# National Standard for Organic and Bio-Dynamic Produce: Proposed new algae section

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**Acknowledgement of Country**

We acknowledge the continuous connection of First Nations Traditional Owners and Custodians to the lands, seas and waters of Australia. We recognise their care for and cultivation of Country. We pay respect to Elders past and present, and recognise their knowledge and contribution to the productivity, innovation and sustainability of Australia’s agriculture, fisheries and forestry industries.

Contents

[Introduction 1](#_Toc193097879)

[Make a submission 1](#_Toc193097880)

[Scope of this standard 2](#_Toc193097881)

[Definitions 3](#_Toc193097882)

[1.25 Algae 7](#_Toc193097883)

[General Principles 7](#_Toc193097884)

[Standards 7](#_Toc193097885)

[1.26 Bio-dynamic production 9](#_Toc193097886)

[Appendix K - Permitted processing aids for algae and plant products (including wine) 10](#_Toc193097887)

****Tables****

[Table A10 Permitted processing aids for algae and plant products 10](#_Toc192858150)

## Introduction

The Department of Agriculture, Fisheries and Forestry and the National Standard Advisory Committee established an expert working group in 2024 to develop the organic algae standards for the [National Standard for Organic and Bio-Dynamic Produce](https://www.agriculture.gov.au/sites/default/files/documents/national-standard-edition.pdf).

The expert algae working group completed a comprehensive review of the applications received from industry to amend the National Standard (edition 3.8) to include algae and conducted a comparative study of international organic algae standards.

The working group has proposed the following sections in the National Standard (edition 3.8) be amended or added to support the inclusion of the proposed new algae section in the National Standard:

* Scope of this standard
* Definitions
* new section 1.25 Algae to be added
* existing section 1.25 Bio-dynamic production to be renumbered to section 1.26
* Appendix K.

### Make a submission

As part of the Have Your Say public consultation, we are asking you to provide feedback on the proposed changes and additions to the National Standard (edition 3.8) to include the proposed new algae section.

Before you take our survey, please review the proposed changes and additions marked up in this document.

The proposed changes and additions appear in tracks. See Microsoft’s advice about [track changes in Word](https://support.microsoft.com/en-au/office/track-changes-in-word-197ba630-0f5f-4a8e-9a77-3712475e806a).

Submit your feedback to [Have Your Say](https://haveyoursay.agriculture.gov.au/organic-exports-produce) by 5 pm (AEST) on Sunday 20 April 2025.

## Scope of this standard

* This Standard stipulates the minimum criteria that must be met by operators before any certified product can be labelled as in-conversion, organic or bio-dynamic.
* A product that complies with this Standard may be described by the terms organic, biodynamic (or words of similar intent), in the labelling, advertising material and/or commercial documents.
* This Standard applies to the following products:
  + (a) unprocessed products from plants, animals, algae and other cultured organisms; and
  + (b) processed products derived mainly from (a) above.
* The above paragraph does not apply where these terms clearly have no connection with the production method.
* Products or by-products that:
  + are derived from genetic modification technology, or
  + treated with ionising radiation, or
  + which interfere with the natural metabolism of livestock and plants,
  + that are manufactured / produced using nanotechnology,
  + are not compatible with the principles of organic and bio-dynamic agriculture and therefore are not permitted under this Standard.
* In itself, this Standard cannot guarantee that organic or bio-dynamic products are free of non-allowed residue material, or other environmental contaminants as they may be subjected to pollution sources beyond the control and/or detection by the certified operator. However, the procedures practiced in accordance with this Standard by the certified operator will ensure the lowest possible risk of contamination of organic and bio-dynamic produce.
* The operator who is certified to this Standard may at times be required to accept a product or instigate a procedure that is contrary to this Standard but which is required under Commonwealth, State or Territory, Local or Statutory laws. In these situations, operators are obliged to comply with any lawful direction and must subsequently inform their certification organisation of the details.

## Definitions

For the purposes of this Standard, the following definitions apply:

**administrative arrangements**: means the documented arrangement between the competent authority and the approved certifying organisations defining the duties and responsibilities, and how the certification system will be administered by both parties. The full title of the document is - Government Administrative Arrangements for approved certifying organisations managing inspection and certification programs for the export of certified Australian Organic and Biodynamic Produce, commonly referred to as the “Administrative Arrangements”.

**adventitious contamination**: means contamination that has come from outside, accidental, or occurring in an unusual place.

**algae**: means a functional group of organisms consisting of microalgae, macroalgae, and cyanobacteria. Algae also refer to plant-like aquatic organisms ranging in size from single-celled organisms (microalgae and cyanobacteria) to giant multicellular forms such as seaweed (macroalgae).

**allopathic veterinary drugs**: means substance(s) used to treat disease that produce a reaction or effects different from those caused by the disease itself.

