

# Amy Norgaard MSc PAg

Agrologist / Researcher / Soils Instructor / Policy Advisor

## EDUCATION & TRAINING

---

- 2020 **MSc Soil Science**, University of British Columbia; advisor: Dr. Sean Smukler  
2020 **Professional Agrologist (PAg)**, British Columbia Institute of Agrology  
2015 **BSc Applied Biology (Honours)**, University of British Columbia  
*In progress* **Nutrient Management Planner**, BC Ministry of Agriculture & Food

## WORK EXPERIENCE

---

- 09/2021 – Present **Climate Change Policy Advisor**, *BC Ministry of Agriculture & Food (AF)*
- I led the Climate Preparedness and Adaptation Strategy Treasury Board submission, securing \$11M for AF to support climate change adaptation in BC agriculture. I also:
    - Evaluate complex climate change issues/opportunities facing BC agriculture to strategically advise on climate action policy development, oversight, and decisions
    - Develop and implement governance, accountability, and performance management/measurement frameworks and reporting
    - Work with FPT counterparts to coordinate policies across organizations
    - Develop and maintain relationships with stakeholders
- 08 – 09/2021 **Research Lead**, *Agricultural Climate Adaptation Research Network (ACARN)*
- Reviewed literature & interviewed researchers to write research summaries
- 2020 – 2021 **Research Assistant**, *Sustainable Agricultural Landscapes Lab, UBC*  
Ministry of Agriculture, Food and Fisheries contract, ‘Opportunity assessment of agricultural greenhouse gas (GHG) reductions and carbon sinks’:
- Developed an excel-based Multi-Criteria Framework tool to evaluate and prioritize beneficial management practices (BMPs) from across agricultural sectors to optimize GHG benefits, environmental co-benefits, and BMP adoptability
  - Developed a multi-functional BMP database and consulted stakeholders to collect feedback on methodologies
  - Worked with Environment and Climate Change Canada and the BC Ministry of Environment and Climate Change Strategy to acquire data and understand methodologies
  - Analyzed, compared, and identified issues in emission data and methodologies across provincial, national, and international agricultural GHG emission inventories
  - Supervised 2 research assistants
- 2018 – 2020 **Graduate Research Assistant**, *Sustainable Agricultural Landscapes Lab, UBC*
- Worked directly with 20+ producers to conduct regional field trials on organic vegetable farms in three regions: Pemberton, Vancouver Island, and the Fraser Valley
  - Collected and analyzed soil, compost, and crop samples, developed crop-specific nutrient budgets, calculated amendment rates, and quantified and evaluated impacts to yield, input costs and soil properties of different nutrient management strategies
  - Communicated technical info. to producers (farm visits, email, text, phone call, reports)
  - Supervised undergraduate worklearn students
- 2015 – 2018 **Farmhand & Farmers’ Market Sales Manager**, *Ice Cap Organics, Pemberton, BC*
- Managed field crops (seeding to harvesting)
  - Managed market sales (product transport, cash sales, and employees)
- 2016 – 2017 **Program Coordinator**, *Richmond Food Security Society, Richmond BC*
- Streamlined managing 300+ program members by implementing a program management database for tracking payments, communication, and waitlist
  - Recruited volunteers and collaborated with local stakeholders
- 2014, 2015 **Undergraduate Research Assistant**, *Sustainable Agriculture Landscapes Lab, UBC*
- Developed a novel protocol for calibrating soil moisture probes for use on non-soil substrates (e.g., compost) and performed soil enzyme analysis
  - Systematically reviewed and input data for the southwest BC Manure and Crop Nutrients Database to support provincial nutrient management planning tools

- 2012, 2013 & 2014      **Seasonal Wildfire Fighter, BC Ministry of Forests, Lands and Natural Resources**
- Performed wildfire suppression, including structure protection in interface fires

