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October 23rd, 2026

Chair Lauren Sanchez & Executive Officer Dr. Steven Cliff  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

Subject: Intermediate Oilseed Crops in the California LCFS

Dear Chair Sanchez & Executive Officer Cliff,

On behalf of Friends of the Mississippi River (FMR), thank you for the opportunity to provide input on the temporary pathway for intermediate oilseeds in the California Low Carbon Fuel Standard.

[Friends of the Mississippi River](http://Friends of the Mississippi River) is a 501(c)3 non-profit organization dedicated to protecting and restoring the Mississippi River and its watershed in Minnesota. We believe biofuel strategies must support not only transportation decarbonization but also improved environmental outcomes for our lands and waters. We strongly support the use of intermediate oilseed crops as biofuel feedstocks because of their strong environmental benefits to water quality, soil health, and biodiversity.

### **Continuous Living Cover**

Intermediate oilseed crops grow at a time when farmland is otherwise fallow, providing Continuous Living Cover (CLC) to those acres. Continuous Living Cover is a critical aspect of regenerative agriculture that keeps living roots in the soil year-round. CLC can be achieved through perennial crops or by combining summer annual and winter annual crops in rotation. Market-based CLC agriculture, in which winter annuals are a harvested crop that farmers can sell, provides a significantly more scalable option for achieving CLC compared to non-harvested cover crops.

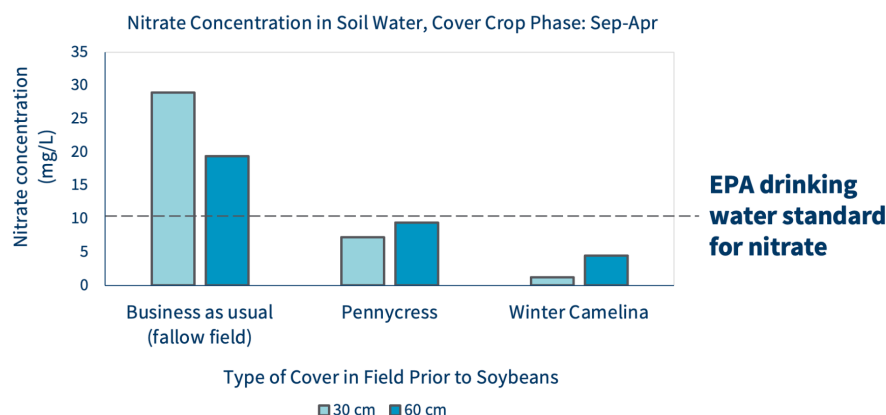
Including intermediate oilseed crops in the California Low Carbon Fuel Standard creates an important market demand that could allow them to scale at a landscape level, delivering four important environmental benefits.

#### **1. Improved Water Quality**

Intermediate oilseed crops are strongly beneficial to water quality. Having living roots in the soil year-round can prevent rainfall and snowmelt from washing topsoil, fertilizer, and pesticides into our waterways. Their strong root system can also increase nutrient capture from residual

fertilizer, reducing nitrate leaching. Research shows that winter camelina and domesticated pennycress can reduce nitrate concentrations in soil water by 70-90% compared to bare soil.<sup>1</sup>

Scaling intermediate oilseed crops at a landscape level could provide broad improvements to water quality. For example, the Minnesota Pollution Control Agency made CLC agriculture a central pillar of the [state's long-term strategy to reach clean water](#).<sup>2</sup>



Adapted from Weyers et al., 2019

## 2. Enhanced Soil Health

Intermediate oilseeds have strong benefits for soil health. By keeping living roots in the soil, farmland is protected from the erosion that can degrade bare fields, significantly reducing the loss of topsoil. Incorporating intermediate oilseeds into crop rotations can reduce soil loss by 90-95%.<sup>3</sup>

Their root systems can also increase the soil organic matter that improves long-term soil health and moisture-holding capacity,<sup>3,4</sup> providing protection from both drought and high precipitation events.

## 3. Improved Biodiversity

By growing during a time when farmland is otherwise vacant, intermediate oilseed crops support biodiversity by providing important wildlife habitat and pollinator forage. These crops typically flower many months before traditional summer crops, providing nutrients for pollinators at a time when little forage is otherwise available.

<sup>1</sup> Weyers, Sharon, et al. "Reduced Potential for Nitrogen Loss in Cover Crop–Soybean Relay Systems in a Cold Climate." *Journal of Environmental Quality*, vol. 48, no. 3, May 2019, pp. 660–69. DOI.org (Crossref), <https://doi.org/10.2134/jeq2018.09.0350>.

<sup>2</sup> Minnesota Pollution Control Agency (MPCA). *2025 Minnesota Nutrient Reduction Strategy*. wq-s1-87a, Jan. 2026, <https://www.pca.state.mn.us/air-water-land-climate/minnesota-nutrient-reduction-strategy>.

<sup>3</sup> Weyers, Sharon L., et al. "Surface Runoff and Nutrient Dynamics in Cover Crop–Soybean Systems in the Upper Midwest." *Journal of Environmental Quality*, vol. 50, no. 1, Jan. 2021, pp. 158–71. DOI.org (Crossref), <https://doi.org/10.1002/jeq2.20135>.

<sup>4</sup> Berti, Marisol, et al. "Environmental Impact Assessment of Double- and Relay-Cropping with Winter Camelina in the Northern Great Plains, USA." *Agricultural Systems*, vol. 156, Sept. 2017, pp. 1–12. DOI.org (Crossref), <https://doi.org/10.1016/j.agsy.2017.05.012>.

#### 4. Avoided Indirect Land Use Change

Unlike conventional summer annual crops, intermediate oilseeds do not require any additional land and do not cause indirect land use change. Instead, they utilize existing farmland to offer a domestic source of both oil for biofuel markets and high-protein meal for animal feed, without displacing primary crops. In recognition of this benefit, [the CORSIA model assigns intermediate oilseeds a negative ILUC score](#).<sup>5</sup>

The adoption of CLC cropping systems is critical to improving water quality, soil health, and biodiversity while reducing pressure on land use. Including intermediate oilseed feedstocks in the California Low Carbon Fuel Standard offers an opportunity to align transportation decarbonization strategies with environmental protections.

Friends of the Mississippi River strongly supports the use of intermediate oilseeds as biofuel feedstocks in the California Low Carbon Fuel Standard.

Thank you for your time and consideration of these comments.

Sincerely,

Meghan Anderson



Biofuels Policy Manager  
Friends of the Mississippi River

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<sup>5</sup> CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels. International Civil Aviation Organization (ICAO), Nov. 2025, <https://www.icao.int/sites/default/files/environmental-protection/CORSIA/Documents/CORSIA%20Eligible%20Fuels/ICAO-document-06-Default-Life-Cycle-Emissions-November-2025.pdf>.