

Technology Transfer Capacity in B.C.

OPPORTUNITIES AND CHALLENGES



Government

BC Ministry of Agriculture – Livestock Team Lead (Geneve Jasper, P.Ag.) and Regional Agrologists

- ❑ AgriServiceBC – general call centre for questions on accessing government resources for Ag industry
- ❑ Regional Agrologists liaise and advise producers on specific issues / assist with projects. Typically work more one-on-one or with small groups of producers
- ❑ Strategic Outreach Initiative – Industry capacity funding (*Growing Forward 2*) to assist with contributing to viability/growth of the sector
 - funding conferences, field days, short courses, etc.
 - Sponsored by regional agrologists
 - Examples:
 - BCCA 2015 Education Day keynote speaker Bruce Vincent under Technology Transfer Pilot Project
 - BC Forage Council brought speakers to regional meeting to discuss alfalfa management
 - Peace River Forage Association has used for multiple projects, incl. Range Seeding Tool



Academia

Thompson Rivers University (Kamloops)

- ❑ Dr. John Church, B.C. Regional Innovation Chair in Cattle Industry Sustainability
 - Drone research and how it can be utilized for cattle management, range utilization & forage development
- ❑ Dan Denesiuk, graduate student – grazing research (example: management intensive grazing) hands-on research involves producers in research outcomes, engages in field days with local cattlemen’s associations, etc.
- ❑ Dr. Lauchlan Fraser, Ecosystem Ecologist - Grassland and wetland ecosystems, Ecosystem reclamation, Biodiversity, Climate change, Range management

OTHER:

Dr. Bill McGill – University of Northern BC ~ biogeochemical cycling, carbon & nitrogen sequestration focus
Marina (Nina) von Keyserlingk – University of British Columbia ~ animal welfare focus



Academia cont'd

❑ **Applied Sustainable Ranching Diploma Program (ASUR)**

- Diploma program designed to provide expertise to build and sustain ranching enterprises within BC's ranching industry and apply that knowledge to agricultural businesses in any region.
- Unique co-op component that requires students to live on a ranch or farm while taking the program. Provides students a built-in practicum for their course work and adds value to the ranch, whether it be their home or a mentoring host-ranch.
- Learning outcomes include:
 - Participation in real-life ranching operation experience, addressing the needs of the local ranching community
 - Understand how ranch and rangeland eco-systems react to management decisions
 - Understand livestock needs and how to best manage the natural environment to produce nutritious proteins to feed the world
 - Learn to design ranching enterprises that fit the environment and resources while providing a return on investment
 - Learn to develop and fine-tune enterprise management around the unique market opportunities in your region
- Speaker series invites producers and public to participate in seminars & field days related to each course module
- <https://www.tru.ca/williamslake/programs/ranching.html>



Ag-Food Climate Action Initiative

- ❑ Tools and resources to enhance the ability of the BC agriculture sector to adapt to climate change.
- ❑ Two programs administered under the initiative
 - Regional Adaptation Enhancement Program
 - assessment of climate change related risks and opportunities for BC agriculture.
 - series of in-depth Regional Adaptation Strategies
 - Farm Adaptation Innovator Fund
 - The Farm Adaptation Innovator Program (FAIP) builds adaptive capacity and encourages the adoption of farm practices to mitigate impacts related to climate change:
 - Promote innovation in farm practices, approaches and technologies that support climate change adaptation
 - Demonstrate farm practices that reduce weather related production risks, and identify new production opportunities
 - Develop informational and knowledge sharing resources and support increased organization capacity to support adaptation

<http://www.bcagclimateaction.ca/>



Climate Action Initiative
BC AGRICULTURE & FOOD



Industry

- ❑ Provincial and independent regional cattlemen's associations regularly host producer events on topics relevant to their local association.
- ❑ BC Cattlemen's hosts an annual education day in conjunction with AGM & convention. Topics and format vary year-to-year. Planned by BCCA, with input from regional association host
- ❑ Industry Communications:
 - ✓ BC Cattlemen's Association publishes an magazine **Beef in BC**, with 6 issues each year - main communications tool for our members, including BCRC and other research news
 - ✓ **E-news**: bi-weekly electronic newsletter (~390 subscribers – mostly members) to share industry information, inclusive to collaborate and share other organizations' events and information. Includes linkage to latest BCRC news/webinars/blog posts
 - ✓ **BCCA website**: information portal for members and industry, and maintain event calendar
- ❑ Peace River Forage Association of BC
 - ✓ Field days and extension events
 - ✓ One-on-one extension through producer projects