## PROFESSIONAL CONTRIBUTIONS

---

### Agricultural Extension – *contract*

- 2019 – present      **Soils instructor, employers listed below**
- Develop and deliver learner-centered classroom and field instruction for:
    - KPU - Tsawwassen First Nation Farm School
    - KPU Richmond Farm School
    - UBC Farm Practicum in Sustainable Agriculture
  - Standardized soils education curriculum across three university farm schools
- 2022      **Workshop facilitator, Sustainable Agricultural Landscapes Lab, UBC**
- Co-led development/delivery of two workshops (120+ attendees) and two podcasts
- 2022      **Soils instructor, (\$10k contract), Gulf Islands Food Co-op**
- Designed and delivered a ‘Healthy Soils Mini Course’ (four zoom lectures, four field days) for producers on four BC Southern Gulf Islands
- 2020 – 2021      **Nutrient management consultant, with ES Cropconsult**
- Co-developed a new nutrient management service for Fraser Valley producers

### Agricultural Extension – *volunteer/unpaid or honorarium*

- 2021      **Workshop facilitator.** West Vancouver Library. *From dirt to soil*. June 5.
- 2021      **Invited presenter.** Society Promoting Environmental Conservation (SPEC) 2021 Small Farm Sessions. “Sustainable soil and nutrient management”. Mar. 4
- 2020      **Guest Speaker.** FarmFolk CityFolk. Topic: Building regenerative soil field day. Oct. 22
- 2020      **Invited presenter and workshop facilitator.** Certified Organic Associations of BC Conference. Richmond BC. Feb. 27. Topic: Organic vegetable nutrient management.
- 2020      **Invited presenter.** Pemberton Farmers’ Institute – Soil Health and Fertility Seminar. “Nitrogen and Phosphorus in Organic Vegetables”. Pemberton BC. Feb. 22
- 2020      **Invited presenter.** Pacific Ag. Show – Horticultural Growers’ Short Course. “Regional Challenges in Organic Vegetable Nutrient Management”. Abbotsford BC. Feb. 1
- 2019      **Invited presenter.** Certified Organic Associations of BC Conference. “Nitrogen and Phosphorus on Organic Vegetable Farms”. Vernon BC. Feb. 23
- 2019      **Invited presenter.** Island Agricultural Show. “Optimizing Nitrogen and Phosphorus in Organic Vegetable Production”. Saanichton BC. Feb. 2
- 2019      **Invited presenter.** Pacific Agricultural Show – Horticultural Growers’ Short Course. “Composts and Nitrogen Management”. Abbotsford BC. Jan 26

### Publications

- Norgaard A, Lewis D, Borden KA, Krzic M, Carillo J, Smukler S.** (*In final review*) Trade-offs in organic nutrient management strategies across mixed vegetable farms in southwest British Columbia. *Frontiers in Sustainable Food Systems*
- Norgaard A & Marr J.** [UBC field trials: Balancing nitrogen and phosphorus on organic vegetable farms](#). OrganicBC podcast.
- Norgaard A.** (2021). [Climate Change Mitigation in Agriculture: BC Research Summaries](#). Reports for the Agricultural Climate Adaptation Research Network.
- Norgaard A, Li C, Borden K, Smukler S.** (2021) [Opportunity assessment of agricultural greenhouse gas reductions and carbon sinks](#), Project Summary Report. Report to the BC Ministry of Agriculture, Food and Fisheries
- Norgaard A, Borden K, Li C, Friesen H, Smukler S.** (2021) [Opportunity assessment of agricultural greenhouse gas reductions and carbon sinks](#), Report 1: BC Agriculture GHG Emission Profile Analysis. Report to the BC Ministry of Agriculture, Food and Fisheries
- Norgaard A, Li C, Hamilton H, Smukler S, Borden K.** (2021) [Opportunity assessment of agricultural greenhouse gas reductions and carbon sinks](#), Report 2: Multi-criteria framework for GHG Emissions and Co-benefits. Report to the BC Ministry of Agriculture, Food and Fisheries

- Hanuszak P, Li C, **Norgaard A**, Borden K, Smukler S. (2021) [Opportunity assessment of agricultural greenhouse gas reductions and carbon sinks](#), Report 3: Agroecosystem Models for GHG Emissions and Co-benefits. Report to the BC Ministry of Agriculture, Food and Fisheries
- Norgaard A**, Lewis D, Borden K, Smukler S. (2021). [Regional field trials final project report](#). UBC Organic Vegetable Nutrient Management Project.
- Holmes E, Yates D, **Norgaard A**. (2019) [Ask an Expert: Soil Testing](#). BC Organic Grower. Apr 1
- Norgaard A**, Lewis D, Smukler S. (2018). Regional field trials baseline report. UBC Organic Vegetable Nutrient Management Project.

