February 24, 2021

The Honorable Gavin Newsom
Governor
State of California
1303 10th Street, Suite 1173
Sacramento, CA 95814

Re: ***Agricultural Burning in the San Joaquin Valley; Upcoming California Air Resources Board February 25th Meeting Agenda Item***

Dear Governor Newsom:

On behalf of the below listed agricultural organizations, we write this letter regarding the upcoming public California Air Resources Board (CARB) meeting to discuss and consider the San Joaquin Valley 2020 Agricultural Burning Assessment. We are seeking the assistance of the Governor's office to ensure there is funding for a well thought out plan if the remaining exempted burning is to be ended. This plan should include assistance to the companies and our farmers that are seeking bioenergy and bioeconomy solutions, but who also face hurdles such as lack of markets for products, necessary equipment, permitting and infrastructure.

The agricultural industry has a long and proven track record of complying and working with EPA, CARB and the San Joaquin Valley Air Pollution Control District (District) to address air quality issues and reduce emissions. From fugitive dust to NOx, the agricultural industry has collaborated with these agencies to not only reduce emissions but surpass expected emissions reductions. This was done while keeping the agricultural industry viable and producing food and fiber for the United States and around the world. Ag burning is no exception. Since the passage of SB 705, the agricultural industry has worked with the SJVAPCD to reduce agricultural burning by more than 80% since 2005. The remaining situations have remained exempted because either no alternative solutions have been developed (e.g. how can vines with wire be incorporated into the soil?) or the alternatives are cost prohibitive (e.g., small and disadvantaged farms). While alternatives to ag burning have been found for most situations through the development of solutions such as whole orchard recycling for orchard removals, chipping of prunings, and chipped wood for bioenergy, further progress has been hampered by increasing closures of biomass plants, and the inability to get alternative technologies (e.g. cellulosic ethanol, renewable diesel, biochar) off the ground to provide needed biomass solutions.

The Board will consider CARB staff's written assessment of the District's 2020 Staff Report and Recommendations on Agricultural Burning (2020 Report) at the upcoming CARB meeting on February 25, 2021. The 2020 Report includes the District's strategy to further reduce open agricultural burning in the San Joaquin Valley as well as a recommendation to postpone the prohibition on open burning for certain crop categories and materials as allowed under Senate Bill 705 (Florez, 2003). CARB's concurrence is required for the recommended postponements.

The 2020 Report, adopted on December 17th, proposes further reductions in acreage and crop types that can be burned. Although further restrictions will be difficult to meet, the District did retain some postponements, with clear technical and/or economic hurdles. It is our understanding that at the February 25, 2021 meeting, the CARB Board members are considering eliminating all ag burning, without any exceptions or extensions. This is not realistic given many small growers are unable to secure the needed chipping and shredding services due to their size and limited acreage. Additionally, further alternatives to burning requires chipping, and there is so far no way to chip vines without wire removal. Therefore, ending

ag burn in the San Joaquin Valley without a well thought out phase-out plan would be devastating to grapes, and greatly impact citrus, tree nuts and kiwi, and will be particularly difficult for small farms.

Industry leaders have come together to discuss how to resolve this situation and there are no easy answers. We need the assistance and partnership of the Governor's office and CARB if we are to effectively phase out agriculture burning. To move away from burning of prunings and orchard/vineyard removal, the following issues need to be addressed.

Additional Funding for Incentive Programs:
The current alternative to burning prunings and orchard removals requires woody biomass to be chipped/shredded on-site and spread on or incorporated into the soil. The practice's primary challenge is that it is not economically feasible for some crops and small farms. Biomass plants used to cover some of the cost of chipping orchard removals. While incorporating chipped woody biomass into ag lands can provide some soil and carbon sequestration benefits (at least for orchard removals), it takes time for those benefits to accrue economically to the grower. Thus, the "Alternative to Agricultural Burning" program facilitated by the District incentivizes growers to utilize alternatives to burning such as whole orchard recycling by covering the additional costs compared to burning or sending to a biomass plant if feasible. The program has been utilized widely in the almond industry but needs to be expanded to other crops in order to phase-out ag burning in the San Joaquin Valley.

Proposed Solution Funding: Provide 3-year funding for Alternative to Open Burn and a modified program at $45 M per year for a total of $135 M. This program needs to be expanded and updated to include annual prunings, with the pruning calculation to be determined within the next 3 to 6 months. This amount would include the accelerated transitions for vineyards and orchard removals as well as current phase-out participants who are relying on the existing program.

Chipping and Shredding Equipment Challenges:
The utilization of chipping and shredding on small acreage is also challenged by the availability of equipment and the fact that small jobs are less profitable for chipping and shredding operators. For example, a custom chipper/shredding operator who actually has appropriate equipment for small operations will charge an upfront charge regardless of size of job and typically only schedule the work when there are multiple sites in close proximity to make the trip with the equipment worthwhile. In the meanwhile, while prunings lie on the orchard floor, other orchard activities such as mummy nut removal (integrated pest management practices) and weed management cannot occur. For orchard removals the primary issue is the availability of equipment that can function in small orchards.

