

2024 BUILDING BRIDGES EXTENSION CONFERENCE FINAL REPORT

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Cross-Commodity Leadership Support Project

www.crosscommodity.org

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The Government of British Columbia and the Investment Agriculture Foundation of BC are pleased to participate in the delivery of this report. We are committed to working with our industry partners to address issues of importance to the agriculture and agri-food industry in British Columbia. Opinions expressed in this report are those of the author and not necessarily those of the Investment Agriculture Foundation or the Government of British Columbia.

Background

The second annual conference for agricultural extension practitioners was held in Penticton BC on February 27 through 29, 2024. The conference was designed around the following theme: “Building Bridges 2024: Strengthening Collaborative Extension Across Commodities”. A total of 31 extension practitioners attended the event from all corners of industry representing tree fruits and wine grapes. Attendees ranged from independent consultants, private companies, government, industry associations, and more.

The event consisted of a social mixer, a commodity specific roadmaps workshop, and various presentations ranging from how to use AI in the workplace to motivating on-farm change with your client.

Extension Roadmaps

The first Roadmaps Workshop was held in 2023 and the content developed was used as a starting point for the group in 2024. To begin, participants split into groups based on commodity and worked together to identify the “Big Issues” for each (apples, cherries, wine grapes). The second part of the workshop focused on finding tangible ways to solve these issues based on specific approaches to sharing information. The approaches to sharing are explained below.



Transfer (<i>Easiest</i>)	Adoption	Adaptation	Co-Innovation (<i>Hardest</i>)
Growers want this information. Make sure messaging is “sticky” and push it out. Minimal support required.	Growers may need to be convinced. Strategy is required, possibly requiring collaboration. Medium support required.	Not all the details are worked out. Growers may need to be convinced. Complex strategy and collaboration required. Significant level of support required.	These are big, complex challenges that require system-level solutions. Primary research and much collaboration required. Extensive collaboration between a range of stakeholders required.

The complete extension roadmaps for each commodity are included in Appendix A. Key issues identified across commodities are outlined in the table below.

Big Issue	Description	What Can We Do?
Climate Adaptation	There is an urgent need to develop a Disaster Risk Management Framework for heat/cold damage regarding climate change. <i>Plan > Prepare > React > Recover</i>	<ul style="list-style-type: none"> ▪ Cold damage pruning seminars ▪ Climate change workshops ▪ Sprays for smoke taint mitigation ▪ Frost protection sprays
Grower Economics	Some growers may lack business management skills. We need to help them focus on the following to increase economic stability: <ul style="list-style-type: none"> ▪ Value streams (circular ag approaches) ▪ Data management ▪ Business, risk, and succession planning ▪ Insurance options 	<ul style="list-style-type: none"> ▪ Cost of production case studies ▪ Funding program criteria preparation ▪ Regulatory case studies (pros/cons) ▪ Apple decline review to continue
HR Support	Education and outreach are needed to improve employment approaches and understanding of standards/rights: <ul style="list-style-type: none"> ▪ GAP housing requirements ▪ Mental health ▪ Labour supply 	<ul style="list-style-type: none"> ▪ GAP workshops ▪ Point of contact sheet for growers ▪ Incorporate mental health into agendas/content ▪ BCFW website ▪ On-farm housing research
IPM Training & Products	Training and education are needed to help growers manage tree stress, new pests/disease, and scout for species of concern. They must be managed with cultural, biological, physical, and chemical practices. There is also concern around MRLs for new products and the loss of existing products.	<ul style="list-style-type: none"> ▪ Expand BCTF production guide ▪ In field spray training ▪ Invasive pest card deck/carabiner ▪ IPM workshops ▪ Biosecurity framework and biovigilance
New Varieties & Rootstocks	There is limited availability and a need for new cultivars (virus testing, cold hardiness, water uptake). Growers require updates to planting systems and decision tools need to be developed to help growers decide: <ul style="list-style-type: none"> ▪ What to plant and how to access it ▪ What rootstock for what variety ▪ What systems they need (what needs to be changed) ▪ How to manage disease 	<ul style="list-style-type: none"> ▪ Rootstock fact sheets ▪ Checklist for replant success ▪ List of variety/rootstock characteristics ▪ Bus tour to WA (rootstocks) ▪ Access to new varieties ▪ Case studies for early adopters of new systems ▪ Decision and weather-based tools
Research & Knowledge/Technology Transfer	Research and reports must be translated into plain language and distributed to growers. Education on apps or technology for trap monitoring, spray timing, spray applications, and other processes is needed. There is a great deal of outdated equipment used in orchard systems that may be difficult to replace due to many factors.	<ul style="list-style-type: none"> ▪ Translation of materials ▪ Neighbourhood support groups ▪ Annual AAFC research transfer event ▪ Existing technology trials (picking platforms, smart sprayers, etc) ▪ Existing softwares (CropTracker, SimpleCrop) ▪ Researchers with disease mapping
Water/Soil Management	Education and outreach are needed for: <ul style="list-style-type: none"> ▪ Drought management and Environmental Flow Need (EFNs) ▪ Precision use and proper timing for uptake ▪ Cover crops/mulch fertigation ▪ Water holding capacity/soil compaction 	<ul style="list-style-type: none"> ▪ Farm tours to share BMPs ▪ Tools to monitor soil, water, disease, and experience with hybrids ▪ Soil moisture technology

Memorandum of Understanding

At the 2023 conference, the group discussed the idea of drafting and signing a memorandum of understanding (MOU) to recognize the power of cooperation through the shared vision of collaborative extension. The MOU was not pursued then due to a lack of time. In 2024, an MOU was created for the collective use of a collaborative extension calendar. By the close of the event, 22 participants had signed the MOU with the goal of reducing schedule clashes and ensuring more people (growers and practitioners alike) can benefit from all events. By signing, members have committed to:

1. Check and update the calendar before scheduling events.
2. Open events (when possible) to maximize the reach to other commodities.
3. Share when they hear about upcoming events held by other organizations.

