BUNGE

1391 Timberlake Manor Parkway
Chesterfield, MO 63107
314.292.2000 | bunge.com

August 27, 2024

Hon. Liane M. Randolph, Chair
California Air Resources Board
1001 I Street
Sacramento, California 95814

Re: Proposed Low Carbon Fuel Standard Amendments

Dear Chair Randolph:

Thank you for the opportunity to comment in response to the 15-day package of proposed modifications to the 2024 Low Carbon Fuel Standard ("LCFS") amendments that the California Air Resources Board ("CARB") released on August 12, 2024.

In Part I, we provide background on how Bunge's sustainability focus informs our comments and helps the LCFS succeed. We also offer general comments on the 15-day package, supporting the proposed 9-percent increase in stringency and reiterating our opposition to a vegetable oil cap. In Part II, Bunge recommends that CARB confirm and clarify that winter canola will be considered a distinct feedstock from more common spring canola for purposes of the proposed cap, because indirect land use change ("ILUC") and other concerns with spring canola do not apply to lower-risk winter canola. Finally, in Part III, Bunge addresses issues with the sustainability guardrails and requests that CARB implement its farm boundary and attestation requirements in 2028 at the earliest.

I. Background and General 15-Day Package Comments

Bunge is a leading oilseed processor. Bunge buys and processes agricultural commodities, then turns them into products used in the food industry, animal feed, and renewable diesel. Bunge is also a leader in sustainability, embracing climate-focused decision making and setting ambitious goals. For instance, we are well on our way to meeting our commitment to eliminate deforestation and native vegetation conversion from our supply chains in 2025. Bunge's robust traceability and monitoring systems give us significant insight into our supply chains. In addition, we are using technology and data to scale our efforts in geographies where deforestation is a higher risk. As described in our 2024 Global Sustainability report, thanks to these systems we have already achieved 100 percent traceability in our direct supply of soy in priority areas in South America. We achieved 97.7 percent traceability in our indirect supply of soy in Brazil's high-risk areas in 2023. Bunge is also working with farmers to incentivize sustainable practices.

Bunge has long supported the LCFS, and we are proud of the role we have played in its success. The LCFS has increased volumes of low-carbon fuels—including the biofuels that Bunge helps produce by supplying feedstocks to biofuel producers—such that California's overall petroleum fuel use has fallen by 1.3 billion gallons since 2019. Meanwhile, the carbon intensity ("CI") of the state's transportation fuels has declined 12.63 percent from 2010 levels.

We support the ambitious 9-percent stepdown in the CI benchmark that CARB proposed in the 15-day package. Low-carbon liquid fuels will be instrumental in achieving this goal. Indeed, biofuels will be especially critical in the near term, serving as drop-in fuels and displacing fossil fuels for existing internal combustion engine vehicles while electric vehicle adoption expands.

However, Bunge was disappointed to see CARB propose a cap on canola oil and soybean oil in its 15-day package. In previous comments, we have consistently opposed the idea of imposing a cap on crop-based fuels. We reiterate our opposition to the proposed cap here. CARB staff repeatedly raised land conversion as the main issue with crop-based fuels at the April 2024 workshop. Staff stated then that CARB would adopt sustainability certifications rather than capping lipid-based fuels, citing concerns that limiting cleaner drop-in fuels would instead promote continued fossil fuel use and thus undercut CARB's climate, health, and air quality goals. We share those concerns, and do not believe those concerns can be squared with a cap. Still, Bunge appreciates the gravity of land-conversion risk. To address this we have made industry-leading progress on the issue through our voluntary efforts, while participating in sector-wide initiatives to create common alignment and scalability on deforestation goals. We continue to believe that the issues CARB seeks to address with a cap are better handled through other means, such as sustainability certifications.

II. CARB Should Confirm that Winter Canola Will Be Considered Separate from Spring Canola.

Bunge encourages CARB to clarify that winter canola, which is a cover crop with a completely different ILUC risk profile than spring canola, will not be considered under the broader canola umbrella for purposes of the proposed cap and other canola LCFS provisions.

