CASCADIA INNOVATION CORRIDOR

INVENTING TOMORROW TOGETHER

Sustainable Agriculture Committee

Co-Chairs: Chad Kruger, Director, WSU Mount Vernon NWREC & Rickey Yada, Professor and Dean, UBC Vancouver Campus

Committee Members:

Dr. Rickey Yada	BC	Professor & Dean, Faculty of Land & Food Systems, UBC (Committee Co-Chair)
Chad Kruger	US	Director, WSU Mount Vernon NWREC (Committee Co-Chair)
Parm Bains	BC	Westbury Farms
Lenore Newman	BC	Univ Fraser Valley, Canada Research Chair in Food Security
Brooke Hayes	BC	British Columbia Ministry of Ag
Julia Diamond	BC	British Columbia Ministry of Ag
Scot Hulbert	US	WSU CAHNRS Office of Research, Associate Dean.
Tom Thornton	US	Northwest Agricultural Research Foundation, President.
Henry Bierlink	US	Washington Red Raspberry Commission, Executive Director.
Dr. David Theilmann	BC	A/Director, Summerland & Agassiz Research and Development Centres AAFC
Bob Martin	US	Northwest Center for Small Fruit, USDA Agricultural Research Service, Corvalis, OR

Big Ideas:

(1) Support the competitiveness and sustainability of our region's agricultural industry by attracting and retaining the world's best talent through coordinated cross-border research.

Goal: Establish a multi-institution Memorandum of Agreement to tighten research coordination across the region regarding expertise and infrastructure, especially prioritization in future hiring of faculty/scientists.

Plan:

- Create a committee with cross-border representation from Washington State University, University of British Columbia, the USDA Agricultural Research Service, Agriculture and Agri-Food Canada, industry leadership, and other research institutions including other regional universities/colleges. Committee established by June 2019.
- Pilot a coordinated information gathering process for a shared/coordinated faculty/research position committed for hiring (e.g., WSU Endowed Chair in Raspberry Industry Development) for improved research investment coordination. Process is complete.
- Host a cross-border gathering of research scientists and faculty at a US and Canadian agricultural research center (e.g., UBC, WSU Mount Vernon, Agassiz).
- Develop a Memorandum of Understanding amongst the research organizations/institutions regarding structures and procedures for regular communication and coordination regarding expertise and infrastructure, especially regarding future hiring plans for faculty/research scientists. MOU to be signed by June 30, 2020.

(2) Accelerate the development of Smart Agriculture in the Cascadia Region.

Goal: Identify and deploy novel digital technologies throughout the agricultural lifecycle that support data collection and analysis with a suitably robust data archiving and networking platform.

Plan:

- Bring big data to agriculture by creating a foundation and framework that allows farmers to gather, collect, share, and analyze data to create more sustainable solutions.
- Invite people from diverse industries to share ideas on how to integrate technologies into agriculture – like a hackathon, but for agriculture.
- Leverage the Cascadia region's existing research farms and sustainable agriculture research clusters as critical living laboratories for proof-of-concept deployments.

(3) Future proof our food supply by deploying forward-thinking strategies that promote farmers, protect agricultural lands, prepare for climate change, and provide environmental leadership.

Goal: Link technology and management innovation to measurement and real-world improvement of sustainability outcomes (on-farm and ecosystem level).

Plan:

- Improve practices to tie management of resources to measurement of outcomes to reveal what is working and what is not working.
- Recognize that land use is tied to land value, which legislation impacts greatly. Understand drivers of demand for competing values in environment and food production.
- Create an environment and culture that supports the dual objectives of environmental stewardship (soil, water and air) and agricultural viability.

2. Describe the context in which your Big Ideas will be implemented (current state of the industry, challenges being faced by organizations, how our region currently operates in this field, etc.)

The agricultural systems along the Cascadia Corridor are under the "sustainability microscope" given the proximity to and potential impact on critical water resources in the region. Farms and farm enterprises in the corridor must remain financially competitive amid increasing global competition, labor challenges, and pressure on land values while navigating an ever-changing landscape of technologies for production, processing, and marketing. Historically, public-private research partnerships have been a key factor in our region's agricultural success. Leveraging these partnerships will prove even more critical as the industry navigates those challenges.

