

January 7, 2022

Cheryl Laskowski Branch Chief California Air Resources Board 1001 I Street Sacramento, California 95814

Submitted electronically to: <u>LCFSWorkshop@arb.ca.gov</u>

RE: Canola Council of Canada's Comments on December 7, 2021 LCFS Workshop

Dear Ms. Laskowski,

The Canola Council of Canada (CCC) appreciates the opportunity to submit comments to the California Air Resources Board (CARB) in response to the Low Carbon Fuel Standard (LCFS) workshop held on December 7, 2021. We thank CARB staff for holding this workshop and initiating the pre-rulemaking activity for the potential LCFS amendments.

The CCC is a non-profit industry association representing all sectors of the Canadian canola industry, including seed developers, farmers, exporters, and processors. The CCC's mission is to advance the growth and profitability of the canola industry based on innovation, sustainability, resilience, and the creation of superior value to customers throughout the world.

California is among canola's largest and most important customers, with consumption of canola oil and meal valued at \$800 million in 2020. Canola oil is one of the most versatile crop-based oils on the market today. It has long been regarded as one of the healthiest cooking oils available and is increasingly recognized as a superior feedstock in renewable fuel production.

Canola's advantage in renewable fuel production stems from the crop's photosynthetic process of capturing / utilizing carbon from the atmosphere and the ability to store the carbon in the soil via sustainable farm practices such as minimal/zero tillage. This natural process of capturing and storing carbon supports the ability of renewable fuels derived from canola to reduce GHG lifecycle emissions by up to 90 % when compared to fossil diesel¹.

This level of GHG emission reduction can only be realized if sustainable farming practices are included in the life cycle assessment of crop-based renewable fuels. Not including sustainable farm practices underestimates the GHG emission reductions of renewable fuels and ultimately creates unnecessary inefficiencies for market participants (eg: higher compliance costs).

¹ O'Connor, D. 2011. Lifecycle Analysis Canola Biodiesel, (S&T)2 Consultants Inc. 22

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I. Canadian Governments Recognition of Farm Practices and GHG reductions from Soil Organic Carbon (SOC)

In Canada, there is a many decades long history of detailed research and publication of studies on the issue of soil organic carbon sequestration in agriculture. As a result, Canadian Governments have recognized SOC as a factor in lifecycle analysis from Canadian crops and this is reflected in the Carbon Intensity scores for each crop. The British Columbia Government's LCFS has recognized SOC for the last ten years and the Government of Canada's forthcoming Clean Fuel Regulation lifecycle accounting tool will also do so. This tool is analogous to the CA-GREET within the California LCFS.

Clear alignment between California and Canadian LCA tools—especially with respect to treatment of SOC in cropland—will ensure canola producers have maximum incentive to decarbonize their agricultural practices. Therefore, CARB should coordinate closely with the Government of Canada on this data and strive for continuous improvement in LCA methods to track changes in agricultural inputs. Such analysis should be done for each major feedstock crop, at the State/Provincial or regional level, at a minimum, and potentially at a greater level of geospatial disaggregation.

In this regard, the canola industry submits that, as part of its rule-making process, CARB should update lifecycle accounting methods to capture farm practices that demonstrate a reduction in GHG emissions from crop production.

Supporting information and rationale on including farm practices in lifecycle analysis can be found in the attached Appendix.

II. Re-evaluate land use change (ILUC) carbon intensity values

We continue to appreciate CARB's commitment to using the most robust and up-to-date science in the LCFS program. New information and data should be considered when modelling ILUC and calculating the CI for renewable fuels derived from crop-based feedstocks. Critical data points underpinning the current ILUC values have changed / evolved since the 2015 rulemaking, including increased productivity of crops, and updated economic data. Accordingly, we recommend that CARB consider updating the relevant datasets in ILUC modelling to better reflect the current realities of crop production and impacts of land use change.

III. Need for Continued Ambition in LCFS Targets

At the Workshop CARB staff expressed a desire to explore increased ambition in program targets—both prior to, and post, 2030—on a path toward carbon neutrality. CCC supports examining increased ambition of targets in both timeframes.

The pace of zero- and low-carbon fuel availability and use in California has exceeded expectations. This success should be applauded, and it makes it possible for CARB to increase the stringency of the program prior to 2030. Further, if the goal is a full transition to a zero-emission transportation sector in California by no later than 2045,² it is also essential to set an increasingly stringent standard for the LCFS beyond 2030. CCC supports continued analysis of

² In line with broader carbon neutrality across all sectors in a similar timeframe.

this target setting, both in the Scoping Plan and in the LCFS rulemaking, to maximize the availability and affordability of zero- and low-carbon fuels in both the short- and long-term.

We thank you again for the opportunity to provide comments on this workshop and look forward to continued engagement with CARB as potential changes to the LCFS are considered.

Sincerely,

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Jim Everson President

Appendix: Importance of Properly Recognizing Agricultural Inputs in Lifecycle Analysis

It is the goal of the canola industry to continue to serve as an important renewable feedstock as the transition toward a zero-carbon transportation sector occurs. However, to maximize the potential for canola to continue to contribute, CARB should update LCA methods to capture farm practices that demonstrate a reduction in GHG emissions from crop production.

The canola industry is pleased to see CARB signal a willingness to explore agricultural inputs in fuel pathway LCA at the workshop.³ Properly quantifying greenhouse gas emissions benefits for renewable feedstocks from improved farm practices is critical to providing a fair LCA for most renewable fuels. We stand ready to assist California with any data needed to conduct improved LCA for canola.

In Canada, canola has been a key crop that has led to changes in tillage practices and decreased areas of summerfallow, which have created notable soil organic carbon (SOC) benefits and subsequent reductions in GHG emissions each year (Figure 1).



Figure 1. SOC change for Canada from 1990 to 2019 (Canada's National Inventory Report).

These reductions are monitored, reported, and verified through Canada's annual National Inventory Report (NIR). A great deal of effort is put into the SOC change estimates so that they achieve the required attributes of transparency, accuracy, consistency, completeness, and comparability under the United Nations Framework Convention on Climate Change (UNFCCC).

Most notably, Canada uses credible data gathered from the Census of Agriculture (conducted every 5 years) to enumerate all farms and collect on farm information, including land allocation (fallow vs. crops) and tillage practices that support GHG emission reductions. In addition to having a robust data set via the Census, Canada also has an extensive, cross-country, network of past and current long-term agricultural field studies for which SOC has been measured and monitored⁴. This allows for a high degree of confidence to accurately model and estimate the changes in SOC and corresponding GHG reductions.

³ CARB Workshop Presentation, slide 18. <u>https://ww2.arb.ca.gov/sites/default/files/2021-12/LCFS%2012_7%20Workshop%20Presentation.pdf</u>

⁴ For a listing of most of these studies, see Liang et al. 2020, Soil and Tillage Research 198:104529 and VandenBygaart et al. 2003, Canadian Journal of Soil Science *a diverse community of soil microorganism*

If SOC change estimates achieve the required attributes of transparency, accuracy, consistency, completeness and comparatively, the International Standards Organization (ISO) standard for LCA (ISO 14067) would suggest that positive or negative changes to soil carbon stocks be reported with the carbon footprint. A decision not to require reporting SOC change can underestimate or overestimate the carbon intensity of biofuels from agricultural feedstocks whose production practices are causing SOC changes. Although ISO 14067 does not recommend specific emission estimation methods, it does state that greenhouse gas emission estimates from methods that meet IPCC inventory good practice, such as is used for Canada's NIR, are suitable.