Almond Alliance
OF CALIFORNIA

July 9, 2021

Clerk of the Board
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Via Electronic Submittal
Re: COMMENTS ON THE INTRODUCTORY PRESENTATION OF THE 2022 SCOPING PLAN

The Almond Alliance of California (Almond Alliance) and the Almond Board of California (ABC) appreciate the opportunity to provide comments in advance of the proposed California Air Resources Board (CARB) Scoping Plan update. The Almond Alliance and the ABC work together to educate regulators with a better understanding of how specific issues impact the California Almond industry.

The Almond Alliance is a non-profit trade association dedicated to advocating on behalf of the California almond industry and is organized to promote the interests of its members. Almond Alliance members include almond processors, hullers/shellers, growers and allied businesses. Almond Alliance is dedicated to educating state legislators, policy makers and regulatory officials about the California almond community. As a membership-based organization, we raise awareness, knowledge, address current issues and provide a better understanding about the scope, size, value and sustainability of the California almond community.

Established in 1950, the Almond Board of California is a grower-enacted Federal Marketing Order (FMO) under the supervision of the U.S. Department of Agriculture. The FMO administers a broad-based mandatory program that scans incoming and outgoing quality, compliance, food safety, industry education, market development, and research on almonds' growing, nutrition, and food safety. The ABC is financed through an assessment collected on each pound of edible almonds delivered.

<u>Almond Background</u>
There are about 7,600 almond growers in California, according to the 2017 USDA Agricultural Census, with a 2020 production of 3.0 billion pounds. Almonds are put into commercial channels by approximately 100 handlers. Virtually 100% of U.S. commercial almond production is in California, grown on over 1.5 million acres throughout the Central Valley. California produces over 80% of the global supply.

The ABC and California almond growers have been investing in research to better understand the greenhouse gasses associated with the growing of almonds (Life Cycle Assessment/LCA) and

ways to grow almonds to reduce emissions and sequester carbon. The LCA showed that nitrogen and water inputs were the largest sources of greenhouse gas (GHG) emissions associated with the on average 25 years of growing an almond orchard, while the trees, hulls, and shells - the co-products grown along with the kernel - provide sequestration, biomass energy, and dairy feed alternatives which off-set nearly 50% of the GHG emissions associated with 25 years of growing. Thus, the LCA helped us identify the opportunities with the co-products and opportunities to reduce other GHG emissions associated with almond growing.

For California almonds, there are three main areas where growers and processors can adopt practices that reduce and sequester greenhouse gas emissions, keeping in mind that the growing of trees is sequestering carbon for at minimum the life of the trees:

1. Reducing reliance on fossil fuel energy in the growing and processing of almonds, particularly for irrigation and in the production of fertilizers (source reduction).
2. Adopting farming practices around building soil organic matter and managing nitrogen nutrients to sequester/reduce emissions (sink and source reduction).
3. Contributing co-products, almond hulls, shells, annual pruning's, and tree removals at the end of orchard life to bioenergy or a bioeconomy (sink and source reduction).

<u>General Comments and Responses to Scoping Plan Questions</u>

For California agriculture to stay competitive with the rest of the world and consistent with relevant statutes, any proposed working lands targets should consider the economic impacts of proposed plans on agriculture. California agriculture has the strongest regulations in the world, with additional regulations risking "leakage" of production and associated impacts to other production areas. Keeping productive agriculture in the central valley will help avoid negative economic impacts to residents of disadvantaged communities that may be reliant on these jobs.

We will also reinforce comments made during previous comment periods, that practice changes should continue to be voluntary and incentivized which is critical for adoption and support among the agricultural community. We would also like to ensure that innovation isn't stifled out of a fear that improvements will become new regulations. Ongoing and expanded investments in the University of California Agriculture and Natural Resources (UCANR) Cooperative Extension and other Technical Service Provider programs are also critically important in continuing to drive research, outreach, and ultimately grower adoption. Adoption can also be supported by public and private markets that give credit for reductions and sequestration.

Perhaps most importantly, any climate smart agricultural practices that come out of the scoping plan should be in a grower's self-interest, and ideally agronomically beneficial. Solutions should also consider food safety and variable farm sizes. Finally, if a grower loses productivity, there must be a compensatory program, including incentives and market-based solutions.

