

# Soil Health Workshop – 2023

## Report

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APRIL 2023

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Suggested Citation: Singh, S. (2023). Soil Health Workshop – 2023 Report (17 April 2023), Alberta Land Institute: Edmonton, Canada. Online: <https://www.albertalandinstitute.ca/research/research-projects/project/soil-health-policy-science-and-law-in-action>



# Soil Health Workshop – 2023

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### 1. Aim and objectives

Soil Health Workshop-2023 aimed to bring together a group of policymakers, policy analysts, researchers, producers and ranchers, government practitioners and non-profits to understand and reduce/mitigate the gaps between the federal and provincial policies on soil health and the actual farm management practices on the ground in Alberta. The workshop was essentially a discussion platform to foster a critical debate among participants on **'What are the current soil health policies and programs in Alberta and how much they have been contributing to improving and maintaining soil health in Alberta in terms of encouraging farmers/producers to adopt targeted farm management practices that help improve and maintain soil health?'** It aimed to create a common platform for farmers/ranchers, researchers and policy analysts to inform and discuss the potential gaps identified so that the current policy framework on soil health in Alberta can be revisited and updated to accommodate the practical issues and concerns that hinder farmers from adopting the best farm management practices to improve soil health on their farms.

### 2. Workshop agenda

The workshop was conducted on Friday, 17 March 2023 (10 am to 4 pm) in the Lister Center at the University of Alberta. As per the agenda (please see below), we had two keynote speakers. The first keynote speech was delivered by **Mr. Don Lobb**, who is a Soil Advocate and member of the Ontario Agriculture Hall of Fame while the second speaker was **Professor M Derek MacKenzie**, who is an eminent Soil Scientist at the Faculty of Agricultural, Life and Environmental Sciences, University of Alberta.



# SOIL HEALTH WORKSHOP - 2023

Understanding and mitigating the gaps between the federal and provincial policies related to soil health and farm management practices in Alberta

Friday, 17 March 2023 - 10 am to 4 pm (A FREE event & lunch provided)  
Aurora Room, Lister Centre, University of Alberta, Edmonton

## KEYNOTE SPEAKERS

Don Lobb, Soil Advocate



DON LOBB, P. Ag. (Hon), owned a successful farming operation in Ontario that became a model for sustainable management of soil, water, and the natural environment. It was the site of more than 50 major research projects, many of which focused on soil and water management. Don has developed, applied, and promoted soil care practices and the soil care ethic. His dedication and leadership have been recognized provincially, nationally, and internationally, including the University of Guelph (Distinguished Service Award), the Ontario agricultural Hall of Fame and the Canadian Conservation Hall of Fame, and in 2021, was named Canada's first farmer Soil Science Super Hero.

M Derek MacKenzie, Associate Professor  
University of Alberta



Professor MacKenzie is a soil scientist with 20 years of experience examining biogeochemical transformations in forest, reclamation, and agricultural soils. He spent a great deal of that time studying the effect of black carbon on soil processes and its use in managed ecosystems. Recently, he started involving in soil health research and regenerative agriculture BMP's and curating a database for Alberta soil health (DASH).