The signed MOU can be found in Appendix B. To access the collaborative extension calendar, please visit: <https://www.crosscommodity.org/events-calendar>



Learnings From Presentations/Key Takeaways

All resources from presentations can be found in the “Resources” section below. Anonymous feedback forms were provided to each participant to complete at the close of the event (21 forms were received). Some highlights are shared throughout this section, but the unedited responses have been compiled in the Dropbox below.

To view all speaker slide decks and unedited feedback forms, please click here: [Dropbox Link](#).

Primer on the Professional Governance Act & How It Might Impact You

Ryan O’Grady, Registrar, BC Institute of Agrologists

What Did We Learn?

- BCIA is using an “education approach” to bring unregistered individuals (who are providing services or advice in the field of agrology to others) in line with the new Professional Governance Act.
- There is a specific exemption from reserved practice that states that farmers working on their own land do NOT need to be Registrants.
- As of September 21, 2022, there is a new professional designation for Limited License Agrologist (LLAg) for persons currently employed in areas subject to practice rights but who cannot qualify for one of the four protected BCIA designations.



What Did We Think?

“I’m glad BCIA was here. Their presence is important, and the impact of regulations will impact extension significantly.”
“It was awesome to see BCIA at a more traditional agricultural event.”

Introduction to IAF and Overview of Funding Opportunities for 2024

Abbie Morris, Director of Programs, Investment Agriculture Foundation of BC

IAF provides customized end-to-end administration for programs that support operational and environmental considerations of agriculture in BC. They deliver a variety of funding programs including the Environmental Farm Plan (and its Beneficial Management Practices Program), the Tree Fruit Industry Stabilization Fund, and Extreme Weather Preparedness.

What Did We Learn?

- IAF aims to be an enduring resource for the sector, a client-centered organization that delivers service excellence, and offers responsive and impactful programs.
- With government and industry in different spheres, IAF works to facilitate partnerships to align industry needs with public programs.

What Did We Think?

"It was great to have an update from people working directly with these groups!"

"There was not enough time to really dive into IAF programming."

A Look at AAFC's 10-Year Strategic Plan for Science

Dr. Rachid El Hafid, Director of Research, Development, & Technology Transfer, Agriculture & Agri-Food Canada

The Strategic Plan aims to ensure a vibrant and prosperous agricultural sector for Canada. The plan was developed alongside the Sustainable Canadian Agricultural Partnership (SCAP) to build on the priorities of Canada's agricultural policy framework agreed by Federal, Provincial, and Territorial leaders.



What Did We Learn?

- The plan strives to focus science on clearly defined goals and outcomes, provide a framework to ensure resources are geared toward creating transformation, and maximize impact through knowledge mobilization.
- The plan's four missions are to:
 - Mitigate and adapt to climate change.
 - Advance the circular economy by developing value-added opportunities.
 - Increase the resiliency of agro-ecosystems.
 - Accelerate the digital transformation of the agriculture and agri-food sector.

What Did We Think?

"I was surprised to hear the AAFC pillars for the 10-year plan and I hope they can be actioned soon."

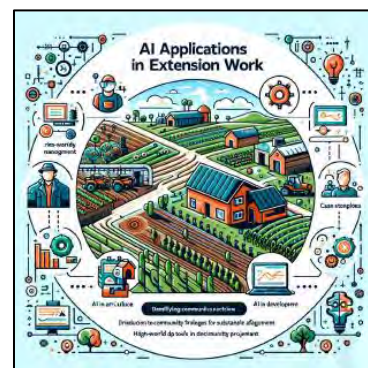
Harnessing AI to Increase Your Productivity and Improve Communication

David Olsson, Co-Founder, Atomic47 Labs

Together the group learned what artificial intelligence (AI) is, what tools are out there, and how they can be used for personal or professional needs. For resources provided during this presentation, please see the Resources section below.

What Did We Learn?

- AI is here and there is no avoiding it. To avoid being left behind, we must learn and adapt!
- AI tools can be used to generate or refine text, photos, videos, audio, and more.



What Did We Think?

"This planted a lot of seeds about what is possible."

"Fascinating but overwhelming!"

"Good information on AI tools – will try them out."

Motivating On-Farm Change: From mindset to assumptions, sticky messages, and strategies to influence

Dr. Steven Roche, Director & Principal Consultant, Acer Consulting

Dr. Roche's keynote discussed why people do what they do, key assumptions/fatal communication flaws, and what it takes to motivate on-farm change. He also explained what makes messages stick, how to harness the principles of adult learning, and practical approaches to building rapport and tailoring your message.

What Did We Learn?

- We talk too much! We are too eager to provide recommendations and impart our knowledge. Assumptions around goals, needs, and priorities diminish our impact.
- People often require motivation, not information. You cannot motivate others but instead you must help them find their own motivation.
- Adult learners are problem focused, pragmatic, self directed, relevancy oriented, bring experience to the table, and need to be involved and respected. We must be prepared to offer learning in multiple ways to reach our audience.



What Did We Think?

"More from him next year!"

"Amazing, really enjoyed this. Very practical."

"Good communicator with usable information for our industries."

"Wow! Amazing presentation on science communication."

Connecting Knowledge to Practice (2-Part Workshop)

Shelagh Pyper, Principal & Director of Education & Outreach, Fuse Consulting

This workshop began with a presentation about how to remove distracting or irrelevant information to pull out your key message and use visuals to communicate. The group discussed the challenges they face when communicating new practices to growers and what has worked well in the past. The second part of the workshop focused on learning from and about your audience, how listening to understand (and not to reply) is a skill in outreach, and how to frame and deliver messages that reflect the values of the recipient. The group used real world examples from their personal on-farm experiences along with guiding questions, to craft messaging that is "sticky", relevant, and values-based. These scenarios can be found in Appendix C.



What Did We Learn?