Natural And Working Land Source Reduction

The almond industry remains committed to ongoing efforts that support State Implementation Plans aimed at achieving air quality standards. In addition to being cleaner-burning, required engine upgrades should also have comparable efficiency to result in actual reductions in fossil fuel energy. To this end, we continue to support incentive programs such as the Funding Agricultural Replacement Measures for Emission Reductions (FARMER) Program, that can show net reductions in emissions and fuel usage, while maintaining on-farm utility. However, farming equipment requires work under challenging conditions. To date, technology is not yet sufficiently reliable for larger engines such as tractors to convert to ZEV, due to the need for higher torque and operational flexibility to refuel in the field.

For anthropogenic black carbon, under on-road Diesel, the almond industry will contribute to reductions through any transportation changes to engines, but the transition must be affordable. There are already significant challenges to getting sufficient drivers and global trade. We will continue to rely on the FARMER program or other incentive providers such as Natural Resources Conservation Service to fund equipment transitions for off-road mobile.

Another way almonds could help is reduce the carbon intensity of fuels, as biomass can be converted into a low carbon biofuel and energy source. Potential products include biogas, ethanol, and even jet fuel, produced through pyrolysis or other extraction processes.

The current proposal (2021 SB100 Joint Agency Report Summary) shows zero projected additional bioenergy in 2030 and 2045. It would be helpful further to understand this estimate and future agriculture potential for bioenergy, given that biomass currently produces 6% of California Energy demand (CPUC presentation 6/8/21).

Under short-lived climate pollutants, ABC has invested in combining dairy waste with almond shells to create compost. To expand these short-lived climate pollutant programs, there is a need for a streamlined approval process for on-farm composting.

For ag burning we have been developing alternatives such as Whole Orchard Recycling. We will continue to be engaged in developing of new alternatives such as chipping equipment, through current processes related to implementing new ag burn restrictions. Incentives and access to service providers particularly for small farms, will be necessary to reach these goals.

Agronomic improvements can help reduce emissions and carbon intensity per unit of food, so ongoing support for improved production efficiencies, such as nutrient and water use efficiency, is critical for meeting scoping plan goals. In this way, research into improved pest management methods, and beneficial or negative pest management impacts from healthy soils practices must be done, to ensure grower support for proposed changes. Improved nutrient management can also reduce related emissions.

Nature Based Solutions for Sinks

The almond industry submitted comments to the Farmer/Rancher Led Climate Change Solutions discussions, and the Natural and Working Lands Climate Smart Strategy. Those points are reiterated here:

- Need for a method to provide sequestration credit for both growing and implementing supportive practices such as Whole Orchard Recycling.
- Support for increased adoption of cover crops, pollinator hedgerows, and the continuation of the Healthy Soils Program in ways that are also be agronomically beneficial.
- Agreement that improved soil management can increase carbon storage and highlight that almonds and other perennial crops are already a largely no-till system.
- Support for efforts to keep agricultural land in production through voluntary easements, thereby minimizing loss of farmland to urbanization. To this end, encourage agricultural land conservation through programs such as Sustainable Agricultural Land Conservation as an opportunity to reduce conversation of agricultural lands into suburban and urban development. Research shows greater potential for avoided emissions from agricultural lands and as the advisory panel noted, lower biodiversity habitat opportunities in urban areas.
- Encouragement of adaptive management to include multi-benefit land repurposing of agricultural lands due to the Sustainable Groundwater Management Act.
- Focus on identifying refugia as priority areas will help target where to concentrate voluntary private landowner habitat establishment.

Again, we appreciate CARB taking the time to solicit feedback on how to incorporate working lands into the scoping plan. There are various ways that the almond industry, California agriculture more broadly, and our hardworking farmers can continue to improve their already excellent efforts in support of these goals. We seek a partnership that shows how the adoption of climate smart agricultural practices improves the bottom line, and helps to maintain the vibrancy, productivity and future of farming in California. Both the Almond Alliance and ABC look forward to continuing to work with CARB on these complex issues.

Sincerely,

Elaine Trevino
President, Almond Alliance of California

Cc: Jesse Roseman, Principal Analyst Sustainability & Env. Affairs, Almond Board of California