

INTERNATIONAL FEDERATION OF  
ORGANIC AGRICULTURE MOVEMENTS



**N O R M S**

**IFOAM Basic Standards (Final  
Revision Draft)**

for Organic Production and Processing

**IFOAM Accreditation Criteria (Not  
included in this document)**

for Bodies certifying

Organic Production and Processing

including

# Policies related to IFOAM Norms

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**II. IFOAM Basic Standards**  
**for**  
**Organic Production and Processing**

~~approved by the IFOAM General Assembly, Victoria, Canada,  
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**(Final Revision Draft)**

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## Definitions

### Accreditation

Procedure by which an authoritative body gives a formal recognition that a body or person is competent to carry out specific tasks

### Ayurvedic

Traditional Indian system of medicine.

### Aquaculture

The managed production of aquatic plants and/or animals in fresh, brackish or salt water in an enclosed circumscribed-environment.

**Biodiversity**

The variety of life forms and ecosystem types on Earth. Includes genetic diversity (i.e. diversity within species), species diversity (i.e. the number and variety of species) and ecosystem diversity (total number of ecosystem types).

**Breeding**

Selection of plants or animals to reproduce and / or to further develop desired characteristics in succeeding generations.

**Buffer zone**

A clearly defined and identifiable boundary area bordering an organic production site that is established to limit application of, or contact with, prohibited substances from an adjacent area.

**Certification**

The procedure by which a third party gives written assurance that a clearly identified process has been methodically assessed, such that adequate confidence is provided that specified products conform to specified requirements.

**Certification body**

The body that conducts certification, as distinct from standard-setting and inspection.

**Certification mark**

A certification body's sign, symbol or logo that identifies product(s) as being certified according to the rules of a program operated by that certification body.

**Certification program**

System operated by a certification body with its own rules, procedures and management for carrying out certification of conformity.

**Contamination**

Pollution of organic product or land; or contact with any material that would render the product unsuitable for organic certification.

**Conventional**

Conventional means any material, production or processing practice that is not certified organic or organic "in-conversion".

**Conversion period**

The time between the start of the organic management and the certification of crops and animal husbandry as organic.

**Crop rotation**

The practice of alternating the species or families of annual and/or biennial crops grown on a specific field in a planned pattern or sequence so as to break weed, pest and disease cycles and to maintain or improve soil fertility and organic matter content.

**Culture**

A micro-organism, tissue, or organ, growing on or in a medium.

**Direct source organism**

The specific plant, animal, or microbe that produces a given input or ingredient, or that gives rise to a secondary or indirect organism that produces an input or ingredient.

**Disinfect**

To reduce, by physical or chemical means, the number of potentially harmful micro-organisms in the environment, to a level that does not compromise food safety or suitability.

**Exception**

Permission granted to an operator by a certification body to be excluded from the need to comply with normal requirements of the standards. Exceptions are granted on the basis of clear criteria, with clear justification and for a limited time period only.

**Farm unit**

The total area of land under control of one farmer or collective of farmers, and including all the farming activities or enterprises.

**Food additive**

An enrichment, supplement or other substance which can be added to a foodstuff to affect its keeping quality, consistency, color, taste, smell or other technical property (For full definition, see Codex Alimentarius).

**Genetic diversity**

Genetic diversity means the variability among living organisms from agricultural, forest and aquatic ecosystems; this includes diversity within species and between species.

**Genetic engineering**

Genetic engineering is a set of techniques from molecular biology (such as recombinant DNA) by which the genetic material of plants, animals, micro-organisms, cells and other biological units are altered in ways or with results that could not be obtained by methods of natural mating and reproduction or natural recombination. Techniques of genetic modification include, but are not limited to: recombinant DNA, cell fusion, micro and macro injection, encapsulation, gene deletion and doubling. Genetically engineered organisms do not include organisms resulting from techniques such as conjugation, transduction and natural hybridization.

**Genetically Modified Organism (GMO)**

A plant, animal, or microbe that is transformed by genetic engineering.

**Genetic resources**

Genetic resources means genetic material of actual or potential value.

**Green manure**

A crop that is incorporated into the soil for the purpose of soil improvement. May include spontaneous crops, plants or weeds.

**Habitat**

The area over which a plant or animal species naturally exists; the area where a species occurs. Also used to indicate types of habitat, e.g. seashore, riverbank, woodland, grassland.

**HACCP**

Hazard Analysis and Critical Control Point. A specific food safety program to identify contamination risks and actions to prevent exposure to such risks.

**Homeopathic treatment**

Treatment of disease based on administration of remedies prepared through successive dilutions of a substance that in larger amounts produces symptoms in healthy subjects similar to those of the disease itself.

**Hydroponics:**

The production of terrestrial plants in water or liquid media without the use of soil.

**Ingredient**

Any substance, including a food additive, used in the manufacture or preparation of a food or present in the final product although possibly in a modified form.

**Irradiation (ionizing radiation)**

High energy emissions from radio-nucleotides, 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.

**Labeling**

Any written, printed or graphic representation that is present on ~~the label of~~ a product, accompanies the product, or is displayed near the product.

**Media (plural) or medium (singular)**

The substance in which an organism, tissue, or organ exists.

**Multiplication**

The growing on of seed stock or plant material to increase supply for future planting.

**Natural fiber**

A non-synthetic filament of plant or animal origin.

**Non-Timber Forest Products**

Products that : 1) are derived from natural, semi natural or plantation forests and that are the result of deliberate management beyond that of the harvest event itself and where those managers have an exclusive or at least primary role in the management of the prescribed area or 2) are the result of “Wild Harvest.”

**Operator**

An individual or business enterprise, responsible for ensuring that products meet the certification requirements.

**Organic**

“Organic” refers to the farming system and products described in the IFOAM Basic Standards and not to “organic chemistry”.

**Organic product**

A product which has been produced, processed, and/or handled in compliance with organic standards.

**Organic seed and plant material**

Seed and planting material that is produced under certified organic management

**Parallel production**

Any production where the same unit is growing, breeding, handling or processing the same products in both a certified organic system and a non-certified or non-organic system. A situation with “organic” and “in conversion” production of the same product is also parallel production. Parallel production is a special instance of split production.

**Processing aid**

Any substance or material, not including apparatus or utensils, and not consumed as a food ingredient by itself, intentionally used in the processing of raw materials, foods or its ingredients, to fulfill a certain technical purpose during treatment or processing and which may result in the non-intentional, but unavoidable presence of residues or derivatives in the final product.

**Propagation**

The reproduction of plants by sexual (i.e. seed) or asexual (i.e. cuttings, root division) means.

**Sanitize**

To adequately treat produce or food-contact surfaces by a process that is effective in destroying or substantially reducing the numbers of vegetative cells of microorganisms of public health concern, and other undesirable microorganisms, but without adversely affecting the product or its safety for the consumer.

**Split production**

Where only part of the farm or processing unit is certified as organic. The remainder of the property can be (a) non-organic, (b) in conversion or (c) organic but not certified. Also see parallel production.

**Synthetic**

Manufactured by chemical and industrial processes. May include products not found in nature, or simulation of products from natural sources (but not extracted from natural raw materials).

**Wild harvest Products**

Products that are collected but not cultivated and that are derived from a land resource where the collection is defined as the only relevant management event.

## **SECTION B GENERAL PRINCIPLES, RECOMMENDATIONS AND STANDARDS**

*Note: Revisions to Section B, Chapter 1 are voted by the IFOAM General Assembly, and are not subject to the standard IBS revision procedure.*

### **1. The Principal Aims of Organic Production and Processing**

Organic Production and Processing is based on a number of principles and ideas. All are important and this list does not seek to establish any priority of importance. The principles include:

- To produce sufficient quantities of high quality food, fiber and other products.
- To work compatibly with natural cycles and living systems through the soil, plants and animals in the entire production system.
- To recognize the wider social and ecological impact of and within the organic production and processing system.
- To maintain and increase long-term fertility and biological activity of soils using locally adapted cultural, biological and mechanical methods as opposed to reliance on inputs.
- To maintain and encourage agricultural and natural biodiversity on the farm and surrounds through the use of sustainable production systems and the protection of plant and wildlife habitats.
- To maintain and conserve genetic diversity through attention to on-farm management of genetic resources.
- To promote the responsible use and conservation of water and all life therein.
- To use, as far as possible, renewable resources in production and processing systems and avoid pollution and waste.
- To foster local and regional production and distribution.
- To create a harmonious balance between crop production and animal husbandry.
- To provide living conditions that allow animals to express the basic aspects of their innate behavior
- To utilize biodegradable, recyclable and recycled packaging materials.
- To provide everyone involved in organic farming and processing with a quality of life that satisfies their basic needs, within a safe, secure and healthy working environment.
- To support the establishment of an entire production, processing and distribution chain which is both socially just and ecologically responsible.
- To recognize the importance of, and protect and learn from, indigenous knowledge and traditional farming systems.

## 2. Organic Ecosystems

### 2.1. Ecosystem Management

#### General Principle

Organic farming benefits the quality of ecosystems.

#### Recommendations

Operators should maintain a significant portion of their farms to facilitate biodiversity and nature conservation.

A farm should place appropriate areas under its management in wildlife refuge habitat. These include: extensive grassland such as moorlands, reed land or dry land

- in general all areas which are not under rotation and are not heavily manured: extensive pastures, meadows, extensive grassland, extensive orchards, hedges, hedgerows, edges between agriculture and forest land, groups of trees and/or bushes, and forest and woodland
- ecologically rich fallow land or arable land
- ecologically diversified (extensive) field margins
- waterways, pools, springs, ditches, floodplains, wetlands, swamps and other water rich areas which are not used for intensive agriculture or aquaculture production
- areas with ruderal flora

- wildlife corridors that provide linkages and connectivity to native habitat.

**Standards shall require that:**

**2.1.1.**

Operators shall take measures to maintain and improve landscape and enhance biodiversity quality.

**2.1.2.**

Clearing of primary ecosystems is prohibited.

**2.2. Soil and Water Conservation**

**General Principle**

Organic farming methods conserve and grow soil, maintain water quality and use water efficiently and responsibly.

**Recommendations**

Operators should minimize loss of topsoil through minimal tillage, contour plowing, crop selection, maintenance of soil plant cover and other management practices that conserve soil.

Operators should take measures to prevent erosion, compaction, salination, and other forms of soil degradation.

Operators should use techniques that conserve water, such as increasing organic matter content of soil, timing of planting and the appropriate design, efficiency and scheduling of irrigation practices.

Operators should apply water and inputs in a way that does not pollute water by runoff to surface water or leaching into ground water.

Organic processors and handlers should install systems that permit the responsible use and recycling of water without pollution or contamination either by chemicals, or by animal or human pathogens.

Operators should plan and design systems that use water resources responsibly and in a manner appropriate to local climate and geography.

Organic management plans should anticipate, address, and mitigate impacts on water resources, including but not limited to the application of manure, stocking densities, application of soluble fertilizers, and effluent from processing and handling facilities.

Operators should respect sustainable resource management and the common good.

**Standards shall require that:**

**2.2.1.**

All operators shall take defined and appropriate measures to prevent erosion.

**2.2.2.**

Land preparation by burning vegetation shall be restricted to the minimum.

**2.2.3.**

Crop production, processing and handling systems shall return nutrients, organic matter and other resources removed from the soil through harvesting by the recycling, regeneration and addition of organic materials and nutrients.

**2.2.4.**

Grazing management shall not degrade land or pollute water resources.

**2.2.5.**

Relevant measures shall be taken to prevent or remedy soil and water salinisation.

**2.2.6.**

Operators shall not deplete nor excessively exploit water resources, and shall seek to preserve water quality. They shall where possible recycle rainwater and monitor water extraction.

## **2.3. Genetic Engineering**

### **General Principle**

Genetic engineering is excluded from organic production and processing

### **Recommendation**

Genetically Modified Organisms (GMOs) and their derivatives should be excluded from organic production processing and handling to the fullest extent possible.

### **Standards shall require that:**

**2.3.1.**

The deliberate use or negligent introduction of genetically engineered organisms or their derivatives to organic farming systems or products is prohibited. This shall include animals, seed, propagation material, and farm inputs such as fertilizers, soil conditioners, vaccines or crop protection materials.

**2.3.2.**

The use of genetically engineered organisms or their derivatives is prohibited. This shall include animals, seed and farm inputs such as fertilizers, soil conditioners, vaccines or crop protection materials.

**2.3.3.**

The use of genetically engineered seeds, pollen, transgene plants or plant material is not allowed.

**2.3.4.**

Organic processed products shall not use ingredients, additives or processing aids derived from GMOs.

**2.3.5.**

Inputs, processing aids and ingredients shall be traced back one step in the biological chain to the direct source organism \*(see definition) from which they are produced to verify that they are not derived from GMOs.

**2.3.6.**

Contamination of organic product by GMOs that results from circumstances beyond the control of the operator may alter the organic status of the operation and/ or product.

**2.3.7.**

On farms with split (including parallel) production the use of genetically engineered organisms is not permitted in any production activity on the farm.

## 2.4. Wild harvested products and common/public land management

### 2.4.1 General principles, recommendations, and standards

#### **General Principle**

Organic management sustains and prevents degradation of common biotic and abiotic resources, including areas used for rangeland, fisheries, forests, and forage for bees, as well as neighboring land, air, and water.

#### **Recommendations**

The operator should provide for maintenance and sustainability of the ecosystem when harvesting or gathering the products.

The operator should positively contribute to the maintenance of natural areas.

#### **Standards shall require that:**

##### 2.4.1.1

Wild harvested products shall only be certified organic if they are derived from a stable and sustainable growing environment. The people who harvest, gather, or wildcraft shall not take any products at a rate that exceeds the sustainable yield of the ecosystem, or threaten the existence of plant, fungal or animal species, including those not directly exploited.

##### 2.4.1.2.

Operators shall harvest products only from a clearly defined area where prohibited substances have not been applied.

##### 2.4.1.3.

The collection or harvest area shall be at an appropriate distance from conventional farming, pollution and contamination.

##### 2.4.1.4.

The operator who manages the harvesting or gathering of common resource products shall be familiar with the defined collecting or harvesting area.

##### 2.4.1.5

Operators shall take ~~concise~~ measures to ensure that wild, sedentary aquatic species are collected only from ~~open~~ areas where the water is not contaminated by substances prohibited in these standards.

### ~~13.3. Maintenance of Natural Forest~~ 2.4.2 Natural Forest Maintenance

#### **General Principle**

~~Primary forest, well developed secondary forests and sites of major environmental, social or cultural significance are conserved. Tree plantations or other land uses may not replace such areas.~~

Organic forestry improves and regenerates natural forest systems, and does not exploit, disturb, or simplify primary forest, well developed secondary forests and sites of major environmental, social or cultural significance.

#### **Recommendations**

The use of replanting as a technique for regenerating stands of certain natural forest types may be appropriate under certain circumstances.

~~Human impact, including rubbish dumping or inappropriate recreational activity should be avoided. Trees should be managed in a way to improve the inter- and intra- species genetic diversity by leaving sufficient numbers of different species for regeneration.~~

~~Forests should be regenerated naturally whenever economically feasible, socially desirable, and ecologically viable.~~

~~Trees should be replanted only to supplement natural regeneration consistent with natural vegetation. Operators should not introduce exotic species, and should remove invasive native exotic species when they threaten or endanger rare native species.~~

~~Invasive exotic species should be removed through biological, cultural, and physical means.~~

**Standards shall require that:**

~~13.3.1.2.4.2.1~~

~~Trees planted in natural forests may supplement natural regeneration, fill gaps or contribute to the conservation of genetic resources. Such plantings shall not replace or significantly alter the natural ecosystem.~~

~~Organic forests shall be regenerated in a way that conserves genetic resources and restores the displaced native ecosystem function.~~

~~13.3.2.~~

~~The use of replanting as a technique for regenerating stands of certain natural forest types may be appropriate under certain circumstances. The standard-setting organization shall define acceptable tree planting areas and density.~~

~~2.4.2.2~~

~~Operators shall not introduce invasive exotic species to the forest.~~

~~13.3.3.~~

~~Where exotic species are introduced disturbance to the ecosystem shall be minimized and shall be evaluated by the certification body.~~

~~2.4.2.3~~

~~Operators shall harvest forests according to a plan developed to ameliorate negative environmental impact including:~~

~~Soil~~

~~Rivers and streams~~

~~Local communities~~

- ~~• Remaining plant, animal and genetic diversity~~

**13.5.2.4.3 — Non Timber Forest Products**

**General Principle**

Non-timber forest products—especially the tropical and subtropical—are integral parts of the forest ecosystem and their harvest is ~~are~~ considered part ~~within management~~ of the overall sustainability of the forest.

