

Canadian Peatland Science Initiatives - Industry Level Success

August 10, 2023

Baltic Peat Producer Forum

Asha Hingorani, CSPMA President



Canadian Sphagnum
Peat Moss Association

Association canadienne
de la tourbe de sphaigne

OUTLINE

- Who is the CSPMA?
- RE3 & its importance
 - Research Partnerships and Programs
 - Restoration and Research Outcomes
 - Other Projects and Initiatives
- The Canadian Collaboration





The CSPMA

The CSPMA represents 14 horticultural peat moss producers (more than 90% of the industry)

Our role:

- Promote the responsible management of Canadian peatlands
- Provide leadership in environmental and social stewardship as well as economic well-being from the wise use of peatlands
- Support research related to peatlands and promote science-based best practices
- Collaborate and communicate with various stakeholders

The CSPMA Board

- Valérie Berger, **Berger**
- Michel Guay, **Premier Tech**
- Michael Watcher, **ASB Greenworld**
- Yedidia Koschitzky, **Sun Gro Horticulture**
- Bert Ruiters, **Jiffy**
- Jody Williston, **Therault & Hachey Peat Moss**
- Pierre Sabourin, **Plastiques Balcan**
- Jeff Knape, **Profile Products**



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A group of people, including students and researchers, are gathered in a field of young trees. Some individuals are kneeling or crouching to examine the plants closely, while others stand and observe. A wooden boardwalk is visible in the foreground. The scene is set outdoors with a dense forest in the background.

RE3: Quebec City

RE3 CONFERENCE
2023
RECLAIM
RESTORE
REWILD
June 11-15, 2023 • QUEBEC CITY • CANADA



RE3: Quebec City

- The CSPMA was the main sponsor
- Peat Industry Hub
- Global Peatland Initiative Workshop (GPI)
- Restoration Short Course Delivered by Marie-Claire Leblanc, CSPMA
- Women in Restoration
- Mid and Post Conference Excursions



RE3: Quebec City – Key Takeaways

A group of people, many wearing high-visibility safety vests in orange, yellow, and blue, are gathered in an outdoor setting, possibly a field or construction site. They appear to be engaged in a discussion or a presentation. The background is slightly blurred, showing more people and what might be a body of water or a large open area under a clear sky.

The Research Investments Matter and Make a Difference for Industry Sustainability

Peat Industry Collaboration is the Key to Success

A group of approximately 15-20 people, mostly men, are walking through a field of tall grass and numerous small white flowers. They are wearing orange safety vests with reflective yellow-green stripes. Some are wearing hats and boots. The background consists of a line of young, thin trees under a clear blue sky with a few wispy clouds. The overall scene suggests an outdoor field study or a site visit.

SCIENCE & PROJECTS

Science is our First Defense

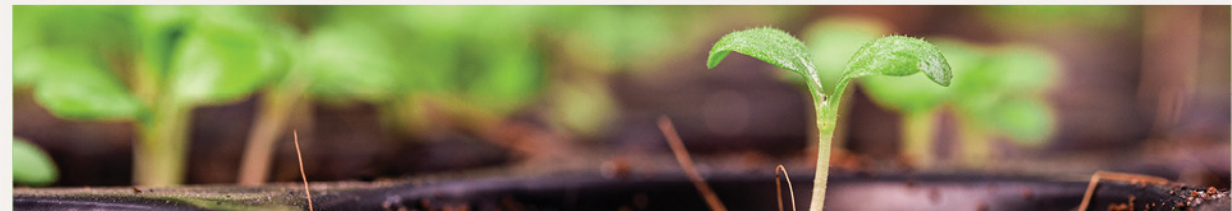
The Horticultural Peat Industry has been collaborating for decades with the science community

Since 1996, the CSPMA has made possible **\$20M** worth of research projects, not a small amount for a small industry!