## WORKSHOP SCHEDULE

9.30 - 10.00	Check-in
10.00 - 10.10	Welcome
10.10 - 10.30	Soil Management-Frontline Experience by Don Lobb
10.30 - 10.50	Discussion
10.50 - 11.00	Tea/coffee break*
11.00 - 11.40	1 <sup>st</sup> round of discussion on "What are the current policies on soil health in Alberta and how much they have been able to contribute to maintain and improve soil health in Alberta?" Led by a Researcher/Policy Analyst
11.40 - 12.00	Conclusion of 1 <sup>st</sup> round
12.00 - 12.40	Lunch Break*
12.40 - 1.00	Making Soil Health a Working Concept in Alberta by Professor MacKenzie
1.00 - 1.20	Discussion
1.20 - 1.30	Break for forming groups
1.30 - 2.00	2 <sup>nd</sup> round of discussions on "What are the current farming practices that help improve or maintain soil health in Alberta?" Led by a Farmer/Rancher
2.00 - 2.20	Conclusion of 2 <sup>nd</sup> round
2.20 - 2.30	Tea/Coffee Break*
2.30 - 3.10	3 <sup>rd</sup> round of discussions on "What are the potential gaps in policy formation and/or its implementation that hinder maintaining or improving soil health in Alberta and how to mitigate these gaps?"
3.10 - 3.30	Conclusion of 3 <sup>rd</sup> round
3.30 - 3.55	Next steps: "How to create a common platform of farmers/ranchers, researchers, and policy analysts to inform the policymakers to mitigate the identified gaps that hinder soil health improvement in Alberta?"
3.55 - 4.00	Vote of thanks

\*Refreshments and Lunch will be provided to all attendees



### 3. Participation: Invitees and attendees

ALI sent out invitations to 137 people belonging to a range of professional backgrounds such as researchers, farmers/producer groups, policy analysts and students studying soil health in Alberta. With a couple of follow-up reminders and registration requests, 27 participants attended the workshop (Figure 1). The group was quite diverse to discuss the issues laid down in the workshop agenda. Participants were affiliated with the University of Alberta, Alberta Innovates, Rural Routes to Climate Solutions, Government of Alberta, Mount Royal University, Agriculture Financial Services Corporation, Alberta Forage Industry Network Board, Union Forage and Southern Cross Livestock, Save Soil, Farming Smart and Clinton in Huron Country.