- Changing statistics into comparisons, using humour, and being an authentic storyteller helps us move our messages from the head to the heart and into the gut. By crafting messages that are “sticky”, your ideas will be understood, remembered, and have a lasting impact.
- Simplicity is all about finding the core. We must remove distracting or irrelevant information and pull out (and refine) our key message.
- Understanding segments of a population can help you learn about your audience and what they value to overcome the curse of knowledge (cognitive bias where we incorrectly assume that the person we are speaking to knows as much as we do about a given topic).

What Did We Think?

“Very well done. Favourite part of the conference!”

“YES! More time spent sharing ideas and learning from each other.”

“Great exercise promoting discussion.”

“This was really helpful.”



Resources

Resources presented at the conference are outlined in the table below.

Conference Resources	
2024 Roadmaps	Please see Appendix A or click here .
Industry Partners/Funders Panel <i>BC Institute of Agrologists</i> <i>Investment Agriculture Foundation of BC</i> <i>Agriculture & Agri-Food Canada</i>	For these slides, please visit the Dropbox or follow the links below: BCIA Presentation IAF Funding Opportunities AAFC Presentation
Harnessing AI To Increase Your Productivity and Improve Communication <i>David Olsson, Atomic47 Labs</i>	For these slides, please visit the Dropbox or click here . Specific resources are linked below. Text & Content Tools: <ul style="list-style-type: none">▪ Grammarly (Writing Assistant)▪ Writesonic (Content Creation)▪ Hemingway (Writing Clarity)▪ QuillBot (Paraphrasing) Images & Videos: <ul style="list-style-type: none">▪ Midjourney (Images)▪ DALL-E 2 (Images)▪ Synthesia (Videos)▪ Pictory (Videos) Chat, Audio, and Assistants: <ul style="list-style-type: none">▪ Eleven Labs (Voice Cloning)▪ Perplexity (Conversational search engine)▪ ChatGPT (Chatbot)▪ Microsoft Copilot (Chatbot)▪ Fireflies Notetaker (Transcribe, etc)
Motivating On-Farm Change <i>Dr. Steven Roche, Acer Consulting</i>	For these slides, please visit the Dropbox or click here .
Connecting Knowledge to Practice <i>Shelagh Pyper, Fuse Consulting</i>	For these slides please visit the Dropbox or click below. Workshop scenarios can be found in Appendix C or below. <ul style="list-style-type: none">▪ Presentation Slides▪ Workshop Scenarios

Additional Resources	
CCLSP Website	www.crosscommodity.org
Drought Management	Resources for Agricultural Water Users (Okanagan Basin Water Board) Drought in Agriculture (Government of BC) Drought Information – General (Government of BC)
Indigenous Awareness Education and Training	Indigenous Canada Open Online Course (University of Alberta) Cultural Perspectives Training (Indigenous Perspectives Society) Free e-books (Indigenous Corporate Training)
Over the Fence: Designing extension programmes to bring about practice change <i>Ministry for Primary Industries</i> New Zealand Government	Please click here to view this handbook.

Next Steps

The CCLSP will work hard to ensure the below considerations are included when planning the 2025 Building Bridges Conference (tentatively booked Feb 26-28, 2025). If you have any ideas about what or who you would like to see at next year's conference, please email your suggestions to Shelby Austen, CCLSP Administration & Communications Manager, at sausten@oksir.org.

Who Was Missing Around the Table?

- | | |
|---|---|
| <ul style="list-style-type: none"> ▪ Wine grape Consultants ▪ Coral Beach Farms (Cherries) ▪ Northern Cherries Inc. ▪ BC Agricultural Climate Action Research Network | <ul style="list-style-type: none"> ▪ Growers ▪ Farm Managers & Hort Advisors ▪ BC Food Hub ▪ UBCO Land to Table Partnership |
|---|---|

Ideas For Next Year

- | | |
|---|---|
| <ul style="list-style-type: none"> ▪ Grower Panel ▪ Presentation on successful extension in New Zealand or Europe ▪ Representative from Peace Living Lab ▪ Conflict Resolution Workshop | <ul style="list-style-type: none"> ▪ More interactive workshops ▪ Researcher presentations for relevant field-based projects ▪ Mental Health workshop ▪ Crisis communications |
|---|---|

Attached

Appendix A: Extension Roadmaps
Appendix B: Signed Collaborative MOU
Appendix C: Workshop Scenarios

APPENDIX A:

EXTENSION ROADMAPS (2024)

BIG ISSUE 1. CLIMATE ADAPTATION

There is an urgency to develop a Disaster Risk Management Framework for heat/cold damage in regards to climate change.

BIG ISSUE 2. GROWER ECONOMICS

Some growers may lack business management skills. Need to help growers focus on the tasks to increase economic stability (value streams, data mgmt, business planning, risk/succession planning, etc).

BIG ISSUE 3. HR SUPPORT

Education and outreach is needed to improve employment approaches and understanding of standards/rights. (GAP housing requirements, mental health, labour)

BIG ISSUE 4. IPM TRAINING & PRODUCTS

Growers need to be able to manage tree stress and new pests/diseases. Education must be managed with cultural, biological, physical, and chemical practices.

BIG ISSUE 5. NEW VARIETIES & ROOTSTOCKS

Growers require updates to planting systems. There is limited availability and a need for new cultivars (virus testing, hardiness, uptake). Access and inconsistency with nurseries are barriers.

BIG ISSUE 6. RESEARCH & KTT

Research and reports must be translated into layman's terms and put into the hands of growers. There is also a great deal of outdated equipment used in orchard systems that may be difficult to replace due to many factors.

BIG ISSUE 7. WATER & SOIL MANAGEMENT

Education and outreach are needed for drought management, environmental flow needs, precision use/proper timing for uptake, cover crops, mulch fertigation, and water holding capacity of soil.

BIG ISSUE _____

BIG ISSUE _____





Easiest: Growers want this info. Make sure messaging is 'sticky' and push it out.

