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Ms. Michelle Arsenault
National Organic Standards Board
USDA-AMS-NOP
1400 Independence Ave. SW
Room 2648-S, Mail Stop 0268
Washington, DC 20250-0268

Docket ID # AMS-NOP-24-0023

Re. CS: CO2 Petition

These comments to the National Organic Standards Board (NOSB) on its Fall 2024 agenda are submitted on behalf of Beyond Pesticides. Founded in 1981 as a national, grassroots, membership organization that represents community-based organizations and a range of people seeking to bridge the interests of consumers, farmers, and farmworkers, Beyond Pesticides advances improved protections from pesticides and alternative pest management strategies that eliminate a reliance on pesticides. Our membership and network span the 50 states and the world.

Beyond Pesticides urges the NOSB to deny the petition because synthetic carbon dioxide is not necessary for organic production. It is not compatible with organic production because it is not in a category of substances eligible for use in organic production. The CS has not assessed all the environmental impacts of its use. We also agree with the statement: "The Subcommittee recognizes that this petition highlights the lack of clear standards pertaining to indoor and container production and prevents the NOSB from fully evaluating petitions for substances used in this type of production." Synthetic substances should not be added to the National List to support forms of production that are not supported by clear production standards.

Synthetic carbon dioxide is not necessary for organic production.

The CS states, "One member stated experience with the substance, noting that its use increases production potential, while another questioned its necessity, i.e., is this material truly necessary for organic production or is it used as a booster like synthetic fertilizers or substance of high solubility? The Crops Subcommittee contacted organic greenhouse transplant and nursery producers and found that CO2 was not needed nor supported for use. These producers were in the Southeast where average temperatures are warmer, and venting is less limited compared to colder climates." Despite the statement that venting may be less common in

colder climates, the CS does not present evidence that synthetic CO_2 is needed, even in colder climates. Organic growers have been able to grow plants in colder climates without adding synthetic CO_2.

The petitioned use of carbon dioxide is not compatible with organic production.

The petition makes it clear that the intended uses of CO_2 include use as a plant growth enhancer, which is not appropriate for a synthetic material, as stated in §6517(c)(1) of the Organic Foods Production Act (OFPA):

> The National List may provide for the use of substances in an organic farming or handling operation that are otherwise prohibited under this chapter only if—
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> (A) the Secretary determines, in consultation with the Secretary of Health and Human Services and the Administrator of the Environmental Protection Agency, that the use of such substances—
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> (i) would not be harmful to human health or the environment;
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> (ii) is necessary to the production or handling of the agricultural product because of the unavailability of wholly natural substitute products; and
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> (iii) is consistent with organic farming and handling;
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> (B) the substance—
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> (i) is used in production and contains an active synthetic ingredient in the following categories: copper and sulfur compounds; toxins derived from bacteria; pheromones, soaps, horticultural oils, fish emulsions, treated seed, vitamins and minerals; livestock parasiticides and medicines and production aids including netting, tree wraps and seals, insect traps, sticky barriers, row covers, and equipment cleansers; or
>
> (ii) is used in production and contains synthetic inert ingredients that are not classified by the Administrator of the Environmental Protection Agency as inerts of toxicological concern; and
>
> (C) the specific exemption is developed using the procedures described in subsection (d).

The CS acknowledges the fact that CO_2 as petitioned does not fit into any of the categories stated above, but says, “However, it is listed on 2004 EPA List 4A and was not revoked under NOP 5008, Guidance: Reassessed Inert Ingredients. As an insecticide, “carbon dioxide is exempted from the requirement of a tolerance when used after harvest in modified atmospheres for stored insect control on food commodities” per 40 CFR 180.1049 (TR, 2023).” Since CO_2 is not petitioned as an “inert” or an insecticide, these observations are irrelevant.

The proposed use has environmental impacts.

First, as stated by the CS, “In the atmosphere, CO2 absorbs longwave radiation coming from the earth’s surface, causing warming known as “the greenhouse effect.” Greenhouses usually have a CO2-use efficiency of less than 60%, meaning that over 40% of the CO2 that is added is released into the atmosphere without being ever incorporated into plant biomass.”

The petition says, “Most of the sources of carbon dioxide are reclaiming the substance from other primary processes. That is to say, it is recycling substances that would otherwise be given off into the atmosphere.” However, even if annotated as proposed, “must be sourced as a byproduct,” if it is not a byproduct of on-site processes, it will need to be transported to the site of use—and that transportation is likely to involve the production and release of more CO_2. In addition, it should be noted that when the NOSB has deliberated on this issue during previous cycles, the point has been made that organic production should not rely on the byproducts of polluting industries. To do so is to accept polluting practices that organic has sought to end by assessing the impacts of allowed substances from cradle-to-grave—from production, use, to disposal. Clearly stated in the history of organic law and policy is the intent that organic systems “enhance” environmental protection and the complex biological communities that sustains life. To, in effect, incorporate a reliance on polluting practices runs contrary to the critical role that organic is playing and must play in incentivizing alternative non-polluting practices.

Conclusion

Beyond Pesticides urges the NOSB to deny the petition because synthetic carbon dioxide is not necessary for organic production. We also agree with the statement: “The Subcommittee recognizes that this petition highlights the lack of clear standards pertaining to indoor and container production and prevents the NOSB from fully evaluating petitions for substances used in this type of production.” Synthetic substances should not be added to the National List to support forms of production that are not supported by clear production standards.

Thank you for your consideration of these comments.

Sincerely,

Terry Shistar, Ph.D.
Board of Directors