Industry Programs – built-in extension

- Farmland Riparian Interface Stewardship Program (FRISP) : *providing assistance to BC agricultural producers to protect and enhance water quality, riparian vegetation and fish habitats*
- VBP+ : *on-farm verification program with food safety, environmental sustainability, biosecurity and animal care modules*
- Environmental Farm Plan : *self-directed program to assist producers to identify and address areas in their operation to improve environmental sustainability. Access to project funding for implementing Beneficial Management Practices (BMPs)*
- Agriculture-Food Climate Action Initiative : *Tools and resources to enhance the ability of the BC agriculture sector to adapt to climate change.*
- Species at Risk Partnerships on Agricultural lands : *program to enable cattle producers to implements Best Management Practices (BMPs) and project that will protect habitat for specific Species at Risk – currently Yellow Breasted Chat and Lewis' Woodpecker*



BCCA Technology Transfer Pilot Program

- ❑ Industry pilot program initiated to address gap of producer extension in BC
- ❑ Spurred by closure of Kamloops Agriculture & Agri-Food Canada Research Station (& others)
- ❑ Incorporated “technology” transfer to fit funding opportunity = great success
- ❑ **GAP:** communicating beef industry research/information to producers
SOLUTION: develop technology transfer delivery model for BC Beef Industry
 - 3 traditional extension events
 - 3 new technology-based delivery methods
 - 3 different topics identified through advisory committee and producer feedback
- ❑ Challenges to address:
 - How to reach all corners of the province
 - Internet connection / availability of technology hardware / knowledge & comfort with technology



The Project

OBJECTIVES:

- provide relevant research to improve production practices
- Encourage adoption on-farm from industry research
- Provide producers with a variety of delivery methods to access information
- Provide training to access technology
- Evaluate the practicality and effectiveness of new delivery systems and their economic feasibility

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Priority Subject Areas Identified:

- ✓ Forage Development
- ✓ Environmental Sustainability
- ✓ People/Business Development

Traditional Extension

2015 BCCA Education Day
“THE LONG GAME”

Focus on future of beef industry:

Keynote: Bruce Vincent

Industry Panel:

- Dr. Murray Jelinski (demographics & major industry events)
- Dr. Rynold Bergen (research and the consumer)
- Cherie Copithorne-Barnes (CRSB & sustainability)
- Brett Stuart (global beef markets)

Forage Workshop & Field Day
“MAXIMIZING YOUR FORAGE”

Focus on winter feeding strategies and extending grazing season

Dr. Bart Lardner, Dr. Alan Iwaasa, Taylor Grafton (producer)

Environment Keynote & Mini Sessions
“RANCHERS & THE ENVIRONMENT FROM A TO Z”

Dr. Tim McAllister “Environmental Footprint of Beef Production”

Mini extension sessions on a variety of topics

Technology Transfer

- Videos

- Videos: 2 “did you know” videos
 - Bale Grazing 101
 - Swath Grazing: Art or Science?
- Webinar

- Video: Dr. Tim McAllister keynote
- USB flash drive with additional resources from mini session presenters + all project resources from previous events

Videos on YouTube on BCcattle channel / Launched tech transfer webpage

www.cattlemen.bc.ca/techtransfer.htm

Project Outcomes

- ❑ Face-to-face events were very well-attended
- ❑ All technology-based delivery was accessed – webinar and USB flash drives were most popular
- ❑ Anecdotally, people also really liked the videos, as they were short and easy to access
- ❑ Preference for type of event was split evenly between face-to-face and technology-based; 56% didn't have a preference.
- ❑ Preference for future events:
 1. Field tour
 2. Interactive workshop
 3. Accessing information through USB flash drive

NOTE: average age of program survey respondents was over 50 years of age, so may be skewed towards traditional extension.