The diverse agricultural industries of the Cascadia Corridor include small fruit, potatoes, dairy, greenhouse vegetable, nursery and ornamental, vegetable seed, and diversified mixed produce and livestock. Together, these industries comprise a significant economic driver for land use in the Cascadia Corridor, but what is needed is a coordinated approach to support the comprehensive agricultural research capacity necessary to support the competitiveness and sustainability of the industry. We must leverage this shared strength (including expertise, infrastructure, and research projects) that crosses agricultural industries including both public and private research institutions to ensure the continued competitiveness and sustainability of agriculture in the Cascadia Corridor.

Hiring of faculty and research scientists is one of the most impactful and resource-intensive decisions a public institution makes. Each institution has a multitude of objectives and goals to meet in the hiring process, including needs for discovery and translational research, community and industry engagement, and academic and non-traditional instruction. As traditional public funding tightens and the cost of research investments increase, our public and government institutions face increasing pressure to hire and retain high quality faculty whose research supports our industry partners. Ensuring coordinated research activities and hiring practices across Cascadia's public research institutions will improve efficiency, reduce total costs, and increase the success of the public-private partnerships supporting sustainable agriculture in the Cascadia Corridor.

3. Briefly describe how the realization of your ideas would impact life in Cascadia.

Ensuring that all of the public research institutions are coordinating research activities as it relates to future hiring practices will improve efficiency, reduce total costs, and increase the success of the public-private partnership supporting sustainable agriculture in the Cascadia Corridor.

4. What major milestones can be accomplished by 2021 and announced/recognized at the centennial celebration of the Peace Arch? What interim milestones must be reached between now and 2021?

Milestone	Description/notes	Timeline	Owner(s)
RC1 (Research Coordination)	Create a committee with cross-border representation from Washington State University, University of British Columbia, the USDA Agricultural Research Service, Agriculture and Agri-Food Canada, government and industry leadership, and other research institutions including other regional universities/colleges.	Committee established by June 2019.	Yada / Kruger
RC2	Pilot a coordinated information gathering process for a shared/coordinated faculty/research position committed for hiring (e.g., WSU Endowed Chair in Raspberry Industry Development, UBC Endowed Porfessorship in Food Processing – see below) for improved research investment coordination. Update from co-chair Kruger: A committee held a series of focus groups with industry and research partners across the border during 2019 to identify the appropriate niche and complementarities for the WSU Endowed Chair in Raspberry Industry Development. Update from co-chair Yada: The BC Ministry of Agriculture has committed to an Endowed Professorship in Food and Beverage Innovation at the Faculty of Land and Systems, University of British Columbia. The incumbent is Dr. Anubhav Singh whose research explores various emerging technologies for improving the nutrition, quality, processability and shelf life of processed food products. With particular focus & experience in processing of liquid particulate matter, a variety of innovative processing technologies is used to deliver a solution that is quantitatively and qualitatively better https://www.landfood.ubc.ca/anubhav-pratap-singh/. A Food and Beverage	Process is complete.	Kruger/Yada

	Innovation Centre planned for the UBC Farm (UBC internal capital project approval process ongoing) will serve as a central hub of the province's Food Hub Network and home of the Endowed Professorship.		
RC3	Host a cross-border gathering of research scientists and faculty at a US and Canadian agricultural research center (e.g. UBC, WSU Mount Vernon, Agassiz).	Process to be complete by March 31, 2020.	Yada / Kruger
RC4	Develop a Memorandum of Understanding amongst the research organizations/institutions regarding structures and procedures for regular communication and coordination regarding expertise and infrastructure, especially regarding future hiring plans for faculty/research scientists.	MOUs to be signed by June 30, 2020.	Yada / Kruger
RC5	Hold an exploratory conversation to frame the issues and needs for Big Ideas 2 and 3. Continue the above process, identify specific projects and execute	Process to be completed by December 2020 2021 -2035	Yada / Kruger Kruger/Yada
RC6	Invite people from diverse industries to share ideas on how to integrate technologies into agriculture – like a hackathon, but for agriculture. Continue the above process, identify specific projects and execute	Process to be completed by June 2021 2021-2035	Yada / Kruger Kruger/Yada