The proposed LCFS modifications that CARB released in its 15-day package specifically impacted canola in two primary ways. First, the 15-day package provided that "[b]iomass-based diesel produced from soybean oil and canola oil is eligible for LCFS credits for up to twenty percent combined of total biomass-based diesel annual production reporting, by company," and that any further quantities will be assigned the CI of the diesel pool or, if higher, the CI for the applicable fuel pathway.[1] Second, the 15-day package proposed to modify Table 6 to add

[1] CARB, LCFS 15-Day Package: Proposed Regulation Order at 37, § 95482(i) (Aug. 12, 2024), https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/lcfs2024/15day_atta-1.pdf.

geographic specifications for each listed feedstock LUC value.[2] This included specifying that, for canola biomass-based diesel, the assigned LUC value of 14.5 gCO2/MJ is applicable only to the feedstock as produced in North America.[3]

However, the proposed cap should not apply to *winter* canola due to the rationale that appears to animate CARB's proposed cap and the nature of the Table 6 LUC value clarifications. Bunge thus asks CARB to confirm and clarify that it is *spring* canola oil that the agency is referring to in the cap and Table 6, and that winter canola will be deemed a distinct feedstock.

A. Land Conversion Risk Appears to Be CARB's Chief Concern.

CARB's chief concern with crop-based fuels, and canola specifically, seems to be deforestation and land-use change risk. A second concern that CARB has raised is the risk of creating excess demand that draws these feedstocks to California over other regions.

CARB has long stated that land-conversion risks are its main concern with regard to crop-based fuels. For instance, at the February 2023 LCFS workshop, CARB staff described reviewing "land use change science" in response to crop-based biofuel concerns, stating that "biofuel production must not come at the expense of deforestation or food production."[4] At the same workshop, staff said they were weighing comments for and against limits on crop-based fuels in response to those concerns.[5] At CARB's September 2023 Board meeting, Board members and staff also discussed sustainability guardrails and a cap on crop-based fuels as potential means to address land conversion and food production risk related to biofuels growth. Subsequently, the LCFS 45-day package released in December 2023 raised "the risk that rapid expansion of biofuel production and biofuel feedstock demand could result in deforestation or adverse land use change."[6] To reduce this risk, CARB proposed sustainability guardrails, including third-party certifications, rather than a cap. The main rationale for the sustainability certification requirement was the same concern driving CARB throughout the LCFS amendment process: to "limit deforestation and land use change as a result of feedstock production as much as possible."[7]

The proposed geographic specification updates to canola and other LUC values in Table 6 also reflect CARB's overarching concern with land-conversion risk. In the Table 6 context, CARB

---

[2] *Id*. at 128-29, § 95488.3(d) Table 6.
[3] *Id*.
[4] CARB, Presentation: California LCFS Workshop at 37 (Feb. 22, 2023), https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/lcfs_meetings/LCFSpresentation_02222023.pdf.
[5] *Id*. at 37, 41.
[6] CARB, Initial Statement of Reasons on Proposed LCFS Amendments at 32 (Dec. 19, 2023) ("ISOR"), https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/lcfs2024/isor.pdf
[7] CARB, Proposed LCFS Amendments, Appendix E: Purpose and Rationale of Proposed Amendments at 79-80 (Jan. 2, 2024), https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/lcfs2024/lcfs_appe.pdf.

proposed explicitly tying listed feedstocks to the geographies where the LUC values were modeled because the "LUC carbon intensity for feedstocks from regions other than the regions modeled may not be equivalent with the Table 6 values for those feedstocks shown."[8]

CARB has only identified the second concern—that California's demand for biofuels could draw virgin feedstocks away from use in other regions—in more recent analyses. In the 15-day package notice, CARB comments on the proposed cap stated that California "must ensure that other regions are able to also access increasing volumes of low-carbon alternative fuels."[9] The notice further stated that a cap would avoid "sending a long-term signal for virgin soy or canola oil to serve California demand."[10]

B. The Proposed Cap and Table 6 Updates Address Risks Inapplicable to Lower-Risk Cover Crops Like Winter Canola.

CARB's approach to winter canola should be distinct from its treatment of "canola" in the LCFS amendments. The two concerns that are animating CARB's 15-day package modifications related to canola—CARB's long-standing focus on minimizing land-conversion, and its more recent concern with ensuring other regions have access to low-carbon fuels—do not apply to winter canola.