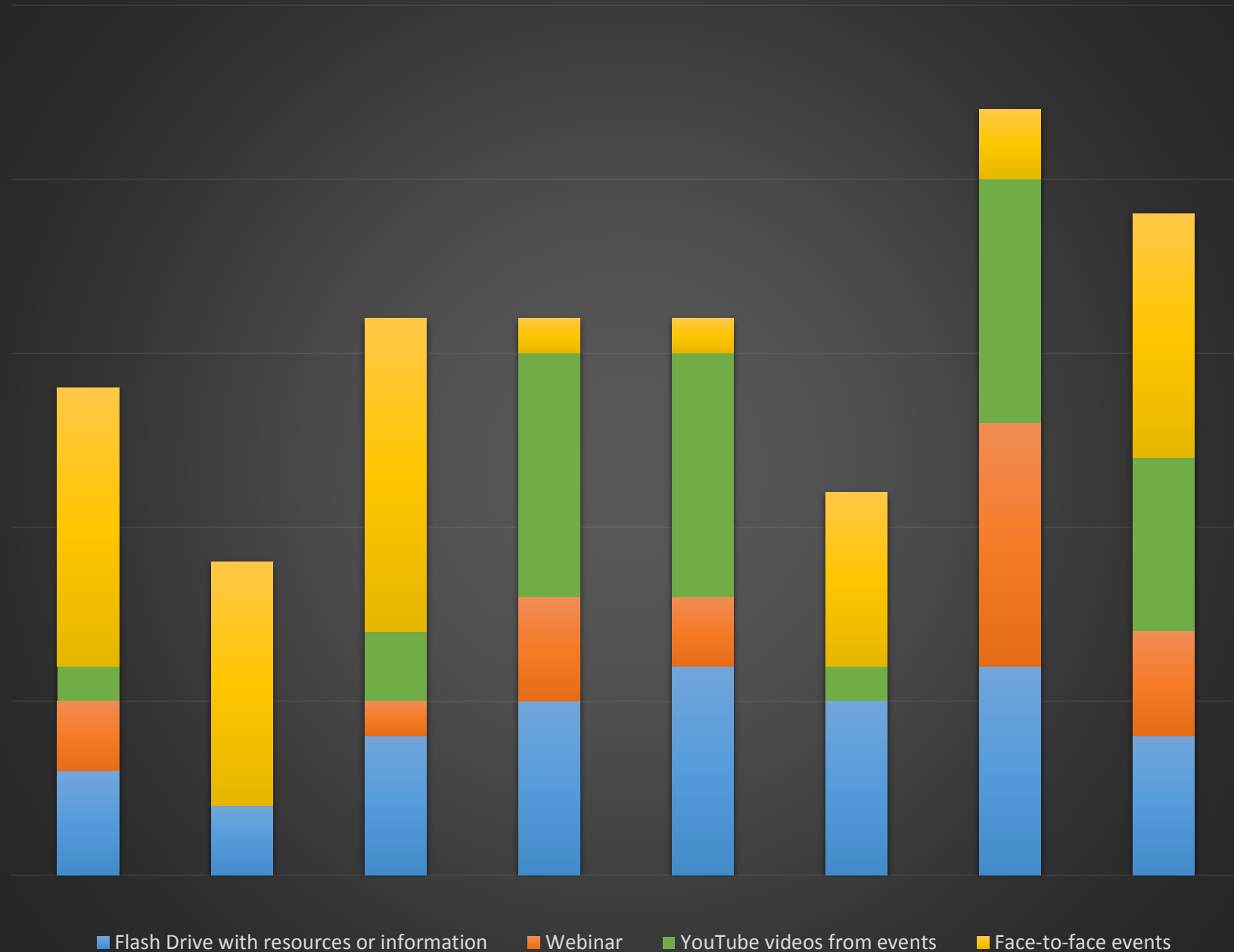


Evaluating the preferences for different types of events:

Reasons for liking each type of event (left to right):

1. Watching a live presentation, with opportunity to ask questions
2. Connecting with fellow producers
3. Attending a lice event because I can't access technology at home
4. Flexibility of accessing information at my convenience @ home
5. Ease o use of technology
6. Accessing information at home without internet requirements
7. Accessing information at home reduced travel time/cost of attend events
8. Information provided was relevant to my ranching operation

What did you like best about the events / technology-based delivery?



Challenges / Opportunities

❑ Ability to access technology-based delivery methods is a major concern:

- Access to high speed internet to stream audio/video - ~40% of BC ranchers have trouble accessing
- Access to computer – many (though likely not the early adopters) don't have adequate computer at home
- Comfort with using technology-based applications – need more training

❑ Opportunities / Recommendations:

- Continue to lobby government for tech transfer funding to assist industry in provide relevant information to producers – level playing field with other provinces for availability of support for tech transfer
- Continue to provide a balance of face-to-face and technology based extension delivery
- Develop central conduit for coordination, planning and communication of technology transfer programs
- Incorporate budget for extension/tech transfer into research projects at all stages
- Consider industry-driven devoted tech transfer \$\$ in industry association operational budgets



Thank you!