**Recommendation**

Operators should adopt practices that integrate the sustainable harvest of diverse non-timber products in addition to the production of timber where it helps to conserve and enhance resource use.

**Standards shall require that:**

~~13.5.1.~~

~~These standards are used in conjunction with 2.4.~~

~~13.5.2.~~

~~When non-timber forest products are taken from a forest, the ecological impact shall be assessed to identify products or harvesting methods that may:~~

- ~~—endanger the productivity or existence of a species or variety~~
- ~~☐be detrimental to nutrient cycling~~
- ~~☐be harmful to wildlife~~
- ~~☐be necessary for subsistence use.~~

~~When any animal products are being collected, animal welfare shall be taken into consideration.~~

#### ~~13.5.3.2.4.3.1~~

~~Where timber extraction is the priority in forest management, the a management plan is required to shall specify which the products are to be collected and consider the long and short term impacts of those products harvest and the overall forest management practices on the collection area. on non-timber forest products.~~

#### ~~13.5.4.2.4.3.2~~

~~Management practices Harvesting of non-timber forest products shall respect the cultural and religious significance of the forest, and its organisms and products to local and indigenous communities. inhabitants~~

#### ~~13.5.5.2.4.3.3~~

~~Non-timber forest products shall be harvested harvesting by appropriate methods shall be appropriate to for the species and ecosystem. or species group. Agroforestry is permitted.~~

## **13.2. Environmental Impact 2.5 Forest Ecosystems**

### **General Principle**

~~Forest management conserves biological diversity and its associated values, water resources, soils and unique and fragile ecosystems and landscapes. Such management maintains the ecological functions and the integrity of the forest bio-system.~~

~~Organic forest management recognizes ecosystem potential, conserves and enhances biological diversity and its associated values, and provides long term sustainable yields. The conservation management includes protection of water resources, conservation of soil, and maintenance of threatened and endangered species. Primary forests or areas of special cultural or genetic diversity are outside the scope of organic forestry.~~

### **Recommendations**

~~Forest management operations should encourage the efficient use of provide multiple products and services and opportunities provided to ensure ecological diversity, economic viability and to deliver a wide range of environmental and social benefits equity.~~

~~Organic forests should be managed to maintain stable populations of non-economic species, including wildlife and native plants.~~

~~Organic forests should build organic matter, optimize standing biomass and diversity, encourage regeneration and permit successional forces to proceed.~~

~~The production area should maintain elements of the entire food chain.~~

### **Standards shall require that:**

#### 2.5.1

~~Operators shall protect the soil by avoiding large scale tree felling and destructive harvest events leading to massive soil disturbance, land slip, erosion and leaching.~~

#### 13.2.1.2.5.2

~~An assessment of environmental impact shall be completed appropriate to the scale and intensity of forest management, and the uniqueness of the affected resources. The results of the assessment shall be adequately integrated into the management plan. Assessments shall include considerations at the landscape level as well as impacts of on-site processing facilities. All potential environmental impacts shall be assessed prior to site disturbance. Operators shall assess the environmental impact of their forest management operations— including both timber and non-timber products— with respect to the biological diversity of the forests managed, including an inventory of soil and water resources, wildlife, threatened and endangered species, native people, and unique and fragile forest ecosystems landscapes and harvested species~~

#### 13.2.2.2.5.3

~~Operators Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g. nesting and feeding areas), by establishing Conservation zones and protected areas shall be established appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Ecologically damaging hHunting, fishing, trapping, and collecting that damages the ecosystem shall be is prohibited.~~

#### 13.2.3.2.5.4

~~Operators Ecological functions and values that shall be maintained intact, enhanced or restored the ecological functions of the managed systems including e:~~

- ~~☐ forest regeneration and succession~~
- ~~☐ genetic, species and ecosystem diversity~~
- ~~☐ natural cycles affecting the productivity of the forest ecosystem~~

#### 13.2.4.2.5.5

~~Operators shall protect Rrepresentative samples of existing ecosystems within the landscape shall be protected in their undisturbed natural state. Such protected areas shall be identifiable within the landscape and recorded on maps.~~

## 2.65 Resource Use

### General Principle

Organic production and handling is based primarily on the sustainable use of renewable resources.

### Recommendations

Renewable resources should be used whenever practical.

If non-renewable resources are used, they should be obtained from recycled sources.

Inputs should be recovered, manufactured, used, and disposed of in a way that takes into account animal welfare, environmental and social impacts throughout their life cycle.

Each enterprise or farm should develop an “ecological plan” that includes a program for the use of renewable and non-renewable resources.

Processing and handling operations should compost or otherwise recycle their agricultural and processing by-products.

Operators should minimize the energy expended in the production, preparation and distribution of organic products.

Operators should minimize the use of fossil fuels whenever possible.

**Standards shall require that:**

**2.5.1**

Operators shall have a resource management system in place, appropriate to their type and scale of operation.

**2.65.12**

Crop production, livestock production, processing and handling systems shall reduce reuse or recycle nutrients and waste products-residual materials generated through crop production, livestock production, processing and handling respectively.

**2.6.2**

Management practices shall conserve non-renewable resources.

## **3. General Requirements for Crop Production and Animal Husbandry**

### **3.1. Conversion Requirements**

#### **General Principle**

Organic agriculture develops a viable and sustainable agro-ecosystem, by working compatibly with natural living systems and cycles.

#### **Recommendations**

For optimum sustainability of an agro-ecosystem, all activities including crop production, animal husbandry and general environmental maintenance should be organized such that all the elements of the farm activities interact positively. Practical farming skills, based on knowledge, observation and experience are therefore important for organic growers. Careful practice based on skill and knowledge often avoids the requirement for synthetic inputs, and reduces reliance on inputs.

Conversion may be accomplished over a period of time. A farm may be converted by gradual introduction of organic practices over the whole farm, or by application of organic principles to only a portion of the operation at first.

There should be a clear plan of how to proceed with the conversion. This plan should be updated as necessary and cover all aspects relevant to these standards. The plan should indicate that the totality of crop production and animal production in the operation will be converted to organic management.

Standards should determine how organic and non-organic production and product can be clearly separated and distinguishable in production and documentation, to prevent unintentional mixing of inputs and products.

Independent sections of the operation unit should be converted in such a way that these standards are completely met on each section before it is certified as organic.

**Standards shall require that:**

### 3.1.1.

There shall be a period of organic management, meeting all the requirements of these standards, before the resulting product may be considered as organic.

### 3.1.2.

The start of the conversion period shall be calculated from the date of application to the certification body or, alternatively, from the date of the last application of unapproved inputs providing the operator can demonstrate that the full standards requirements have been met for at least the minimum period stated in 4.2 and 5.2. Calculation of the conversion period may not start before the date of the last non-compliant input or practice. For the length of conversion periods, refer to sections 4.2. and 5.2.

## ~~13.1.~~ **3.2 Conversion to Organic Forest Management**

### **General Principle**

~~Conversion defines the process of developing a certifiable, viable and sustainable forest management system. The time between the start of organic management and certification of the production is known as the conversion period.~~

~~Conversion to organic forestry emphasizes the achievement of a stable and diverse forest operation rather than simply a minimum period of organic forest management.~~

### **Recommendations**

~~The total production should be converted to meet the requirements of the standards over a period of time. If a complete production unit is not converted simultaneously, then separate sections should be converted in such a way that these standards are met in full.~~

~~Operators should have a clear plan that documents the conversion process. This plan should be updated when necessary, and include:~~

~~Recognition of Ecosystem Potential~~

~~Suiting species and structure to the site~~

~~Sustainability~~

~~Conservative management~~

~~Landscape recovery and re-integration~~

### **Standards shall require that:**

#### ~~13.1.1.~~

~~Those responsible for production shall have a clear and documented management plan which includes how to proceed with conversion. This plan shall be updated when necessary, and shall include:~~

~~history and existing situation~~

~~a schedule for the progress of conversion~~

~~aspects and practices that shall be changed and implemented during conversion~~

#### ~~13.1.2.~~

~~A minimum conversion period of 3 years shall apply to new plantation forest previously treated with fertilizers and/or pest and disease control not permitted by Appendix 1 and 2 of the IBS.~~

#### ~~13.1.3.~~

~~The start of the conversion period shall be calculated from the date of application to the certification body or, alternatively, from the date of the last application of unapproved inputs providing the operator can demonstrate that standards requirements have been met~~

~~from that date. Calculation of the conversion period may not start before the date of the last non-complying input or practice.~~

**~~13.1.4.~~**

~~No conversion period is required in case of natural and plantation forest that currently meets the full requirements of these Standards and has done so continuously for a period exceeding the conversion period stipulated in 13.1.2. This shall be supported by documentary evidence.~~

**~~3.2.1~~**

~~A conversion period is required in case of natural and plantation forest that is no less than 18 months.~~

~~Conversion to organic forestry may require additional time to ensure that the principles of organic management and the ecological aims of the organic management plan have been fulfilled.~~

## **3.2. Split Production and Parallel Production**

### **General Principle**

The whole farm, including livestock, is converted to organic management practices according to the standards over a period of time.

### **Recommendation**

The operator should convert the whole farm, and the conversion plan should include the steps and approximate time-frame for whole farm conversion.

### **Standards shall require that:**

**3.2.1.**

If the whole farm is not converted (split production) the organic and conventional parts of the farm shall be clearly and continuously separated ~~and this shall be verified by inspection.~~

**3.2.2.**

Simultaneous production of the same organic and non-organic crops or animal products (parallel production) is only permitted where such production is undertaken in a way that allows clear and continuous separation of all product claimed as certified or certifiable as organic.

**3.2.3**

~~Prohibited materials shall be stored in separate locations from those where organic products are handled.~~

## **3.3. Maintenance of Organic Management**

### **General Principle**

Organic production systems require an ongoing commitment to organic production practices.

### **Recommendation**

The operator should design an organic conversion management plan that includes programs and strategies that will allow the operation to be sustainably maintained as organic.

**Standards shall require that:**

**3.3.1.**

The operator shall demonstrate that a production system does not rely upon continuous switching between organic and conventional management.

## 4. Crop Production

### 4.1. Choice of Crops and Varieties

#### General Principle

Species and varieties cultivated in organic agriculture systems are selected for adaptability to the local soil and climatic conditions and tolerance to pests and diseases.

All seeds and plant material are certified organic.

#### Recommendations

A wide range of crops and varieties should be grown to enhance the sustainability, self-reliance and biodiversity value of organic farms.

Plant varieties should be selected to maintain genetic diversity.

~~Organically grown varieties, and~~ Varieties known to be suited to organic cultivation should be preferred.

Operators should use organically bred varieties. See Chapter ~~9D1~~ and Appendix ~~6-D1~~ for the draft organic plant breeding ~~and multiplication~~ standards.

**Standards shall require that:**

**~~9.2.4.1.1~~**

~~Seed and plant materials shall be propagated under organic management one generation, in the case of annuals, and for perennials, two growing periods, or 12 months, whichever is the longer, before being certified as organic seed and plant material.~~

**~~4.1.1.2~~**

~~Operators shall use organic seed and plant materials of appropriate varieties and quality, shall be used. When they are not commercially available, standard-setting organizations shall set time limits for the use of non-organic seed and plant material.~~

**~~4.1.2.~~**

~~When organic seed and plant materials are not available, conventional materials may be used provided that they have not been treated with pesticides not otherwise permitted by these standards. To promote and establish the use of organic seed and plant material, standard-setting organizations shall set appropriate standards and/or time limits for the selected use of non-organic seed and plant material.~~

~~Where untreated conventional seeds and plant materials are not available, Chemically treated seed and plant material may be used:~~

~~1) for foundation seed or~~

~~2) if chemical treatment is prescribed legally required for phytosanitary purposes by the competent authority for all varieties of a given species in the area where the seed or plant materials are to be used. The certification body shall establish time limits and conditions for exemptions that permit use of any chemically treated seeds and plant materials.~~

## 4.2. Length of Conversion Period (Plant Production)

### General Principle

A conversion period enables the establishment of an organic management system and builds soil fertility.

### Recommendations

The conversion period should be long enough to improve soil fertility significantly and to re-establish the balance of the ecosystem.

The length of the conversion period should be adapted to:

- the past use of the land
- the ecological context and its implications
- the experience of the operator.

The length of the conversion period should be defined to provide for a period of at least 36 months from the last date of application of any prohibited material or practice.

### Standards shall require that:

#### 4.2.1.

Plant products from annual production shall only be considered organic when a conversion period of at least 12 months has elapsed prior to the start of the production cycle. In the case of perennials (excluding pastures and meadows) a period of at least 18 months prior to harvest shall be required.

#### 4.2.2.

There shall be at least a 12-month conversion period prior to pastures, meadows and products harvested therefrom, being considered organic.

#### 4.2.3.

The conversion period may be extended by the standard-setting organization depending on conditions such as past use of the land, management capacity of the operator and environmental factors.

#### 4.2.4.

Where conversion periods exceeding those stated in 4.2.1 are required, and labeling of product as “produce of organic agriculture in the process of conversion” or a similar description is permitted, the standards requirements shall have been met for at least 12 months prior to such labeling.

## 4.3. Diversity in Crop Production

### General Principle

Soil and soil management is the foundation of organic production. Organic growing systems are soil based, care for the soil and surrounding ecosystems and provide support for a diversity of species, while encouraging nutrient cycling and mitigating soil and nutrient losses.

### Recommendations

Diversity in crop production is achieved by a combination of:

- a diverse and versatile crop rotation that includes green manure, legumes and deep rooting plants
- appropriate coverage of the soil with diverse plant species for as much of the year as possible.

**Standards shall require that:**

**4.3.1.**

Diversity in plant production and activity shall be assured by minimum crop rotation requirements and/or variety of plantings. Minimum rotation practices for annual crops shall be established unless the operator demonstrates diversity in plant production by other means. Operators are required to manage pressure from insects, weeds, diseases and other pests, while maintaining or increasing soil organic matter, fertility, microbial activity and general soil health.

**4.3.2.**

For perennial crops, the certifying body shall set minimum standards for orchard/plantation floor cover and/or diversity or refuge plantings in the orchard.

## **4.4. Soil Fertility and Fertilization**

### **General Principle**

Organic farming returns microbial plant or animal material to the soil to increase or at least maintain its fertility and biological activity.

### **Recommendations**

Biodegradable material of microbial, plant or animal origin produced from organic practices should form the basis of the fertility program.

Nutrient resources should be used in a sustainable and responsible manner. Nutrient losses from the farm to the natural environment should be minimized. Nutrients should be used in such a way and at appropriate times and places to optimize their effect.

Accumulation of heavy metals and other pollutants should be prevented.

Naturally occurring mineral fertilizers and brought-in fertilizers of biological origin permitted under these standards should be regarded as only one component of the nutrient system, and as a supplement to, and not a replacement for, nutrient recycling.

Manures containing human feces and urine should not be used unless free of human pathogens. Careful attention to hygiene is required and it is recommended that they are not applied directly to vegetation for human consumption or to soil that will be used to grow annual plants within the next six months.

**Standards shall require that:**

**4.4.1.**

Material of microbial, plant or animal origin shall form the basis of the fertility program.

**4.4.2.**

Nutrients and fertility products shall be applied in a way that protects soil, water, and biodiversity. Restrictions may be based on amounts, location, timing, treatments, methods, or choice of inputs applied.