An important part of the research conducted focused on the development of Best Management Practices, especially ecological restoration techniques for post extracted peatlands



PERG Meetings, March 2023, Montreal



SCIENCE & PROJECTS

- Current Collaborative Research Programs
 - Responsible Management and Ecological Restoration of Peatlands (ULaval, UWaterloo, UAlberta, Valorēs, etc.)
 - Carbon Emissions during Peat Production, Use and End-use (McGillU, UWaterloo, UAlberta)
 - Restoration and ecotone creation in South East Manitoba (BrandonU and UWaterloo)

2022 Industry Investment:
Cash: \$320,600 / In-kind: \$420,600



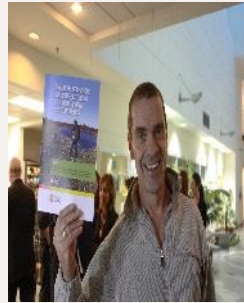
Responsible Management and Ecological Restoration of Peatlands

- Team of researchers with complementary expertise



Dr. Rochefort

Peatland plant ecology



Dr. Price

Wetland hydrology



Dr. Strack

C biogeo-chemistry



Dr. Whittington

Hydromorphic setting



Dr. Shotykh

Geo-chemistry



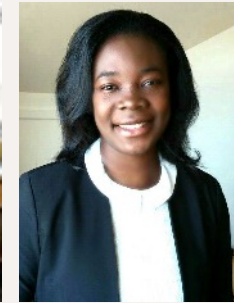
Dr. Devito

Landscape ecohydrology



Dr. Godbout

Irrigation systems



Dr. T. Simon

Soil science



Responsible Management and Ecological Restoration of Peatlands

1. Managing for biodiversity
2. Managing for water regulation and quality
3. Managing for carbon sequestration
4. Managing for *Sphagnum* biomass