**approved certifying body**: means an organisation that has been approved by the Australian competent authority.

**aquatic**: means in or around water.

**biodegradable**: means capable of being decomposed by the action of biological agents, especially bacteria.

**biodiversity**: refers to the variety of all forms of life — the different plants, animals and micro-organisms, the genes they contain and the ecosystems of which they are components. It underpins the processes that make life possible such as hydrological cycles and the supply of such human needs as food.

**bio-dynamic**: means an agricultural system that introduces specific additional requirements to an organic system. These are based on the application of preparations indicated by Rudolf Steiner and subsequent developments for management derived from practical application, experience and research based on these preparations.

**bio-dynamic preparation(s)**: means the natural activators developed according to Steiner’s original indications.

**biological control**: means the control of pests or diseases by natural organisms.

**buffer zone**: means a clearly defined and identifiable boundary area bordering an organic or bio-dynamic production unit that is established to limit inadvertent application or contact of prohibited substances from adjacent non-organic/bio-dynamic areas.

**certified/certification**: means procedures by which an approved certifying body provides written assurance that an operator has been determined to conform to this Standard. Certification is based on the inspection of practices used, verification against records maintained by the operator and sampling of product.

**competent authority**: means a government agency having legal jurisdiction.

**compost**: means the end result of the conversion of organic materials (e.g. vegetation, manure and waste products permitted under this Standard) into humus colloids.

**cosmetic and skincare products**: means a substance or preparation intended for placement in contact with any external part of the human body including the mucous membranes of the oral cavity and the teeth.

**cultural control**: means the management of pests and diseases by manipulation of the production system or production practices e.g. cultivation, heat, light, nutrient, agitation, pruning, cover crops, and resistant varieties.

**feed ration**: means a feed allowance for an animal in any given period of a day or longer.

**feed supplement**: means a component added to correct or overcome a deficiency or to prevent the development of a deficiency.

**genetically modified organism (GMO)**: means materials produced through the modern engineering methods of biotechnology; specifically gene technology, “recombinant DNA (rDNA)” and all other techniques using molecular and/or cell-biology for altering the genetic make-up of living organisms in ways or with results which do not occur in nature or through traditional breeding.

**homeopathic preparation/treatment**: means a preparation for the treatment of disease based on the administration of minute potentised doses of a substance that in larger amounts would produce symptoms in healthy animals, similar to those of the disease itself.

**ingredients**: means substances, including additives, used in the preparation of the products specified in this Standard.

**inspection**: means the examination of production or processing units to ensure they conform to the requirements of this Standard.

**inspector**: means a person deemed by an approved certifying body to have the expertise, knowledge and authority to inspect operators for certification purposes.

**ionising radiation (irradiation)**: means the use of high energy emissions capable of altering a food’s molecular structure for the purpose of controlling microbial contaminants, pathogens, parasites and pests in food, preserving food or inhibiting physiological processes such as sprouting or ripening.

**in-conversion**: means a production system which has adhered to this Standard for at least one year and has been certified as such but which does not yet qualify as organic or bio-dynamic.

**landless production**: means the specific production methods used to grow such as mushrooms, sprouts, barley and wheat grass. Hydroponic practices are excluded.

**labelling**: means any words, particulars, trademarks, brand names, names of certifying bodies, pictorial matter or symbols appearing on any packaging, document, notice, label, board or collar accompanying or referring to a product specified in this Standard.

**livestock**: means domestic or domesticated aquatic and terrestrial animals, including insects.

**marketing**: means holding or displaying for sale, offering for sale, selling, delivering or placing on the market in any form.

**m/m**: means mass per mass.

**mulch**: means the material applied to the surface of soil to protect plants from weed competition and to moderate soil moisture and temperature.

**nanotechnology**: means the intentional production of particles with a size less than 300 nm in at least one dimension. These particles are called nanoparticles. For the purposes of this Standard, nano particles produced by nature, for example, products of forest fires, volcanoes, salt spray or incidentally produced as a result of accepted processing methods such as flour as a by-product of traditional milling, are not excluded from an organic production or preparation system.

**natural**: means existing or formed by nature; not artificial.

**operator**: means a person including any delegated person, or organisation who is certified for any stage of the supply chain e.g. primary production, processing, storage, packaging, transportation, retailing, wholesaling, brokering, importing or exporting of products referred to in this Standard.

**organic**: means the application of practices that emphasise the:

* use of renewable resources; and
* conservation of energy, soil and water; and
* recognition of livestock welfare needs; and
* environmental maintenance and enhancement, while producing optimum quantities of produce without the use of artificial fertiliser or synthetic chemicals.

**organic management plan**: means a plan developed and documented by operators that identifies how they will maintain the integrity of their operation in accordance with this Standard and includes a map or floor plan of the production or processing unit.

