

Formal Recommendation
From: National Organic Standards Board (NOSB)
To: the National Organic Program (NOP)

Date: October 30, 2020

Subject: Marine Macroalgae¹ in Crop Fertility Inputs

NOSB Chair: Steve Ela

The NOSB hereby recommends to the NOP the following:

Rulemaking Action: X

Statement of the Recommendation:

The NOSB recommends changes to the USDA organic regulations sections 205.601 and 205.602. The board recommends an annotation to marine macroalgae used as crop fertility inputs at 205.601(j)(1) aquatic plant extracts to provide parameters on harvesting addressing conservation areas, bottom trawling, protecting reproduction of the population and ecosystem functions, biomass and architecture, and bycatch. Specifically, the annotation states:

Harvest Parameters - "Prohibited harvest areas: established conservation areas under federal, state, or local ownership, public or private, including parks, preserves, sanctuaries, refuges, or areas identified as important or high value habitats at the state or federal level. Prohibited harvest methods: bottom trawling and harvest practices that prevent reproduction and diminish the regeneration of natural populations. Harvest practices should ensure that sufficient propagules², holdfasts, and reproductive structures are available to maintain the abundance and size structure of the population and its ecosystem functions. Harvest timing: repeat harvest is prohibited until biomass and architecture (density and height) of the targeted species approaches the biomass and architecture of undisturbed natural stands of the targeted species in that area. Bycatch: must be monitored and prevented, or eliminated in the case of special status species protected by U.S. Fish and Wildlife Service or National Marine Fisheries Service."

A new listing at 205.602 is further recommended to prohibit marine macroalgae unless harvested to the same parameters, with an exemption for non-commercial harvests.

Marine macroalgae are used in extracts as foliar fertilizers or as soil conditioners. They also are used as a foliar/soil feed or transplant solution and seed treatment. Over a six-year period from 2015-2020, the board received public comments from numerous stakeholders, obtained a broad TR, and heard testimony from an expert panel on the potential for negative environmental impacts of marine macroalgae harvesting for crop fertility inputs. The board put forward one proposal and three discussion documents on this topic over that timeframe before making this recommendation. The

¹ For the purposes of this recommendation, the term "marine macroalgae" is used to refer to marine plants, seaweed, and marine vegetation.

² Definition of a propagule: a vegetative structure that can become detached from a plant and give rise to a new plant, e.g. a bud, sucker, or spore.

annotation wording in this recommendation was developed based on the scientific recommendations of the Fall 2019 Expert Panel and through subsequent feedback from 15 independent marine scientists.

Adoption of this annotation should be accompanied by a NOP-appointed scientific task force to elaborate additional guidance and instruction to certifiers, with particular focus on providing species-specific parameters. The task force could identify the top species used and provide recommendations for their unique biological and geographical characteristics. A lengthy phase-in period of five years is recommended to allow for industry adaptation.

Areas for guidance that were identified in public comments include:

- what documentation would be sufficient for attesting that harvest parameters are followed;
- if harvesting in conservation areas is permitted by the local regulating authority, would that be permissible under the annotation;
- elaboration of the language “prevent reproduction” to ensure consistent interpretation as the intention of the language is not to exclude species;
- under the harvest timing section, “undisturbed natural stands” should be clarified to mean “undisturbed by harvesting”; and
- the proposed wording recognizes that some bycatch is impossible to avoid, but harvesters should take steps to prevent it.

The review of the scientific literature in the proposal provides the technical data to support this recommendation. Marine macroalgae play important roles in the broader functioning of the ecosystem, such as nutrient cycling and retention, filtering of run-off, production of detritus, shore buffering from waves and storms, carbon storage, provision of food, habitat for year-round residents, foraging grounds, refugia from predators, and breeding and nursery areas. This annotation wording is broad enough to cover the different species and geographic regions of harvest but specific enough to capture more than just biomass recovery, as is the focus of most regulations.

Rationale Supporting Recommendation [including consistency with OFPA and Organic Regulations]:

The National Organic Standards Board advises the National Organic Program (NOP) and the United States Secretary of Agriculture by assisting in the development of standards affecting the implementation of the Organic Foods Production Act (OFPA). Particularly, § 6518 of OFPA, (k) Responsibilities of the Board, (2) National List states “The Board shall develop the proposed National List or proposed amendments to the National List for submission to the Secretary in accordance with section 6517 of this title”.

OFPA Section 6517 [National List] (c) [Guidelines for Exemptions or Prohibitions] (1)(a)(i) and (2)(a)(i) allow for the prohibition of synthetic or nonsynthetic substances, respectively, that would be “harmful to ... the environment.”

This proposal furthers the commitment to continuous improvement in organic farming by valuing marine macroalgae not simply as resources but also as integral species within complex ecosystems. The recommendation addresses the potential harm to the environment from an input ingredient, marine macroalgae used in crop fertility, by establishing scientifically sourced harvest parameters created in collaboration with marine science experts in the field. The potential for a negative impact is sufficient to warrant a cautionary approach and was recommended by the scientists on the NOSB’s Fall 2019 Expert Panel. The review of the literature demonstrates the possibility for multi-level environmental effects of harvesting marine macroalgae. Even where government regulations exist, and they are not legislated in every country, they do not typically address effects on the community and ecosystem functions and

instead focus on regrowth and recovery of the targeted species. The organic regulations are concerned not only with single species impacts but also with ecological balance and biodiversity conservation. This proposal helps assure that marine macroalgae used in organic production is consistent with a system of sustainable agriculture.

NOSB Vote:

Motion to adopt the proposal on Marine Macroalgae in Crop Fertility Inputs

Motion by: Emily Oakley

Seconded by: Dave Mortensen

Yes: 13 No: 2 Abstain: 0 Recuse: 0 Absent: 0

Motion Passed

[\[Fall 2020 Original Subcommittee Proposal - Marine Macroalgae in Crop Fertility Inputs\]](#)