1. Winter Canola ILUC Risk Is Lower Than Spring Canola ILUC Risk, So the LCFS Should Not Treat the Two Feedstocks Identically.

The differences between spring canola and winter canola are particularly apparent when it comes to ILUC, and ILUC appears to be CARB's main concern with spring canola. Spring canola is a cash crop, planted in the spring and harvested in the fall. Winter canola is a cover crop that is specifically bred for cultivation over the winter. It is planted in the fall and harvested in the spring. As such, winter canola is generally grown on land that would otherwise be fallow. Thus, winter canola, almost by definition, has less land-conversion risk than spring canola. It is grown on land *already* cultivated for another purpose (for instance, growing a food crop) during the summer. While farmland-expansion pressure may be associated with demand for spring canola, that pressure is minimized for a feedstock like winter canola that is planted exclusively as a cover crop. Moreover, winter canola brings significant environmental and sustainability benefits as a cover crop. Including winter canola in a crop rotation can help balance nutrient uptake, replenish soil fertility, reduce erosion, improve water retention, and reduce the need for fertilizers and pesticides.

---

[8] CARB, 15-Day Notice: Proposed LCFS Amendments at 10 (Aug. 12, 2024), https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/lcfs2024/15day_notice.pdf.
[9] *Id*. at 4.
[10] *Id*.

In recent years, researchers have emphasized that "double-cropping" with a cover crop such as winter canola can promote crop diversity, add environmental benefits, and make "a dedicated energy crop economically attractive."[11] Planting winter canola or another cover crop can also alleviate concerns about biofuel crops replacing food crops, because both can be grown on the same land in one season.[12] Further, oilseed cover crops like winter canola can "eliminate the side effect of ILUCs for biofuel production because they come in rotation with the major crops with some savings in demand for new cropland."[13] Researchers are interested in crops such as winter canola for the same reason that winter canola should not be treated as identical to spring canola: Winter canola has markedly lower land-conversion risks, and thus lower ILUC values.

A May 2024 analysis of winter canola provides data to support the lower-risk ILUC profile of winter canola compared to spring canola.[14] Researchers examined the ILUC of the entire canola market and concluded that "using winter rapeseed oil [i.e., winter canola oil] as the feed stock has a significant effect and decreases the corresponding ILUC emissions to about half of spring rapeseed [i.e., canola] ILUC values."[15] Additional scenarios examined by the researchers suggest winter canola has a zero, or even negative, ILUC factor, when examined as a stand-alone crop from spring canola. The analysis used the GTAP-BIO model accepted by the Carbon Offsetting and Reduction Scheme in International Aviation ("CORSIA") representing double cropping and unused land. This modeling reinforces that winter canola and spring canola should be distinguished under the LCFS. Applying a cap to winter canola would be illogical, because the cap is driven by land-conversion concerns that are less applicable to winter canola, as the analysis here demonstrates. Prescribing the Table 6 ILUC value to winter canola would be equally unreasonable. The purpose of the proposed Table 6 modifications is to ensure Table 6 values accurately reflect the modeling for each feedstock—but the modeling used to reach the canola Table 6 value reflects *spring* canola, not *winter* canola.

2. Clarifying that Winter Canola Is Not Capped Would Promote, Not Undermine, CARB's Goal of Ensuring Other Regions Access to Cleaner Alternative Fuels.

