



May 10, 2024

Rajinder Sahota, Deputy Executive Officer  
Climate Change and Research  
California Air Resources Board  
1001 I Street Sacramento, CA 95814

Dear Ms. Sahota:

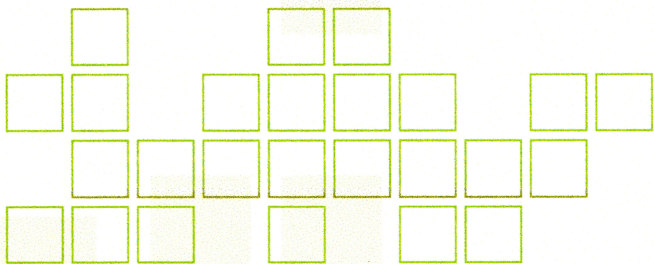
I am writing on behalf of Nuseed and our support of the Air Resources Board's amendments to the LCFS and specifically in response to the Workshop on April 10<sup>th</sup>.

Nuseed is a global agriculture innovator enabling the transformation of select crops into renewable and traceable sources of lower-carbon energy, and plant-based nutrition. Nuseed's proprietary solutions like our Omega-3 canola and our Carinata product, an intermediate winter oilseed, contribute to solving global challenges like food security, human nutrition, and climate change. Nuseed empowers growers and end-use customers to rapidly scale today to meet current and emerging demand for generations to come.

Established in 2006, Nuseed has 10 locations in Australia, Europe, North America, and South America, including three proprietary innovation centers (one of which is in Northern California), more than 400 employees, and sales in more than 30 countries. Nuseed is the seed technologies platform of Nufarm Limited (ASX:NUF)

Executive Summary

- Biofuels are a successful and critical element of the LCFS and have demonstrated their place in the state's effort to address climate change and decarbonize the fuel supply.
- UCO and waste-based feedstocks need proper oversight and governance lest the entire system lose credibility and the market falter, threatening achievement of any additional environmental and climate outcomes;
- The sustainability criteria being developed must have a robust, consistent, and standardized system of ensuring that emission reductions are real, calculations and claims are robust and the program defensible. Each feedstock regardless of origin should have the opportunity to compete on a level playing field and for their unique characteristics to be considered in determining CI and LCFS value.





- Intermediate Crops need to be recognized for what they are, a novel class of crops that do not fit into the current federal classifications but which can deliver significant carbon reduction potential for transport fuels along with net-positive societal benefits (i.e., zero or even negative impact to land use demand, positive rural development, soil carbon sequestration, carbon-neutral or carbon-negative fuel, and air quality benefits under the LCFS).

Low-carbon liquid fuels are a critical component of decarbonizing transport.

We appreciate and recognize the significant amount of time, energy and effort by all (staff and stakeholders) to develop the proposed changes to the LCFS program in accordance with the adopted scoping plan. As we have stated previously, while others may wish to single out certain items or proposals as lacking and needing changes or adjustments, we recognize and acknowledge that the overall proposal significantly improves air quality, reduces carbon loading and positively impacts climate change.

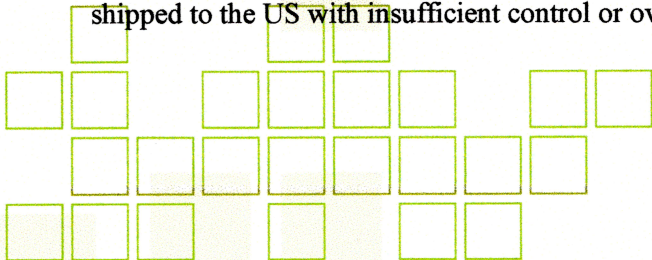
The myriad comments that seek to discredit the important role of biofuels are *not* supported by science or (as ARB staff have noted) the nearly 20 years of hard data compiled on air quality and GHG emissions improvement in California by ARB and across the US by the US Environmental Protection Agency. Simply put, we agree and support the ARB’s efforts to emphasize that biofuels do work at delivering real, meaningful GHG and carbon reductions today. In fact, for certain difficult to decarbonize areas like marine or aviation, biofuels like sustainable aviation fuel (SAF) are the only realistic and meaningful option available today and in the near future.

There were several important issues and topics discussed at the April 10<sup>th</sup> workshop for stakeholders to respond. Nuseed would like to focus our comments on two important items covered in the workshop: provisions to encourage waste-based feedstocks and sustainability.

Waste-based feedstocks

Staff discussed the important role that waste-based feedstocks (mainly used cooking oil, or UCO) have played (and will continue to play) in growing the renewable diesel consumption numbers across the state. However, other than a mention of classifying waste-based feedstocks as specified source material and that those feedstocks must provide chain-of-custody documentation, there was no significant discussion of improving enforcement of audit and verification standards in this area.

As demand for biofuel has grown in California so has the demand of waste-based material UCO from Asia. However, a cursory look at volumes shipped over the last 3 years shows a rapid increase in material shipped to the US with insufficient control or oversight, raising the real prospects of material like virgin



palm making its way into the UCO supply destined for the US<sup>1</sup>. Simply banning palm as ARB staff have proposed in the proposed amendments [§ 95482 (f), page 34 of Appendix A-1] is not enough. The same rigor in audit and verification applied to crop-based feedstocks *must* be applied to the audit and verification process for UCO. Given the majority of UCO is aggregated after collection at restaurants by a variety of companies in the supply chain, audits of attestations alone are completely inadequate; verification of all entities and transaction across the supply chain must extend upstream to the point of original collection in order to instill market confidence that underpins the LCFS program. Auditors must be required to implement random spot audits of collection facilities domestic and abroad. All biofuel feedstocks and end products should be subject to the same stringent requirements if the market itself is to deliver its intended outcomes.

