

The draft of the Organic Aquaculture Standards that is currently submitted for the approval of the CGSB Committee on Organic Aquaculture (in the blue column), as compared with the National Standard of Canada - Organic Production Systems – CAN/CGSB-32.310 and Permitted Substances Lists CAN/CGSB-32.311 (in the green column). Please note that the Aquaculture standard is fully listed, the Agriculture standard sections corresponding to the content of the Aquaculture standard being reported “en vis-à-vis” in the green column.

**Section 4 and 5**

**Notes** – Transition periods are similar; the principle of 36 months without any prohibited substances is maintained in both standards.

Other similarities: 15 months requirement for first application; no parallel production in same production unit; buffer zones between organic and non-organic; strict record keeping; low impact of the operation on environment; same principles applied to wild aquatic plants and wild crops.

Plant cultivation: the notion of Integrated Multi-Trophic Aquaculture is basically a recycling system of waste (as of manure in agriculture) and is equivalent to the “balanced ecosystem” defined in agriculture. Cultivation of seaweeds and aquatic plants is a short section compared to terrestrial crop. But it is related to the low variety and much simpler cultivation practices of aquatic plants. PSL is the same for aqua-agri cultures.

<p><b>AQUACULTURE – section 4.5 - 5</b></p> <p><b>4.5 Transition Period</b></p> <p>4.5.1 The following transition periods for aquaculture production units shall apply for the following types of aquaculture:</p> <ul style="list-style-type: none"> <li>a. for facilities that cannot be drained and cleaned a transition period of 36 months including their existing seaweeds, aquatic plants and aquaculture animals;</li> <li>b. for facilities that can be drained, or have been fallowed, a transition period of 12 months, including their existing seaweeds, aquatic plants and aquaculture animals;</li> <li>c. for facilities that have been drained, cleaned, disinfected and rinsed, no transition period for new stock and a transition period of 12 months for existing seaweeds, aquatic plants and aquaculture animals;</li> </ul>	<p><b>Comparable or identical paragraph:</b></p> <p><b>AGRICULTURE section 5</b></p> <p><b>5.1 Land Requirements for Organic Crop Production</b></p> <p>5.1.1 This standard shall be fully applied on a production unit for at least 12 months before the first harvest of products. Substances prohibited by par. 1.4.1 and substances not in CAN/CGSB-32.311, <i>Organic Production Systems — Permitted Substances Lists</i>, shall not have been used for at least 36 months before the harvest of any organic crop.</p> <p>6.3.1 When an entire dairy herd is being converted to organic production, the operator shall,</p> <ul style="list-style-type: none"> <li>a. in the first nine months of the transition year, provide a minimum of 80% feed, calculated by dry matter, that is either organic or raised from land included in the organic system plan and that is managed in accordance with organic crop requirements</li> </ul>
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<p>d. for open water facilities, a transition period of at least 12 months or one production cycle, whichever is less, during which time equipment and apparatus are cleaned.</p> <p>4.5.2 Any documented period in which the facilities, seaweeds, aquatic plants and aquaculture animals were not treated or exposed to substances prohibited or not permitted by this standard may be included in the transition period.</p> <p><b>Note:</b> Certification to this standard requires operators to document that they have not used substances prohibited and not permitted by this standard.</p> <p><i>It also requires that, in the case of an initial application for an organic certification of organic seaweeds and aquatic plants harvested in wild areas and organic aquaculture products with a production cycle of more than 12 months, the application for certification must be filed, at least 15 months before the day on which the product is expected to be marketed.</i></p> <p><i>During that period of time, the full compliance of this standard will be assessed by the certification body, and this assessment must at least include one inspection of the production unit during production in the year before organic aquaculture products maybe eligible for certification and one inspection during production in the year organic aquaculture products are eligible for certification.</i></p>	<p>b. in the final three months of the transition year, provide only organic feed conforming to this standard.</p> <p><b>Note:</b> The Canadian Organic Products Regulations require operators to document that they have not used substances prohibited by this standard and substances not listed in CAN/CGSB-32.311, Organic Production Systems — Permitted Substances Lists.</p> <p><i>The Organic Products Regulations also require that, in the case of an initial application for an organic certification of <b>field crops</b>, the application for certification must be filed 15 months before the day on which the product is expected to be marketed.</i></p> <p><i>During that period of time, compliance to (or with) this standard will be assessed by the certification body, and this assessment must at least include one inspection of the production unit during production in the year before <b>field crops</b> may be eligible for certification and one inspection during production in the year <b>field crops</b> are eligible for certification</i></p>
<p><b>4.6 Parallel Production and Buffer Zones</b></p> <p>4.6.1 Parallel production is permitted within an operation, but not within a production unit.</p> <p>4.6.2 In open water systems, organic aquaculture facilities shall provide buffer zones from potential contamination sources including pesticide drift and other possible contaminants from external sources. The minimum separation distance between organic and non-organic production shall be based on the natural situation, separate water distribution systems, distances, the tidal flow, the upstream and the downstream location of the organic production unit.</p>	<p>5.1.2 The enterprise shall aim at a complete transition of its production. During the transition period, the enterprise can maintain, in addition to the production in transition, a non-organic system of production (split operation) that shall be entirely separate and identified separately, pending its incorporation into the overall transition process.</p> <p>The enterprise can be converted one unit at a time, and each converted unit shall respect the requirements of this standard. The exception to this norm, parallel production, is only allowed in the following cases: perennial crops (already planted), agricultural research facilities, production of seed, vegetative propagating materials and transplants. The following special conditions shall be observed for parallel production:</p>