- Pruning seminars (cold damage)
- Cost of production case studies (excel templates to modify)
- Financial information on regulations
- Tap into current financial programs
- Look into AgSafe/Work Safe for delivering workshops & tools
- Incorporate mental health talks into regular meetings
- GAP workshops
- Point of contact sheet for growers
- Expand BCTF Production Guide
- In field spray training
- Invasive pest card deck/carabiner
- Fireblight information
- Better/more PAC courses
- Rootstock fact sheets
- "Checklist" for replant success
- List of variety/rootstock characteristics
- Vine health practices & replant (Rick de Jong)
- Implement use of AI
- Podcasts
- Translation of materials to Punjabi, Spanish, French, Patois
- Farm tours/field visits to share BMPs



Harder: Growers may need to be convinced. Strategy required, possibly requiring collaboration. Make sure messaging is 'sticky'.

- Funding program criteria preparation (VMP, irrigation optimization, etc)
- BCFW website for HR support (videos, factsheets, etc)
- Have producers speak of personal experiences to demystify (grower panel)
- IPM workshops
- Common extension calendar
- Orchard design before replant
- Create neighbourhood support groups & bring technology to them
- Annual event with AAFC researcher knowledge transfer
- Existing Technologies:
 - > Picking platforms
 - > Automated irrigation
 - > Smart Sprayers (rate regulators)
 - > 3M weed electrocutor
 - > Mulcher
- Demo tools to monitor soil, water, disease, and experience with hybrids
- Soil moisture technology



Harder Still: Not all the details are worked out. Growers may need to be convinced. Complex strategy required, collaboration definitely needed.

- Climate change workshops
- Sprays for smoke taint mitigation
- Frost protection sprays
- Regulatory case studies for pros/cons
- Develop a regular space around a different task (i.e tailgate with mental health component, add to conference content)
- Streamlining data collection & record management
- Demo sites (rootstocks)
- Bus tour to WA to look at rootstocks
- Access new varieties (pears too)
- Case studies for early adopters of new replant systems (sap flow, hilling, geotextiles, clones/hybrids)
- Existing Software
 - > CropTracker
 - > SimpleCrop



Hardest: These are big, complex challenges that require system-level solutions. Primary research and much collaboration required.

- Disaster risk management framework
- Apple decline review to continue
- On farm housing research for labourers (i.e like those for unhoused people)
- Biosecurity framework & biovigilance (see something, say something)
- Develop decision based tools and weather based data for when to replant variety/terroir interactions
 - > Data sharing to help inform decisions
 - > Outreach to producers for potential clones (if survivors)
- Reach out to researchers with disease mapping for information on how to use research to help producers

BIG ISSUE 1. INCONSISTENT FRUIT QUALITY

Due to low inputs & low returns, growers are experiencing low quality fruit. Need to increase pruning training, sizing (crop load), colour (LRM, defoliator, new tech), and quality standards.

BIG ISSUE 2. POST HARVEST MANAGEMENT

There's been a loss of expertise regarding post harvest management. Growers need best practice training as well as new technologies. This pertains to storage rot and when/how to irrigate.

BIG ISSUE 3. ORCHARD RENEWAL

Require updates to planting systems (i.e rootstocks and new varieties).

BIG ISSUE 4. LOW PRODUCTION PER ACRE

Need education and resources to help with orchard replants, pruning, and crop load management.

BIG ISSUE 5. TECHNOLOGY UPDATES

Currently, there's a great deal of outdated equipment used in orchard systems. This can be difficult to replace due to many factors (cost, resistance to change, etc).

BIG ISSUE 6. CLIMATE ADAPTATION

There's an urgent need to develop a risk management framework for winter and heat damage.
Plan > Prepare > React > Recover

BIG ISSUE 7. CHANGING PEST & DISEASE COMPLEX

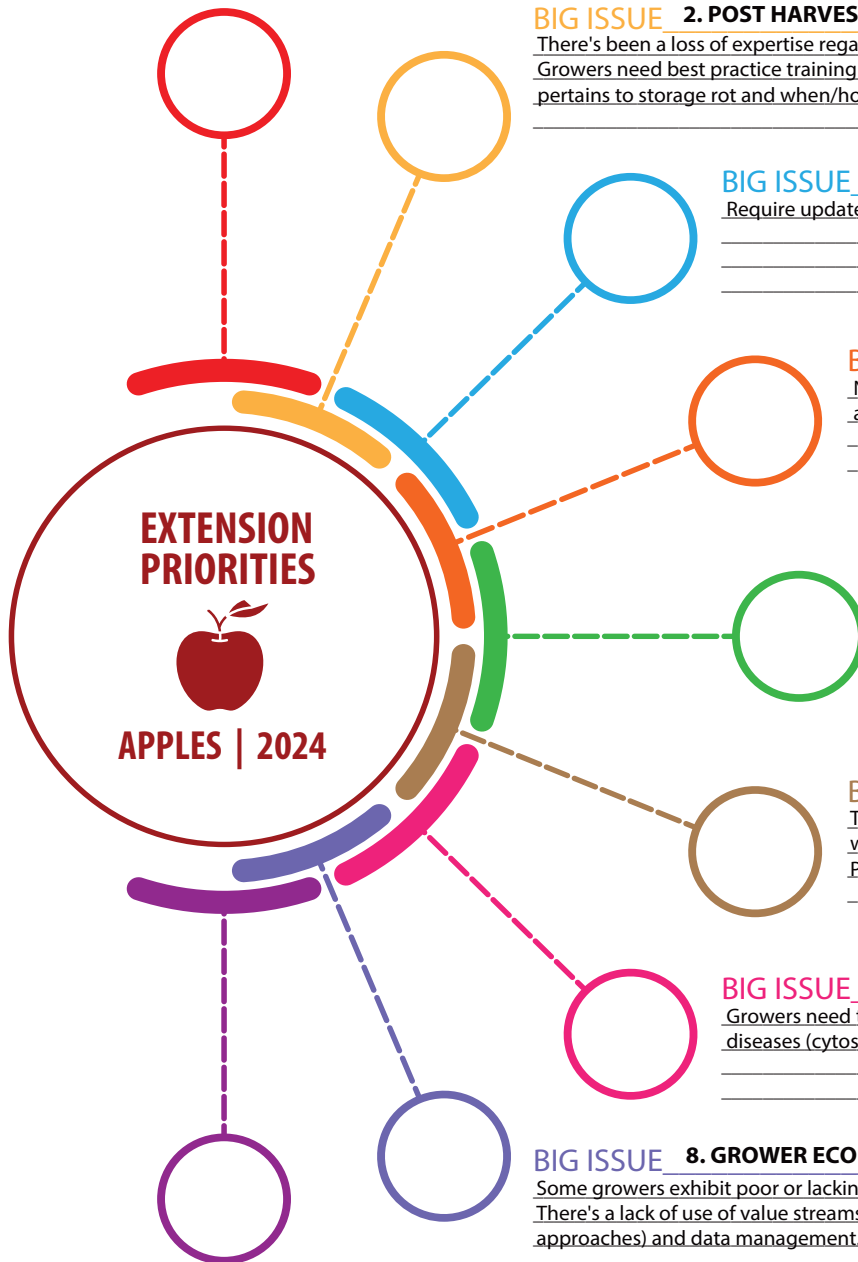
Growers need to be able to manage tree stress and new pests/diseases (cytospora canker, spotted lanternfly, etc).

