

# INNOVATION & TECHNOLOGY COMMITTEE

Minutes of the **Innovation & Technology Committee** meeting held virtually via MS Teams on November 20, 2024.

**Members Present:**

- |                          |  |
|--------------------------|--|
| Barbara Hall             | UBC Okanagan                                     |
| Gail Nelson              | BC Fruit Growers' Association                    |
| Galen Barnhardt          | Monte Creek Winery                               |
| Hank Markgraf            | Syngenta Canada Inc.                             |
| Jesse Macdonald          | Agriculture and Agri-Food Canada                 |
| Kate Durisek             | BC Wine Grape Council                            |
| Kathy Malone             | Hillside Winery                                  |
| Kellie Garcia (CO-CHAIR) | Cross-Commodity Leadership Support Project       |
| Lindsay King             | BC Ministry of Agriculture & Food                |
| Lisa Wambold             | Terralink Horticulture                           |
| Molly Thurston           | Pearl Agricultural Consulting                    |
| Sarah O'Brien            | Okanagan-Kootenay Sterile Insect Release Program |
| Shelby Austen            | Cross-Commodity Leadership Support Project       |
| Steve Brown              | Independent                                      |
| Sukhpaul Bal             | BC Cherry Association                            |

**Regrets:**

- |                        |                                  |
|------------------------|----------------------------------|
| Felix Egerer           | Unsworth Winery                  |
| Gayle Krahn            | Terralink Horticulture           |
| Karen Yeung (CO-CHAIR) | BC Wine Grape Council            |
| Nick Ibuki             | Summerland Varieties Corporation |

**1. WELCOMING REMARKS**

**2. REVIEW OF ACTION ITEMS**

| ACTION ITEMS         |   |        |
|----------------------|---|--------|
| MEMBER               | ACTION REQUIRED   | STATUS |
| K. Garcia/S. Austen  | Reach out to possible AAFC/Living Labs representatives to join the committee (K. Hannam or J. MacDonald). | ✓      |
| K. Garica/S. Austen  | Research SFU's BC Centre for Agritech Innovation and identify possible collaboration opportunities.       | IP     |
| L. King/G. Nelson    | Connect RE: BC On-Farm Tech Adoption program eligibility (producers vs. associations)                     | ✓      |
| L. King/G. Barnhardt | Connect RE: BC On-Farm Tech Adoption program eligibility (wineries)                                       | ✓      |

**3. MEMBER ROUND TABLE UPDATES**

- Galen informed the committee that they are wrapping up harvest and are fortunate to have a crop this year, achieving about 50% of last year's yield. This was due to proactive steps taken to mitigate the cold snap, including cold-climate varieties and broadscale geotextiles.
- Sukhpaul mentioned that Genome BC members recently spoke at a BCCA meeting about identifying markers for traits such as cold hardiness, cracking, and for viruses like Western X and Little Cherry Virus. He noted that any technology to support cold hardiness is a current priority. An update was also given on Jealous Fruit's freeze chamber. While grapes have a strong cold hardiness program through the

Summerland Research Station, there is no similar industry-wide initiative for other crops. He mentioned a potential project to establish a freeze chamber, with the Summerland Research Centre being the logical location, though questions remain about who would own and operate it.

- Molly said she is finishing the season's fieldwork and writing final project reports. They also received an interesting trial request for bioplastics made from seaweed, including mulch films and plant pots. She is curious about whether these seaweed-based bioplastics have similar characteristics to others on the market and is interested in pursuing trials.
- Gail noted that BCFG's Horticulture and Crop Protection committees have narrowed their focus to water use efficiency, irrigation, nutrient and crop load management, sunburn protection, and frost protection tools. She also gave an update on the stabilization-funded pilot project to import nursery stock from the Pacific Northwest and Eastern Canada without fumigation, with imports expected in 2025.
  - Molly called the pilot project a major win, with CFIA's systems approach enabling U.S. partners to implement a trapping program for Oriental Fruit Moth. The project will provide access to advanced rootstock technologies and address industry gaps, involving four approved nurseries (two ornamental) with ongoing learning.
- Lisa said Terralink has been busy supporting growers after the Growers Supply closure, focusing on stress mitigation (drought, winter, heat, and cold) and optimizing vine and tree nutrients. She highlighted the underutilized value of SAP analysis in grapes and expressed interest in field-ready soil analysis tools. Lisa also mentioned a promising microorganism technology from Oregon that could enhance winter hardiness, though it is not yet available for trials.
- Lindsay shared that Lana Popham is back as Minister of Agriculture, with Michelle Koski as Deputy Minister. The BC On-Farm Technology Program closed on October 6, but a second call is expected. She is researching cold hardiness products and noted the Southern Interior Horticulture Show has invited experts from Oregon, Washington, and Eastern Canada to discuss new cold hardiness products.
  - Kellie noted a potential partnership between CCLSP and MAF to explore cold hardiness products.
- Jesse MacDonald shared that AAFC has submitted 2026 letters of intent for internal funding, including a project on exclusion netting for apples. Next summer, they plan to gather netting data with a cross-commodity focus. AAFC is also reviving regional research meetings, with the first likely focused on cold hardiness, providing a platform for committee input and aligning with potential CCLSP projects.
- Kathy said the BCWGC recently held a meeting at the research station, where they reviewed current SCAP projects and distributed plain-language summaries for each. Over the summer, they hosted the Triggs Lecture Series with cold hardiness expert Markus Keller during the BCGA/BCWGC AGM. She also noted the need for a GPS system update as replanting progresses.
  - Kellie informed the committee of a potential GPS project with SIR, BCWGC, and BCCA.
- Kate highlighted the importance of comparing current and historical acreage data, noting a 1,000-acre discrepancy with BRM figures and BCWGC's data before replanting. She mentioned a new cover crop tool aligning with MAF's efforts, upcoming on the BCWGC website. Recent sessions covered grapevine clean plant programs and biochar for crop resilience, both supported by MAF initiatives.
- Hank emphasized the importance of updating sprayer technology, noting that Ontario now uses autonomous sprayers while many here still rely on outdated 1970s equipment. He suggested organizing a demo of modern units and also exploring drone use for pesticide application.
  - Lisa noted that Clean Works, an Ontario based company, is testing the use of UV light, ozone, and hydrogen peroxide to control powdery mildew at a Niagara winery.
- Sarah said SIR has been testing drones for moth release in recent years but is now working with a U.S. company for better results. Transitioning from ATV to drone releases has significantly improved moth quality.