<p>4.6.3 For land-based aquaculture installations, there shall be physical barriers such that water cannot circulate between organic and non-organic production units.</p> <p>4.6.4 Areas for storing all inputs for the organic and non-organic production methods shall be kept well separated.</p> <p>4.6.5 Feed and inputs for organic production shall be clearly marked.</p> <p>4.6.6 Adequate records shall be available for organic and non-organic production systems.</p>	<p>a. The operator shall clearly demonstrate that the identity of the crops so produced can be maintained during their production, harvesting, storage, processing, packaging and marketing.</p> <p>b. The operator shall maintain verifiable, accurate records of both non-organic and organic produce and product storage, transportation, processing and marketing.</p> <p><i>Note: Parallel production crops both organic and non-organic must be inspected just prior to harvest and an audit of all parallel production crops must occur after harvest.</i></p> <p>5.1.3 All production units shall have distinct, defined boundaries.</p> <p>5.1.4 When unintended contact with substances prohibited by par. 1.4.1 is possible, distinct buffer zones or other features sufficient to reasonably prevent contamination are required.</p> <p>a. Buffer zones shall be at least 8 m wide.</p> <p>b. Permanent hedgerows or plant windbreaks, artificial windbreaks, permanent roads or other adequate physical barriers may be used instead of buffer zones.</p> <p>5.1.5 Crops grown in buffer zones shall be considered non-organically grown products whether they are used on the farm or not.</p> <p>5.1.6 Production units shall not be alternated between organic and non-organic production methods.</p>
<p><b>Environment</b></p> <p><b>5.1 Water Quality and Environment</b></p> <p>5.1.1 Operations shall be situated in locations where water is not subject to contamination by products or substances not authorised for organic production, or pollutants that would compromise the organic nature of the products.</p> <p>5.1.2 The operator shall detail the environmental effects of the operation, the environmental monitoring to be undertaken, and list measures to be taken to minimise negative impacts on the surrounding aquatic and terrestrial environments.</p>	<p><b>5.2.1</b> Measures shall be taken to minimize the physical movement of substances prohibited by par. 1.4.1 from neighbouring areas onto organic farmland and crops. Similarly, measures shall be taken to minimize the contamination of land and crops with such substances</p> <p>6.9.2 All manure storage and handling facilities, including composting facilities, shall be designed, constructed and operated to prevent contamination of ground and surface water.</p> <p>6.9.1 Manure management practices used to maintain areas in which livestock</p>