BIG ISSUE 8. GROWER ECONOMICS

Some growers exhibit poor or lacking business management skills. There's a lack of use of value streams (especially circular Ag approaches) and data management.

BIG ISSUE 9. BRM Programs

There are deficiencies in current communication channels for BRM programs.





TRANSFER

Easiest: Growers want this info. Make sure messaging is 'sticky' and push it out.

- Infield spray training
- Invasive pest card deck/carabiner
- Fireblight information
- Cost of production case studies (excel templates to modify)
- Resource warehouse
- Farm tours to share BMPs
- Pruning seminars (regular pruning and for cold damage)
- Better/more PAC courses
- Podcasts (Let's try it!)



ADOPTION

Harder: Growers may need to be convinced. Strategy required, possibly requiring collaboration. Make sure messaging is 'sticky'.

- Soil moisture technology
- Create neighbourhood support groups (cluster). Bring technology to them.
- Orchard design before replant
- Existing Technologies:
 - Picking platforms
 - Automated irrigation
 - Smart sprayers (rate regulators)
 - 3M weed electrocutor
 - Mulcher(Niche equipment between commodities)
- IPM workshops



ADAPTATION

Harder Still: Not all the details are worked out. Growers may need to be convinced. Complex strategy required, collaboration definitely needed.

*Disaster risk management framework is needed!
(AAFC, IAF, Government, BCFGA, others)*

- Streamlining data collection & record management (sensitive)
- Existing Softwares:
 - Croptracker
 - SimpleTax
 - SimpleCrop
- New varieties (pears too)



CO-INNOVATION

Hardest: These are big, complex challenges that require system-level solutions. Primary research and much collaboration required.

- Apple decline review to continue
- Biosecurity framework & Biovigilance (see something, say something)

Make sure geographic spread is covered, translation is a possibility (Punjabi, French, Spanish, Patois)

BIG ISSUE 1. ROOTSTOCKS/TRAINING SYSTEMS

There is limited availability and a need for new cultivars (virus testing, cold hardiness, water uptake). Also need to match rootstocks to the variety of cherry. Access and inconsistency with nurseries are barriers. Need to demystify what rootstocks are and approach in a grower friendly way.

BIG ISSUE 2. KNOWLEDGE/TECHNOLOGY TRANSFER

There is a need to translate research and reports into layman's terms to get them into the hands of growers.

BIG ISSUE 3. CANOPY/CROP MANAGEMENT

There is a need for culture or scientific tools, workshops, and other resources to teach renewal and light management. These are also needed for cold/frost events.

BIG ISSUE 4. IPM TRAINING/PEST CONTROL PRODUCTS

Need training and education for scouting/identifying species of concern (LCD). Education needs to be managed with cultural, biological, physical, and chemical practices. There is also concern around MRLs for new products and the loss of existing ones.

BIG ISSUE 5. NUTRIENT MANAGEMENT

Need to focus on precision use and proper timing for best uptake. Quality fruit is produced using proper foliar sprays, cover crops, and mulch fertigation.

BIG ISSUE 6. TECHNOLOGY ADOPTION

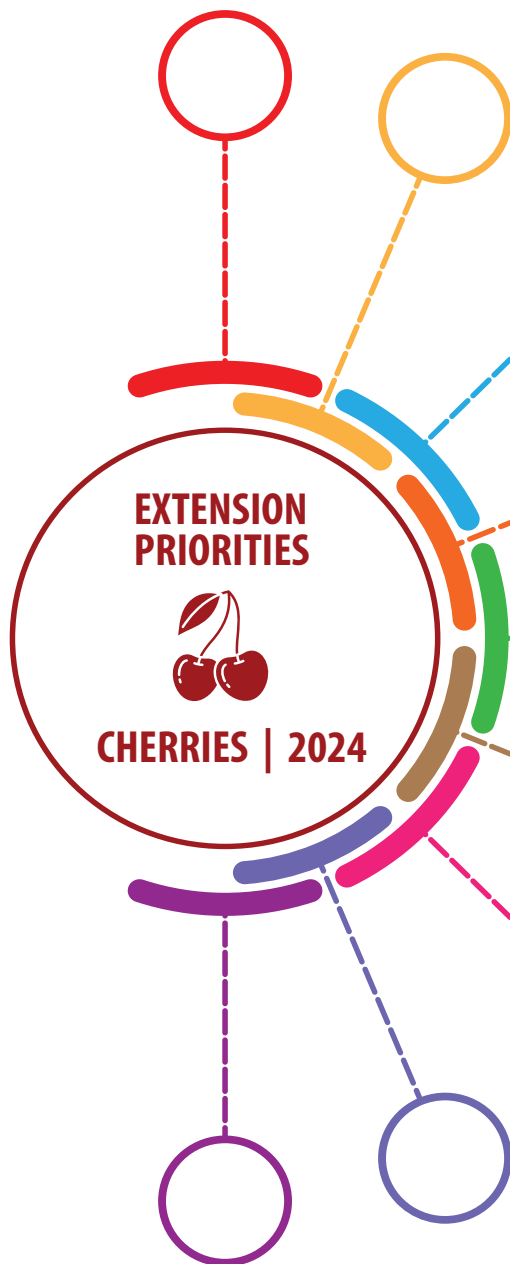
Need to implement the use of apps or technology for processes such as trap monitoring, labour, spray timing, orchard health, spray applications, etc.

