Cuiabá, Mato Grosso, Brazil | May 10, 2024

CARB staff
California Air Resources Board
1001 I ST
Sacramento,
CA 95814

RE: Proposed 2024 LCFS Amendments

Dear CARB staff:

UNEM – Brazilian Corn Ethanol Association welcomes the opportunity to comment on the proposed changes to the Low Carbon Fuel Standard (LCFS). UNEM is the voice of the Brazilian corn ethanol industry, representing more than 90% of national corn ethanol production and 20% of total ethanol production, offering 1.63 billion gallons to the market in the 2023/24 crop year.

In line with CARB's goals highlighted at the LCFS workshop on April 10, 2024, Brazilian corn ethanol from second crops produces a low CI biofuel and is poised to show how its cutting-edge technological advances are making an effective contribution to climate change mitigation.

It is crucial to emphasize that Brazilian corn ethanol encounters a substantial predicament within the LCFS program due to the lack of a regional default value. The prevailing global standard value for corn ethanol in the program fails to encompass the distinctive attributes of Brazil's second crop production, resulting in punitive measures for Brazilian applicants. With this in mind, we call on CARB to reconsider the calculation of the emissions intensity of Brazilian corn ethanol.

To improve the calculation of the Brazilian corn ethanol CI score by the LCFS, we urge CARB staff to consider the following issues:

1. Renewable biomass can be used as a process fuel with a low CI.

2. New agricultural practices and the introduction of soybean-corn multi-crop systems are solutions to reduce the risk of land use change (LUC) emissions associated with the expansion of bioenergy.
3. Brazil has huge areas of soybean cultivation that can be used to increase the production of corn as a second crop, eliminating the need to acquire additional land.
4. Multiple cropping of corn and soybean carries a low risk of land use change and should be considered in the LCFS/CARB.
5. The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) has recognized that second crops hold zero or negative indirect land use change (ILUC) values. Additionally, CORSIA acknowledges a zero ILUC value for sequential cropping in general, encompassing second crop corn.
6. Negative ILUC impacts for Brazilian corn ethanol have been extensively documented and analyzed in reputable scientific literature.
7. Brazilian corn ethanol is classified as low LUC risk by ISCC/CORSIA.
8. CARB's 2028 Sustainability Certification Program can be improved.

Use of renewable biomass as a process fuel:

Biomass is a renewable and sustainable energy source. The use of renewable biomass for industrial processes offers a compelling solution for tropical countries due to its abundant supply and low environmental impact. As an important component of this LCFS framework, Brazilian corn ethanol producers advocate for the consideration of the use of renewable biomass as a process fuel.

Renewable biomass provides thermal and electrical energy for industry without using fossil fuels for the production process. This is beneficial to produce low-carbon fuels, as this approach reduces greenhouse gas emissions during processing due to the biogenic nature of the carbon burned in the energy-generating boilers.

While other corn ethanol producers elsewhere rely on natural gas or even coal for production, Brazilian ethanol producers are using renewable biomass, such as

eucalyptus, other energy crops and residues. CARB's recognition of the benefits of using renewable biomass to generate energy as part of a low CI ethanol production process is important and will encourage other market participants to move away from fossil sources.

Agricultural residues are treated as carbon-neutral, so wood residues should be treated similarly. Woody biomass grown for energy purposes is recognized as neutral by the Intergovernmental Panel on Climate Change (IPCC) because the carbon released during combustion was earlier sequestered from the atmosphere in the plant's growth process. We also emphasize that the biomass sources used by Brazilian second crop ethanol producers are fast-growing species.

The Global Decarbonization plan recently published by the International Energy Agency (IEA) underlines that biomass will inevitably play an important role in the energy transition. This statement by the IEA underscores the importance of CARB analyzing the different types of biomasses as process energy for LCFS pathways and determining the parameters for low CI renewable biomass.