**4.4.3.**

Material applied to the land or crop shall be in accordance with Appendix [12](#).

**4.4.4.**

Manures containing human excrement (feces and urine) are prohibited for use on crops for human consumption.

*Exceptions may be made where detailed sanitation requirements are established by the standard-setting organization to prevent the transmission of pests, parasites and infectious agents and to ensure that manures are not mixed with other household or industrial wastes that may contain prohibited substances.*

#### **4.4.5.**

Mineral fertilizers shall only be used in a program addressing long-term fertility needs together with other techniques such as organic matter additions, green manures, rotations and nitrogen fixation by plants.

#### **4.4.6.**

Mineral fertilizers shall be applied in the form in which they are naturally composed and extracted and shall not be rendered more soluble by chemical treatment, other than addition of water and mixing with other naturally occurring, permitted inputs.

*Under exceptional circumstances, and after consideration of all relevant information, and having regard to Appendix 31, the standard-setting organizations may grant exception to this requirement. These exceptions shall not apply to mineral fertilizers containing nitrogen.*

#### **4.4.7.**

Chilean nitrate and all synthetic nitrogenous fertilizers, including urea, are prohibited

## **4.5. Pest, Disease, Weed, and Growth Management**

### **General Principles**

Organic farming systems apply biological and cultural means to prevent unacceptable losses from pests, diseases and weeds. They use crops and varieties that are well-adapted to the environment and a balanced fertility program to maintain fertile soils with high biological activity, locally adapted rotations, companion planting, green manures, and other recognized organic practices as described in these standards.

Growth and development should take place in a natural manner.

### **Recommendations**

Pests, diseases and weeds should be managed by the knowledgeable application of one, or a combination, of the following measures:

- choice of appropriate species and varieties
- appropriate rotation programs
- mechanical cultivation
- protection of natural enemies of pests through provision of favorable habitat, such as hedges, nesting sites and ecological buffer zones that maintain the original vegetation to house pest predators
- diversified ecosystems. These will vary between geographical locations. For example, buffer zones to counteract erosion, agro-forestry, rotating crops, intercropping etc.
- thermal weeding
- seed bed preparation
- natural enemies including release of predators and parasites
- acceptable biodynamic preparations from stone meal, farmyard manure or plants
- mulching and mowing

- grazing of animals
- mechanical controls such as traps, barriers, light and sound

**Standards shall require that:**

**4.5.1.**

All organic production systems shall display a set of positive processes/mechanisms capable of accounting for management of significant pests, weeds and diseases under normal circumstances.

**4.5.2.**

Pest, disease and weed management products that are prepared at the farm from local plants, animals and micro-organisms, are permitted when the measures in 4.5.1. are not sufficient. If the ecosystem or the quality of organic products might be jeopardized, the *Procedure to Evaluate Additional Inputs to Organic Agriculture (Appendix 31)* and other relevant criteria shall be used to establish whether the product is acceptable.

**4.5.3.**

Physical methods for pest, disease and weed management are permitted, including the application of heat. Thermal sterilization of soils to combat pests and diseases is restricted.

The standard-setting organization shall establish standards or criteria for all soil sterilization methods that are considered consistent with Appendices 2 and 3.

**4.5.4.**

Any input applied for plant pest, disease, weed, or growth management shall appear in Appendix 2-3 subject to the limitations of that Appendix.

**4.5.5.**

Any formulated input shall have only active ingredients in Appendix 23, and all other components shall meet the criteria of Appendix 31.

Formulated products with only active ingredients in Appendix 23, but with other components that have not been reviewed against the above criteria may be used until 2005.

**4.6. Avoiding Contamination**

**General Principle**

All relevant measures are taken to ensure that organic soil and food is protected from contamination.

**Recommendations**

Operators should take reasonable measures to identify and avoid potential contamination.

In case of risk, or reasonable suspicion of risk, that contamination may occur, the standard-setting organization should set limits for the maximum application levels of heavy metals and other pollutants. The standards should place emphasis on detection of contamination sources, improvement of the production system taking into account the procedures developed for HACCP, and the assessment of background contamination levels.

Accumulation of heavy metals and other pollutants should be limited and the appropriate remedial measures implemented where possible.

The standards should establish parameters for the acceptance/rejection of organic products based on analysis.

The standards should establish a procedure on how to evaluate organic products in case of reasonable suspicion of pollution based on due expert consideration and the precautionary principle.

Contamination that results from circumstances beyond the control of the operation does not necessarily alter the organic status of the operation.

**Standards shall require that:**

**4.6.1.**

The operator shall employ measures including barriers and buffer zones to avoid potential contamination and limit contaminants in organic products.

**4.6.2.**

In case of a reasonable suspicion of contamination the certification body shall ensure that an analysis of the relevant products and possible sources of pollution (soil, water, air and inputs) is undertaken to determine the level of contamination and shall make the appropriate responses, such as detection of contamination sources, considering background contamination and other relevant factors.

**4.6.3.**

For synthetic structure coverings, mulches, fleeces, insect netting and silage wrapping, only products based on polyethylene and polypropylene or other polycarbonates are permitted. These shall be removed from the soil after use and shall not be burned on the farmland.

**4.6.4.**

All equipment from conventional farming systems shall be thoroughly cleaned of potentially contaminating materials before being used on organically managed areas.

**13.4. ~~Plantations~~ 4.7 Forest Plantations**

**General Principle**

~~Plantations are planned and managed in accordance with the forestry standards. As plantations can provide an array of social and economic benefits and can contribute to satisfying needs for forest products, they should complement the management of, reduce pressures on, and promote restoration and conservation of natural forests.~~

~~In organic plantation forestry, species are suited to site.~~

**Recommendations**

~~Species selection should be native or endemic where possible.~~

~~Plantations should include wildlife corridors, permanent laneways, streamside zones and a mosaic of stands or blocks of different ages and rotation.~~

~~Plantations should not replace well developed secondary forests.~~

~~Suited species should be preferred to establish plantations that restore degraded ecosystems and conserve biological diversity.~~

~~Monocultural stands and blocks should be avoided.~~

~~Hydrological cycles should be considered when planning and establishing forestry plantations~~

**Standards shall require that:**

**13.4.1.4.7.1**

The management objectives of the plantation including natural forest conservation and restoration objectives shall be explicitly stated in a management plan. In order to enhance the conservation of biological diversity, native species shall be preferred over exotic species in the establishment of plantations and the restoration of degraded ecosystems. Exotic species shall be used only when it can be demonstrated that their performance will not severely imbalance the natural ecosystem and this shall be carefully monitored. Operators shall manage plantations to conserve soil, mitigate against salinity, encourage diversity, and restore degraded ecosystems.

#### **13.4.2.**

The design and layout of plantations shall promote the protection, restoration and conservation of natural forests, and not increase pressures on natural forests. Wildlife corridors, streamside zones and a mosaic of stands of different ages and rotation periods consistent with the scale of the operation shall be used in the layout of the plantation. The scale and layout of plantation blocks shall be consistent with forest patterns found within the natural landscape.

#### **4.7.2**

Plantations shall not negatively impact regional hydrological cycles.

#### **4.7.3**

Operators shall ensure that forest floors are protected from unnecessary traffic and disturbance.

#### **13.4.3. 4.7.4**

Plantations Sufficient diversity shall be sufficiently diverse created in the in their composition of plantations to enhance economic, ecological and social stability. Such diversity may include the size and spatial distribution of management units within the landscape, the number and genetic composition of species, and their age classes and structures.

#### **13.4.4. 4.7.5**

Operators shall select The selection of species for planting shall be based on their overall suitability for the site and their compatibility with specified a management objectives plan, and genetic diversity. To enhance the conservation of biological diversity, native species are preferred to exotic species in the establishment of plantations and the restoration of degraded ecosystems. Exotic species may be introduced only when their performance proves superior to native species and shall be carefully monitored to detect mortality, disease or insect outbreaks and, in particular, any adverse ecological impact.

#### **13.4.5.**

A proportion of the total plantation forest area and appropriate to the scale of the plantation shall be managed so as to ultimately restore the site to a natural forest cover. This area shall be representative of the total area and the standards shall specify minimum levels.

#### **13.4.6.**

Measures shall be taken to maintain or improve soil structure, fertility and biological activity. Chapter 4.4 of the IBS applies to fertilization and Chapter 2.2 of the IBS applies to water and soil conservation. These shall apply to plantation forest management.

#### **4.7.6**

Operators who use fire as a management tool shall do so consistent with a management plan that is based on traditional knowledge and careful consideration.

#### **13.4.7.**

~~Measures shall be taken to prevent and minimize outbreaks of pests, diseases, fire and the introduction of invasive plants. Only those fertilizer and crop protection products identified in Appendix 1 & 2 of the IBS may be used.~~

~~To evaluate whether other products are acceptable additional to those already listed in the Appendices, the IFOAM guidelines on evaluation of inputs to organic agriculture shall be applied. The use of fire as a management tool shall be regulated in the management plan. Traditional knowledge on how and when to use fire in the landscape, shall be taken into account.~~

#### **4.7.7**

Plantations shall protect local customary rights of ownership, use or access.

#### **13.4.8.**

~~Appropriate to the scale and diversity of the operation, monitoring of the plantation shall include regular assessment of its on-site and off-site ecological and social impacts concerning, for example, natural regeneration, effects on water resources and soil fertility, and impacts on the welfare and social well-being of local peoples. No species shall be planted on a large scale until local trials and/or experience have shown that they are ecologically harmonious with the site, and do not have significant negative ecological impacts on other ecosystems. Special attention shall be paid to social issues of land acquisition for plantations, and in particular the protection of local customary rights of ownership, use or access.~~

## **5. Animal Husbandry**

### **5.1. Animal Management**

#### **General Principle**

Organic livestock husbandry is based on the harmonious relationship between land, plants and livestock, respect for the physiological and behavioral needs of livestock and the feeding of good-quality organically grown feedstuffs.

#### **Recommendations**

The operator should:

- provide adequate good quality organically grown feedstuffs
- maintain appropriate stocking rates, flock or herd sizes, and rotations to allow for natural behavior patterns and to maintain natural resources and environmental quality
- practice methods of animal management that reduce stress, promote animal health and welfare, prevent disease and parasitism, and avoid the use of chemical allopathic veterinary drugs
- apply management practices that promote sustainable land and water use

#### **Standards shall require that:**

##### **5.1.1.**

The operator shall ensure that the environment, the facilities, stocking density and flock/herd size provides for the behavioral needs of the animals and provides for:

- sufficient free movement and opportunity to express normal patterns of behavior

- sufficient fresh air, water, feed and natural daylight to satisfy the needs of the animals
- access to resting areas, shelter and protection from sunlight, temperature, rain, mud and wind adequate to reduce animal stress
- the maintenance of social structures by ensuring that herd animals are not kept in isolation from other animals of the same species
- construction materials and production equipment that do not significantly harm human or animal health

*This provision does not apply to small herds for mostly self-sufficient production. Operators may isolate male animals, sick animals and those about to give birth.*

#### **5.1.2.**

Housing conditions shall ensure:

- ample access to fresh water and feed according to the needs of the animals
- animals have sufficient space to stand naturally, lie down easily, turn around, groom themselves and assume all natural postures and movements such as stretching, and wing flapping
- where animals require bedding, adequate natural materials are provided
- that construction provides for insulation, heating, cooling and ventilation of the building, that permits air circulation, dust levels, temperature, relative air humidity, and gas concentrations to within levels that are not harmful to the livestock
- that poultry, rabbits and pigs shall not be kept in cages
- that animals are protected from predation by wild and feral animals
- 

#### **5.1.3.**

Landless animal husbandry systems are prohibited.

#### **5.1.4.**

All animals shall have access to pasture or an open-air exercise area or run, whenever the physiological condition of the animal, the weather and the state of the ground permit. Such areas may be partially covered.

*Animals may be temporarily confined because of inclement weather or absences of pasture due to temporary or seasonal conditions. Such animals shall still have access to an outdoor run.*

*Animals may be fed with carried fresh fodder where this is a more sustainable way to use land resources than grazing. Animal welfare shall not be compromised.*

#### **5.1.5.**

The maximum hours of artificial light used to prolong natural day length shall not exceed a maximum that respects the natural behavior, geographical conditions and general health of the animals.

## **5.2. Length of Conversion Period**

### **General Principle**

The establishment of organic animal husbandry requires an interim period, the conversion period. Animal husbandry systems that change from conventional to organic production require a conversion period to develop natural behavior, immunity and metabolic functions.

## Recommendations

All livestock on an organic farm should be converted to organic production. Conversion should be accomplished over a period of time.

Replacement poultry should be brought onto the holding at the start of the production cycle.

### Standards shall require that:

#### 5.2.1.

Animal products may be sold as “product of organic agriculture” only after the land and animals have all met the appropriate established conversion requirements

#### 5.2.2.

Land and animals may be converted simultaneously subject to the requirements for all other land and animal conversion period.

#### 5.2.3.

Where existing animals on a farm are converted to organic they shall undergo a one-time minimum conversion period at least according to the following schedule:

Production	Conversion period
meat	12 months
dairy	90 days
eggs	42 days

## 5.3. Animals Sources/ Origin

### General Principle

Organic animals are born and raised on organic holdings.

### Recommendation

Organic animal husbandry should not be dependent on conventional raising systems.

Livestock obtained from off the farm should be from organic farms or as part of an established co-operative program between specific farms to improve herd health and fitness.

### Standards shall require that:

#### 5.3.1.

Animals shall be raised organically from birth.

- *When organic livestock is not available conventional animals may be brought in according to the following age limits: 2 day old chickens for meat production*
- *18 week old hens for egg production*
- *2 weeks for any other poultry*
- *piglets up to 6 weeks and after weaning*
- *dairy calves up to 4 weeks old that have received colostrum and are fed a diet consisting mainly of full milk.*

#### 5.3.2.

Breeding stock may be brought in from conventional farms to a yearly maximum of 10% of the adult animals of the same species on the farm.

*Where standards allow for exceptions of more than 10% these shall be limited to:*

- *unforeseen severe natural or man made events*
- *considerable enlargement of the farm*

- *establishment of a new type of animal production on the farm*
- *holdings with less than 10 animals*

## **5.4. Breeds and Breeding**

### **General Principle**

Breeds are adapted to local conditions.

### **Recommendations**

Breeding goals should encourage and maintain the good health and welfare of the animals consistent with their natural behavior.

Breeding practices should include methods that do not depend on high technologies invasive to natural behavior and capital intensive methods.

Animals should be bred by natural reproduction techniques.

### **Standards shall require that:**

#### **5.4.1.**

Breeding systems shall be based on breeds that can reproduce successfully under natural conditions without human involvement.

#### **5.4.2.**

Artificial insemination is permitted.

#### **5.4.3.**

Embryo transfer techniques and cloning are prohibited.

#### **5.4.4.**

Hormones are prohibited to induce ovulation and birth unless applied to individual animals for medical reasons and under veterinary supervision.

## **5.5. Mutilations**

### **General Principle**

Organic farming respects the animal's distinctive characteristics.

### **Recommendations**

Operators should select species and breeds that do not require mutilation.

Exceptions for mutilations should only be made when suffering can be kept to the minimum.

Surgical treatments should only be used for reasons of safety, mitigation of suffering and the health and welfare of the livestock.

### **Standards shall require that:**

#### **5.5.1.**

Mutilations are prohibited.

The following exceptions may be used only if animal suffering is minimized and anesthetics are used where appropriate:

- Castrations

- Tail docking of lambs
- Dehorning
- Ringing
- mulesing only for breeds that require mulesing

## 5.6. Animal Nutrition

### General Principle

Organic animals receive their nutritional needs from organic forage and feed of good quality.

### Recommendations

Operators should offer a balanced diet that provides all of the nutritional needs of the animals in a form allowing them to exhibit their natural feeding and digestive behavior.

Organic animals should be fed by-products from the organic food processing industry not suitable for human use.

Ruminants should receive a balanced diet according to their specific nutritional needs and should not be fed a diet that consists entirely of silage and concentrates.