### Sustainability

The concepts proposed in the workshop around sustainability are notable and important in several ways; however, the concepts raise a number of questions and highlight that significant gaps still exist in the policy framework. For example, the discussions around sustainability<sup>2</sup> seem mainly focused on increasing waste-based feedstocks and/or reducing the impact of crop-based feedstocks. These concepts glaringly miss a clear and obvious alternative: new intermediate crops grown on otherwise fallow lands to produce renewable fuel feedstocks.

Intermediate Crops like carinata, camelina, or covercress carry real, measurable and verifiable climate-smart environmental benefits and offer the opportunity to produce dedicated energy crops without impacting existing farm rotations that provide food, feed and fiber for consumers globally. These crops are grown between main-crop rotations on existing land that would otherwise be idle or fallow. Data suggests that less than 10% of eligible acres in production across the United States currently use cover cropping, highlighting the growth potential of these crops without impact to existing crops. These Intermediate Crops offer similar soil health benefits and increased carbon sequestration compared to traditional cover crops. Further, as the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) has demonstrated, Intermediate Crops can also be harvested to provide ultra-low carbon feedstocks that easily rival those associated with UCO and other limited-availability waste-based feedstocks.

<sup>1</sup> <https://www.bloomberg.com/news/articles/2024-05-07/suspicious-frying-oil-from-china-is-hurting-us-biofuels-business>

<sup>2</sup> See April 10, staff presentation slide 58, “Guardrails Include Multiple Mechanisms”

If ARB is to be successful in expanding feedstocks beyond the traditional crop-based products available, it is imperative to recognize and expand the production of novel feedstocks like intermediate crops that have the potential to meet both the environmental goals of the LCFS and the economic needs of renewable energy producers without disrupting the ability to provide biofuels to the state of California.

In the case of carinata, Nuseed and its predecessors have been researching and developing new varieties for over a decade and have been selling seeds in a closed loop system in the US and South America for several years. Further, Nuseed has been working with a number of regional and international organizations<sup>3</sup> around sustainability and we have developed a variety of standards and audits for our carinata crop across all our production areas.<sup>4</sup>

At a minimum, we would ask CARB to add intermediate crops as a listed compliance strategy<sup>5</sup> and allow the utilization of intermediate cover crops like Carinata similar to the actions taken by the European Union as adopted in recent changes to Annex IX of its Renewable Energy Directive. Inaction would cede usage and development of these crops and, more importantly, the oil derived from them to European refiners and European aviation markets, thus impacting the ability to deliver our shared commitment to deep decarbonization of fuels in California and across the United States.

Beyond the need to address Intermediate Crops, the staff proposals around audit and verification reference leveraging existing certification programs.<sup>6</sup> While this makes sense on its surface, it is important to note that not all certification programs are created equal nor do they all measure sustainability in a consistent manner. Additional work must go into further defining what constitutes adequate demonstration of sustainability criteria. Further, a number of details have yet to be identified as to how ARB staff would oversee the implementation of a certification scheme. Will this become a part of the pathway certification process or the audit and verification activities? Will existing staff, who are already taxed to workload limits, have sustainability activities added to their jobs, or will new staff be hired and dedicated to the process?

Given the extent to which ARB's sustainability provisions could impact a large and diverse segment of US farmers and acknowledging that ARB may lack academic and practical experience with such programs, establishing a pilot program prior to 2028 may prove useful.

An early pilot system would allow ARB staff to review processes, build knowledge, develop a better understanding of US agronomy practices and develop program recommendations prior to instituting the

<sup>3</sup> Southeast Partnership for Advanced Renewables from Carinata SPARC; University of Florida; University of Georgia; the Roundtable for Sustainable Biomaterials RSB; The International Civil Aviation Organization ICAO

<sup>4</sup> As we are in a competitive market and a number of our systems are proprietary, we will be detailing our work with RSB, our sustainability program including audits and certification, as well as target markets, acreage growth and projections in additional correspondence as confidential business information.

<sup>5</sup> Staff presentation slide 58

<sup>6</sup> Staff presentation slide 60



concept for all of US agriculture. As noted, intermediate crops are sold and grown by US farmers today, with active data collection and, in many cases, verification to a prescribed set of standards. Our segment could be an ideal candidate for concept testing. We look forward to exploring this concept further with ARB staff.

Lastly, we would like to highlight that any proposal focused on feedstock sustainability which does not also include provisions focused on rewarding Climate Smart agricultural practices, is akin to ignoring a helping hand while one struggles to lift a heavy object (or solve a critical problem). As we have stated in previous correspondence, as CARB looks to allow innovative ways to sequester carbon, like direct air capture, the agency should also embrace data driven climate smart agriculture. Practices which enhance carbon retention in the soil at the farm scale deserve the same recognition and treatment as CCS, especially given the reality that those practices are less costly, equally measurable and verifiable, and cumulative (compounding over time).

Finally, it bears repeating again, we recognize the significant amount of time, energy and effort by all in developing the proposed changes to the LCFS program. We firmly believe the Board should commend the Staff for the work they have done and the commitment they have made to the program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Scott R. Hedderich".

Scott R. Hedderich  
North America Policy and Government Affairs Director