Agricultural practices and multiple cropping systems for soybeans and corn to reduce the risk of LUC:

Growing corn as a second crop is a technique in which a second harvest is grown during an additional growing window in the same year. Soybeans and corn are planted in a no-till system without plowing or harrowing the soil. This helps to increase agricultural yields, reduces the risk of land-use change and enables farmers to produce more food and biofuels on the same area of land without having to expand the area under cultivation.

In the Brazilian state of Mato Grosso, where most of the corn ethanol plants are located, almost all corn, about 99%, comes from second crop cultivation. This crop is grown after and on the same area as soybeans. Soybeans are grown in the summer, from September to December/January, and corn is sown immediately after and on soybean residue between January and February, both in no-till.

Agricultural practices and technologies related to corn production have advanced significantly in recent years. Advances in agricultural technology have enabled the introduction of multi-crop production systems, with a focus on cropping models that combine short rotation soybeans and corn as a second crop. These cultivation techniques offer numerous advantages, including higher production per area, better soil protection and optimization of resources in the agricultural production process.

Farmers have adopted a more strategic approach to their farming practices. These include direct farming, a form of regenerative agriculture, crop rotation, the use of high-yielding corn varieties adapted to the region and the development of early soybean varieties adapted to the Brazilian Cerrado (savanna biome), which was important for the development of the second cop.

Precision agriculture has also played an important role in this approach with the introduction of satellite monitoring systems, moisture sensors and drones. This helps to optimize the use of inputs such as fertilizer and irrigation. These practices have proven effective in maximizing the yield of second crop corn and promoting more sustainable and efficient production.

Second crop corn is a decisive factor in improving land efficiency in modern tropical agriculture. Studies have shown that the soybean-corn system can maintain its advantages, especially in terms of soil quality, even under long-term cultivation if good soil management practices are applied. The introduction of direct cultivation in the Brazilian Cerrado region has led to a significant increase in carbon input into the soil, mainly due to the cultivation of a second crop in the same season.

3. Brazil has huge areas of soybean cultivation that can be used to increase the production of corn as a second crop, eliminating the need to acquire additional land:

Farmers can expand their corn production without affecting income from other crops. However, they would have to bear the higher risk of a second harvest due to the end of the rainy season or uncertain demand. The corn market is highly responsive to market incentives and can fill existing soybean fields, as has been seen over the past decade. In the Centre-West region, there are 28. million acres of corn acreage, and in the

state of Mato Grosso, 60% of soybean acreage is available for corn expansion. For this reason, corn ethanol production is mainly concentrated in Brazil's Centre-West region, where 97% of corn production is a second crop and 99.5% of corn ethanol is produced.

Corn as a second crop has increased its share of the total Brazilian corn area and accounted for around 77 % in the 22/23 harvest. This expansion mainly took place in already established soybean areas. Between 2000/01 and 2022/23, the area under corn cultivation for the second crop in Brazil increased by about 36.3 million acres. However, the area under cultivation for the first corn crop fell by 14.8 million acres in the same period. At the same time, the area under soybeans rose from 34.5 million acres to 108.7 million acres, which corresponds to an increase of 74.1 million acres. The Centre-West region, which accounts for 73% of Brazil's corn second crop production, had a soybean area of 28.4 million acres in 2011/12, which corresponds to the area for corn second crop production in this region in 2022/23.

The expansion of corn second crop production in the Centre-West region was mainly on soybean fields that had already been consolidated for many years. According to the latest data from the Brazilian government, 60% of the soybean area in the Centre -West region is already earmarked for the second crop corn in the 2022/23 season. This means that 40% of the area is still available to produce a second crop.

The expansion of second-crop corn production in the Center-West region occurred mainly in soybean areas that had already been consolidated for many years. According to the latest data from Brazilian Government, the Center-West region has already allocated 60% of the soybean area for second-crop corn in the 2022/23 season. This means that 40% of the area is still available to produce a second crop.

Zero ILUC value for multiple cropping under certain conditions:

The U.S. Environmental Protection Agency (EPA) has studied the potential of producing biofuels from camelina and has concluded that it is unlikely to result in significant emissions from indirect land use change if (1) it is expected to be grown on fallow land and (2) it has limited impact on other markets.