**organic management practices**: means organic farming systems and operator practices as described in this Standard.

**organic goods certificate**: means the official government to government certificate required for all organic export consignments. It does not include any other official health or phytosanitary export certificate.

**parallel production**: means the production of a product which complies with this Standard by an operator, who is also producing the same type of product, which does not comply with this Standard.

**potable water**: means the same as that defined by the National Health and Medical Research Council under the Australian drinking water guidelines.

**preparation**: means the operations of processing, preserving, packaging, storing and handling of product that complies with this Standard.

**principle display panel**: means the panel on packaging which identifies the primary or advertised description of the product.

**processing aid**: means substances intentionally added to food for use in the processing of raw materials, food or food ingredients in order to fulfil an essential technological purpose during treatment or processing. Their use may result in their unavoidable presence in the final product.

**production**: means any primary production involved in producing an agricultural, algae or aquaculture product.

**production or processing unit**: means a portion of an enterprise or growing area that produces a product or food under specific organic management practices.

**prohibited substance/material**: means an input to organic production, processing or handling not permitted in this Standard.

**sanitise**: means to adequately treat produce or product-contact surfaces by a process that is effective in destroying or substantially reducing the numbers of undesirable micro organisms, but without adversely affecting the product or its safety for the consumer.

**sheet composting**: means a method of composting in which organic materials (e.g. plant matter, animal manure) are spread over an area of land and subjected to environmental decomposition, rather than being organised into heaps designed for management under specific heat control.

**Standard**: means the National Standard for Organic and Biodynamic Produce.

**synthetic**: means substances formulated or manufactured by a chemical process or by a process that chemically alters compounds extracted from naturally occurring plant, animal or mineral sources.

**wetting agents (surfactants)**: means substances used to reduce surface tension of liquids sprayed onto plants or livestock.

**wine**: means the product of the complete or partial fermentation of fresh grapes, fruit and / or vegetables, or a mixture of that product.

## 1.25 Algae

### General Principles

This Standard covers collection and cultivation of algae in fresh, brackish, and salt waters.

* Collection means picking, cutting or otherwise harvesting algae from natural environments, where algae are not being managed in any way. Biomass collected as unattached beach cast, floating or other algae wrack is excluded from this section.
* Cultivation means the deliberate growing and harvesting of algae in natural environments or any form of land-based system.

Organic algae are based on:

* high-quality water entering the system
* sound management practices
* the use of approved inputs.

### Standards

1.25.1 Operators must document how they will develop and maintain the operation in accordance with this Standard. Such documents may be referred to as an Organic Management Plan.

1.25.2 For a production unit to comply with this Standard, the operation will be subject to the inspection system outlined under Section 4 of this Standard.

1.25.3 Production units must be under an approved certifying body for at least 6 months or one growing period, whichever is the longer, before any products can be labelled as certified organic.

1.25.4 The production unit must be situated in locations where water is not subject to contamination with products or substances not authorised for organic production, or pollutants that would compromise the organic nature of the production.

1.25.5 Construction materials and production equipment must not contain synthetic chemicals or substances, which could detrimentally affect the environment or contaminate the certified product.

1.25.6 If equipment is used on both non-organic and organic units, it must be cleaned according to a defined protocol to prevent contact with substances not permitted by this Standard.

1.25.7 Ropes and other equipment used for algae production must be re-used or recycled and disposed of responsibly when they can no longer be used.

1.25.8 Organic production units in open water must provide buffer zones from potential contamination sources. The minimum separation distance between organic and non-organic production is based on the natural situation, distances, tidal flow and the upstream and downstream location of the production unit.

1.25.9 In land-based cultivation there must be physical barriers that prevent water circulation between organic and non-organic production units.

1.25.10 The application of inputs is prohibited for algae cultivated in natural environments.

1.25.11 In addition to those in Appendix B, authorised inputs for land-based cultivation include:

* Calcium carbonate of natural origin
* Ethylenediaminetetra acetate (EDTA) salts used to maintain trace elements in solution and available as micronutrients
* Mollusc waste
* Ozone and ultraviolet must only be used in hatcheries and nurseries
* Sodium bicarbonate used as pH-adjustors.

1.25.12 In land-based cultivation, the nutrient load in effluent water must not exceed the nutrient load in the influent water and the wastewater must not adversely affect the natural ecology or biodiversity of the environment.

1.25.13 Biofouling organisms and pests must be managed in such a way as to reduce risks to the environment through cultural control, biological control and physical removal.

1.25.14 If pests cannot be effectively controlled using the methods described in 1.25.13, the following substances may be used in land-based cultivation:

* Peracetic acid, formic, lactic and acetic acid
* Hydrogen peroxide
* Milk of lime, lime, quicklime (calcium oxide)
* Natural essences of
  + linseed oil
  + lavender oil, or
  + peppermint oil
* Sodium hypochlorite (e.g. not to exceed 10% solution).