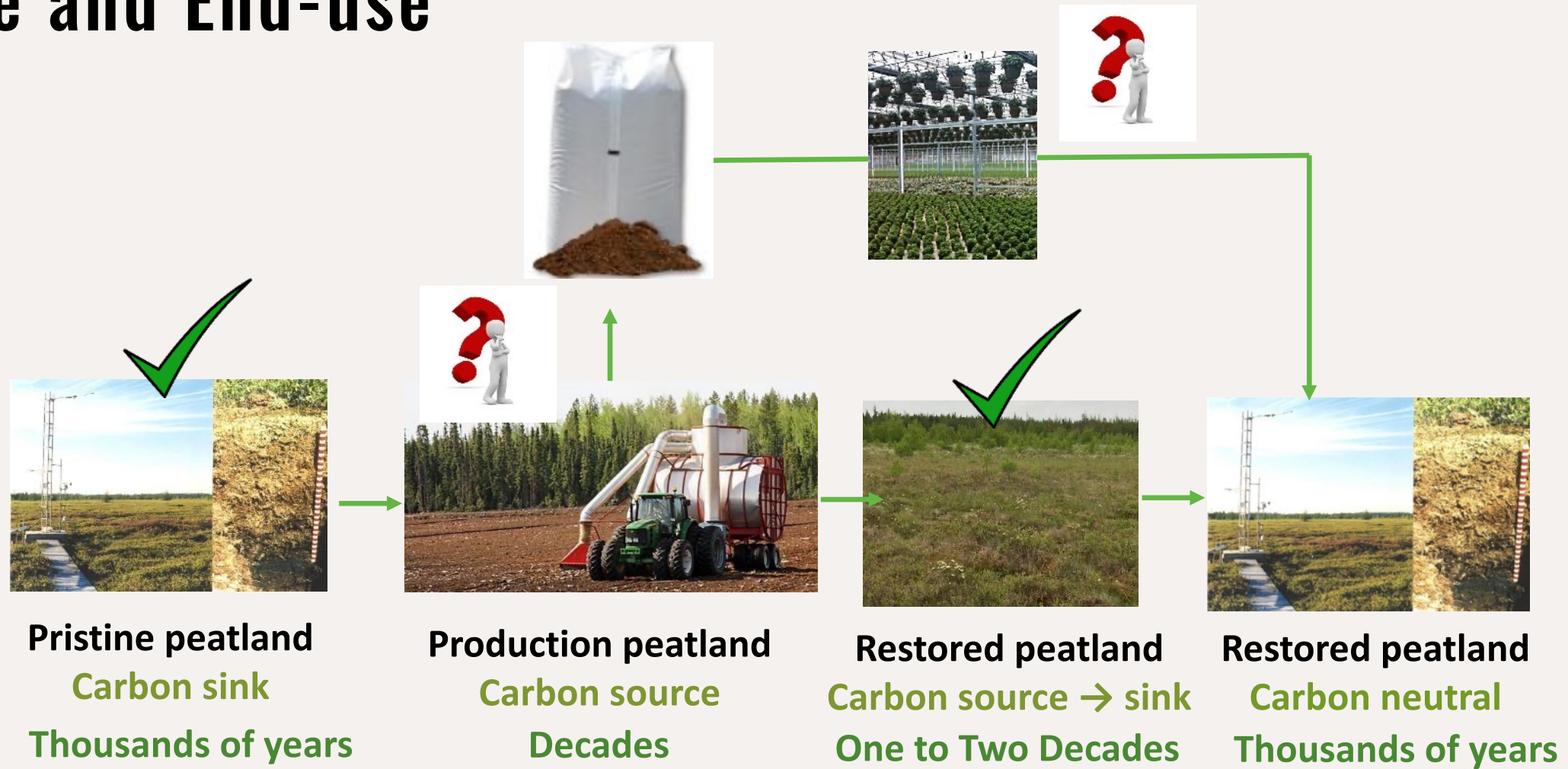
www.gret-perg.ulaval.ca

Some specific objectives:

- Indicators to assess the effectiveness of restoration
- Fine-tuning bog restoration
- Adapting the method for fen
- Biodiversity of arthropods, pollinators and birds
- Hydrological connectivity in the landscape
- Optimizing *Sphagnum* productivity



GHG Emission Factors from Peat Extraction, Use and End-use



GHG Emission Factors from Peat Extraction, Use and End-use



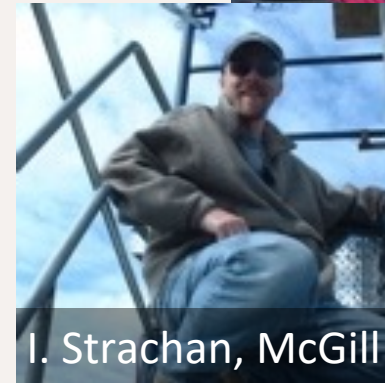
Chamber method



Eddy covariance tower



N. Roulet, McGill



I. Strachan, McGill



M. Strack, Waterloo



D. Olefeldt, Alberta



T. Moore, McGill



Fen restoration and ecotone creation in South East Manitoba

- 5-year research program (2021-2026) specific to fen restoration
- Spin-off and continuity of previous programs
- Lead by Dr. Pete Whittington (BrandonU)



A photograph of a grassy field with a concrete drainage ditch. The ditch runs diagonally from the upper left towards the lower right. The grass is a mix of green and brown, suggesting some dryness or a specific type of vegetation. The text "Restoration and Research Outcomes" is overlaid in white, centered in the middle of the image.