According to the EPA, camelina is not currently a popular crop and farmers are unlikely to grow it on a large scale as they could use the land for more valuable crops. However, as growing camelina in rotation can increase the value of the land, it may be used on small areas. Currently, the uses of camelina for non-renewable fuels are limited and there is no significant market for camelina compared to other crops. Therefore, an increase in the production of camelina-based biofuels is not expected to have an impact on the production of other agricultural crops or commodity markets. As a result, the EPA believes that there will be no significant greenhouse gas emissions associated with indirect land use change.

Carinata, a winter crop grown in the southeastern United States and South America, is not expected to have a significant impact on LUC emissions. Renewable Energy Group, Inc (REG) conducted an analysis that found no indirect emissions for carinata oil. According to REG, carinata is well suited as a winter crop rotation in Southeast cropping systems because it performs better compared to other oilseed crops and provides soil benefits during the winter months when vegetative cover is required. In the Southeast, carinata is typically grown in the winter months between the seeding and harvest of summer crops such as soybeans, sorghum, peanuts, and cotton. The usual planting schedule is to plant in November and harvest in early May before sowing the next crop.

The cultivation of ethanol from corn in Brazil meets the conditions used by the EPA to determine low ILUC for carinata and camelina, which provides an additional level of confidence for this assessment. Table 1 summarizes the requirements that the EPA established to classify camelina or carinata as low emitting in land use. In the case of camelina, two technical requirements had to be demonstrated in a rulemaking process. Carinata, on the other hand, was approved in a petition process because it was able to demonstrate four technical requirements listed by the EPA as well as ILUC modeling from the CORSIA regulation. Second crop corn in Brazil meets the same technical requirements as camelina and carinata and offers additional safety levels.

Table 1. Comparison between camelina, carinata and corn of the second crop to be considered as low LUC:

		Camelina	Carinata	2nd crop corn
1	Low impact in other (international) markets	x	x	x

2	Does not generate land displacement of the 1st crop.	x	x	x
3	Do not compete with other winter crops		x	x
4	Low risk of reducing yields of the main crops		x	x
5	ILUC under CORSIA		x	x
6	ILUC based on the FAPRI-CARD model			x
7	ILUC based on the IAM external model			x
8	ILUC based on GTAP/LCFS approach			x
9	Evidence on SOC enhancement			x
10	Rulemaking process	x		
11	Petition Process		x	x

- **Effects of the second crop on the commodity markets:**

Camelina and carinata have a limited commercial use. The oil of these plants is used for cosmetics and to produce biofuels. Camelina meal currently has little market importance and the market for carinata meal is even smaller. But the lack of economic importance does not eliminate the risk of ILUC and makes the future even more volatile. It is not important that the effect of a second crop on the market is zero, but that the risk of significant impact is low. That is the key point.

On the other hand, corn as a second crop is much better understood in this respect. Data and evidence show that corn dynamics in Brazil are largely dominated by the second crop and that shocks in the domestic market have no lasting impact on the global commodity market. Many econometric studies have shown that mainly internal market factors influence the Brazilian corn price and that shocks in the international corn price have a positive effect on the local price, while the opposite has not been proven.

A recent econometric study by the University of Campinas confirms this result based on monthly data for the period 2005 to 2022. Various empirical strategies were used, including the estimation of vector autoregressive models (VAR), estimates of

vector autoregressive models with error correction (VEC), cointegration tests, causality tests and estimates of impulse response functions. Through these methodologies, the results confirmed that the corn price in the Center-West region shows a direct reaction to fluctuations in the international price, while the reverse phenomenon is not observed.

In contrast, price shocks on the corn market in the state of Mato Grosso do not spread to other countries. Consequently, price changes in the local corn market due to ethanol demand have no impact on the international market and are limited to the second harvest. Understanding the mechanism underlying the functioning of the market allows for better predictability of market movements compared to crops without an established market.