All feed should come from the farm itself or be produced within the region.

Coloring agents in feed should not be used in organic livestock production.

All animals should have daily access to roughage.

### Standards shall require that:

#### 5.6.1.

Animals shall be fed organic feed.

Operators may feed a limited percentage of non-organic feed under specific conditions for a limited time in the following cases:

- Organic feed is of inadequate quantity or quality
- Areas where organic agriculture is in early stages of development

*In no case may the percentage of non-organic feed exceed 10% dry matter per ruminant and 15% dry matter per non-ruminant calculated on an annual basis.*

*Operators may feed a limited percentage of non-organic feed under specific conditions for a limited time in the following cases:*

- Unforeseen severe natural or man-made events
- Extreme climatic or weather conditions

#### 5.6.2.

The prevailing part (at least more than 50%) of the feed shall come from the farm unit itself or be produced in co-operation with other organic farms in the region.

*The standard-setting organization may allow exceptions with regard to local and regional conditions, and shall set a time limit.*

#### 5.6.3.

For the calculation of feeding allowances only, feed produced on the farm unit during the first year of organic management, may be classed as organic. This refers only to feed for animals that are being produced within the farm unit. Such feed may not be sold or otherwise marketed as organic.

#### 5.6.4.

The following substances are prohibited in the diet:

- Farm animal by-products (e.g. abattoir waste) to ruminants
- Slaughter products of the same species
- All types of excrements including droppings, dung or other manure (all types of excrements)
- Feed subjected to solvent extraction (e.g. hexane) or the addition of other chemical agents
- Amino-acid isolates
- Urea and other synthetic nitrogen compounds
- Synthetic growth promoters or stimulants
- Synthetic appetizers
- Preservatives, except when used as a processing aid
- Artificial coloring agents

#### 5.6.5.

Animals may be fed vitamins, trace elements and supplements from natural sources. Synthetic vitamins, minerals and supplements may be used when natural sources are not available in sufficient quantity and quality.

#### 5.6.6.

All ruminants shall have daily access to roughage.

#### 5.6.7.

Fodder preservatives such as the following may be used:

- Bacteria, fungi and enzymes
- By-products of food industry (e.g. molasses)
- Plant based products

*Synthetic chemical fodder preservatives such as acetic, formic and propionic acid and vitamins and mineral are permitted in severe weather conditions.*

#### 5.6.8.

Young stock from mammals shall be provided maternal milk or organic milk from their own species and shall be weaned only after a minimum time that takes into account the natural behavior of the relevant animal species.

*Operators may provide non-organic milk when organic milk is not available.*

*Operators may provide milk replacers or other substitutes only in emergencies provided that they do not contain antibiotics, synthetic additives or slaughter products*

## 5.7. Veterinary Medicine

### General Principle

Organic management practices promote and maintain the health and well-being of animals through balanced organic nutrition, stress-free living conditions and breed selection for resistance to diseases, parasites and infections.

### Recommendations

Operators should maintain animal health and practice disease prevention through the following techniques:

- Selection of appropriate breeds or strains of animals

- Adoption of animal husbandry practices appropriate to the requirements of each species, such as regular exercise and access to pasture and/or open-air runs, to encourage the natural immunological defense of animal to stimulate natural immunity and tolerance to diseases
- Provision of good quality organic feed
- Appropriate stocking densities
- Grazing rotation and management

Operators should use natural medicines and treatments, including homeopathy, Ayurvedic medicine and acupuncture whenever appropriate.

When illness does occur an operator should determine the cause and prevent future outbreaks by adopting appropriate management practices.

**Standards shall require that:**

**5.7.1.**

The operator shall take all practical measures to ensure the health and well being of the animals through preventative animal husbandry practices.

**5.7.2.**

If an animal becomes sick or injured despite preventative measures that animal shall be treated promptly and adequately, if necessary in isolation and in suitable housing. Producers shall not withhold medication where it will result in unnecessary suffering of the livestock, even if the use of such medication will cause the animal to lose its organic status.

An operator may use chemical allopathic veterinary drugs or antibiotics only if:

- Preventive and alternative practices are unlikely to be effective to cure sickness or injury
- They are used under the supervision of a veterinarian, and
- Withholding periods shall be not less than double of that required by legislation, or a minimum of 48 hours, whichever is longer

**5.7.3.**

Substances of synthetic origin used to stimulate production or suppress of natural growth are prohibited

**5.7.4.**

Vaccinations are allowed with the following limitations:

- When an endemic diseases is known or expected to be a problem in the region of the farm and where this diseases cannot be controlled by other management techniques; or
- When a vaccination is legally required, and
- The vaccine is not genetically engineered

**5.8. Transport and Slaughter**

**General Principle**

Organic animals are subjected to minimum stress during transport and slaughter.

**Recommendations**

Animals should be transported the minimum frequencies and distances possible.

Animals should be inspected regularly during transport.

The transportation medium should be appropriate for each animal. Animals should be watered and fed during transport depending on weather and other conditions of transport.

Those responsible for transportation and slaughtering should employ stress-reducing measures, such as:

- a. Allowing sufficient rest time to reduce stress
- b. Maintaining existing group and social ties
- c. Avoiding contact (sight, sound or smell) of each live animal with dead animals or animals in the killing process.

Each animal should be stunned before being bled to death. The equipment used for stunning should be in good working order. Exceptions can be made according to cultural practice. Where animals are bled without prior stunning this should take place in a calm environment.

Local and mobile slaughterhouses should be used when available.

**Standards shall require that:**

**5.8.1.**

Animals be handled calmly and gently during transport and slaughter

**5.8.2.**

The use of electric prods and other such instruments is prohibited.

**5.8.3.**

Organic animals be provided with conditions during transportation and slaughter that reduce and minimize the adverse effects of:

- Stress
- Loading and unloading
- Mixing different groups of animals or animals of different sex
- Quality and suitability of mode of transport and handling equipment
- Temperatures and relative humidity
- Hunger and thirst; and
- The specific needs of each animal

**5.8.4.**

Animals shall not be treated with synthetic tranquilizers or stimulants prior to or during transport.

**5.8.5.**

Each animal or group of animals shall be identifiable at each step in the transport and slaughter process.

**5.8.6.**

Slaughterhouse journey times shall not exceed eight hours.

When there is no certified organic slaughterhouse within eight hours travel time, an animal may be transported for a period in excess.

## **5.9. Bee Keeping**

### **General Principle**

Bee keeping is an important activity that contributes to enhancement of the agriculture and forestry production through the pollinating action of bees.

### **Recommendations**

The hives should consist of natural materials presenting no risk of contamination to the environment or the bee products.

The feeding of colonies may be undertaken, with organic feed, to overcome temporary feed shortages due to climatic or other exceptional circumstances.

When bees are placed in wild areas, consideration should be given to the safety and integrity of the indigenous insect population and pollination requirements of native plants.

The treatment and management of hives should respect all the principles of organic animal husbandry contained elsewhere in these Standards.

The capacity of bees to adapt to local conditions, their vitality and their resistance to disease should be taken into account.

Honey temperatures should be maintained as low as possible during the extraction and processing of products derived from bee keeping.

The collection areas should be large enough and as varied as possible to provide adequate and sufficient nutrition and access to water.

The health of bees should be based on prevention of disease, using techniques such as adequate selection of breeds, favorable environment, balanced diet and appropriate husbandry practices.

The sources of natural nectar, honeydew and pollen should consist essentially of organically produced plants and/or naturally occurring (wild) vegetation.

### **Standards shall require that:**

#### **5.9.1.**

Hives shall be situated in organically managed fields and/or wild natural areas. Hives may be placed in an area that ensures access to sources of honeydew, nectar and pollen that meets organic crop production requirements sufficient to supply all of the bees' nutritional needs.

#### **5.9.2.**

The operator shall not place hives within foraging distance of fields or other areas with a high contamination risk.

#### **5.9.3.**

At the end of the production season, hives shall be left with reserves of honey and pollen sufficient for the colony to survive the dormancy period.

Any supplementary feeding shall be carried out only between the last honey harvest and the start of the next nectar or honeydew flow period. In such cases, organic honey or sugar shall be used.

*Exceptions may be made, for a limited time, if organic sugar is not available.*

#### **5.9.4.**

Bee colonies may be converted to organic production. Introduced bees shall come from organic production units when available.

Bee products may be sold as organically produced when the requirements of these Standards have been complied with for at least one year.

During the conversion period the wax shall be replaced by organically produced wax.

Where no prohibited products have been previously used in the hive and there is no risk of contamination of wax, replacement of wax is not necessary.

In cases where all the wax cannot be replaced during a one-year period, the conversion period may be extended with the approval of the standard-setting organization.

**5.9.5.**

Each beehive shall primarily consist of natural materials. Use of construction materials with potentially toxic effects is prohibited.

**5.9.6.**

For pest and disease control the following are permitted:

- Lactic, formic acid
- Oxalic, acetic acid
- Sulfur
- Natural essential oils (e.g. menthol, eucalyptol, camphor)
- *Bacillus thuringiensis*
- Steam, direct flame and caustic soda for hive disinfection.

**5.9.7.**

Where preventative measures fail, veterinary medicinal products may be used provided that:

- Preference is given to phyto-therapeutic and homeopathic treatment, and
- If allopathic chemically synthesized medicinal products are used, the bee products shall not be sold as organic
- Treated hives shall be placed in isolation and undergo a conversion period of one year

The practice of destroying the male brood is permitted only to contain infestation with *Varroa jacobsoni* (mites).

**5.9.8.**

The health and welfare of the hive shall be primarily achieved by hygiene and hive management.

**5.9.9.**

The destruction of bees in the combs as a method of harvesting of bee products is prohibited.

**5.9.10.**

Mutilations, such as clipping of the wings of queen bees, are prohibited.

**5.9.11.**

Artificial insemination of queen bees is permitted.

**5.9.12.**

The use of chemical synthetic bee repellents is prohibited during honey extraction operations.

**5.9.13.**

The use of smoke should be kept to a minimum. Acceptable smoking materials should be natural or from materials that meet the requirements of these standards.

## **6. Processing and Handling**

### **6.1. General**

#### **General Principle**

Organic processing and handling provides consumers with nutritious, high quality supplies of organic products and organic farmers with a market without compromise to the organic integrity of their products.

#### **Recommendations**

Handlers and processors should handle and process organic products separately in both time and place from non-organic products. Handlers and processors should identify and avoid pollution and potential contamination sources.

#### **Standards shall require that:**

**6.1.1.**

Handlers and processors shall not co-mingle organic products with non-organic products.

**6.1.2.**

All organic products shall be clearly identified as such, and stored and transported in a way that prevents contact with conventional product through the entire process.

**6.1.3.**

The handler and processor shall take all necessary measures to prevent organic products from being contaminated by pollutants and contaminants, including the cleaning, decontamination, or if necessary disinfection of facilities and equipment.

### **6.2. Ingredients**

#### **General Principle**

Organic processed products are only made from organic ingredients.

#### **Recommendations**

Processors should use organic ingredients whenever possible.

Enzymes, fermentation organisms, dairy cultures, and other microbiological products should be organically produced and multiplied from a medium composed of organic ingredients, and substances that appear in Appendix 4.

#### **Standards shall require that:**

**6.2.1.**

All ingredients used in an organic processed product shall be organically produced except for those additives and processing aids that appear in Appendix 4 and non-organically produced ingredients that are in compliance with the labeling provisions.

*In cases where an ingredient of organic origin is unavailable in sufficient quality or quantity, the standard-setting organization may authorize use of non-organic raw materials subject to periodic review and re-evaluation. These materials shall not be genetically engineered.*

**6.2.2.**

Water and salt may be used as ingredients in the production of organic products and are not included in the percentage calculations of organic ingredients.

**6.2.3.**

Minerals (including trace elements), vitamins and similar isolated ingredients shall not be used unless their use is legally required or where severe dietary or nutritional deficiency can be demonstrated.

**6.2.4.**

Preparations of micro-organisms and enzymes commonly used in food processing may be used, with the exception of genetically engineered micro-organisms and their products. Processors shall use micro-organisms grown on substrates that consist entirely of organic ingredients and substances on Appendix 4, if available, This includes cultures that are prepared or multiplied in-house.

## **6.3. Processing Methods**

### **General Principle**

Organic food is processed by biological, mechanical and physical methods in a way that maintains the vital quality of each ingredient and the finished product.

### **Recommendations**

Organic products should be processed in a way that maintains nutritional value.

Processors should choose methods that limit the number and quantity of non-organic additives and processing aids.

[The Principal Aims of Organic Production and Processing \(Chapter 1\) should be considered when using materials, methods, and techniques that have a functional effect or that modify, add, or remove constituents, or otherwise chemically change the composition of food.](#)

### **Standards shall require that:**

**6.3.1.**

Techniques used to process organic food shall be biological, physical, and mechanical in nature. Any additives, processing aids, or other substances that chemically react with or modify organic foods shall comply with the requirements of Appendix 4.

**6.3.2.**

Extraction shall only take place with water, ethanol, plant and animal oils, vinegar, carbon dioxide, nitrogen. These shall be of a quality appropriate for their purpose.

**6.3.3.**

Irradiation is not permitted.

**6.3.4.**

~~Filtration techniques~~ Materials that chemically react with or modify organic food on a molecular basis shall be restricted and must appear on Appendix 4.

#### **6.3.5**

Filtration equipment shall not contain asbestos, or utilize techniques or substances that may negatively affect the product.

#### **6.3.5.**

~~Materials, methods, and techniques used in organic food processing that have a functional effect or that modify, add, or remove constituents, or otherwise chemically change the composition of food shall be evaluated by the criteria in Appendix 1 and any substance that has a functional effect on food, such as ion exchange resins, must appear on Appendix 4.~~

#### **6.3.6**

The following conditions of storage are permitted (for allowed substances in these conditions, ~~s~~See Appendix 4):

- Controlled atmosphere
- Temperature control
- Drying
- Humidity regulation

#### **6.3.6-7**

Ethylene gas is permitted for ripening.

## **6.4. Pest and Disease Control**

### **General Principle**

Organic food is protected from pests and diseases by the use of good manufacturing practices that include proper cleaning, sanitation and hygiene, without the use of chemical treatment or irradiation.

### **Recommendation**

Recommended treatments are physical barriers, sound, ultra-sound, light and UV-light, traps (including pheromone traps and static bait traps), temperature control, controlled atmosphere and diatomaceous earth

### **Standards shall require that:**

#### **6.4.1.**

A handler or processor is required to manage pests and shall use the following methods according to these priorities:

1. preventative methods such as disruption, elimination of habitat and access to facilities
2. mechanical, physical and biological methods
3. substances according to the Appendices of the IBS
4. substances (other than pesticides) used in traps

#### **6.4.2.**

Prohibited pest control practices include, but are not limited to, the following substances and methods:

- Pesticides not contained in Appendix 23
- Fumigation with ethylene oxide, methyl bromide, aluminum phosphide or other substance not contained in Appendix 4

- Ionizing radiation

#### **6.4.3.**

The direct use or application of a prohibited method or material renders that product no longer organic. The operator shall take necessary precautions to prevent contamination, including the removal of organic product from the storage or processing facility, and measures to decontaminate the equipment or facilities. Application of prohibited substances to equipment or facilities shall not contaminate organic product handled or processed therein. Application of prohibited substances to equipment or facilities shall not compromise the organic integrity of product handled or processed therein.

## **6.5. Packaging**

### **General Principle**

Organic product packaging has minimal adverse impacts on the product or on the environment.

### **Recommendations**

Processors of organic food should avoid unnecessary packaging materials.

Organic food should be packaged in reusable, recycled, recyclable, and biodegradable packaging whenever possible.

### **Standards shall require that:**

#### **6.5.1.**

Packaging material shall not contaminate organic food.

#### **6.5.2.**

Packaging materials, and storage containers, or bins that contain a synthetic fungicide, preservative, or fumigant are prohibited.

#### **6.5.3.**

Organic produce shall not be packaged in reused bags or containers that have been in contact with any substance likely to compromise the organic integrity of product or ingredient placed in those containers.

