

# INNOVATION & TECHNOLOGY COMMITTEE

Minutes of the **Innovation & Technology Committee** meeting held virtually via MS Teams on January 14, 2025.

**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           |
| Karen Yeung (CO-CHAIR)   | BC Wine Grape Council                      |
| Kate Durisek             | BC Wine Grape Council                      |
| Kellie Garcia (CO-CHAIR) | Cross-Commodity Leadership Support Project |
| Lindsay King             | BC Ministry of Agriculture & Food          |
| Molly Thurston           | Pearl Agricultural Consulting              |
| Nick Ibuki               | Summerland Varieties Corporation           |
| Shelby Austen            | Cross-Commodity Leadership Support Project |
| Sukhpaul Bal             | BC Cherry Association                      |

**Regrets:**

- |               |  |
|---------------|--|
| Felix Egerer  | Unsworth Winery                                  |
| Gayle Krahn   | Terralink Horticulture                           |
| Kathy Malone  | Hillside Winery                                  |
| Lisa Wambold  | Terralink Horticulture                           |
| Raj Gill      | Cohort Wholesale                                 |
| Sarah O'Brien | Okanagan-Kootenay Sterile Insect Release Program |
| Steve Brown   | Independent                                      |

**1. WELCOMING REMARKS**

**2. REVIEW OF ACTION ITEMS**

ACTION ITEMS		
MEMBER	ACTION REQUIRED	STATUS
Kellie Garcia & Molly Thurston	Connect RE: Seaweed Bioplastics	✓
Kellie Garcia	Update committee on Industry Data Strategy discussed at CCLSP Partners Table.	✓
Shelby Austen	Send calendar invites to committee members.	✓

**3. MEMBER ROUND TABLE UPDATES**

- Jesse shared that the research station has been quiet as everyone prepares for reporting and conference season. They are waiting for approval of their 2026 project letters of intent. If approved, they will submit full proposals and use the year to organize and coordinate with collaborators.
- Gail mentioned that the BCFGA has been collaborating on the Ministry's upcoming climate resiliency program criteria. Since the fall, their focus has been on strategic planning and grower engagement, and they are looking forward to their AGM in February.
- Kate provided an update on BCWGC's in-person R&D meeting in November at the research station, which had about 40 attendees. The group received updates on Sustainable Canadian Agricultural Partnership

(SCAP) funded projects. Future meetings will be held in person every six months. She also highlighted the next Third Thursday meeting, which will focus on remote sensing technology to monitor vigor and fruit quality. Kate is working with Kelowna's Agritech Innovation Program to explore collaborations on data analysis and AI. Additionally, she is managing the Sustainable Winegrowing BC program because the Program Manager moved to another position. The BCWGC recently held a Best Practices Steering Committee meeting and have their first Wine Grape Industry Task Force (WGITF) meeting scheduled for this week.

- Sukhpaul noted that BCCA is collaborating with the Ministry on cold hardiness projects, although details are still being finalized. This comes at the anniversary of the 2024 freeze.
- Lindsay explained that the climate resiliency program opens January 30. She highlighted the Southern Interior Horticulture Show (SIHS) in February, where the Ministry will lead an innovation panel featuring growers who have implemented new technologies. Cold mitigation products will also be showcased. When Galen asked about ABAzyne's registration, Lindsay clarified that it's still in progress, with more information expected at SIHS.
- Barbara has been focusing on setting up projects this winter, with her primary work focused on tissue culture.
- Hank observed that it's tradeshow season, so schedules are busy with many meetings planned over the next five weeks. He noted that fruit buds currently look good, but the upcoming cold snap is worrisome, especially with no snow cover. Cherry buds are starting to emerge, and pruning is needed soon. The situation is similar for pomme fruits.
- Karen noted that things are quiet in the grape sector, with pruning underway and growers focusing on replanting.
- Molly highlighted that BCFGA's crop protection committee is prioritizing provincial goals for the national meetings in March and is making good progress. She also updated the group on the BC Access to Plant Material project, including work on permits for the first shipment of Washington trees under the pilot. Molly noted challenges with imports from Ontario and Eastern nurseries due to additional pest concerns and reported residual bud damage from last year.

## **4. OLD BUSINESS**

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

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

- Molly informed the committee that preparations for BC DAS are already underway, with new sign-ups coming in and systems being set up for the year. She is also updating handouts and resources for the upcoming field season. While most models are offline still, she has been in contact with the programmer at Washington State University (WSU) and will implement updates as they become available during the season.

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

- Galen updated the committee on his work for the first phase of the BC DAS expansion to winegrapes. The goal is to determine what would be needed to expand BC DAS to winegrapes and whether it would be feasible and beneficial to move forward with the project. He has conducted interviews and plans to continue gathering input. So far, he has identified five key issues:
  - **Funding:** Sustaining the program remains a challenge, though the expansion is not expected to experience significant short-term costs, and the licensing agreement with WSU will remain unaffected. The WGITF has additional funds available over the next two years, which could support the project, particularly under the task force's data-sharing initiatives.