- Second crops for biofuels do not displace the main crop:

Carinata and camelina crops do not displace primary crops due to their economic competitiveness, which also applies to corn cultivation. As the data from large-scale production in Centre-West shows, around 100 % of the additional corn comes from the second crop, which leads to an increase in yield and area. It is important to note that the area planted to the first corn crop in Brazil decreased, allowing other crops to expand. As far as the second crop is concerned, no competition for land is expected in the foreseeable future. In Brazil, 108.7 million acres are currently planted to soybeans and only 42 million acres to corn as a second crop, a difference of 27 million acres.

- The cultivation of secondary crops for biofuels does not lead to a reduction in the yield of the main crop:

When soybeans are harvested, only small amounts of residue remain, leaving the soil unprotected, which leads to evaporation and leaching of nutrients. This can lead to soil erosion and a loss of organic carbon. However, growing corn after soybeans helps to retain nutrients in the soil, reduce soil erosion and prevent plant diseases and pests.

Factors such as soil cover, carbon input, straw formation on the soil surface and soil organic matter are decisive for the stability and efficiency of the production

system. On the other hand, growing soybeans in monoculture can affect the stability of production, especially in harvests with irregular rainfall. Annual soybeans and corn as a second crop increase total yields per hectare and lead to positive results. Technological advances and regional climatic conditions have enabled early sowing of soybeans, making corn an ideal successor crop.

As of 2022/23, the average soybean yield in Brazil is 3.5 t/ha, a significant increase compared to 2.6 t/ha in 2011/12. In the Centre-West region of Brazil, the yield has increased by 25 % within a decade. As shown in Figure 1, the combination of soybeans and corn leads to consistently higher soybean yields over the years.

Figure 1. Controlled field trial: soybean in different production systems. Source: MT Foundation (2020).

CORSIA has recognized that second crops hold zero or negative ILUC values:

CORSIA has previously discussed cases of secondary crops such as camelina and carinata that have been given a negative ILUC value because they do not require additional land and have no significant impact on other markets. The negative ILUC for these oilseeds, which are used to produce oil and meal, is since existing feed sources are replaced by the feed portion of the grain used to produce oil and sustainable aviation fuel (SAF).

There is currently no final decision from CORSIA on the correct ILUC value for corn in the second crop in Brazil. The standard GTAP-Bio and GLOBIOM models used in this regulation have not been prepared for the analysis of second crops, which already exist on a large scale, which is a singularity of Brazil. In the meantime, CORSIA has determined that "sequential cultivation" (in the case of second crop corn) is suitable for a zero ILUC value under the certification of the low-LUC risk approach, considering the "yield increase approach". This methodology aims to promote low-LUC risk practices and can be a solution for cases where ILUC models face a major challenge in accurately representing management practices or land use dynamics.

Negative ILUC impacts for Brazilian corn ethanol have been extensively documented and analyzed in reputable scientific literature:

Moreira et al. (2020) developed a consistent life cycle assessment (LCA) for ethanol in Brazil using corn second crop as feedstock. This study was based on the Brazilian Land Use Model (BLUM), a reduced version of the FAPRI-CARD model used in the RFS2 regulation. The study, published in Nature Sustainability, found an ILUC value of -4.7 gCO2e/MJ for a payback period of 30 years, considering the additional production of 1 billion liters of ethanol from multi-cropping corn by 2030.

The negative ILUC value is mainly due to the presence of the second crop in the Center-West region, the use of eucalyptus wood chips in cogeneration and the displacement of conventional animal feed by distiller's dried grains (DDG). The use of second-crop corn was not restricted in the model, and any corn variety (first or second crop) could be selected for ethanol production. The model result showed that most of the additional corn would be grown as a second crop in the Centre-West region of the model (this region has low costs and high supply elasticity). The result already considers

market-mediated effects and could apply to any corn crop in Brazil. This scenario was labeled Scenario 1 (S1).