## **11-6.6 Cleaning, Disinfecting, and Sanitizing of Food and Food Processing Facilities**

### **General Principle**

Organic food is safe, of high quality, and free of substances used to clean, disinfect, and sanitize food ~~and~~ food-processing facilities.

### **Recommendations**

Handlers should clearly differentiate substances used to clean, disinfect and sanitize food handling equipment and food contact surfaces from those directly applied to food.

Operators should develop a management system for cleaning and disinfecting.

~~Processors-Operators~~ should design facilities, plant layout; install equipment; and devise a cleaning, disinfecting and sanitizing system that prevents the contamination of food and food contact surfaces by prohibited substances, non-organic ingredients, pests, disease-causing organisms, and foreign material.

~~Handlers and processors should educate personnel in hygiene, sanitation, safe food handling, and organic standards.~~

Handlers and processors should use physical and mechanical means such as dry heat, moist heat, exclusion, and other non-chemical methods, adequate water supplies and substances that appear on Appendix 4 to prevent microbiological contamination.

~~Operators should select cleaners, sanitizers, and disinfectants based on avoidance of residual contamination, rapid biodegradability, low toxicity, worker safety, and a life cycle impact of their manufacture, use, and disposal. In particular, operators should avoid endocrine disrupting, ozone depleting, and trihalomethane forming compounds whenever possible.~~

Allowed substances in Appendix 4 should be used with consideration to the environment.

The use of cleaning compounds should minimize the disposal of effluent and the use of disinfectants. Gray water recycling off-site for uses other than handling or processing food is preferred over either re-circulation or disposal.

Steam traps and filters should be used to remove non-volatile boiler water additives.

Operators should not use persistent cleaning, sanitizing that are not easily removed by an intervening event (e.g. quaternary ammonia) or have an adverse impact on the environment (e.g. halogenated compounds).

#### **Standards shall require that:**

##### **11.1.6.6.1**

Operators shall take all necessary precautions to protect organic food against contamination by substances prohibited in organic farming and handling, pests, disease-causing organisms, and foreign substances.

##### **11.2.6.6.2**

Only water and substances that appear in Appendix 4, Table 2, as processing aids may be used after harvest as cleaners or disinfectants in direct contact with organic food.

Substances other than those appearing on annex IV-Appendix 4 are only allowed if they are legally required..

##### **11.3.6.6.3**

Operations that use cleaners, sanitizers, and disinfectants on food contact surfaces shall use them in a way that maintains the food's organic integrity.

##### **6.6.4**

The operator ~~is required to shall~~ perform an intervening event between the use of any cleaner, sanitizer, or disinfectant and the contact of organic food with that surface, ~~unless the substance is otherwise noted in Appendix 4. Acceptable intervening events include a hot water rinse, a sufficient flush of organic product that is not sold as organic, or adequate time for the substance to volatilize.~~ sufficient to prevent residual contamination of that organic food.

[Note: Appendix 4 is still under development and currently contains no sanitizers. A list will be developed.]

#### **11.4.**

Operators shall prevent the residues of boiler water additives from direct contact with organic food by the use of entrained water, filters, traps, or other means that prevent steam in contact with organic foods from carrying such compounds.

#### **6.6.5**

Substances included in Appendix 4 shall be evaluated by the criteria for processing and handling substances that appear in Appendix 1.

## **6.7 Forest Products**

### **General Principles**

Organic Forestry products are handled and processed in ways that enhance products while minimizing impact on the environment or workers

### **Recommendations**

The extraction of organic forest products should not damage land and waters.

Transport should minimize impact on the environment and incorporate energy efficient methods.

Processing should not lead to negative environmental impacts including impact from the generation of waste products.

Where possible waste products should be re-cycled.

### **Standards shall require that:**

#### **6.7.1**

Timber products from organic forestry are handled and processed in ways that preserve the identity of the raw material through to the finished product.

#### **6.7.2**

Organic forest products are processed in a way that minimizes contamination of soil, water and finished products.

#### **6.7.3**

Waste products must be recycled or treated to a safe level.

#### **6.7.4**

Where processing and manufacturing includes the use of materials not contained within appendix 4, labeling claims must be limited to “made with organic“.

## **12.3. Processing in General 6.8 Textile Fiber Processing**

### **General Principle**

All processing units should follow an integrated environmental management system

Organic fiber is processed from organic raw materials in an environmentally sound way that considers the entire product life cycle of the substances used.

### **Recommendations**

Organic fiber Processing should take place using use appropriate techniques that will be least damaging to the environment.

Whenever possible, organic fiber products should be processed using only mechanical and/or physical methods.

The amounts of chemical substances used in organic fiber processing should be limited to the minimum quantity needed to achieve the desired product.

Operators should avoid the use of non-biodegradable, bio-accumulating input products and heavy metals. Organic textiles should be used to the maximum extent possible and not blended with non-organic fibers. Equipment should be constructed, maintained, and operated in a way that avoids contamination of fibers and fiber products.

Non organic natural or synthetic fibers blended with organic fibers should not contain toxic substances or fibers produced in a way that is hazardous to consumers, workers or the environment.

### **Standards shall require that:**

#### **12.3.1.**

~~IFOAM standards for storage, separation, identification, hygiene and pest management apply. IFOAM standards for cleaning and sanitation, food additives and processing aids do not apply.~~

~~The standards may permit individual exceptions for the requirements of separation in instances where such separation could lead to substantial environmental or economic disadvantages, and where there is no risk of the mixing of raw materials e.g. the possible contact of organic product with recycled fluids that have been previously used for conventional production (mercerizing, sizing, rinsing, etc.) When granting such exceptions, the standard setting organization shall establish that there is no contamination by the actual process.~~

#### **6.8.1**

Fiber processing shall comply with the requirements of Section 6.1 and 6.4

#### **6.8.2**

Organic apparel and other textile products shall contain only organic fibers.

~~Non-organic fibers may be blended with organic fibers when labeled appropriately -A fiber product labeled as 'organic' shall not be from organic and non-organic sources, except when:~~

- ~~a) -the certifying body determines that organic fibers of sufficient quality and quantity are not commercially available, and~~
- ~~b) the amount of non-organic fiber does not exceed 5% ~~by weight~~ of the weight of the product, and~~
- ~~c) ~~where~~ the organic and non-organic fibers are not the same kind.~~

#### **6.8.32**

~~Only substances allowed by the certification body based upon the criteria for textile processing in Appendix 1 shall be used to process fiber products labeled as "organic."~~

#### **6.8.343**

Operators shall ~~have~~ a management system in place which ensures that any effluents released into the environment resulting from wet processing are properly treated.

## **7. Labeling**

### **General Principle**

Organic products are clearly and accurately labeled as organic.

### **Recommendations**

When the full standards requirements have been fulfilled, products should be labeled as “produce of organic agriculture” or a similar description.

The name and address of the person or company legally responsible for the production or processing of the product should be on the label.

Product labels should identify all ingredients, processing methods, and all additives and processing aids.

Labels should contain advice on how to obtain all additional product information.

All components of additives and processing aids should be declared.  
Wild ingredients or products should be declared as such, as well as organic.

**Standards shall require that:**

**7.1.1.**

The person or company legally responsible for the production or processing of the product and the certification body shall be identifiable.

**7.1.2.**

To be labeled as “produce of organic agriculture” or equivalent protected terms, a product shall comply with at least these standards.

**7.1.3.**

Mixed products where not all ingredients, including additives, are of organic origin and products that are entirely in compliance with these standards, shall be labeled in the following way (percentages in this section refer to raw material weight):

- Where a minimum of 95% of the ingredients are of certified organic origin, products may be labeled “certified organic” or equivalent and should carry the certification mark of the certification body.
- Where less than 95% but not less than 70% of the ingredients are of certified organic origin, products may not be called “organic”. The word “organic” may be used on the principal display in statements like “made with organic ingredients” provided there is a clear statement of the proportion of the organic ingredients. An indication that the product is covered by the certification body may be used, close to the indication of proportion of organic ingredients.
- Where less than 70% of the ingredients are of certified organic origin, the indication that an ingredient is organic may appear in the ingredient list. Such product may not be called “organic”.

**7.1.4.**

All ingredients of a multi-ingredient product shall be listed on the product label in order of their weight percentage. It shall be apparent which ingredients are of organic certified origin and which are not. All additives shall be listed with their full name.

*If herbs and/or spices constitute less than 2% of the total weight of the product, they may be listed as “spices” or “herbs” without stating the percentage.*

**7.1.5.**

Added water and salt shall not be included in the percentage calculations of organic ingredients.

**7.1.6.**

The label for conversion products shall be clearly distinguishable from the label for organic products.

**7.1.7. (see also 2.3).**

Organic products shall not be labeled as GMO-free in the context of these standards. Any reference to genetic engineering on product labels shall be limited to the production and processing methods themselves having not used GMOs.

## **12.7 Labeling of textiles 7.2 Fiber, Textiles and Apparel**

### **General principle**

~~The labeling should be correct and contain information useful to the consumer.~~

Organic fiber, textiles, and apparel are labeled in a way that accurately conveys the organic content of the product.

### **Recommendation**

~~The standards should require that any substances known to cause allergies and which have been used during textile processing should be mentioned on the label.~~

Labels and tags attached to the products should declare materials in non-textile accessories.

### **Standards shall require that:**

#### ~~12.7.1. 7.2.1~~

~~Labeling of textiles follows IFOAM all standards on labeling (see Chapter 9) organic food with the exceptions in this section following special regulations:~~

- ~~□ calculation by weight shall exclude weight of the non-textile accessories (buttons, zippers, etc.)~~
- ~~□ **materials in non-textile accessories shall be declared**~~
- ~~□ information on labels required by applicable local labeling regulations shall be included~~
- ~~□ raw materials of textiles may be labeled “made with (...%) organically produced fibers” provided at least 70% of the fibers are certified organic~~
- labeling of the final product as organic, other than reference to raw materials of agricultural origin, cannot occur until the standard-setting organization has developed a positive list of ingredients and processing aids

#### ~~12.7.2.~~

~~Where the certified textile constitutes only part of the final product (i.e. furniture) the textiles may be declared according to this standard, but it shall be clear from the labeling that this only relates to the textile part of the product.~~

#### ~~7.2.2~~

~~Only substances allowed by the certification body based upon the criteria for textile processing in Appendix 1 shall be used to process fiber products labeled as “organic.”~~

#### ~~7.2.32~~

~~Apparel and other textile products labeled as organic consist of at least 95% by weight organic fiber as described in section 6.8.2. \* net of the weight of the non-textile accessories such as buttons and zippers.~~

#### ~~7.2.43~~

Textiles may be labeled “made with (...%) organically produced fibers” only if at least 70% of the fibers are organic as described in section 6.8.3. \* net of the weight of the non-textile accessories such as buttons and zippers.

\* (Percentages in sections 7.2.2 and 7.2.3 refer to the total weight of the fibers, and do not include the weight of the non-textile accessories such as buttons and zippers.)

## 8. Social Justice

### General Principle

Social justice and social rights are an integral part of organic agriculture and processing.

### Recommendations

Operators should comply with all ILO conventions relating to labor welfare and the UN Charter of Rights for Children.

All employees and their families should have access to potable water, food, housing, education, transportation and health services.

Operators should provide for the basic social security needs of the employees, including benefits such as maternity, sickness and retirement benefit.

All employees should have equal opportunity and adequate wages when performing the same level of work regardless of color, creed and gender.

Workers should have adequate protection from noise, dust, light and exposure to chemicals that should be within acceptable limits in all production and processing operations.

Operators should respect the rights of indigenous peoples, and should not use or exploit land whose inhabitants or farmers have been or are being impoverished, dispossessed, colonized, expelled, exiled or killed, or which is currently in dispute regarding legal or customary local rights to its use or ownership.

Contracts should be fair, open to negotiation, and honored in good faith.

### Standards shall require that:

#### 8.1.

Operators shall have a policy on social justice.

*Operators who hire fewer than ten (10) persons for labor and those who operate under a state system that enforces social laws may not be required to have such a policy.*

#### 8.2.

In cases where production is based on violation of basic human rights and clear cases of social injustice, that product cannot be declared as organic.

#### 8.3.

Standards shall require that operators not use forced or involuntary labor.

#### 8.4.

Employees and contractors of organic operations have the freedom to associate, the right to organize and the right to bargain collectively.

#### 8.5.

Operators shall provide their employees and contractors equal opportunity and treatment, and shall not act in a discriminatory way.

#### 8.6.

~~Children employed by organic operators shall be provided with educational opportunities.~~

~~Operators shall not hire child labor.~~

~~Family farms may use family labor on a restricted basis provided that children have access to education, health care, and recreation.~~

~~Children are allowed to experience work on their family's farm or a neighboring farm provided that:~~

~~a) such work is not dangerous or hazardous to their their health and safety~~

~~b) it does not jeopardize the children's educational, moral, social, and physical development.~~

~~c) Children are supervised by adults or have authorization from a legal guardian.~~

## 10.9 Aquaculture Production ~~Draft~~ Standards

### 10.2.9.1 Conversion to Organic Aquaculture

#### General Principles

~~Conversion to organic aquaculture is a process of developing farming practices that encourage and maintain a viable and sustainable aquatic ecosystem. The time between the start of organic management and certification of the production is known as the conversion period. Aquaculture production methods can vary widely according to biology of the organisms, technology used, geographic location and local conditions, ownership structure, time span, etc. These aspects should be considered when the length of conversion is specified.~~

~~Conversion in organic aquaculture production reflects the diversity of species and production methods.~~

#### Recommendations

~~The total production in each farming unit or under each operator's control should be converted to organic aquaculture over a specified period of time. If a production unit is not converted all at once, the standard-setting organization should set standards for how organic and non-organic production and product can be clearly separated in production and documentation, to prevent unintentional mixing of materials and products.~~

~~Independent sections of the production unit should be converted in such a way that these standards are completely met on each section before it is certified as organic.~~

~~There should be a clear plan of how to proceed with the conversion. This plan should be updated as necessary and cover all aspects relevant to these standards.~~

~~The length of the conversion period should be at least one life cycle of the organism in question.~~

~~Production units should have be an appropriate distance from contamination sources and conventional aquaculture.~~

#### Standards shall require that:

##### ~~10.2.1.9.1.1~~

~~The operation shall comply with these standards throughout the conversion period.~~

Calculation of the conversion period may not start before the date of the last non-complying input or practice.

Operators shall meet comply with all the relevant general requirements of [terrestrial crop production and animal husbandry chapters 3 and 5](#).

#### **~~10.2.2.~~**

~~Where the entire production is not converted the following is required:~~

- ~~□ physical separation between conventional and organic production units. For sedentary or sessile organisms not living in enclosures (see 6.4.1. and 6.4.2.) the area shall be at an appropriate distance from pollution or harmful influence from conventional aquaculture/agriculture or industry~~
- ~~□ organic production shall be capable of inspection with respect to water quality, feed, medication, input factors or any other relevant sections of these standards~~
- ~~□ Adequate documentation including financial accounting is available for both production systems~~
  - converted units shall not be switched between organic and conventional management

#### **~~10.2.3.~~**

~~The length of the conversion period shall be specified by the standard setting organization, taking into consideration life cycle and species, environmental factors, and past use of the site with respect to waste, sediments and water quality.~~

#### **9.1.2**

The conversion period shall be at least one life cycle of the organism or one year whichever is shorter.

#### **9.1.3**

Operators shall ensure that conversion to organic aquaculture addresses environmental factors, and past use of the site with respect to waste, sediments and water quality.

#### **~~10.2.4.~~**

~~The standard setting organization may allow brought in organisms of conventional origin, provided these are not genetically engineered. Required conversion periods for brought in organisms shall be defined by the standard setting organization.~~

#### **~~10.2.5.~~**

~~No conversion period is required in the case of open collecting areas for wild, sedentary organisms (see 6.5.) where the water is free flowing and not directly or indirectly contaminated by substances prohibited in these standards and where the collecting area can be inspected with respect to water quality, feed, medication, input factors or any other relevant sections of these standards and all requirements are met.~~

### **10.3. Basic Conditions 9.2 Aquatic Ecosystems**

#### **General Principles**

Management techniques are governed by the physiological and ethological needs of the organisms in question. The organisms are allowed to meet their basic behavioral needs. Management techniques, especially when applied to influence production levels and speed of growth, will maintain and protect the good health and welfare of the organisms.

