



January 18, 2023

Lauren Otani
Department of Pesticide Regulation
1001 I Street
Sacramento, CA 95814

Re: "TEXT OF PROPOSED REGULATIONS: Title 3. California Code of Regulations, Division 6. Pesticides and Pest Control Operations, Chapter 2. Pesticides, Subchapter 4 Restricted Materials, Article 4. Field Fumigation Use Requirements, Amend section 6448 to read:" and "California Environmental Protection Agency, Department of Pesticide Regulation, 1,3-Dichloropropene Field Fumigation Requirements, Established January 1, 2024".

Dear Lauren Otani:

On behalf of the California Strawberry Commission (Commission) we appreciate the opportunity to provide comment on the proposed regulatory action (DPR 22-005) regarding the use of 1,3-Dichloropropene (1,3-D) in California.

The Commission represents all of California's strawberry farmers, shippers, and processors. Strawberries in California use less than half of a percent (0.5%) of the state's farmland. In 2023 this includes 41,570 planted acres, located primarily in the Oxnard, Santa Maria, and Watsonville/Salinas regions. These acres generated \$2.7 Billion in production value in 2022 for the state of California. For every strawberry farm dollar 97 cents remain in local communities on the Central Coast, supporting the local labor force and fueling the economic engine of these communities. Although occupying only a tiny footprint in California, strawberries are the fourth most valuable commodity in the state. Over 50% of strawberry farmers are small family farms, growing strawberries on less than 50 acres while 75% of strawberry farmers are minority-owned businesses who employ over 55,000 people.

The California strawberry industry has a long history of investment in pest management research and collaboration with California research institutions to develop more sustainable plant protection methods. As a result of these efforts, the approach to pest management has become more comprehensive, targeted, and safer for people and the environment. In your 2020 pilot project proposal is states, "The objective of the pilot program is to provide growers and applicators with alternative methods of achieving emission reductions comparable to totally impermeable film (TIF) tarpaulins." We feel proud to note that strawberry farming almost exclusively utilizes totally impermeable film (TIF) tarpaulins when fumigating as far back as 2008 during the early trials for use of TIF, with a significant ramp up in 2014 when TIF replaced VIF.

Issues

1. *Proposed regulation soil moisture requirements not sustainably achievable for all soil types.*

In the regulations, the Department proposes to increase soil moisture requirements from 25% to at least 50% of field capacity and offer three options to comply: (1) irrigate with three inches of water 48 to 72 hours prior to fumigation, (2) determine the soil moisture content using the feel and appearance method, or (3) determine the soil moisture using a soil moisture sensor.

We would like to offer our concern that this increased saturation requirement will result in an inefficient use of scarce water supplies. The “Documents Relied Upon” for which this proposed regulation is based on includes a few reports specific to soil moisture that we would like to highlight and ask for more clarity on how it was determined that all soil types can be successful at meeting the proposed regulations minimum soil moisture percentage. Success in this instance is defined as effective fumigation of the soil as well as sustainable water use. We appreciate that there are trade-offs in this situation, and respect that safety with chemicals is first and foremost. We seek clarity as to how 50% minimum soil moisture was determined to be applicable for all soil types. The USDA 1998 “Estimating Soil Moisture by Feel and Appearance”, and the CDPR in 2022 “Guideline to determine soil water content (moisture) at field capacity” offer insights as to how the regulation was developed. As stated in the CDPR report, spatial variation in soil properties at the field scale exists and should be monitored. While this specific variation is an important aspect of assessing soil moisture, it appears their study did not look at variations between soil types.

A table entitled “Guide For Estimating Soil Moisture Conditions” in the USDA report “Estimating Soil Moisture by Feel and Appearance” Contains four different soil types, and presents soil moisture deficit (SMD) at various available soil moisture percentages. We note that at the 50-75% available soil moisture percentage range that all four soil types assessed have different SMD values. Unfortunately, the report does not analyze these variations nor comment on these differences.

The CDPR memorandum “EFFECT OF PRE-APPLICATION SOIL MOISTURE ON EMISSIONS OF 1,3-DICHLOROPROPENE” dated September 11, 2019 was listed in the references for the relied upon document “Developing mitigation measures for 1,3-dichloropropene applications: An overview of the Pilot Studies”. In this memorandum it notes that 16 soil profiles were utilized to develop the HYDRUS model utilized in subsequent studies for this proposed regulation. There is no elaboration regarding the soil type itself for each of the profiles. The author notes in their conclusions three separate points, one of which is, “Although soil moisture is a critical factor affecting fumigant emissions, even with soil moisture held constant emission ratios continue to show substantial variation by soil type due to a number of other factors affecting fumigant emissions. Therefore, the effect of soil moisture on emission ratio should not be quantified based on a single field or modeling experiment.” (Vidrio, 2019).

While due diligence might have been performed, the reader is left with little transparency to conclude this on their own. This is an area of high interest, especially in California regarding another competing goal for farmers, sustainable water use. As farmers look to maintain compliance with the Sustainable Groundwater Management Act (SGMA), the proposed regulation would further constrain farmers' abilities to manage all required resources for sustainable farming practices.

2. *Further clarification regarding definition of "occupied structures" specific to the regulation.*

DPR's proposed definition of occupied structures will help reduce interpretation discrepancies and confusion at the County enforcement level. Per DPR, occupied structures will include, "*residences, onsite employee housing, schools, convalescent homes, hospitals, businesses, or other similar sites identified by the CAC.*". We appreciate the further clarification by DPR that, "*non-residential agricultural buildings, including barns, livestock facilities, sheds, and outhouses, are not by default considered to be an occupied structure.*", as these structures are only occupied for very short durations of time. We seek clarification from DPR that as long as these non-residential agricultural buildings are not occupied for at least 24 consecutive hours that they are not to be considered occupied structures and are therefore not subject to the setback distance in effect.

Conclusion

We value the work and effort that DPR dedicates to protecting human and environmental health. While revisions to past regulations are needed to stay relevant, they can take a period of adjustment for farmers and agricultural industry partners. We see great value in open communication and educating regulators about the efforts being made by farmers to match and exceed the sustainability and protection efforts outlined by DPR. Our comment letters are sent with the intention of sharing valuable industry insights, challenges, and knowledge. We hope that our correspondence will also be viewed as an open door for further communication. We look forward to continued discussion on this proposed regulatory package. We thank you for the opportunity to comment and for your careful consideration.

Respectfully submitted,



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