In the paper, simulations of alternative scenarios were conducted to analyze the sensitivity of the results to DDG nutritional efficiency (when displacing forage) and the role of planted eucalyptus forests in ILUC. The results are shown in Figure 2. For scenario S2, which was like S1 but excluded the area expansion for eucalyptus, the ILUC result was 0.4 gCO2e/MJ. This result shows that the expansion of eucalyptus cultivation contributes to a further reduction in ILUC values. It is important to note that the ILUC value is very close to zero even without taking the eucalyptus expansion into account. For scenario S3, which ran like S1 but assumed a conservative lower nutrient equivalence for DDG, ILUC emissions were -2.6 gCO2e/MJ. Finally, for scenario S4, which ran like S1 but with a more optimistic assumption of DDG food efficiency, emissions were -7.4 gCO2e/MJ. The main reason for this decrease in emissions was the reduced cultivation of annual crops and pastures.

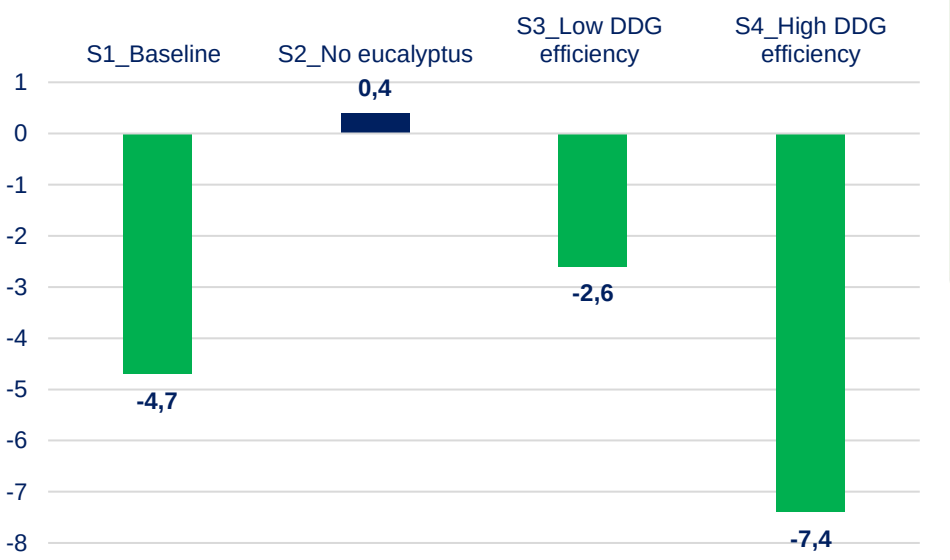

Figure 2. ILUC results for multi-cropping corn ethanol in Brazil (gCO2e/MJ). Source: Moreira et al. (2020).

Based on the current operating conditions of this application, Scenario 4 appears to be the most suitable option. It involves the use of eucalyptus as the primary fuel source and includes an improved fiber separation technology that increases DDG efficiency. Sensitivity analysis shows that this pathway has low ILUC emissions which

remain stable across a range of potential uncertainties, with emissions ranging from 0.4 to -7.4 gCO2e/MJ.

Corn as a second crop SAF is characterized by a consistent negative ILUC assessment model (IAM) that explicitly considers multi-crop cultivation in Brazil. Fiorini et al. (2023) estimated the ILUC for SAF in different scenarios using the Brazilian Land Use and Energy System (BLUES) model. The BLUES model is a process-based IAM that uses least-cost optimization and mixed-integer programming to predict long-term outcomes up to 2050 in 5-year intervals.

The model includes five macro-regions in Brazil and covers both conventional and new energy and land use technologies. The model was assessed in the latest IPCC report on mitigation strategies (IPCC, 2022). Although the model is not perfectly suited for analyzing RFS, it provides valuable insights. The study analyzes the impact of ILUC for five different commodities, two policy scenarios to combat deforestation in Brazil and five different blending targets for SAF. The results show that corn derived alcohol-to-jet (ATJ) performs best in most cases. Moreover, this was the only pathway that consistently showed negative ILUC values in all scenarios, even when deforestation was not well controlled in Brazil.

