Jim Vercammen**

**Food and Resource Economics and Sauder School of Business, University of British Columbia**

Current CAIRN Research Projects:

Time Inconsistent Commercialization Competitions (With MSc student Anna Zubchenko): In annual competitions the British Columbia Innovation Council awards prizes to entrepreneurs with outstanding business plans. This research shows that the Council may choose to maximize the greater good by shifting prize money away from those entrepreneurs who can successfully commercialize without the prize and shifting prize money toward those entrepreneurs with medium quality projects and who require the prize to move forward to commercialization. This shift maximizes ex post surplus, but distorts ex ante incentives. Experimental data supports this hypothesis.

Efficient Policy Design for Innovation Systems: This project develops a framework for analyzing government intervention in a standard innovation system. The system is characterized by firms investing resources to generate ideas in a world characterized by uncertainty, spillovers and environmental externalities. Firms choose projects with the highest private payoff, and then choose the level of resources to devote to project development. The government uses grants and R&D tax credits to maximize efficiency in a second-best setting.

Rebate versus Usage Tax: Efficient Policy for New Technology Adoption (with Murray Fulton): This project models the entry and consumption decisions of consumers who purchase durable goods such as a hybrid car where both the cost of entry and the on-going usage cost are key determinants of technology adoption.

Private Returns on Investment in Small Scale Green Electricity Projects: This project compares private rates of return for farm level investment in wind, solar and anaerobic digester technology under a wide range of parameter assumptions.
Ideas for New CAIRN Projects:

I am interested in the unintended consequences of regulations on innovation outcomes. Vancouver homes will soon have electricity smart meters installed. The idea is to use price as a mechanism to shift electricity use away from peak use periods. My worry is that smart meters will cause large numbers of consumers to use electricity just when the peak period ends or just before it begins. This type of “bunching” has the potential to create a new type peak use problem, and as a result can eliminate much of the efficiency gains that are associated with smart meters.

Other CAIRN Research at UBC:

Kelleen Wiseman received CAIRN funding to examine innovation and regulation in food processing. Kelleen’s hypothesis is that food manufacturers are purposely developing products with one “healthy” attribute (e.g., “fat free”) and are using front-of-package (FOP) messaging to promote this project to consumers. What is not being messaged is that the fact that higher levels of unhealthy nutrients (e.g., sodium) are often incorporated into the product to compensate for the lower tasted that is associated with the additional healthy ingredient. Kelleen has a theoretical model to identify the conditions for which this moral hazard problem is most prevalent. She will test her hypothesis using nutrient data from about 1000 food products that are sold in a Vancouver supermarket.
CAIRN FUNDED STUDENT RESEARCH PROJECTS

MEHDI ARZANDEH

School: University of Manitoba  
Degree: PhD  
Supervisor(s): Derek Brewin  
Project Title: Firm R&D Investment in Plant Breeding With and Without Farmer-saved Seed Levies and Complementarities Between Seed Products and the Breeding Process

LANA AWADA

School: University of Saskatchewan  
Degree: PhD  
Supervisor(s): Murray Fulton  
Project Title: Economics of Innovation: The Adoption of Conservation Tillage Technology

KATARZYNA BOLEK

School: University of Saskatchewan  
Degree: PhD in Agricultural Economics  
Supervisor(s): Richard Gray and Julian Alston
Project Title: *Economics of GRDC in Australia and potential application in Canada*

BILL BOLAND

School: University of Saskatchewan  
Degree: PhD  
Supervisor(s): Peter Phillips  
Project Title: *Role of Public-Private Partnership (P3s) in Plant Genetic Resource Research and Development*

COVEY, CAALEN

School: University of Saskatchewan  
Degree: MSc Agriculture Economics  
Supervisor(s): Richard Gray  
Project Title: *The Economics of Cooperative Variety*

RIM LASSOUED

School: University of Saskatchewan  
Degree: PhD  
Supervisor(s): Jill Hobbs  
Project Title: *Co-regulation: Exploring the Interface Between Regulation and Private Standards*

MOHAMMAD TORSHIZI

School: University of Saskatchewan  
Degree: PhD  
Supervisor(s): Richard Gray  
Project Title: *The Dynamics of Hybrid Seed Pricing: Lessons from the Canola Industry.*