Restoration and Research Outcomes

Ecological Restoration (MLTT) – 8 steps

Planning



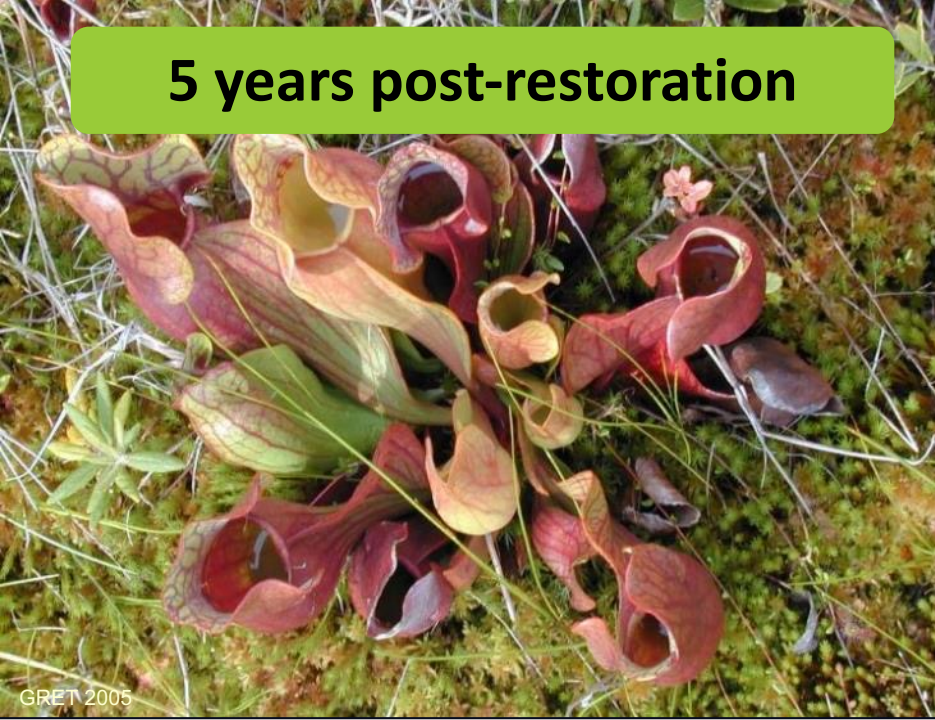
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Monitoring

5 years post-restoration



19 years post-restoration



2,000 ha restored peatland by the MLTT in Canada



Bois-des-Bel research station (Québec), 16 years post-restoration

Ecological Attributes of Restored Peatlands



Nugent et al. 2018, Nugent et al. 2019



Hugron et al. 2020



Guêné-Nanchen et al. 2018



MLTT restored peatlands

Fire resistant and short-term resilient

Blier-Langdeau et al. 2021

Other Recent Projects and Initiatives

- “CanRePeat: Restoring historically harvested peatlands in Canada”
ECCC Nature Smart Climate Solutions Fund
- CSPMA Statistics & NPRI Monitoring Update
- Sphagnum Farming Synthesis Report
- Update of the GHG calculator in support of certification with UQAR
- Support to other external programs:
 - Can-Peat: Canada’s peatlands as nature-based solutions to climate change
 - Canadian Wetland Roundtable





Canadian Collaboration

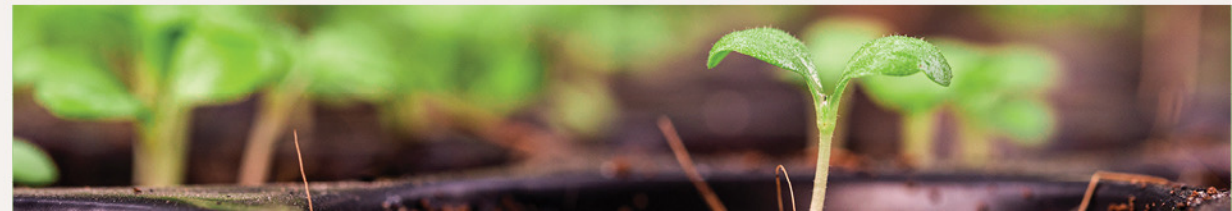
Keys to Success

- Industry funding collaboration is key
- Find a Scientific Champion & Dedicated Research Team
- Academic institutions willing to partner
- Government funding and other partners
- Looking beyond 2050 - a good communication strategy helps to keep stakeholders informed



Committees

- Science Coordinating Committee (SCC)
 - Follow-up of ongoing research projects by various research collaborators: ULaVal, McGillU, UWaterloo, UAlberta, BrandonU, Valorēs, DUC, etc.
 - Update on our current projects, projects development
 - Planning of scientific communication and knowledge transfer activities
- CRD-UL Advisory Committee (AC)
- More detailed progress report
 - Review of scientific manuscripts
- Many specific **projects** meetings



Conclusion

- Industry-wide efforts to address common concerns
- Unique, long lasting research partnerships
- Focus on ecological restoration
- Other sustainability initiatives and partners
- Science-based evidence to support best management practices, policy and regulations





Thank you / Merci!

Q&A

Contact: Asha Hingorani, CSPMA President

asha@peatmoss.com