<p>5.1.3 For seaweed harvesting a once-off biomass estimate shall be undertaken at the outset.</p> <p>5.2.1 Records shall be maintained to verify that the harvesters have supplied only wild seaweeds and aquatic plants in accordance with this standard.</p> <p><b>Sustainable Harvesting of Wildcrafted Seaweeds and Aquatic Plants</b></p> <p>5.2.2 Harvesting shall be carried out in such a way that the amounts harvested do not cause significant impact on the state of the aquatic environment. Measures shall be taken to ensure that seaweeds and aquatic plants can regenerate, such as harvest technique and tools, minimum sizes, ages, reproductive cycles or size of remaining seaweeds and aquatic plants. Evidence of sustainable management and of no long-term impact on the harvesting areas shall be provided.</p>	<p>are housed, penned or pastured shall be implemented in a manner that minimizes soil and water degradation.</p> <p><b>Wild Crops</b></p> <p>7.6.2 The operator shall</p> <ol style="list-style-type: none"> <li>draw up a detailed description of harvested areas and the history of compliance with this standard over the past three years,</li> <li>draw up a description of harvest methods used,</li> <li>propose protection measures for wild species that will prevent disturbance of the environment.</li> </ol> <p>7.6.3 Wild products can only be deemed organic, in accordance with this standard, if they are harvested in relatively undisturbed or stable natural settings. A wild plant shall be harvested or picked in a way that promotes its growth and production and that does not destroy the environment.</p>
<p><b>Seaweeds and aquatic plants cultivation</b></p> <p>5.3.1 Seaweed and aquatic plant cultivation shall only utilize nutrients naturally occurring in the environment, or from organic aquaculture animal production, preferably located nearby as part of an Integrated Multi-Trophic Aquaculture system.</p> <p>5.3.2 In enclosed and recirculation systems, <b>the dissolved amounts of nutrients shall not exceed those necessary for healthy growth of the plants, and culture media shall be disposed of in a manner that does not adversely impact the environment.</b> Nutrients from organic aquaculture animal production or nutrients of plant or mineral origin as listed in CAN/CGSB 32.311, <i>Organic Production Systems – Permitted Substances Lists</i> may be used provided that the origin and use are consistent with the annotation for that substance. Nutrients listed in table 9.2 may be used.</p> <p>5.3.3 In enclosed and recirculation systems, crop production aids and materials as listed in CAN/CGSB 32.311, <i>Organic Production Systems – Permitted Substances Lists</i> may be used provided that the origin and use are consistent with the annotation for that</p>	<p><b>5.4.3</b> The operator shall select and implement tillage and cultivation practices that maintain or improve the physical, chemical and biological condition of soil, that minimize damage to the structure and tilth of soil, and that minimize soil erosion</p> <p><b>5.4.4</b> The operator shall manage plant and livestock materials to maintain or improve soil organic matter content, crop nutrients, and soil fertility <b>in a manner that does not contribute to the contamination of crops, soil or water, by plant nutrients, pathogenic organisms, heavy metals or residues of substances prohibited by par. 1.4.1.</b></p> <p><b>5.5.2.2</b> All soil amendments including liquid manure, slurries, compost tea, solid manure, raw manure, compost and other approved substances shall be applied to land in accordance with nutrient management planning principles.</p>

substance. Crop production aids and materials listed in table 9.3 may be used.

5.3.4 Retired equipment used from growing seaweeds and aquatic plants shall be re-used or recycled where possible.

**5.4 Antifouling measures and cleaning of production equipment and facilities**

5.4.1 Bio-fouling organisms shall be removed by mechanical means and disposed of in an appropriate manner, or by using substances permitted for that use in table 9.3 or table 12.

5.4.2 **Cleaning of equipment and facilities shall be carried out by physical or mechanical measures.** Where this is not satisfactory, only substances as listed in table 12 may be used.

**5.6.1** Pest, disease and weed control shall be centred on organic management practices aimed at enhancing crop health and reducing losses caused by weeds, disease and pests. Organic management practices include cultural practices (e.g. rotations, establishment of a balanced ecosystem, and use of resistant varieties) **and mechanical techniques (e.g. sanitation measures**, cultivation, traps, mulches and grazing).

**5.6.3** Application equipment (e.g. spray equipment) used for soil nutrient supplements, disease or pest management on the enterprise shall be cleaned thoroughly between applications to remove residues of applied substances. If products presenting a contamination risk have been previously applied with the equipment, equipment parts from which residue cannot be removed shall be replaced.