1.25.15 The collection of wild algae is considered organic production provided that the growing areas are suitable from a health point of view and are of high ecological status.

1.25.16 The density of algae cultivated and collected must not negatively impact the environment or the natural ecosystem in the growing area.

Notes about proposed new section 1.25 Algae

This is a proposed new section to be added to the National Standard for Organic and Bio-Dynamic Produce to include algae within the scope of the National Standard.

The new algae section is proposed to follow the existing section 1.24 Aquaculture. The new algae section is proposed to be numbered as section 1.25.

The existing section 1.25 Bio-dynamic production in the National Standard edition 3.8 is proposed to be renumbered to section 1.26 to accommodate the insertion of the new algae section.

## 1.26 Bio-dynamic production

Notes about proposed section 1.26 Bio-dynamic production

This section is currently number as 1.25 in the National Standard for Organic and Bio-Dynamic Produce (edition 3.8).

This section is proposed to be renumbered to 1.26 to accommodate the insertion of the proposed new algae section at section 1.25.

There are no proposed changes to the content of the Bio-dynamic produce section in National standard (edition 3.8).

## Appendix K - Permitted processing aids for algae and plant products (including wine)

Table A10 Permitted processing aids for algae and plant products

| Substances | Specific conditions/restrictions |
| --- | --- |
| Activated carbon | From vegetative sources only for wine |
| Bees wax | Releasing agent |
| Bentonite | Derived from organic material if available. Wine use - fining |
| Calcium carbonate | None |
| Calcium chloride | Coagulation agent |
| Calcium hydroxide | None |
| Calcium sulphate | Coagulation agent |
| Carbon dioxide | Food grade |
| Carnauba wax | Releasing agent |
| Casein | Derived from organic material if available. Wine Use - Fining |
| Cellulose | Wine only, must be food grade |
| Chitosan | Wine only: Derived from *Aspergillus niger.* Use - fining |
| Citric acid | pH adjustment |
| Cupric Citrate | Wine only. Use - fining |
| Diammonium phosphate (DAP) | Wine only: permitted if Yeast Assimilable Nitrogen (YAN) is <150mg/L, with maximum dose 100g/hL. Use - Fermentation |
| Diatomaceous earth | Food grade |
| Egg white albumin | For wine it must be certified organic. Wine use - fining |
| Ethanol | Solvent |
| Food grade phosphoric acid | For initial sugar cane processing |
| Gelatin | Derived from organic material if available. Wine use - fining |
| Grape Juice Concentrate | Wine only for chaptalisation/enrichment: Must be certified organic |
| Hazelnut shells | None |
| Isinglass | None. Wine use - fining |
| Kaolin | None. Wine use - fining |
| Lactic Bacteria | Wine only: must be non-synthetic. Use - Fermentation |
| Magnesium chloride (or Nigari) | Coagulation agent |
| Nitrogen | Food grade |
| Oak chips/staves/beans | Untreated with prohibited materials; packed in allowed materials (beans etc to be immersed in wine). Wood of Quercus species |
| Oxygen | Food grade |
| Pea or Wheat protein | Wine only for fining: Derived from organic material if available |
| Pectolytic Enzymes | Wine only – assist extraction of juice during crushing and settling the juice (fining) |
| Perlite | Food grade. |
| Potable water | None |
| Potassium carbonate | Drying agent for raisins, use must be indicated on the labelling |
| Potassium bicarbonate | Wine only for acidity regulator |
| Potassium bitartrate (cream of tartar)  (Potassium hydrogen tartrate) | Wine only for stabilisation |
| Potassium hydroxide | pH adjustment for sugar processing, traditional saponification |
| Potato proteins | Wine only for fining |
| Silicon dioxide | as gel or colloidal solution. Wine use - fining |
| Sodium carbonate | Sugar production |
| Sodium hydroxide | pH adjustment in sugar production, traditional saponification |
| Sulphuric acid | pH adjustment of extraction water in sugar production |
| Talc | None |
| Tannic acid | Filtration aid |
| Tartaric acid/salt | Stabiliser, sequestrant |
| Thiamine Hydrochloride (Vitamin B1) | Wine only. Use - Fermentation |
| Vegetable oils | Greasing or releasing agent |
| Yeast | Wine only: non-synthetic only. Growth on petrochemical substrate and sulphite waste liquor is prohibited. Use - Fermentation |
| Yeast autolysates (Autolysates of yeast) | Wine only: Derived from organic material if available |
| Yeast Hulls | Wine only: Derived from organic material if available. Use - Fermentation |
| Yeast inactivated (Inactivated yeast) | Wine only: Derived from organic material if available |
| Yeast Mannoproteins | Wine only: Derived from organic material if available. Wine use – fining. |
| Yeast Protein Extracts | Wine only: Derived from organic material if available. Use - fining |