Beyond their ILUC differences, winter canola and spring canola are also markedly different in terms of market size. The two types of canola should thus also be treated separately insofar as CARB is concerned with ensuring other regions have ample access to increasing volumes of low-risk biofuels.

---

[11] *See* R.W. Gesch & W.D. Archer, *Double-Cropping with Winter Camelina in the Northern Corn Belt to Produce Fuel and Food*, 44 INDUSTRIAL CROPS & PRODUCTS 718, 719 (2013).
[12] *Id*. (internal citation omitted).
[13] *See, e.g.*, Farzad Taheripour et al., *Oilseed Cover Crops for Sustainable Aviation Fuels Production and Reduction in Greenhouse Gas Emissions Through Land Use Savings*, 9 FRONTIERS IN ENERGY RESEARCH 1 (Jan. 20, 2022).
[14] *See generally* Farzad Taheripour & Ehsanreza Sajedinia, Purdue University, Induced Land Use Change: Case of Winter Rapeseed Biodiesel (May 2024).
[15] *Id*. at 4.

Winter canola is still an emerging crop in the United States, whereas spring canola is relatively established. Based on recent National Agricultural Statistics Service acreage reports, we estimate that the United States planted only 79,000 acres of winter canola in 2024 compared to approximately 2.5 million acres of spring canola.[16] And this is far less than the approximately 90 million acres of soybeans planted in 2024.[17] These numbers illustrate that there is little concern that California will siphon off winter canola supplies that other markets should have access to; compared to spring canola (and soybeans), United States winter canola acreage is small. Allowing uncapped crediting for winter canola would not undermine CARB's goal of ensuring that low-carbon fuels derived from abundant feedstocks like soy and canola can reach to other markets. There are currently no winter canola pathways in the LCFS at all. Including winter canola in the cap would thus stymie the development of a promising but fledgling low-risk feedstock. If CARB is committed to expanding other markets' access to low-risk alternative fuels, CARB should support winter canola pathways to foster a market for winter canola so that it can then serve other regions as well. Applying a cap to winter canola would not enhance, and could instead threaten, this market.

Moreover, it would not "send[] a long-term signal for virgin soy or canola oil to serve California" to allow uncapped winter canola LCFS crediting, either.[18] As an initial matter, winter canola has more in common with other cover crops than it does with spring canola, particularly with respect to ILUC, sustainability, and other CARB focuses. Thus, to the extent these concerns prompted CARB's desire to avoid drawing virgin spring canola oil to California long-term, winter canola clearly should not be grouped with spring canola. Further, any signal sent by allowing uncapped winter canola volumes would be neither harmful nor long-term. Instead, it would be a signal encouraging investment in a low ILUC-risk feedstock that will benefit other regions once it matures.

Finally, clarifying that winter canola is separate from spring canola would not undermine efforts to completely displace carbon-intensive fossil diesel with cleaner drop-in fuels, to the extent that is a CARB objective. We note that the 15-day notice characterized the proposed cap on canola and soy oil as a change that "allows for California to displace up to 100% of the State's current fossil diesel demand with cleaner alternative diesel."[19] However, it is not the cap that would "allow" California to displace fossil diesel with cleaner alternatives. More accurately, any full displacement of fossil diesel would come *in spite of* the proposed cap on the drop-in fuel

---

[16] *See* USDA National Agricultural Statistics Service, Acreage (June 2024) 19, https://www.nass.usda.gov/Publications/Todays_Reports/reports/acrg0624.pdf (identifying approximately 2.5 million acres of spring canola).
[17] *Id.* at 41.
[18] 15-Day Notice at 4.
[19] *Id.*

feedstocks that are best positioned to replace diesel in the near term.[20] Excluding winter canola from the cap, and instead grouping it with other cover crops of similarly low ILUC risk, would help California replace fossil diesel without raising the land-conversion concerns associated with spring canola and soy.