BIG ISSUE 7. HR & LABOUR

Education is needed (i.e changing GAP housing requirements) to improve employment approaches, labour supply, hiring, understanding of standards and rights.

BIG ISSUE 8. WATER MANAGEMENT

Education and outreach is needed to inform of "horizon issues" (drought management, environmental flow needs, irrigation efficiency).



BIG ISSUE _____



Easiest: Growers want this info. Make sure messaging is 'sticky' and push it out.

- Rootstock fact-sheets
- Field visits
- Bringing existing information together in one place.
- "Points of Contact" sheets for growers
- Expand BCTF Production Guide
- GAP workshop



Harder: Growers may need to be convinced. Strategy required, possibly requiring collaboration. Make sure messaging is 'sticky'.

- BCFW website for HR support, videos, fact-sheets, and other resources
- Annual event with AAFC researcher knowledge transfer
- Common extension calendar



Harder Still: Not all the details are worked out. Growers may need to be convinced. Complex strategy required, collaboration definitely needed.

- Demo sites (rootstocks)
- Bus tour to WA to look at rootstocks
- Climate change workshops (pruning, heat/cold stress, etc)



Hardest: These are big, complex challenges that require system-level solutions. Primary research and much collaboration required.

- On farm housing research for labourers (i.e like those for unhoused people)
- Data and information collection and sharing

BIG ISSUE 1. HUMAN RESOURCES

HR support is needed for mental health, labour supply/hiring, and capacity.

BIG ISSUE 2. REPLANT

Decision tools need to be developed to help growers decide what to plant, how to access it, what type of system they need (what needs to be changed), and how to manage disease.

BIG ISSUE 3. WATER MANAGEMENT

Need to measure and monitor the water holding capacity of soil to make informed decisions.

BIG ISSUE 4. SOIL/VINE HEALTH

Need to measure compaction and read reports. What tests are needed here?

BIG ISSUE 5. MARKETING DEVELOPMENT

BIG ISSUE 6. REGULATORY

Need to strike a balance between education and protection.

BIG ISSUE 7. ECONOMIC STABILITY

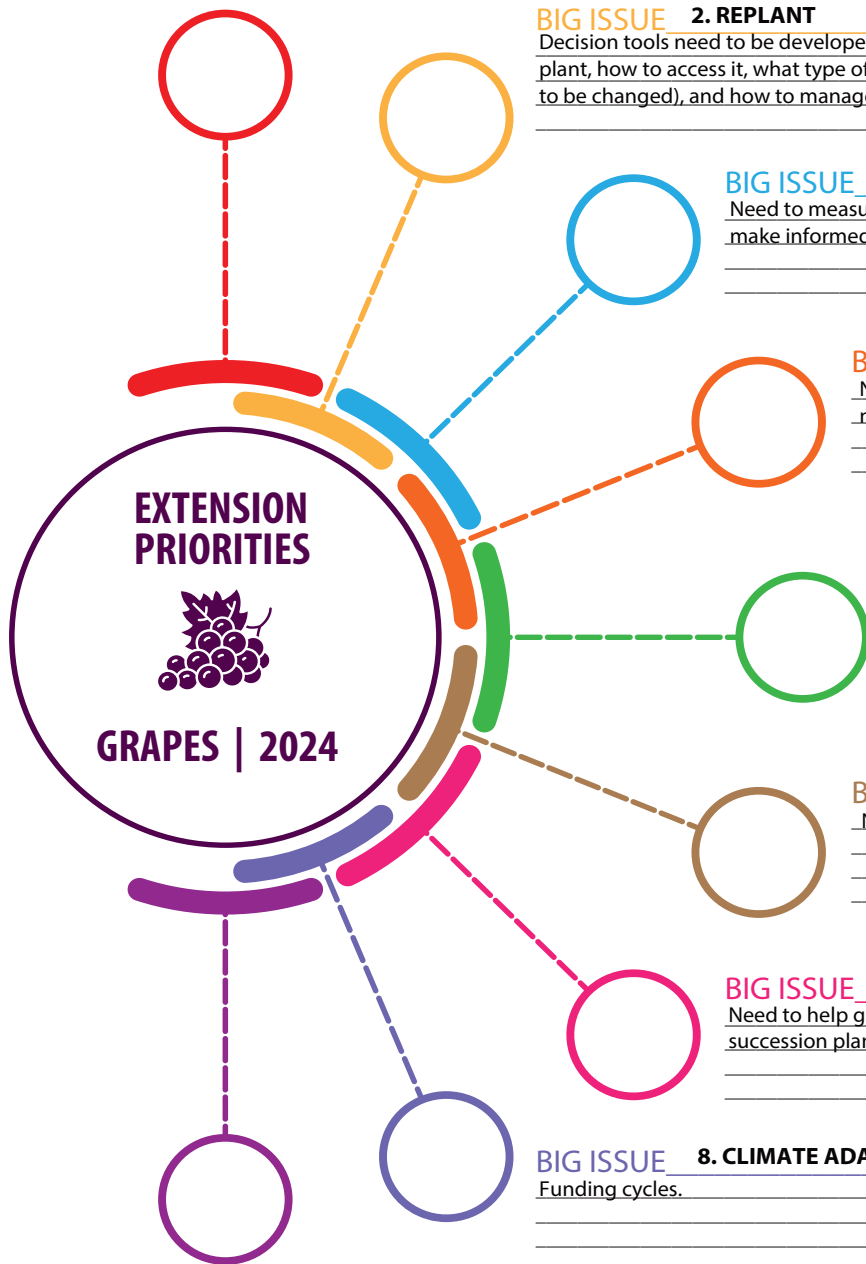
Need to help growers focus of business planning, risk planning, succession planning, and insurance.