### Media Coverage, Guest Articles, & Interviews

- 2022 **Media coverage.** [2022 Healthy Soils Course](#). Gulf Islands Food Co-op 2022.
- 2021 **Interviewee.** [Pilot program bridges the extension gap for Gulf Island farmers](#). Country Life BC.
- 2021 **Interviewee.** Women in agriculture video series. RBC.
- 2021 **Interviewee.** [Meet a young agrologist helping organic farmers with their green production goals](#). National Observer.
- 2020 **Invited Panelist.** 'Prairie Invasions: A Lullaby'. Richmond Art Gallery.
- 2020 **Media coverage.** [Pacific Ag Show keeps up with changing times](#). Country Life BC.
- 2020 **Interviewee.** [Soil matters: Climate activists in our midst](#). Pique News.
- 2019 **Interviewee.** [What the Farmers Know](#). Patagonia, Inc.

### Service to the Profession

- 2021 **Panel moderator.** UBC Centre for Sustainable Food Systems. [Climate change: Mobilizing industry to make a difference](#). Online. Aug. 5
- 2021/22 **Director.** Pacific Regional Soil Science Society
- 2020 **Panel moderator.** 300+ attendees. [UBC Connects Masterclass with Vandana Shiva: 'The future of food and farming in a Pandemic World'](#). Online. July 31
- 2020 **Co-reviewer.** Manuscript peer review for *Geoderma*.
- 2020 **Panel moderator.** 100+ attendees. *PRSSS 2020 Spring Workshop & AGM: 'Emerging trends in soil science education and practice'*. Abbotsford BC. Mar 7
- 2018 – 2020 **Secretary.** Pacific Regional Soil Science Society

### Service to the University

- 2020-2021 **Research Mentor.** Research EXperience Program. UBC.
- 2019 **Invited Panelist.** *Is Grad School Right For You?* Faculty of Land and Food Systems UBC

## TEACHING

### Teaching Assistantships

- 2020 Introduction to Soil Science (2<sup>nd</sup> year undergraduate). UBC
- 2019, 2020 Agroecology I: Introduction to Principles and Practices (2<sup>nd</sup> year undergraduate). UBC
- 2019 Key Indicators of Agroecosystem Sustainability (3<sup>rd</sup> year undergraduate). UBC

### Teacher Training & Development

- 2020 Completed pedagogical training: 'Developing your teaching portfolio and philosophy', 'Introduction to the scholarship of teaching and learning', and 'Supporting student awareness of learning: using metacognition as a tool in teaching'. UBC Centre for teaching and learning.
- 2019 UBC Instructional Skills Workshop for Graduate Students (3 days)

### Students Advised

- In progress* Todd, A – BSc Student – BSc Thesis. UBC [co-supervisor]
- 2021 Lily, Madeleine – BSc Student – Undergraduate research project, UBC
- 2019 Friesen, H. – BSc Student – Research methods course. UBC

## FELLOWSHIPS AND AWARDS

---

### Fellowships

2020 Hugo E Meilicke Memorial Fellowship [\$5,333]  
2019 Theodore E Arnold Fellowship [\$2,650]  
2019 Hugo E Meilicke Memorial Fellowship [\$8,017]

### Awards

2018 British Columbia Institute of Agrologists Graduate Student Award [\$1,500]  
2015 British Columbia Institute of Agrologists Dean Blythe A Eagles Scholarship [\$400]  
2015 Faculty Women's Club Marion Nodwell Memorial Scholarship [\$1,450]  
2014 Bruce MacDonald Horticulture Travel Scholarship [\$650]  
2014 Trek Excellence Scholarship for Continuing Students [\$1,500]  
2014 Rhona Clare Gillis Scholarship [\$950]  
2014 Go Global Award: Global Seminar Programs [\$1,000]  
2014 Jacob and Gertrude Narod Scholarship [\$325]  
2010 President's Entrance Scholarship [\$2,500]