When introducing non native species, special care is taken to avoid permanent disruption to natural ecosystems.

Organic aquaculture management maintains the biodiversity of natural aquatic ecosystems, the health of the aquatic environment, and the quality of surrounding aquatic and terrestrial ecosystem.

### **Recommendations**

Production should maintain the aquatic environment and surrounding aquatic and terrestrial ecosystem, by using a combination of production practices that:

- Encourage and enhance biological cycles
- ~~use a wide range of~~ Utilize preventive, system based methods for disease control
- ~~prohibit~~ Avoid the use of synthetic fertilizers, pesticides, and avoid chemotherapeutic agents
- ~~p~~ Provides for biodiversity through polyculture and maintenance of riparian buffers with wild and uncultivated areas, where possible adequate plant cover.

~~Converting material of plant and animal origin into animal production results in nutrient and energy losses. For this reason feed sources based on by-products and waste materials of biological origin not suitable for human consumption should be encouraged.~~

### **Standards shall require that:**

#### **10.3.1.**

~~The standard setting organization shall set standards that take into account the physiological and behavioral needs of organisms. This shall include provisions regarding:~~

- ~~☐ sustainable production~~
- ~~☐ non-stressful stocking density~~
- ~~☐ water quality~~
- ~~☐ protection from extremes of sunlight and shade and sudden temperature changes.~~

#### **10.3.2.**

~~The standard setting organization may allow artificially prolonged light periods, appropriate to the species and geographical location. Day length shall not be artificially prolonged beyond 16 hours per day.~~

#### **10.3.3.**

~~Construction materials and production equipment shall not contain paints or impregnating materials with synthetic chemical agents that detrimentally affect the environment or the health of the organisms in question.~~

#### **9.2.1**

~~Organic a~~ Aquatic ecosystems shall be managed to meet the comply with relevant requirements of terrestrial ecosystems chapter 2.

#### **10.3.4.9.2.2**

~~Operators shall take Aadequate measures shall be taken to prevent escapes of introduced, domesticated or cultivated species and document any that ~~do are known to occur.~~ from enclosures.~~

#### **9.2.3.**

~~Operators shall take concise measures to ensure that wild, sedentary aquatic species are collected only from open areas where the water is free flowing and not contaminated by substances prohibited in these standards.~~

#### **9.2.4.3**

~~Operators shall take verifiable and effective measures to minimisze the release of nutrients and waste into the aquatic ecosystem.~~

**10.3.5.**

~~Adequate measures shall be taken to prevent predation on species living in enclosures.~~

**10.3.6.**

~~The standard setting organization shall set relevant standards to prevent excessive and/or improper use of water.~~

**9.2.4**

Fertilizers and pesticides are prohibited unless they appear in Appendices 1 and 2.

## **10.9. — Harvesting 9.3 Aquatic Plants**

### **General Principle**

~~Harvesting certified organic aquatic organisms from enclosures or collecting areas causes the least possible distress to the organisms. The act of collection does not negatively affect natural areas. Organic aquatic plants are grown and harvested sustainably without adverse impacts on natural areas.~~

### **Recommendations**

~~Aquatic organisms should be handled in the most considerate manner.~~

~~Harvesting or gathering of products shall not exceed the sustainable yield of the ecosystem, or threaten the existence of other species.~~

The act of collection should not negatively affect any natural areas.

### **Standards shall require that:**

**10.9.1.**

~~The standard setting organization shall set standards for handling living organisms that:~~

- ~~are adapted to the organism in question,~~
- ~~ensure that harvesting from enclosures and collecting areas is carried out in an effective and appropriately considerate manner.~~

**10.9.2.**

~~The standard setting organization shall set standards for harvesting or gathering of products from collecting areas that ensure the sustainable yield of the ecosystem is not exceeded, and that the existence of any other species is not threatened.~~

**9.3.1.**

Aquatic plant production shall ~~meet the~~comply with the relevant requirements of chapters 2 and 4 ~~crop production standards.~~

**9.3.2**

Aquatic plant production involves the use of soil and natural media in a defined and managed outdoor environment.

**9.3.3**

Hydroponic production is excluded

**9.3.4.**

Harvest of aquatic plants shall not disrupt the ecosystem or degrade the collection area or the surrounding aquatic and terrestrial environment.

## **10.7. Breeds and Breeding 9.4 Aquatic Animal Sources/Origin**

### **General Principle**

~~Breeding strategies and practices in organic aquaculture interfere as little as possible with natural behavior of the animals. Natural breeding methods are used.~~

Organic animals are born and raised begin life on organic units.

### **Recommendations**

~~Breeds should be chosen that are adapted to local conditions.~~

~~Breeding goals should aim at obtaining good food quality and efficient conversion of inputs to animal growth.~~

~~Brought in conventional aquatic organisms should spend at least 2/3 of their life in the organic system before being acceptable for certification.~~

Aquatic farmed animals Breeds should be locally adapted, native species preferably indigenous to and regionally established in the region.

Aquatic animal husbandry should not be dependent on conventional raising systems.

Aquatic animals should be born or hatched begin life by natural methods.

### **Standards shall require that:**

#### **10.7.1.**

~~Breeding shall allow natural birth. The certification body/standard setting organization may, however, allow the use of production systems that do not provide for natural birth, for instance hatching of fish eggs.~~

#### **10.7.2.**

~~Where available, brought in aquatic organisms shall come from organic sources.~~

#### **10.7.3.**

~~The standard setting organization shall define the minimum length of time brought in aquatic organisms shall be managed organically before certification is permitted.~~

#### **9.4.1**

Animals shall be raised organically from birth.

*If organic animals are not available, brought-in conventional A animals shall accumulatespend -not less than 90% two thirds of their biomasslife span in the organic system.*

*When organic stock is not available, conventional sources may be used. To promote and establish the use of organic stock, standard-setting organizations shall set appropriate standards and/or time limits for the selected use of non-organic sources.*

#### **10.7.4. 9.4.2**

~~Artificially polyploid organisms and genetically engineered species or breeds, are prohibited.~~

Operators shall not utilize artificially polyploid organisms.

## **10.8. Nutrition (Aquaculture) 9.5 Aquatic Animal Nutrition**

## General Principles

Organic aquaculture production provides a good quality diet balanced according to the nutritional needs of the organism. Feed is only offered to the organisms in a way that allows natural feeding behavior, with minimum loss of feed to the environment.

Feed is comprised of by products from organic food processing and wild aquatic feed resources not otherwise suited for human consumption.

Organic aquatic animals receive their nutritional needs from good quality, organic and other sustainable sources.

## Recommendations

Feeding and feeding regimes should be organized to give best possible growth on least possible input. Nutrient management should maintain the biological diversity of the area.

Operators should design feed rations to supply most of the nutritional needs of the animal from organic plants and animals appropriate for the digestive system and metabolism of the species.

Feed brought into the operation should be comprised of by-products from organic and wild sources not otherwise suitable for human consumption.

Operators should maintain the biological diversity of areas that are ~~grazed or managed~~ and maintain adequate representation of naturally-occurring organisms.

Operators should design good quality balanced diets according to the physiological needs of the organism.

Operators should feed animals according to their natural feeding behaviour.

Operators should feed animals efficiently, with minimum losses to the environment.

Operators should design systems so that the production area comprises the entire food chain with minimal reliance on outside inputs.

## Standards shall require that:

### **10.8.1.9.5.1**

Aquaculture feeds shall contain 100% certified organic components or wild feed resources.

When supplying food collected from the wild, the “Code of Conduct for Responsible Fisheries” (FAO, 1995) shall be followed.

When certified organic components or wild foods are not available, the standard setting organization may allow feed of conventional origin up to a maximum 5% (by dry weight).

Animals shall be fed organic feed.

Operators may feed a limited percentage of non-organic feed under specific conditions for a limited time in the following cases:

- organic feed is of inadequate quantity or quality
- areas where organic aquaculture is in early stages of development

In no case may the percentage of non-organic feed of agricultural origin exceed 15% dry matter calculated on an annual basis.

Operators may use non-organic aquatic animal protein and oil sources provided that such sources:

- a) are harvested from independently verified sustainable sources;

- b) are verified to have contamination levels below limits established by standard setting body; and
- c) do not exceed 50% of the diet.

Non-organic feed sources may not exceed 50% of the ration.

### 9.5.2

The dietary requirements for aquatic animals shall comply with the requirements of Sections 5.6.4 and 5.6.5.

### ~~10.8.2.~~

~~In systems using brought in feed inputs, at least 50% of the aquatic animal protein in a diet shall come from by products or other waste and/or other material that would not be used for human consumption.~~

### ~~10.8.3.~~

~~In cases of unforeseen severe natural events, the standard setting organization may grant exceptions from the percentages mentioned in 6.8.1. and 6.8.2. Specific time limits and conditions shall be established for such exceptions.~~

### 9.5.2

Operators who bring in feed that contain aquatic animal protein and oil in a diet shall use only by products from sustainably managed, food grade fisheries.

*For a limited period, operators may use a limited amount of aquatic animal protein and oil from feed grade fisheries. Such components shall not exceed 50% of the fish diet and sources must have independent verification of their sustainable management.*

### ~~10.8.4.~~

~~Feed rations should be designed so that plant and/or animal sources supply most of the nutritional needs of the organism.~~

~~The standards may permit the use of mineral supplements if they are applied in their natural form.~~

~~Use of human feces is restricted.~~

### ~~10.8.5.~~

~~The following products shall not be included in or added to the feed or in any other way be given to the organisms:~~

- ~~Synthetic growth promoters and stimulants~~
- ~~Synthetic appetizers~~
- ~~Synthetic antioxidants and preservatives, Urea, Feedstuffs subjected to solvent (e.g. hexane) extraction, amino acid isolates~~
- ~~material from the same species/genus/family as the one being fed~~
- ~~synthetic coloring agents~~
- ~~genetically engineered organisms or products thereof~~

### ~~10.8.6.~~

~~Vitamins, trace elements and supplements used shall be of natural origin when available.~~

~~The use of substances from synthesized or unnatural sources shall only occur under conditions established by the standard setting organization.~~

### ~~10.8.7.~~

The following feed preservatives may be used:

- bacteria, fungi and enzymes
- by-products from the food industry (e.g. molasses)
- plant based products.

Synthetic chemical feed preservatives are permitted in response to severe weather conditions. The standard setting organization shall establish conditions for their use.

### 9.5.3

The following are not allowed in diets of organic aquatic animals

Fishmeal and oil from by catch from food grade fisheries

Fishmeal and oil from unsustainably managed fisheries.

Fishmeal and oil from sources known to contain high levels of persistent organic compounds which can accumulate in tissue .

Slaughter products of the farmed species.

## **10.6.—9.6 Aquatic Animal Health and Welfare**

### **General Principles**

Management practices achieve a high level of disease resistance and prevention from infection.

All management techniques, especially when influencing production levels and speed of growth, maintain the good health and welfare of the organisms. Living aquatic organisms should be handled as little as possible.

The well being of the organisms is paramount in the choice of treatment for disease or injury.

Organic management practices promote and maintain the health and well-being of animals through balanced organic nutrition, stress-free living conditions appropriate to the species and breed selection for resistance to diseases, parasites and infections.

### **Recommendations**

Operators should identify ~~T~~the cause of outbreaks of disease or infection.

Operators should be identified, and implement management practices, ~~implemented to prevent~~ including siting criteria that can diminish ~~the~~ causative events and future out-breaks of disease.

Operators should use natural methods and medicines, as the first choice, ~~W~~when treatment is necessary, the use of natural methods and medicines should be the first choice.

Disease treatment should be carried out in a way that minimizes harmful effects on the environment.

### **Standards shall require that:**

#### **10.6.1.**

Conventional, veterinary chemicals shall only be used if no other justifiable alternative is available, and/or if the use of such chemicals is required according to national law. The standards shall define appropriate withholding periods for use of veterinary drugs where required. The length of the withholding periods shall be at least twice that recommended by the manufacturer.

#### **9.6.1**

Operators shall comply with ~~meet the~~ relevant requirements of the animal husbandry standards section 5.7.

#### **10.6.2.9.6.2**

Prophylactic use of veterinary drugs chemotherapeutants ~~veterinary drugs, except~~ vaccinations in certain cases (see 6.6.3.), is prohibited.

### **10.6.3.9.6.3**

~~Vaccinations are permitted if diseases that cannot be controlled by other management techniques are known to exist in the region. Vaccinations are also permitted if they are mandatory under applicable legislation.~~

~~Genetically engineered vaccines are prohibited.~~

~~Vaccinations are only permitted under the following conditions:~~

~~When an endemic diseases is known or expected to be a problem in the region of the farm and where this diseases cannot be controlled by other management techniques.~~

~~When a vaccination is legally required.~~

- ~~• When the vaccine is not genetically engineered.~~

### **9.6.3**

Use of antibiotics is prohibited.

### **10.6.4.9.6.4**

~~Synthetic hormones and growth promoters are prohibited.~~for use to artificially stimulate growth or reproduction.

### **10.6.5.**

~~The certification body shall ensure that current, accurate disease management records are kept. The records shall include:~~

- ~~□ identification of the infected and infecting organisms concerned~~
- ~~□ details of treatment and duration, including application rate, method of application, frequency of repetition and concentration of organisms~~
- ~~• brand names of drugs used and active ingredients~~

### **9.6.5**

~~Operators must establish monitoring measures to demonstrate that s~~ Stocking densities do not compromise animal welfare.

### **10.6.6.9.6.6**

~~Operators shall analyze and adjust water quality, as necessary, I~~ in case of irregular behavior by the organisms, the water quality shall be analyzed and adjusted as necessary according to the needs of the organisms

~~Operators shall routinely monitor water quality, stocking densities, health, and behavior of each cohort (school) and manage the operation to maintain water quality, health, and natural behavior.-~~

### **10.6.7.**

~~Aquatic animals shall not be subject to any kind of mutilation.~~

## **10.10. Transportation of Living Marine Animals**

### **General Principle**

The transportation medium should be appropriate for the species with regards to water quality including salinity, temperature, oxygen etc. Transportation distance, duration and frequency should be minimized.

### **Recommendations**

Transport of living aquatic animals should be minimized and be done in the most considerate manner.

Living animals should be monitored regularly and maintained in a healthy state during transportation.

**Standards shall require that:**

**10.10.1.**

Transportation shall not cause avoidable stress or injury to the animals. Transportation equipment and/or construction materials shall not have toxic effects.

**10.10.2.**

The standard-setting organization shall set appropriate transportation requirements regarding:

- water quality, including salinity, temperature, oxygen content, pH etc.
- stocking density
- maximum distance and/or time limits that animals may be restrained in transport containers
- precautions against escape

**10.10.3.**

Chemically synthesized tranquilizers or stimulants shall not be given to the animals prior to or during transport or at any time.

**10.10.4.**

There shall be a minimum of one person specifically responsible for the well-being of the animals during transport.

## **10.11. Slaughter**

### **General Principles**

Stress and suffering of the organism is minimized during the slaughter process.

Slaughter management and techniques are governed by careful consideration of the physiology and ethology of the organisms in question and accepted ethical standards.

### **Recommendation**

To avoid unnecessary suffering, the organisms should be in a state of unconsciousness before bleeding out.

**Standards shall require that:**

**10.11.1.**

The standard-setting organization shall set standards to ensure that stress in connection with slaughtering is minimized.

**10.11.2.**

Where applicable, aquatic organisms shall be in a state of unconsciousness before bleeding to death. Equipment used for stunning shall be in good working order and shall quickly remove sensate ability and/or kill the organism.

Equipment shall be regularly inspected and monitored for proper functioning. Equipment relying on gas or electricity shall be constantly monitored.