BIG ISSUE 8. CLIMATE ADAPTATION

Funding cycles.

BIG ISSUE 9. SOCIAL DIVERSITY OF PRIMARY PRODUCERS

It is a challenge to recognize the different needs of each demographic.





TRANSFER

Easiest: Growers want this info. Make sure messaging is 'sticky' and push it out.



ADOPTION

Harder: Growers may need to be convinced. Strategy required, possibly requiring collaboration. Make sure messaging is 'sticky'.



ADAPTATION

Harder Still: Not all the details are worked out. Growers may need to be convinced. Complex strategy required, collaboration definitely needed.



CO-INNOVATION

Hardest: These are big, complex challenges that require system-level solutions. Primary research and much collaboration required.

HR support & resources for producers

- Tap into AgSafe/WorkSafe for delivering tools and workshops
- Incorporate mental health talks into regular meetings
- Create a "checklist" for replant success
- \$\$ information on regulations
- Create a list of variety/rootstock characteristics
- Tap into current financial programs
- Vine health practices & replant (Rick de Jong)
- How to use AI for organizations

- Have producers speak of personal experiences (HR related) to demystify
- Demo tools to monitor soil, water, disease, and experience with hybrids
- Funding program criteria preparation (VMP, irrigation optimization, etc)

- Develop a regular space around a different task (i.e a tailgate with a mental health component, add to conference content)
- Case studies with early adopters of new systems (replant):
 - Sap flow
 - Hilling
 - Geotextiles & varieties (*clones, hybrids*)
- Climate adaptation:
 - sprays for smoke taint mitigation
 - frost protection sprays
- (\$\$) Regulatory case studies for pros/cons

- Develop a shared HR resource for support
- Develop decision tools and weather based data for when to replant variety/terrior interactions:
 - Data sharing to help inform decisions
 - Outreach to producers for potential clones (if survivors)
- Reach out to researchers with disease mapping for information on how to help producers

APPENDIX B:

SIGNED COLLABORATIVE MOU

MEMORANDUM OF UNDERSTANDING

USE OF THE COLLABORATIVE EXTENSION CALENDAR



In the spirit of unity and progress, we, the undersigned members, recognize the power of collaboration through our shared vision of a ground-breaking cross-commodity collaborative extension calendar. This Memorandum of Understanding is forged with the goal of optimizing our time, resources, and extension outcomes.

Here in front of my peers at the
2024 Building Bridges Conference
held
February 28, 2024,
in
Penticton BC,

I hereby commit that I will:

Check and Update the Calendar

Before locking in my event plans, I will always give the calendar a quick check. As soon as my dates are locked in, I'll add it to the calendar. No unnecessary schedule clashes on my watch!

Spread the Love

When planning events, especially if they are planned with public dollars or experts with limited time, I'll consider opening up the invitation to others in the industry. If it's not a "secret sauce" event, then I am all for maximizing the reach of my event. The more the merrier!

Share the News

It's not just about my events. I'll let others know about the calendar and when I hear about other cool and/or possibly conflicting events, I'll make sure they make it into the calendar. I'll share the responsibility for making sure we are all in the know. Sharing is caring!

Signatures:

Handwritten signatures of conference attendees, including names like John L. Ingham, John McDowell, and others, along with initials and a large stylized signature.

APPENDIX C:

WORKSHOP SCENARIOS



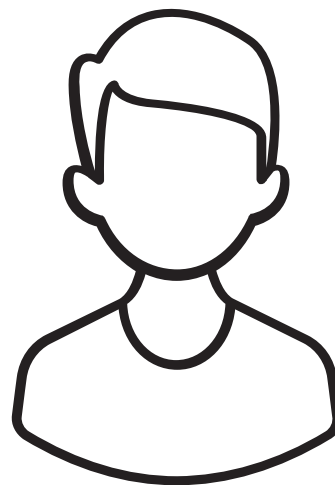
Scenario 1 – finding alternatives to “money issues”

Scenario- A grower might have high amount of fruit damage/rots in their packout but are unable to hire the additional labour needed to stem clip or can't afford the labour if it is available.

Challenge - Growers are usually restricted by either money or availability of labour. When I'm working with them in the orchard I often find that these two things can restrict their ability or willingness to adopt new practices.

Question for discussion - How do other extension folks address these "money issues" when working with growers?

“In this situation I usually try to work with the grower to find an alternative way they can address the issue - maybe soil amendments to increase calcium or other nutrients, suggesting earlier harvest etc.”



What does your audience know?

- The problem
- The solution

What do they value?

- Quality
- Make a living

What do they want to know more about?

- Alternatives ; cost effective
- Std industry practice in similar situation.

Give the most attention to the highest value apples

Key Message:

~~Prioritize~~ Higher value cultivars need to be require prioritized action to increase the bottom line.

• reallocate resources accordingly.