In sum, CARB's cap on canola oil and its Table 6 changes are not logical in the context of winter canola due its role as a cover crop and its resulting lower ILUC risk. To resolve this issue, Bunge encourages CARB to clarify that winter canola is not included in the canola oil cap or subject to the canola LUC value listed in Table 6. Winter canola should be treated as any other similarly low-risk crop: It should not be subject to the cap, and its LUC value should be determined based on modeling reflecting its unique risk profile.

III. Sustainability Guardrail Recommendations

Bunge is committed to ending deforestation in agricultural supply chains. Our record shows a robust history of working with farmers and stakeholders to address deforestation. It is imperative that efforts to stop deforestation in agricultural supply chains take a risk-based approach so that resources and energy are directed at the parts of the world where the risk of deforestation is the highest. To have a one-size-fits-all approach to addressing certification of deforestation and conversion adds an unnecessary burden on agricultural supply-chains, and can result in diverting resources and focus from areas of the world where the risk of deforestation and conversion is the greatest. Bunge raised issues related to the sustainability certifications and urged a later implementation timeline in our comments on the December 2023 45-day package and the April 2024 workshop. We maintain those concerns and encourage CARB to re-examine its proposal on the sustainability certification and ensure the approach it is taking is commensurate with the risks specific to each region of the world.

Furthermore, Bunge is concerned about the timeline laid out for initial compliance for fuel producers. The 15-day package proposes that, starting in the 2026 data year, fuel producers using biomass must collect and submit supply chain data such as spatial data of farm boundaries and submit an attestation letter certifying that biomass was sourced on land that was cleared or cultivated before 2008.[21] Bunge appreciates the value of attestations and data. However, we also know firsthand how difficult this data is to collect and the burden it places on supply-chain participants. We have been performing comparable data-gathering to comply with similar European Union deforestation rules, which go into effect at the end of 2024. From this experience, Bunge has learned that collecting and managing geographical shapefiles or coordinates of plot boundaries presents complex logistical challenges. It takes time to gather

[20] *See, e.g.*, ISOR at 88-94 (explaining that Alternative 1 to the proposed LCFS amendments, which limited total credits from virgin oil feedstock diesel fuels, resulted in relatively more fossil diesel use and had fewer emissions reduction and public health co-benefits compared to the proposed amendments).
[21] Proposed Regulation Order at 171-72, § 95488.9(g)(2).

the necessary data, and it could be unrealistic for the LCFS to require such data and related attestations on such short notice. The agricultural feedstock supplied to biofuel producers in 2026 will primarily come from the 2025 crop season. The 2025 crop season essentially begins in the fall of 2024 as farmers begin purchasing seed and inputs, and make planting decisions. In order for farmers, agriculture companies, and biofuel producers to be properly prepared to meet the farm boundary and attestation requirements on January 1, 2026, the work would essentially have to begin today, and many in the supply-chain will not be ready to meet this standard by 2026. Bunge urges CARB to shift the initial compliance date for sustainability certification back to the original proposal of 2028. This adjustment would phase in the requirements on the timeline that was originally proposed for sustainability requirements in the 45-day package. Further, this modification would better ensure the proposed requirements can be satisfied by the deadline.

IV. Conclusion

Bunge appreciates CARB's commitment to improving the LCFS in the 2024 amendments. We hope our comments help enhance the program in its final version.

In particular, Bunge encourages CARB to clarify that winter canola will be considered separate from spring canola under the program. As explained in Part II above, winter canola and spring canola are distinct in key respects. Most notably, there are significant differences between their ILUC risk profiles and their respective roles in crop rotation. In light of these differences, the proposed canola cap and the Table 6 canola value should not apply to winter canola.

We also ask CARB to move back implementation of the proposed farm boundary data and attestation requirements so that these requirements apply for the 2028 data year or later. Bunge's firsthand experience with the challenges of collecting this data to comply with EU regulations confirms that 2028 is a more realistic target.

We appreciate the opportunity to share Bunge's perspective and to advance our common goal of a cleaner, sustainable fuel supply.

Sincerely,

Robert Coviello
Chief Sustainability Officer and Government Affairs