**10.11.3.**

The standard-setting organization shall specify slaughterhouse requirements based on local species and cultural customs. This shall include:

- recovery period after transport
- timing between unconsciousness and bleeding
- type and quality of equipment

contact between living and slaughtered organisms

## **9.7 Aquatic Animal Transport and Slaughter**

## General Principles

Organic animals are subjected to minimum stress during transport and slaughter

## Recommendations

A person specifically responsible for the well being of the animals should be present during transport. To avoid unnecessary suffering, organisms should be in a state of unconsciousness before ~~slaughter.~~ bleeding out.

### Standards shall require that:

#### 9.7.1.

Operators shall ~~meet the~~ comply with relevant requirements of ~~the animal husbandry standards.~~ Section 5.8.

#### 9.7.2.

The operator shall handle live organisms in ~~a~~ ways that are compatible with their ~~physiological requirements.~~ ensures that respects natural behaviour.

#### 9.7.3.

Operators shall implement defined measures to ensure that organic aquatic animals are provided with conditions during transportation and slaughter that meet animal specific needs and minimise the adverse effects of:

- diminishing water quality
- time spent in transport
- stocking density
- toxic substances
- escape

#### 9.7.4.

Operators shall ensure that equipment used to stun animals is sufficient to remove sensate ability and/or kill the organism and is maintained and monitored.

#### 9.7.5.

Operators shall implement procedures that during slaughter:

~~Provide animals a recovery period after transport.~~

~~Provide animals an interval between unconsciousness and bleeding where appropriate to the species.~~

~~Prevent contact between living and slaughtered organisms.~~

~~Respect local cultural customs.~~

Animals shall be handled, transported and slaughtered in a way that minimizes stress and respects species-specific needs. Finfish shall be anaesthetized before bleeding out.

# 10 Forestry

## 10.1 Conversion to organic forest management

Conversion to organic forestry requires that the site is managed according to the requirements of this chapter and that there is a minimum period of 18 months since the last use of prohibited inputs.

## 2.4.2 Natural Forest Maintenance 10.2 Forest Management

### General Principle

Organic forestry improves and regenerates natural-site suitable forests systems, and maintains the complexity, stability and resilience of the ecosystem. does not exploit, disturb, or simplify primary forest, well developed secondary forests and sites of major environmental, social or cultural significance.

Organic forest management recognizes ecosystem potential, conserves and enhances biological diversity and its associated values, and provides long term sustainable yields, particularly of timber products.

The conservation management includes protection of water resources, conservation of soil, and maintenance of threatened and endangered species. Primary forests or areas of special cultural or genetic diversity are outside the scope of organic forestry.

### Recommendations

The use of replanting as a technique for regenerating stands of certain natural forest types may be appropriate under certain circumstances.

Human impact, including rubbish dumping or inappropriate recreational activity should be avoided. Species selection should be native or endemic where possible.

Trees should be managed in a way to improve the inter- and intra-species genetic diversity by leaving sufficient numbers of different species for regeneration.

Forests should be regenerated naturally whenever economically feasible, socially desirable, and ecologically viable.

Trees should be replanted only to supplement natural regeneration consistent with natural vegetation.

Operators should not introduce exotic species, and should remove invasive native exotic species when they threaten or endanger rare native species.

Invasive exotic species should be removed through biological, cultural, and physical means.

Plantations should include wildlife corridors, permanent laneways, streamside zones and a mosaic of stands or blocks of different ages and rotation.

Plantations should not replace well developed secondary forests.

Monocultural stands and blocks should be avoided.

Hydrological cycles should be considered when planning and establishing forestry plantations

### Standards shall require that:

#### 2.410.2.1

Organic forests shall be regenerated in a way that conserves soil and genetic resources, maintains regional hydrological stability and restores the displaced native ecosystem function.

#### 2.4.10.2.2

Operators shall not introduce invasive exotic species to the forest.

Operators shall ensure that forest floors are protected from unnecessary traffic and disturbance.

Operators who use fire as a management tool shall do so consistent with a management plan that is based on traditional knowledge and careful consideration.

### **2.4.2.3**

Operators shall harvest forests according to a plan developed to ameliorate negative environmental impact including:

Soil

Rivers and streams

Local communities

- Remaining plant, animal and genetic diversity

## **4.7 Forest Plantations 10.3 Plantation Forestry**

### **General Principle**

In organic plantation forestry, species are suited to site.

### **Recommendations**

Species selection should be native or endemic where possible.

Plantations should include wildlife corridors, permanent laneways, streamside zones and a mosaic of stands or blocks of different ages and rotation.

Plantations should not replace well developed secondary forests.

Suited species should be preferred to establish plantations that restore degraded ecosystems and conserve biological diversity.

Monocultural stands and blocks should be avoided.

~~Hydrological cycles should be considered when planning and establishing forestry plantations~~

Hydrological cycles should be considered when planning and establishing forestry plantations.

### **Standards shall require that:**

#### **4.710.3.1**

Operators shall manage plantations to conserve soil, mitigate against salinity, encourage diversity, and restore degraded ecosystems.

#### **4.710.3.2**

Plantations shall not negatively impact local or regional hydrological cycles.

#### **4.710.3.3**

Operators shall ensure that ~~forest~~plantation-floors are protected from unnecessary traffic and disturbance, and are protected from erosion.

#### **4.710.3.4**

~~Plantations shall be support sufficiently diversity-diverse in their composition to enhance economic, ecological function and social stability.~~

**4.710.3.5** Operators shall select species for planting based on their suitability for the site and their compatibility with a management plan, and genetic diversity.

#### **4.710.3.6**

Operators who use fire as a management tool shall do so consistent with a management plan that is based on traditional ecological knowledge and careful consideration.

#### **4.710.3.7**

Plantations shall ~~protect~~not impinge on-local customary rights of ownership, use or access.

### **2.4.310.4 Non Timber Forest Products**

#### **General Principle**

~~Non-timber forest products —especially the tropical and subtropical— are integral parts of the forest ecosystem and their harvest is considered part of the~~ are managed and harvested in ways that contribute to the overall sustainability of the forest site.

#### **Recommendation**

Operators should adopt practices that integrate the sustainable harvest of diverse non-timber products in addition to the production of timber where it helps to conserve and enhance resource use.

#### **Standards shall require that:**

##### **2.4.310.4.1**

~~Where timber extraction is the priority a component of in forest management for non timber products,~~ a management plan is required to specify the timber products to be collected harvested and the long and short-term impacts of those products harvest ~~and the overall forest management practices on the collection production area.~~

##### **2.4.310.4.2**

Management practices shall respect the cultural and religious significance of the forest, and its inhabitants

##### **2.4.310.4.3**

Non-timber forest products shall be harvested by appropriate methods for the species and ecosystem.

### **2.10.5 Forest Ecosystems**

#### **General Principle**

Organic forestry improves and regenerates site suitable forests, and maintains the complexity, stability and resilience of the ecosystem.

~~Organic forest management recognizes ecosystem potential, conserves and enhances biological diversity and its associated values, and provides long term sustainable yields. The conservation management includes protection of water resources, conservation of soil, and maintenance of threatened and endangered species. Primary forests or areas of special cultural or genetic diversity are outside the scope of organic forestry.~~

#### **Recommendations**

Forest management operations should provide multiple products and services and ensure ecological diversity, economic viability and social equity.

Organic forests should be managed to maintain stable populations of non-economic species, including wildlife and native plants.

Organic forests should build organic matter, optimize standing biomass and diversity, encourage regeneration and permit successional forces to proceed.

The production area should maintain elements of the entire food chain.

**Standards shall require that:**

**210.5.1**

Operators shall protect the soil and micro-climate within the forest by avoiding large scale tree felling and destructive harvest events leading to massive soil disturbance, land slip, erosion and leaching.

**210.5.2**

Operators shall assess the environmental impact of their forest management operations – including both timber and non-timber products – with respect to the biological diversity of the forests managed, including an inventory of soil and water resources, wildlife, threatened and endangered species, native people, and unique and fragile forest ecosystems landscapes and harvested species

**210.5.3**

Operators shall protect rare, threatened and endangered species and their habitats (e.g. nesting and feeding areas) by establishing conservation zones and protected areas appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Hunting, fishing, trapping, and collecting that damages the ecosystem is prohibited.

**210.5.4**

Operators shall maintain intact, enhance or restore the ecological functions of the managed systems including:

- forest regeneration and succession
- genetic, species and ecosystem diversity
- natural cycles affecting the productivity of the forest ecosystem

**210.5.5**

Operators shall protect representative samples of existing ecosystems in their undisturbed natural state. Such protected areas shall be identifiable within the landscape and recorded on maps.

**6.710.6 Forest Products Handling and Processing**

**General Principles**

Organic Forestry products are handled and processed in ways that ~~enhance products~~ maintain identity and traceability while minimizing impact on the environment ~~or and~~ workers

**Recommendations**

The extraction of organic forest products should not damage land and waters.

Transport should minimize impact on the environment and incorporate energy efficient methods.

Processing should not lead to negative environmental impacts including impact from the generation of waste products.

~~Where possible waste~~ Waste products should be re-cycled.

**Standards shall require that:**

**6.710.6.1**

Timber products from organic forestry ~~are~~ shall be handled and processed in ways that preserve the identity of the raw material through to the finished product.

#### **6.710.6.2**

~~Organic forest products are processed in a way that minimizes contamination of soil, water and finished products.~~

Processors and handlers of organic forest products shall monitor and demonstrably minimize the contamination of soil, water, and finished products.

#### **6.710.6.3**

Waste products must be recycled or treated to a safe level.

#### **6.710.6.4**

Where processing and manufacturing includes the use of materials not contained within appendix 4, labeling claims must be limited to “made with organic“.

## **SECTION C APPENDICES**

### **Introduction to Appendices**

~~In organic agriculture the maintenance of soil fertility is achieved through the recycling of minerals and organic matter where the nutrients are made available to crops through the activity of soil micro-organisms. Pests, diseases, and weeds can be managed through cultural practices. Organic foods are processed primarily by biological, mechanical, and physical means. The following appendices are used as a guideline for certifiers, and are not intended to be comprehensive. Appendix 3 is used to evaluate products included in Appendix 1 and 2. Appendix 5 is used to evaluate products included in Appendix 4.~~

~~Taking into consideration factors such as contamination, risk of nutritional imbalances, importation of inputs from outside the farm, and depletion of natural resources, the use of many of these inputs listed in Appendix 1 and 2 is already restricted (see chapters 4.4 Soil Fertility and Fertilization, 4.5 Pest, Disease and Weed Management including Growth Regulators and 4.6 Avoiding Contamination). Where there is doubt about whether products should be included in the appendices the precautionary principle should be applied.~~

### **Revision Procedure for Appendices**

~~Any IFOAM member can request that IFOAM add, delete, or change the status of an input. A member who wishes IFOAM to determine whether or not an input should be permitted for use in organic production or processing shall submit a dossier. A dossier addresses all of the IFOAM criteria in Appendices 3 and/or 5 and follows a standardized format developed by the Standards Committee. A dossier requesting deletion needs only to address the criteria the non-fulfillment of which are the reason for deletion. Requests from non-members may also be considered at the discretion of the SC. Dossiers shall be submitted to the SC when the certification body or standard-setting organization has included an input in their standards that does not appear in the appendices or that is not clearly covered by the general standards or generic groups in the standards. Inputs that are the subject of dossiers may be used and/or included in standards during the assessment period but any IFOAM member does so at its own risk and should be mindful that a negative decision may be made.~~

~~The Standards Committee reviews the dossier and makes one of five decisions:~~

1. **Insufficient information.** The dossier is returned to the member with a request to provide more information.
2. **Clarification of existing standards.** The member is informed that the input is already covered (allowed, restricted, or prohibited) by the IBS.
3. **Reference to experts.** The Standards Committee requires the opinion of recognized expert before it can make a decision. The IFOAM SC passes a dossier to one or several experts for evaluation. If the experts require further information, the SC requests this information and passes it to the experts. The experts provide a recommendation to the SC. The SC passes expert comment back to the applicant for further comment. The SC then makes a decision based on the recommendation and comments of the applicant.
4. **Recommendation for Change of Relevant Appendix.** The SC informs the member that the change is recommended by the SC to be included into the IBS. The input then follows the procedure established for changes of the IBS.
5. **Rejection of Change.** The SC informs the member that the input is not considered to be appropriate for inclusion in the IBS.

Final decisions and recommendations shall be published in IFOAM internal newsletter and home page.

#### **Appendix 1 (Now Appendix 2 moved behind the new Appendix 1)**

#### **Appendix 2 (Now Appendix 3 moved behind the new Appendix 1)**

#### **Appendix 3 (Replaced with new Appendix 1)**

#### **Criteria to Evaluate Additional Inputs to Organic Agriculture**

Appendices 1 & 2 refer to products for fertilization and plant pest and disease control in organic agriculture. Appendix 3 outlines the criteria to evaluate other inputs into organic production.

#### **The following checklist should be used for amending the permitted substance list for fertilization and soil conditioning purposes:**

- The material is essential for achieving or maintaining soil fertility or to fulfill specific nutrient requirements, for specific soil conditioning and rotation purposes which cannot be satisfied by the practices outlined in Chapter 4 or of other products included in Appendix 1 and
- The ingredients are of plant, animal, microbial or mineral origin which may undergo the following processes:
  - o physical (mechanical, thermal)
  - o enzymatic
  - o microbial (composting, digestion) and
- Their use does not result in, or contribute to, unacceptable effects on, or contamination of, the environment, including soil organisms and
- Their use has no unacceptable effect on the quality and safety of the final product.

The following checklist should be used for amending the permitted substance list for the purpose of plant disease or pest and weed control:

- The material is essential for the control of a harmful organism or a particular disease for which other biological, physical or plant breeding alternatives and/or effective management techniques are not available and
- The substances (active compound) should be plant, animal, microbial or mineral origin which may undergo the following processes:
  - o physical
  - o enzymatic
  - o microbial and

- Their use does not result in, or contribute to, unacceptable effects on, or contamination of, the environment
- Nature identical products such as pheromones, which are chemically synthesized may be considered if the products are not available in sufficient quantities in their natural form, provided that the conditions for their use do not directly or indirectly contribute to contamination of the environment or the product

## **Introduction**

Inputs should be evaluated regularly and weighed against alternatives. This process of regular the evaluation should result in organic production becoming ever more friendly to humans, animals, environment and the ecosystem.

The following criteria should be used for evaluation of additional inputs to organic agriculture.

### **1. ——— Necessity**

Each input must be necessary. This will be investigated in the context in which the product will be used.

Arguments to prove the necessity of an input shall be drawn from such criteria as yield, product quality, environmental safety, ecological protection, landscape, human and animal welfare.

The use of an input may be restricted to:

- Specific crops (especially perennial crops)
- Specific regions
- Specific conditions under which the input may be used

### **2. ——— Nature and Mode of Production**

#### **Nature**

The origin of the input should usually be (in order of preference):

- Organic — vegetative, animal, microbial
- Mineral

Non-natural products which are chemically synthesized and identical to natural products may be used.

When there is any choice, renewable inputs are preferred. The next best choice is inputs of mineral origin and the third choice is inputs which are chemically identical to natural products. There may be ecological, technical or economic arguments to take into consideration in the allowance of chemically identical inputs.

#### **Mode of Production**

The ingredients of the inputs may undergo the following processes:

- Mechanical
- Physical
- Enzymatic
- Action of micro-organisms
- Chemical (as an exception and restricted)

#### **Collection**

The collection of the raw materials comprising the input shall not affect the stability of the natural habitat nor affect the maintenance of any species within the collection area.

### **3.——Environment**

#### **Environmental Safety**

The input shall not be harmful or have a lasting negative impact on the environment. Nor should the input give rise to unacceptable pollution of surface or ground water, air or soil. All stages during processing, use and breakdown shall be evaluated.

#### **Chemically Synthesized Products and Heavy Metals**

Inputs shall not contain harmful manufactured chemicals (xenobiotic products) where these are known to accumulate in the food chain. Chemically synthesized products may be accepted only if nature identical e.g. pheromones.