Table 2. Cumulative LUC GHG emissions of the assessed scenarios (gCO2e/MJ) in 2050. Source: Fiorini et al. (2023).

Bio-SAF blends	Maize		Sugarcane		Palm		Macaw low productivity		Macaw high productivity	
	Def	ZeroDef	Def	ZeroDef	Def	ZeroDef	Def	ZeroDef	Def	ZeroDef
10%	−298.0	−286.8	−108.9	−186.9	−169.5	−125.0	−208.0	−170.7	−223.8	−196.8
20%	−74.5	−95.2	−13.7	−107.8	−22.0	−98.8	−3.8	−58.0	7.2	−43.1
30%	−48.9	−53.3	1.0	−36.6	5.4	−31.7	9.2	−34.0	12.5	−24.2
40%	−56.9	−64.0	−5.1	−33.7	3.8	−21.6	15.0	−18.8	10.3	−17.0
50%	−48.4	−37.4	0.2	−23.5	3.8	−13.7	10.4	−4.3	7.9	−13.6

Multiple cropping of corn carries a low risk of land use change and should be considered in the LCFS/CARB:

It is widely recognized that ILUC values are not precise and can vary significantly depending on the model and approach. These models can only indicate risk levels and do not provide exact data points. The ILUC value for corn in the second crop

can vary between 0.4 g CO2e/MJ and -298 gCO2e/MJ depending on the model, premise, and efficiency level. These results differ significantly from the original assessment of regular US corn as defined in the LCFS/CARB. Based on the current analysis, multi-crop corn cultivation can be considered with a low probability of ILUC emissions.

Brazilian corn ethanol is classified as a Low LUC risk by the ISCC/CORSIA:

According to ISCC (2022), when implementing low LUC risk practices to produce SAF, actions that lead to LUC should be avoided. It is important to encourage the production of additional commodities in relation to a baseline without increasing the demand for land.

To obtain certification as low LUC risk under ISCC CORSIA, there are two approaches to commodity production that are categorized as low risk, considering practices introduced after January 2016 (in exceptional cases 2013):

(i) yield increase.
(ii) utilization of unused land (degraded land).

The yield of harvested commodities can be enhanced through diverse strategies, including the refinement of agricultural practices, the formation of collaborative partnerships, the practice of sequential cultivation, the mitigation of post-harvest losses, and the implementation of both mechanical and non-mechanical advancements. These measures, as expounded upon by the ISCC (2022), can effectively augment the productivity and quality of agricultural output.

One of Brazil's second crop ethanol producers has become the first ethanol producer in the world to receive the international ISCC CORSIA certification with the addition 'low LUC risk'. This certification confirms that the company's production process complies with global standards for the production and supply of ethanol and corn oil for SAF and that Brazilian second crop ethanol is a feedstock that does not cause emissions related to indirect land use change. This approach aims to ensure that the production of biofuels makes a positive contribution to reducing carbon emissions, particularly in hard-to-decarbonize sectors such as aviation.

CARB's 2028 Sustainability Certification Program:

We would like to make the following additional suggestions regarding the requirement that all crop and forest-based feedstocks must be certified by January 1, 2028:

Clear guidelines: Develop clear rules and definitions to ensure that products have the required sustainability attributes to avoid misinterpretation and ensure compliance with stakeholder involvement and learning from existing programs.

Focus on fuel value chain: certification of production that meets the requirements of the LCFS without interfering with other sectors of the local economy and respecting national sovereignty.

- Recognize that raw materials and fuel production may serve multiple sectors with different certification standards.
- Certifications should be limited to the fuel production chain, respect the laws of the individual countries, and avoid interference.
- Certification procedures should be tailored to and focused on the specific sector of the product concerned, while respecting the sovereignty of the countries supplying the raw materials.

Avoid market reserves: Encourage competition and diversity of certifications by establishing comprehensive rules that are compatible with different systems, reducing red tape and providing more options for qualified materials.