- Steve noted that cold events are a major concern for growers, particularly with soft fruits, but apples and pears on lighter soils also suffered heat stress this summer. Heat impacted the size of summer apple varieties like Gala and Sunrise. He is continuing to produce educational "back-to-basics" videos to address the decline in fundamental horticultural practices, which are often overlooked by newer generations.
  - Gail said NVDC projects will continue through BCFGAs, and Steve's videos will be made accessible to growers via BCFGAs.
  - Kathy noted a similar issue in the wine industry, where both winemaking and growing often overlook basic questions due to reluctance to show ignorance. She emphasized that making such information readily available would benefit the entire sector.
- Barb introduced herself as a previous winemaker and now pursuing a sustainability degree at UBCO. Her research focuses on developing methods using Vivent Biosensors to monitor plant growth regulator responses to heat and cold stress. In response to grape industry needs, a new rootstock (M-4) from Italy is being studied for its suitability to the region's future climate. She also highlighted the UBCO Plant Growth Facility's precision nutrient system and expressed interest in collaborating on project development for its use.

## **4. OLD BUSINESS**

### **4.1 PROJECT UPDATES & IDEAS**

#### **a) BC DAS Operations**

- No update.

#### **b) BC DAS Expansion to Winegrapes**

- The project aims to expand the BC Decision Aid System to winegrapes. Kellie explained that the project would be phased: phase one will assess available models and conduct a needs assessment, while phase two will involve the work plan and implementation.
  - Kate emphasized the importance of understanding existing resources and their potential to enhance decision-making. She also highlighted the need to hire a contractor with the right skill set.
  - Lisa noted that models for powdery mildew and mealybug are particularly important for grapes.

#### **c) Cold mitigation products**

- Lindsay shared that the Southern Interior Horticulture Show has invited speakers to cover ABAzyne (Eastern Canada), microorganism technology (Oregon), and cellulose nanocrystals (WSU).
  - Lisa offered to help coordinate host sites for trials.
  - Sukhpaul suggested exploring drones for winter spray applications, noting snow as a potential challenge.

#### **d) Seaweed bioplastics.**

- Discussion provided during roundtable updates.

#### **e) Industry data strategy**

- This will be discussed at the CCLSP Partners Table meeting.

#### **f) Noise Control Technologies (Kellie Garcia/Lindsay King)**

- No discussion.

**g) Cherry cold hardiness decision support tool (Gail Nelson)**

- Gail shared that this idea emerged from BCFGAs Horticulture Committee discussions on decision-aid tools for climate resilience. She referenced a 2023 paper on sweet cherry hardiness models, which produced an open-access platform for growers. However, she noted it may not be widely used or useful without additional data. Gail emphasized the need for such tools, as members have called for more resources for climate adaptation.
  - Sukhpaul noted the connection to the freeze chamber discussion, emphasizing that understanding crop hardiness requires a freeze chamber.
  - Molly shared that the BCCA Extension Committee recently reviewed this paper but raised concerns about its limited focus on 1-2 varieties, which may not reflect geographical and management differences. She also noted that a freeze chamber would provide more reliable and comprehensive data.

| ACTION ITEMS                   |   |
|--------------------------------|---|
| MEMBER                         | ACTION REQUIRED   |
| Kellie Garcia & Molly Thurston | Connect RE: Seaweed Bioplastics   |
| Kellie Garcia & Sukhpaul Bal   | Connect RE: Industry Freeze Chamber   |
| Kellie Garcia                  | Update committee on Industry Data Strategy discussed at CCLSP Partners Table. |

**5. NEW BUSINESS**

**5.1 2025 PROPOSED MEETING SCHEDULE**

- Kellie presented the proposed 2025 meeting schedule. The meetings are planned for January 14, April 15, June 10, and November 12.

| ACTION ITEMS  |   |
|---------------|---|
| MEMBER        | ACTION REQUIRED                             |
| Shelby Austen | Send calendar invites to committee members. |

**6. ADJOURNMENT**

- The next Innovation and Technology Committee meeting will be held on Jan 14, 2025, via MS Teams.