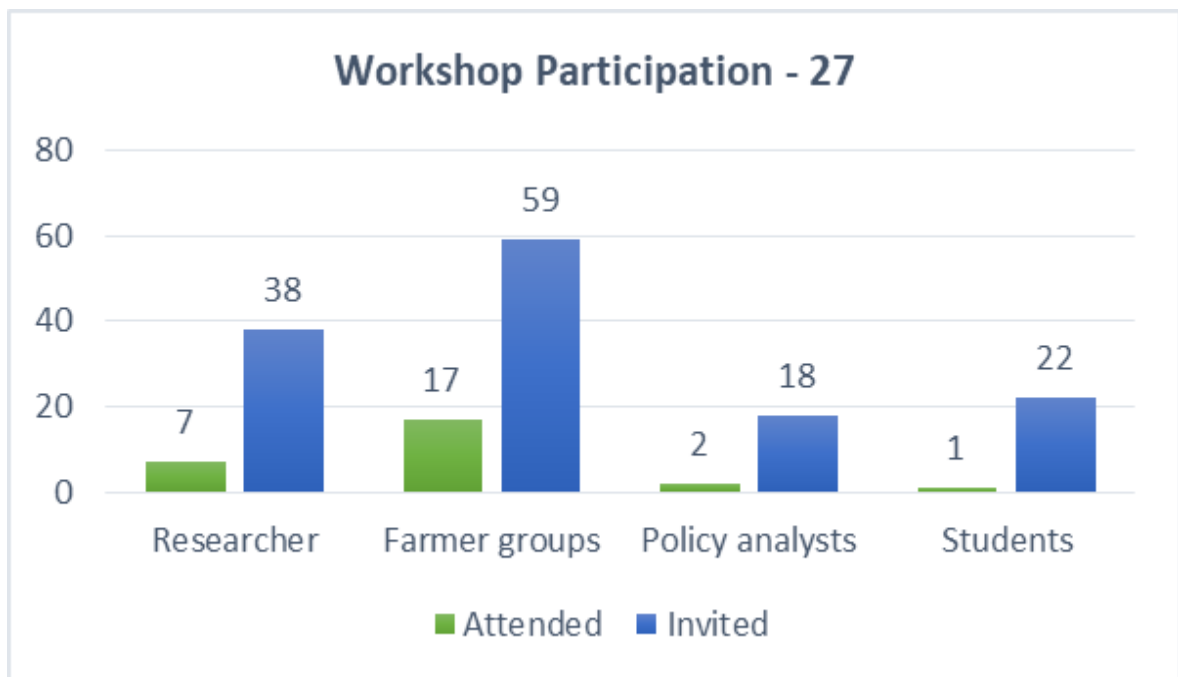


Figure 1: Distribution of invitees and participants

## 4. Keynote presentations

- 4.1 ***Mr. Don Lobb***: While referring to his long 30–year experience of practicing farming in Ontario, Mr. Lobb focused his speech on no-till practice to manage/reduce soil erosion, particularly from wind and water. He emphasized that the no-till system is economically and environmentally more beneficial and sustainable when compared with conventional tillage. No-till along with cover-cropping helps maintain soil biota (earthworms, fungi, bacteria) and organic carbon in the soil. He noted that with the increased population, we started producing more food from the same land area which eventually deteriorated the soil health. These trends can be reversed by adopting the best soil management practices that will require innovation, bold policies, and investment in the farm sector.

His presentation was well-received by the audience and invited many questions, particularly on a committee on soils at risk, and decision-making processes among farmers. Mr. Lobb answered all questions very eloquently and fostered the discussion towards adopting best farm management practices for the overall improvement of land, water, and soil.

- 4.2 ***Professor Derek MacKenzie***: Professor MacKenzie talked about soil health and its relationship with human health. He explained his current project where he is analyzing soil samples to contribute to the national soil database. Professor MacKenzie collected 4000 soil samples across Alberta and is currently analyzing them using various soil quality parameters. He is looking forward to collaborating with other soil scientists and institutions to expand the soil sample base for better coverage across all regions of Alberta. Through the Canadian Society of Soil Sciences (CSSS), he is trying to establish a Canadian Institute for Soil Health, a nodal institute to create a network of soil scientists to encourage efforts towards sampling and testing of soil samples across Alberta. Upon presentation, participants posed various questions related to soil sample results, particularly about the current state of soil carbon in Alberta and



discussed how to expand the soil sample database. Another Soil Scientist from the audience offered to collaborate with Professor MacKenzie.

## 5. Discussions and Conclusions

### *5.1 First round*

**Question:** What are the current policies on soil health in Alberta and how much have they been able to contribute to maintaining and improving soil health in Alberta?

**Format of discussion:** All the participants were divided into four groups (taking at least one member from each group mentioned in Table 1), and each group was allotted one table with the required writing support material for making notes and then presenting. Each of the four groups discussed the above-mentioned question separately and then from each table, one group leader presented their conclusion to other groups. Then all the four groups discussed to reach a conclusion.

**Conclusions:** The majority of groups were of the view that **there is no comprehensive policy on soil health in Alberta** although there are some short/mini policy frameworks such as Regional Agriculture Master Plan, Edmonton Metropolitan Regional Board, Conservation cropping protocol, on-farm climate action fund, 30% reduction in fertilizer/GHG, Pan Canadian Approach to transforming species at risk conservation in Canada and Conservation easements, they came in the form of advisories for producers to follow with the aim of maintaining/improving soil health. Participants argued that there is a lack of coordination among all these programs though they all aim to improve/maintain soil health. Further, these programs are not well disseminated among producers. Overall, there is no clear-cut policy on soil health in Alberta.



## **5.2 Second round**

**Question:** What are the current farming practices that help improve or maintain soil health in Alberta?

**Format of discussion:** Same as for Round 1.

**Conclusions:** Participants outlined various farm management practices, such as no or reduced tillage, cover cropping, integrating livestock, crop rotations, reduced fertilizer, and pesticides input, composting, Integrated Pest Management, rotational grazing, soil testing etc., that are being undertaken by producers in Alberta. However, participants argued that producers need incentives or financial support from government to adopt the best management practices that help maintain/improve soil health as each of these practices lead to higher cost of cultivation. Producers are aware of the state of soil health on the farms but limited knowledge of the current policy framework on soil health and lack of incentives doesn't allow them to adopt the best management practices that can improve soil health.