In terms of reducing the hurdles to chipping/shredding because of costs/availability/right sized equipment, we propose forming a stakeholder group to make recommendations on how to catalyze chipping/shredding and orchard removal services that are economical and available to small growers/orchards. A primary goal is to motivate custom operators to make new equipment investments and grow their businesses to service small farms.

We anticipate the group will assess what equipment is feasible for various situations, infrastructure needs for operating and maintaining equipment at costs that work for small growers, and how to best communicate these options. Based on these assessments, the stakeholder group would recommend how to incentivize appropriate equipment via custom operators or other structures such as co-ops and Resource Conservation Districts (RCD's).

Proposed Solution Funding: To stimulate the supply and demand for new equipment, one-time funding of $50 million dollars to incentivize chipping and shredding equipment and support the development of a platform to assist with connecting small growers and their jobs with custom operators.

Bioenergy/Bio-Economy Investments Pilots and Research (Part 1):
When chipping and shredding for soil incorporation are not economically feasible, biomass to energy appears to be the most viable method of disposal. Advanced Bioenergy solutions are available and ready to go but many lack investment capital and contracts to purchase the energy. New resources will be required for successful adoption of new advanced methods.

We learned from our historic reliance on a limited number of biomass-to-energy facilities that depending on one disposal practice is not wise. We know that soil incorporation is not appropriate for all situations due to plant disease issues or transition to annual cropping where soil incorporation of woody biomass is agronomically counterproductive. To sustain the economic feasibility of alternatives to open air burning we must support a larger toolbox of alternatives. These include maintaining some biomass plants and providing the necessary energy policy incentives and investment in novel bioenergy and bioeconomy alternatives.

San Joaquin Valley Economic Development through Bioenergy/Bio-Economy Investments Pilots and Research (Part 2):
We need to increase the utilization of woody biomass as an input to bioenergy processes within the San Joaquin Valley through processes such as gasification, pyrolysis, and torrefaction which produce a variety of produces including heat, power, syn-gas, bio-oils, and biochar. Bioeconomy facilities are still more in the research phase but show promise that they can produce products that enhance quality of recycled plastic, pre-cursors to bio-plastics, and other valuable chemical compounds.

Supporting development of this bioeconomy and bioproducts developed and produced in California will accelerate movement away from fossil fuels and towards syngas, biodiesel, etc., contributing to new methods of green energy production. It also brings technical jobs to the economically challenged San Joaquin Valley. Lastly, it adds value to ag coproducts and processes them locally for jobs movement toward a bioeconomy. Incentivizing early adopters with up-front investment helps to defray the costs of developing markets for the new bioenergy and bioproducts.

A partial list of examples of companies we are aware of that are interested in constructing these advanced bioenergy facilities are:

- Aemetis
- Enerkem
- West Coast Waste Co.
- Caribou Biofuels
- West Biofuels
- Restoration Fuels, LLC
- Phoenix bio-fuels

While some of these solutions have been around for some time, they are not being built at a pace that would match potential needs due to a rapid phase-out of ag burning. Therefore, we believe it is necessary to develop a stakeholder group and a 6-month summit with CARB to review technologies and assess potential solutions and any barriers for wide implementation. Some of the items to be addressed are:

- How to get facilities permitted and built?
- How to overcome regulatory hurdles?
- What energy market policies and incentives are needed to purchase the resulting fuel and power?
- Necessary infrastructure to utilize the product, whether it is gas, electricity, biochar, or other product?

We therefore support the recommendation by both the District and CARB to establish a Clean Biomass Collaborative, including ag stakeholders, that can rapidly review these issues and within 6 months of the CARB board meeting provide initial recommendations on how to rapidly get currently available technology sited, permitted and built in the San Joaquin Valley.

Proposed Solutions and Funding for advanced bioenergy: There is a need for multiple solutions to this complex issue. Some examples include:

- Provide low interest grants, matching loans/cost shares for facilities to be built and expanded.
- Pilot/invest in mobile units that can use various ag co-products such as woody biomass from tree removals, peach pits from canning, shells from tree nuts, prunings, twigs, etc. (Similar mobile units are being piloted for management of Sierra wildfire slash piles)
- Review permitting hurdles to assess if streamlining is possible.
- Assess hurdles for bioenergy to reach markets and for coproducts to reach markets (e.g. biochar been priced too high to be on interest to growers).
- Research additional ways to convert woody biomass efficiently into products of interest in the marketplace.

The request would be for CARB and the Governor's office to assist with a significant investment and dedicated staff to partner in the development of bioenergy and bioeconomy solutions in the San Joaquin Valley, targeted towards those agricultural industries that must transition away from ag burning. This effort should tie in with other efforts to move the California economy away from fossil fuels to include the California Energy Commission and CDFA.

Agriculture is a source of food and fiber and with the right technologies can also be a source of energy and biobased products. However, with increased costs and little if any increased income accruing to growers, these solutions need support. Otherwise, these changes can further drive small farmers towards getting out of the business and potentially selling their land for development. In addition to government financial support, woody co-products have unrealized potential in marketing the resulting reduction in GHG emissions, achieved through either soil incorporation or bioenergy. We look forward to your assistance for companies and farmers seeking solutions for the "bioeconomy," and overcoming the hurdles necessary to take these to scale, through developing necessary markets and infrastructure.

Thank you for your consideration and response on this important issue.

Sincerely,

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Almond Alliance of California

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