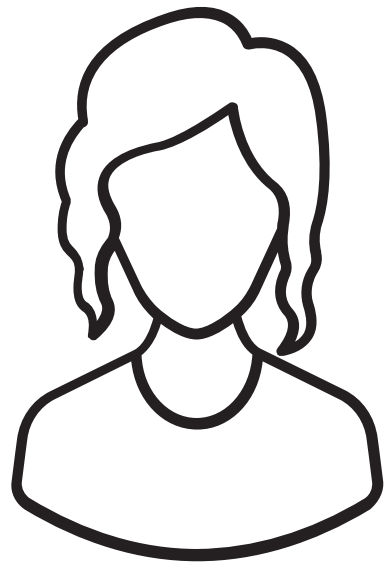
Scenario 3 – timeline and cost concerns re. new technology

Scenario - In trying to bring new technology solutions to the packing/housing and growers - vision based analytics - we receive pushback regarding timelines and cost.

Challenge - This is coming from a lack of resources (employees) and heavy reliance on outdated technology and processes that are difficult to update.

Question for discussion - How are other extension folks approaching integration of new technologies into the industry?

"Our solution has been to prioritize smaller solutions which can sometimes feel like "band aid fixes"."



What does your audience know?

Q: do they know what they want out of their cover crop?
(old practice but ~~may~~ considered "new tech" if using practice for new purpose)

- > they know priority (why they would use practice)
- > climate change/resilience on radar (heat dome, fires)
- understand concepts of having organic matter in soil, etc.
might not know why they would plant cover crop (objective)
- curious about relationships b/w pests (heat hopper, little x)

gov't has changed language/phrases
- new to ag sector (terms + concepts + priorities).

> prev. pest management 2021 > flip to cc. planning (heat dome)

What do they value?

- different audiences e.g. sustainable wine growers value different things than cherry export growers

- domestic vs. export crops.

- organic vs. conventional.

change in preference - people are sometimes/often looking for someone to tell them what to do/give recommendations.

> not looking to add resources (like production guide)

- > soil health
- > fruit quality
- > disease management.

people have become so busy it is harder to connect/prioritize
- less control over time w/ cell phones + email

What do they want to know more about?

- how people are using technology (new practices) successfully. (Stories + case studies)

- how practice affects key metrics (soil, yields, pests)

- what to expect from a cover crop
> what do seedlings look like
> ~~what to look for~~ when selecting seed
> what are other growers

> what are other growers

consider:

- > is there a resource I can use/adapt
- > people don't want to go on a quest for information

Key Message:

Specific instances where cover-crops help > e.g. soil compaction
Get involved, participate, come learn with us. > engage
Help build the knowledge bank.

How do we make messages more concrete?

- > design a roadmap (visual)
- > identify commitments from others, funding opps, other partners.
- > resilience > emphasize that ~~things~~ conditions aren't getting better. We need to work together to adapt.

What words do we need to stay away from?

- > regenerative
- > ~~carbon~~
- > sustainable
- > carbon sequestration €

Consider:

- > role of uncertainty. Good fruit quality \neq more money.

"Don't get left in dust, come talk about erosion control + cover cropping"

Scenario 5 – from earlier brainstorm

Scenario: Grape growers will not have a crop this year and no money for labour.

Challenge: Need to maintain canopy management, pest control, and soil amendments.

For Discussion: How can we help them focus on top priorities?



What does your audience know?

- Not a normal year
- Not alone
- Finances will be tough
- They must do something.

What do they value?

- Producing a premium grape.
- ~~theve~~ Being able to support their families
- Innovation - Community

What do they want to know more about?

- pruning? how? when?
- how bad is it for vines?
- is there "aid" (regulatory or financial)

Key Message: We will get through this, together, by innovating together.

More Concrete? Stick? Emotions?

- we're not afraid of hard work.
(core grower identity)
- ~~we~~
- story of overcoming adversity,
each day is a day to
"start fresh." too overwhelming
- "We're not starting from nothing.
We built a world-class
industry and we can re-invent"



Scenario 4- no foundational knowledge of pests and horticulture

Scenario – A particular grower has been struggling to control one pest for a number of years. They are spreading it to their neighbors and it is coming back to their orchard from them. They have been ignoring the pest mgmt. recommendations because they are perceived to be “too expensive” or they think that we are making the recommendations to “cover our ass” . Ultimately, the pest population has grown out of control

Challenge - The **grower lacks basic understanding of the pest biology**, lifecycle etc. and how it needs to be managed. The **grower lacks basic horticultural skills** (like calibrating a sprayer) and understanding spray coverage. The grower **refuses to acknowledge their own role in pest population growth**, and fruit damage. The **grower is argumentative and combative**. A prescriptive approach has been ignored for years, now the extension activities need to go back to basics of pest biology and life-cycle. I need to demonstrate to the grower with water sensitive paper that they are not spraying their trees properly, need to follow up weekly with grower to see if they are on track. Also, need to try and **allow the grower to save face**.

I have found that a very clear, simple prescriptive recipe for success is the best way to get message across. This often needs to be in writing, like a recipe (do x, then in 2 weeks, do x again, then call me to follow up with Y). Generally short “stories” about the pest biology are useful to underpin why these prescription are being made are helpful, but not sufficient.



What does your audience know?

- they know the pest is an issue from SIR feedback.
- they know it also impacts neighbours.
- potential sceptical of gov't & those in authority

What do they value?

- independence/autonomy
- feeling respected ~~train~~
- valuing immediate finances & not long-term perspective.
- knowing their \$ is used wisely.

What do they want to know more about? What happens if I do nothing?

- how long use IPM methods, cost vs \$ gain
- immediate vs long-term strategy
- & What are the guarantees of success? & background
- What is the motivation of the inspector & their expertise?
- What's everyone else doing? Possibly referral of a grower name to discuss issue.

Key Message:

- Need to provide a cost/benefit analysis - appeal to pocketbook.
- Connecting grower with peers/advisors who they may trust.
- Commitment to grower needs to be offered to tackle IPM issue.

~~12/10~~

The most successful growers analyze ^{the} cost-benefit of implementing an IPM program, and adjust practices based on ~~annual~~ seasonal observations/data. We can connect ~~with~~ you with other growers/advisors to support you.