

**Carbon Offsets, Insets, Soil Health, and Protein Extraction from Canola**  
***Response to Members of the Senate Standing Committee on Agriculture and Forestry***

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The soil carbon pool is a critical component of the global carbon cycle. One of the practical approaches suggested for addressing climate change is the sequestration of carbon in agricultural crops and soils. This is linked, in part, to increased agricultural productivity while simultaneously reducing agricultural emissions, which is an achievable objective that is inextricably linked to soil health.

The potential to sequester carbon in agricultural crops and soils has spurred an increase in public and private interest in markets that compensate farmers for their role in this process. This has the potential to be a win-win for farmers and society as a solution for removing carbon dioxide and nitrous oxide from the atmosphere while providing a supplemental source of farm revenue. Making this a reality is currently the subject of scientific endeavor, public policy, as well as various platforms and markets in different countries and jurisdictions.

Farmers have two broad options available with respect to participation in carbon markets – offset markets and inset markets.

In offset markets, carbon offsets are generated by producers who can sequester carbon (and / or reduce emissions). These are then verified and sold to emitters as a means of offsetting the emissions that are produced from the purchaser. Offsets can be sold by farmers through voluntary offset programs or to polluters regulated under carbon cap-and-trade programs. These programs typically work with farmers to identify and implement practices that sequester carbon, measure and verify, and sell those offsets to buyers interested in offsetting emissions. In the case of offsetting, the emissions and reductions are discrete activities and there is no interaction between parties except via a financial transaction.

Carbon insetting refers to initiatives taken by a company / organization to reduce emissions within its own supply chain. Insetting is defined as partnerships / investments in emissions reduction activity within the sphere of influence or interest of a company (i.e., its supply chain), whereby the GHG reductions are acknowledged to be created through partnerships and where mutual benefit is derived. In contrast to offsetting, there is an exploration and partnership with stakeholders to identify emissions reduction / increased sequestration opportunities. Commonality with offsetting exists in that there is still a need to measure or quantify but verification or certification may or may not require an independent auditor.

Both offset and inset programs are grounded in healthy soils and best management practices that continue to maintain and build healthy soils over time. As stated in our presentation to the Committee, key requirements to achieve this is a practical definition of soil health, soil health metrics and benchmarking that are practical, cost effective and meaningful to farmers, and continued investment in research to determine best management practices which allow growers



to increase productivity and profitability while improving the environmental footprint, including increased carbon sequestration.

Finally, in response to Senator Klyne's question on protein extraction, in order for the value of the canola protein to be realized, the seed must first be defatted – crushed to remove the oil. Protein extraction would be very inefficient and costly if the oil was not removed from the seed first. This is due in part to the much higher oil content of canola seed as opposed to the protein content.

Thank you for the opportunity to appear at the Senate Standing Committee on Agriculture and Forestry. Should you have any additional questions, please contact the Canola Council's Director of Government Relations, Troy Sherman, at [shermant@canolacouncil.org](mailto:shermant@canolacouncil.org).