- **Resource materials:** The best practice guide, last updated in 2010, is currently undergoing a revision to align with current Ministry of Agriculture spray recommendations. Any expansion of BC DAS should integrate this updated guide to ensure relevance and accuracy.
  - **Appropriate models:** While models exist, none have been thoroughly vetted for BC's climate. WSU has recently added two grape-specific models to their system—a bloom predictor for 10 grape varieties and a nematode model. A meeting with WSU is planned to discuss these technical requirements.
  - **User uptake:** The success of the expansion depends on sufficient user adoption. More research is needed to identify potential volunteers for beta testing and to assess their willingness to dedicate time and resources.
  - **Academic backing:** Local academic support is promising but still developing. For instance, Dr. Urbez-Torres expressed interest in modelling if the DAS system expands to include grapes, though it has not been a focus for him to date.
- Galen opened the discussion to the committee for feedback on user uptake:
    - Hank shared his experience as a frequent user of the system, checking it multiple times daily during the season for fungus and insect models. Due to the varying geography of the valley, he emphasized the importance of reliable data stations, noting he relies on familiar stations when accuracy is critical. He also observed improvements in insect and disease models over time, driven by updates from WSU. Molly and Kate noted challenges with identifying growth stages, which often lead to misunderstandings. They suggested incorporating clearer guidance on growth stage-related tasks in the best practice guide.
    - When asked about alert systems, Molly explained that push notifications are a common request but are not currently feasible due to the large geographical area and manual backend requirements. Hank emphasized the system's role as a decision aid, designed to support but not replace grower judgment, a sentiment echoed by Jesse, who noted researchers' hesitations about growers over-relying on models.
    - Regarding cherries, Molly pointed out that export cherries have a zero-tolerance threshold for disease, unlike products that do not require cosmetic perfection. This highlights the different levels of reliance and expectations for the system across commodities.

## 4.2 2024 PROJECT IDEAS

- Kellie led the committee through the 2024 project ideas document.
  - **Centralized Horticulture Dashboard:** Gail raised questions about how a horticulture dashboard would differ from the Tree Fruit Production Guide (TFPG) and whether it should focus on the orchard level or industry-wide scale. Kellie agreed, suggesting it should tie into the TFPG and best practice guides.
  - **Cold Mitigation Sprays:** Kate expressed interest in BCWGC to collaborate with the Ministry on cold hardiness projects for products like ABAsyne. Lindsay offered to facilitate the connection between BCWGC and ABAsyne. These sprays, including ABAsyne, cellulose nanocrystals, and microorganism/protective proteins, will be showcased at the 2025 SIHS and were confirmed as a priority for 2025.
  - **Crop Yield Software:** Karen noted the industry demand for crop tracking software, although previous pilots like CropTracker saw low adoption. Gail confirmed that the BCFGA piloted CropTracker for a few years with minimal uptake, highlighting the need to understand growers' feedback before further investments.

- **Modern Sprayer Technology:** Hank recommended that he and Steve continue to monitor developments in sprayer technology, including autonomous options, instead of pursuing new initiatives. They noted John Deere’s autonomous tractor being trialled in California, though adapting such equipment to the Okanagan’s smaller orchards would be challenging.
  - **Industry Freeze Chamber:** Jesse explained that AAFC lacks capacity to manage freeze chambers for ongoing industry needs, though the equipment exists. He suggested industry-run chambers could be viable, but managing the logistics and paperwork would be challenging. Karen noted that grape freeze chamber research is ongoing but requires consistent funding, which is currently secured under SCAP until 2028. This will need to be revisited in 2026 to maintain priority.
  - **Drone/UAV Technology:** Kate updated the committee on a Third Thursday presentation that the BCWGC is hosting about using UAV technology for predicting vigor. Hank highlighted that drone-based spraying depends on pesticides being registered for UAV application. Jesse mentioned the minor use program at Summerland may soon yield results, while Sukhpaul suggested cross-commodity trials or field days when UAV products are available.
  - **Information and Data Sharing:** Identified as a priority for 2025, the group discussed the importance of accurate, comprehensive data for industry planning, resource initiatives, and farm decision-making.
- The committee agreed that cold mitigation sprays and information/data sharing should be prioritized for 2025, with updates from CCLSP, MAF, and BCCA on related discussions to be shared regularly.

ACTION ITEMS	
MEMBER	ACTION REQUIRED
Kellie/Karen/Gail	Connect RE: BCFGA CropTracker Pilot

**5. NEW BUSINESS**

**5.1 INDUSTRY DATA STRATEGY PROJECT**

- Kellie updated the committee that the CCLSP is collaborating with BCFGA to develop a proposal for an initiative that could encompass data-sharing, BRM data, and land-use mapping. The project will require significant support from stakeholders once it is scoped into a manageable framework. Addressing privacy concerns and other questions will be a critical step in moving the proposal forward.
  - Kate highlighted that data is a high priority for the Wine Grape Industry Task Force as well and expressed hope that an upcoming meeting with Kelowna Agritech will uncover AI opportunities to analyze this data, noting the likelihood of robust models already being available.

**6. ADJOURNMENT**

- The next Innovation and Technology Committee meeting will be held on April 15, 2025, via MS Teams.