## **5.3 Third round**

**Question:** What are the potential gaps in policy formation and/or its implementation that hinder maintaining or improving soil health in Alberta and how to mitigate them?

**Format of discussion:** All the participants were randomly divided into four groups, and each group was allotted one table with the required writing support material for making notes and then presenting. Each of the four groups discussed the above-mentioned question separately. Then, in the second sub-round, one member from each of the four groups was requested to sit at four of the five chairs placed in the center of the room to facilitate a “fishbowl” discussion. The four participants kicked off the discussion with their group conclusions while the remaining



participants were sitting/standing around them. The fifth chair was kept empty to be occupied by another member from the audience at anytime. As one member joined the discussion, one, who was already sitting on one of the four chairs, left to make the space available for the new discussant. It was an on-going discussion with fresh ideas coming into the discussion.

**Conclusions:** The participants came up with two main conclusions: First, there is a lack of a commonly accepted definition of soil health; Second, there is a definite disconnect between policy and practices as soil health is not a priority for policymakers. Then, while answering how to bridge these gaps, participants suggested that the currently available policies on soil health should be disseminated among producers. Producers should be given incentives to adopt the best management practices so that they can be able to maintain/improve soil health on their farms. Some participants suggested that there must be some programs to help producers get their soils tested on a regular basis at least to know what exactly the situation is, so they can make more informed decisions and adopt a focused approach to maintaining/improving soil health on their farms.

#### **5.4 Fourth round**

**Question:** How should a common platform of producers, researchers, and policy analysts be created to inform the policymakers to mitigate the identified gaps that hinder soil health improvement in Alberta?

**Format of discussion:** All the participants were asked to form three groups following their individual interest in the following platforms:

- 1) Web-based platform
- 2) In-person events such as workshops/conferences
- 3) Any other platform such as a combination of existing groups in Alberta

Each of the three groups discussed the advantages and disadvantages of each of the three above-mentioned platforms.





**Conclusions:** Participants in all three groups discussed very useful ideas. For instance, the first group suggested having regular webinars, group meetups, TED talks, and developing collaborations among producers, government bodies, universities, and schools to discuss the issues around policies on soil health in Alberta. The second group suggested having bi-annual or annual meetings of all stakeholders to discuss issues and then connect with the government bodies entrusted with policymaking. The third group suggested making a collective platform of the already existing farmer groups, non-profits, researchers who can conduct annual meetings and make a common plan, and then connect with policymakers to make changes in the current policy framework. Although we could not conclude this round very well, it can serve as an important input for future workshops/meetings targeting ‘how to form an effective platform to connect with policymakers to mitigate the gaps between the current policy framework on soil health and farming practices on the ground in Alberta.’

## 6. Next steps

Based on the workshop response, feedback, and conclusions drawn from four rounds of discussion, there are apparent gaps in the current policies related to soil health and prevalent farming practices in Alberta. It is, therefore, required to conduct such events regularly to get all the stakeholders on a common platform to understand these gaps, and the reasons thereof and communicate with departments concerned to mitigate gaps for improving soil health in Alberta. This platform might be a combination of a web-based portal, in-person meetings/workshops or a collegium of existing networks to come forward to discuss these common issues and communicate with the policymakers.

## 7. Participants’ feedback

We collected participants’ feedback about the workshop theme, and their experiences while registering and attending the workshop including their comments and suggestions to improve such events in the future. More than 75% of participants were satisfied with



their overall experience of attending the workshop. A majority of participants enjoyed listening to the keynote speakers. We received very positive comments in terms of compliments. The major suggestions include improving representation from farmers, students, government ministries and grain/livestock commissions. Participants want this workshop to be continued in the years to come so that we can establish a common platform for all stakeholders to communicate with policymakers working with the federal and provincial governments.