- Sustainability certification for LCFS should be a process that encourages continuous improvement and educates a growing number of producers about the benefits of sustainable practices and does not impose restrictive and unnecessary criteria that could monopolize the market by qualifying a limited number of producers or processes.
- There is a risk that sustainability certifications will only apply to certain curtailment schemes. Homogeneousness should be balanced to prevent monopolization of the market.

- CARB should aim to establish comprehensive rules that allow multiple certification programs without being too restrictive, promote competition, expand options for qualified materials, and reduce bureaucracy.
- CARB should conduct a comprehensive evaluation of certification programs, focusing on broad sustainability criteria to include different systems, including regional systems such as Brazil's Renovabio program, if the certification scheme meets the required sustainability criteria of the LCFS or commits to meeting/implementing these criteria.

Interchangeability of certifications: Allow interchangeability with other certifications that are equally or more stringent to avoid duplication and promote efficiency and compliance with required attributes, such as transparency and traceability. Avoid creating LCFS-exclusive modules in certifications such as ISCC and RSB to minimize complexity and duplication of effort.

- Avoiding linking each market or program to its own certification system avoids duplication of effort, multiple management systems, additional documentation, additional costs, and slow processes.
- Encourage the use of interchangeable certifications that meet equivalent standards to save time and resources.
- The LCFS could expand its certification schemes to include those that are compatible and interchangeable and consistent with its principles and criteria across the supply chain.
- The certifications could be based on strict national environmental laws that prescribe social and ecological responsibility and reflect the standards of the LCFS.
- Ensuring transparency and traceability in the production chain is crucial, especially for proving land use change and ensuring that products meet the required characteristics. Compliance with laws related to non-verified requirements could confirm compliance with the required LCFS attributes.

Optimize time and reduce costs: Strategies to optimize the time and reduce the costs of implementing and maintaining certifications, improving efficiency and accessibility

using standard values, remote testing, investing in qualified inspectors and training local professionals can mitigate logistical challenges and reduce costs for growers.

- The use of regional default values can streamline certification and monitoring, as less data and documentation is needed than when relying on actual GHG values, which can lead to delays.
- In addition to the required audits by the certification programs, LCFS applicants must also undergo on-site visits by independent auditors to obtain traceable certificates. This requirement can significantly increase both the time and costs of the certification process. Conducting remote audits where possible and investing in qualified auditors and training local professionals, especially in developing regions, could save time and resources.
- Annual fees, volume-based fees and fees per unit of production required by certification programs, together with implementation costs such as infrastructure adjustments on farms, preparation of certificates and staff training and on-site audits, can be prohibitive for all producers, especially small farms.
- Certification costs can drive up the price of biofuels and place a financial burden on producers and the entire supply chain, which can lead to a decline in production and supply volumes due to the high costs and bureaucratic burden.

Scalability: The introduction of regional eligibility criteria and a modular certification approach could simplify the certification process, reduce costs, and promote scalability, as different parts of the production chain can comply with the certification standards independently of each other.

- The introduction of regional eligibility could solve this complexity by seeing specific regional characteristics and streamlining the certification process.
- Enabling random audits using the square root of the number of farms to be certified to shorten the audit time.
- Global scalability must account for potentially prohibitive costs for all producer types, including fees for Certification Bodies, property adaptations, and staff training to meet evolving standards.

- A scalable solution might involve a modular adherence mechanism within the production chain, where certification is independent for different product batches or areas, thereby simplifying management and reducing costs.

Based on the April 10 presentation, default values will only apply to sites that already have defined pathways, so **we urge that a default value for Brazilian ethanol from second crop corn be included in the rulebook**. In addition, the certification process should be robust and efficient, as different certification processes should not be assessed overlapping and should be easily scalable.

Therefore, we request that CARB to reevaluate the Brazilian case and allow the submission of a new rulemaking process to establish a regional default value that reflects the reality of Brazilian second crop corn.

Respectfully,

UNEM – Brazilian Corn Ethanol Association
President and Chief Executive Officer

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ATTACHMENT

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