The following characteristics of the input shall be taken into account:

#### **Degradability**

- All inputs shall be degradable to CO<sub>2</sub>, H<sub>2</sub>O, and/or to their mineral form.
- Inputs with a high acute toxicity to non-target organisms should have a maximum half-life of five days.
- Natural substances used as inputs which are not considered toxic do not need to be degradable within a limited time.

#### **Acute toxicity to non-target organisms**

When inputs have a relatively high acute toxicity for non-target organisms, restrictions for their use is needed. Measures have to be taken to guarantee the survival of these non-target organisms. Maximum amounts allowed for application must be set. When it is not possible to take adequate measures, the use of the input is not permitted.

#### **Long-term chronic toxicity**

Inputs that accumulate in organisms or systems of organisms and inputs which have, or are suspected of having, mutagenic or carcinogenic properties shall not be used. If there are any risks, sufficient measures shall be taken to reduce any risk to an acceptable level and to prevent long-lasting negative environmental effects.

Mineral inputs should contain as few heavy metals as possible. Due to the lack of any alternative, and long-standing, traditional use in organic agriculture, copper and copper salts are an exception for the time being. The use of copper in any form in organic agriculture must be seen, however, as temporary and use shall be restricted with regard to environmental impact.

### **4.——Human Health and Quality**

#### **Human Health**

Inputs shall not be harmful to human health. All stages during processing, use and degradation shall be taken into account. Measures shall be taken to reduce any risks and standards set for inputs used in organic production.

#### **Product quality**

Inputs shall not have negative effects on the quality of the product—e.g. taste, keeping quality, visual quality.

### **5.——Ethical Aspects – Animal Welfare**

Inputs shall not have a negative influence on the natural behavior or physical functioning of animals kept at the farm.

## **6. ~~Socio Economic Aspects~~**

Consumers' perception: Inputs should not meet resistance or opposition of consumers of organic products. An input might be considered by consumers to be unsafe to the environment or human health, although this has not been scientifically proven. Inputs should not interfere with a general feeling or opinion about what is natural or organic—e.g. genetic engineering.

## **Appendix 4 (Moved behind the new Appendix 1)**

## **Appendix 5 (Replaced with new Appendix 4)**

### ~~Criteria for the Evaluation of Additives and Processing Aids for Organic Food Products~~

#### ~~Introduction~~

~~Additives, processing aids, flavoring agents and colors should be evaluated according to Appendix 5. The following aspects and criteria should be used for evaluation of additives and processing aids in organic food products:~~

#### ~~1. ~~Necessity~~~~

~~Additives and processing aids may only be allowed in organic food products if each additive or processing aid is essential to the production and:~~

- ~~the authenticity of the product is respected~~
- ~~the product cannot be produced or preserved without them~~

#### ~~2. ~~Criteria for the Approval of Additives and Processing Aids~~~~

~~Where:~~

- ~~There are no other acceptable technologies available to process or preserve the organic product.~~
- ~~The use of additives or processing aids which minimize physical or mechanical damage to the foodstuff as a substitute for other technologies which if used would result in such damage~~
- ~~The hygiene of the product cannot be guaranteed as effectively by other methods (such as a reduction in distribution time or improvement of storage facilities)~~
- ~~There are no natural food sources available of acceptable quality and quantity which can replace the use of additives or processing aids~~
- ~~Additives or processing aids do not compromise the authenticity of the product~~
- ~~The additives or processing aids do not confuse the customer by giving the impression that the final product is of higher quality than is justified by the quality of the raw material. This refers primarily, but not exclusively, to coloring and flavoring agents~~
- ~~Additives and processing aids should not detract from the overall quality of the product~~

#### ~~3. ~~Step by Step Procedure for the use of Additives and Processing Aids~~~~

~~1. ~~Instead of using additives or processing aids, the preferred first choice is:~~~~

- ~~Foods grown under organic conditions which are used as a whole product or are processed in accordance with the IFOAM Basic Standards—e.g. flour used as a thickening agent or vegetable oil as a releasing agent~~
- ~~Foods or raw materials of plant and animal origin which are produced only by mechanical or simple physical procedures—e.g. salt.~~

~~2. ~~The second choice is:~~~~

- ~~Substance isolated from food and produced physically or by enzymes—e.g. starch, tartrates, pectin~~

- Purified products of raw materials of non agricultural origin and micro organisms—e.g. acerola fruit extract, enzymes and micro organism preparations such as starter cultures.

3. In organic food products the following categories of additives and processing aids are not allowed:

- "Nature identical" substances
- Synthetic substances primarily judged as being unnatural or as a "new construction" of food compounds such as acetylated crosslinked starches
- Additives or processing aids produced by means of genetic engineering
- Synthetic coloring and synthetic preservatives

Carriers and preservatives used in the preparation of additives and processing aids shall also be taken into consideration.

## **Appendix 1 Procedures and Criteria for the Evaluation of Inputs, Additives, and Processing Aids for Organic Production and Processing**

### **General Principles**

Organic production and processing systems are based on the use of natural, biological, renewable, and regenerative resources. Organic agriculture maintains soil fertility primarily through the recycling of organic matter. Nutrient availability is primarily dependent on the activity of soil organisms. Pests, diseases, and weeds are managed primarily through cultural practices. Organic livestock are nourished primarily through organically produced feed and forage, and are kept in living conditions that allow for natural behavior and avoidance of stress. Organic foods and other products are made from organically produced ingredients that are processed primarily by biological, mechanical, and physical means.

### **Input Lists**

The following Appendices contain lists of the inputs, food additives, processing aids, and other substances that are allowed for use in organic production, handling, and processing. The *IFOAM Basic Standards* are limited (closed) to inputs that comply with these lists. These lists include broad categories and are not comprehensive or detailed. Compliant standards can only contain additional inputs that appear in these categories. Standards may also restrict the use of certain inputs based on the consideration of factors such as contamination, risk of nutritional imbalances, importation of inputs from outside the farm, and depletion of natural resources.

### **Revision Procedure for Appendices**

Any IFOAM member can request that IFOAM add, delete, or change the status of an input under the IBS. Requests from non-members may also be considered at IFOAM's discretion. IFOAM requires a dossier for any revision made to IBS Appendices 2, 3, and 4. The applicant who submits a dossier to add a substance or remove restrictions must address all of the appropriate criteria described below. An applicant who requests an input to be deleted or further restricted may address only the evaluation criteria where an input fails to meet a specific criterion.

IFOAM reviews the dossier and makes one of following decisions:

**Insufficient information.** The dossier is returned to the applicant with a request to provide more information.

**Clarification of existing standards.** The applicant is informed that the input is already covered (allowed, restricted, or prohibited) by the IBS.

**Reference to Experts.** IFOAM requires the opinion of recognized experts before it can make a decision. IFOAM refers the dossier to one or several experts for evaluation. If the experts require more information, the IFOAM requests this information and distributes it to the experts. The experts provide a recommendation to the Standards Committee. The SC informs the applicant of the experts' comments and recommendations, and offers the applicant the opportunity to respond. IFOAM then makes a decision based on the information contained in the dossier, the recommendation of experts, and response of the applicant.

**Recommendation for Change of Relevant Appendix.** IFOAM informs the applicant that the change is recommended by the IFOAM to be included into the IBS. The input then follows the procedure established to revise the IBS.

**Rejection of the Dossier.** IFOAM reserves the right to reject any dossier that fails to document that the substance is compatible with the evaluation criteria. This may be because the dossier is incomplete, because the substance fails to meet the evaluation criteria below, or because the dossier makes false or misleading statements. IFOAM informs the applicant of the decision and the reason(s) why the input is not considered to be appropriate for inclusion in or deletion from the IBS.

**Final decisions and recommendations shall be published in IFOAM internal newsletter and home page.**

### **Production Input Criteria**

Inputs used in organic production are consistent with the principles of organic farming outlined in IBS and are evaluated against criteria based upon the Precautionary Principle:

'When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of an activity, rather than the public, should bear the burden of proof.'

'The process of applying the Precautionary Principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action.'

**The criteria used to evaluate organic production inputs are based on the following principles:**

*Necessity and alternatives:* Any input used is necessary for sustainable production, is essential to maintain the quantity and quality of the product, and is the best available technology.

*Source and manufacturing process:* Organic production is based on the use of natural, biological, and renewable resources.

*Environment:* Organic production and processing is sustainable for the environment.

*Human health:* Organic techniques promote human health and food safety.

*Quality:* Organic methods improve or maintain product quality.

*Social, Economic, and Ethical:* Inputs used in organic production meet consumer perceptions and expectations without resistance or opposition. Organic production is socially just and economically sustainable, and organic methods respect cultural diversity and protect animal welfare.

Dossiers for a given substance must address these criteria based on the data requirements and decision rules stated in the criteria below, and meet the criteria to be added to the Appendices.

### **Crop and Livestock Criteria**

## **1. Necessity and Alternatives**

All dossiers shall document the necessity of the substance, its essential nature in organic production systems, and the availability of alternative methods, practices, and inputs.

- 1.1 The input is necessary to produce crops or livestock in sufficient quantity and of ~~superior~~ suitable quality; to cycle nutrients; to enhance biological activity; to provide a balanced animal diet; to protect crops and livestock from pests, parasites, and diseases; to regulate growth; and to maintain and improve soil quality.
- 1.2 A given substance shall be evaluated with reference to other available inputs or practices that may be used as alternatives to the substance.
- 1.3 Every input shall be evaluated in the context in which the product will be used (e.g. crop, volume, frequency of application, specific purpose).

## **2. Source and Manufacturing Process**

All dossiers shall document sources and manufacturing processes.

- 2.1 Biological substances require a description of the source organism(s), a verifiable statement that they are not genetically engineered as defined by IFOAM, and the processes required to breed, culture, produce, multiply, extract, or otherwise prepare the substance for use. Naturally occurring plants, animals, fungi, bacteria, other organisms are generally allowed. Substances that undergo physical transformations, such as by mechanical ~~or thermal~~ processing, or biological methods, such as composting, fermentation, and enzymatic digestion are also generally allowed. Limitations and prohibitions may be set based on consideration of the other criteria. Substances that are modified by chemical reaction are considered synthetic and therefore subject to protocol 2.3 below.
- 2.2 Natural non-renewable resources—such as mined minerals—require a description of the deposit or occurrence in nature. Non-renewable resources are generally restricted or limited in their use. They may be used as a supplement to renewable biological resources, provided they are extracted by physical and mechanical means, and are not rendered synthetic by chemical reaction. Inputs with high levels of natural environmental contaminants, such as heavy metals, radioactive isotopes, and salinity, may be prohibited or further restricted.
- 2.3 Synthetic substances from non-renewable resources are generally prohibited. ~~All of the criteria below shall be fully and positively documented in a dossier and review for an input to be allowed in organic production.~~ Synthetic nature-identical products that are not available in sufficient quantities and qualities in their natural form may be allowed., ~~provided that all other criteria are satisfied.~~
- 2.4 Inputs that are extracted, recovered, or manufactured by means that are environmentally destructive may be restricted or prohibited.

## **3. Environment**

All dossiers shall ~~consider~~ document the substance's environmental impact.

- 3.1 The environmental impact of a substance includes, but is not limited to, the following parameters: Acute toxicity, persistence, degradability, areas of concentration; biological, chemical, and physical interactions with the environment, including known synergistic effects with other inputs used in organic production.
- 3.2 Effect of substance on the agro-ecosystem, including soil health; the effects of the substance on soil organisms; soil fertility and structure; crops and livestock.

3.3 Substances with high salt indexes, measured toxicity to non-target organisms, and persistent adverse effects may be prohibited or restricted in their use.

3.4 Inputs used for crop production shall be considered for their impact on livestock and wildlife.

#### **4. Human Health**

All dossiers shall consider document the impacts of the substance on human health.

4.1 Documentation about human health includes, but is not limited to: acute and chronic toxicity; half-lives, degradants, and metabolites. Substances reported to have adverse effects may be prohibited or restricted in their use to reduce potential risks to human health.

4.2. Dossiers shall consider document any human who might be exposed by all possible pathways at every stage: workers and farmers who extract, manufacture, apply, or otherwise use the substance; neighbors who may be exposed through release into the environment; and consumers exposed by ingestion of food-borne residues.

#### **5. Quality**

All dossiers shall consider document the substance's effect on product quality.

1.1 Quality includes—but is not limited to—nutrition, flavour, taste, storage, and appearance of the raw product.

#### **6. Social, Economic, and Ethical Considerations**

All dossiers shall consider document the substance's social, economic, and cultural implications.

6.1 Social and economic implications include, but are not limited to, the impact of the substance on the communities where they are made and used, whether the use of the substance favors any economic structure and scale, the historical use of the substance in traditional foods.

6.2 Consumer perceptions of the compatibility of inputs shall be taken into account. Inputs should not meet resistance or opposition of consumers of organic products. An input might be reasonably considered by consumers to be incompatible with organic production in situations where there is scientific uncertainty about the impact of the substance on the environment or human health. Inputs should respect the general opinion of consumers about what is natural and organic— e.g. genetic engineering is neither natural nor organic.

6.3 Inputs used for animal feed and livestock production shall be evaluated for the impact on animal health, welfare, and behaviour. Medications must either alleviate or prevent animal suffering. Animal inputs that cause suffering, or have a negative influence on the natural behaviour or physical functioning of animals kept at the farm may be prohibited or restricted.

### **Processing and Handling Criteria**

#### **Introduction**

These criteria apply to the evaluation of food additives and food processing aids. Substances used for technical, sensory, and dietary purposes are subject to these criteria. The criteria may also apply to substances in contact with food. For food processing, an input, non-organic ingredient, additive, or processing aid shall be essential to maintain or improve human health, environmental safety, animal welfare, product quality, production efficiency, consumer acceptance, ecological protection, biodiversity, or landscape. Carriers and preservatives used in the preparation of additives and processing aids must also be taken into consideration. The following aspects and criteria should be used to evaluate additives and

processing aids in organic food products. All of the criteria below shall be fully and positively documented in a dossier and review for an input to be allowed in organic processing. ~~Only substances that address and fulfil all of the criteria can be sent to the membership for addition to the Appendix.~~

### **1. Necessity and Alternatives**

All dossiers shall document the necessity of the additive, processing aid, or carrier, its essential nature in organic processing and for the proposed application, and the availability of alternative methods, practices, and inputs.

Each substance shall be evaluated with respect to its specific uses and applications, and shall be ~~used~~ only added to the list only when it is demonstrated to be absolutely essential and necessary for the production of a specific food that is consistent with organic principles stated in the IBS.

1.1. ~~None of the following options are technically feasible:~~ All dossiers shall take into consideration the technical feasibility of the following alternatives:

- a. Whole foods that are organically produced according to the IBS.
- b. Foods that are organically produced and processed according to the IBS.
- c. Purified products of raw materials of non-agricultural origin, e.g. salt.
- d. Purified products of raw materials of an agricultural origin that have not been organically produced and processed according to the IBS but appear on Appendix 4.

1.2 If ~~a processed food product requires~~ an ingredient is required to ~~make~~ manufacture a processed food product to independently established minimum technical specifications recognized by consumers, and no organic substitute is available, then a non-organic ingredient can be deemed essential.

1.3 A given additive, processing aid, or carrier shall be evaluated with reference to other available ingredients or techniques that may be used as alternatives to the substance.

1.4 A substance is considered essential if a processed food product requires that substance in order to meet established standards of identity, governmental regulations, or widely accepted consumer expectations.

### **2. Source and Manufacturing Process**

All dossiers shall document the substance's sources and manufacturing processes.

2.1 Additives and processing aids from biological sources, such as fermentation cultures, enzymes, flavours, and gums must be derived from naturally occurring organisms by the use of biological, mechanical, and physical methods. Non-organic forms are allowed in organic products only if there are no organic sources.

2.2 Natural non-renewable resources—such as salt and mined minerals—must be obtained by physical and mechanical means, and are not rendered synthetic by chemical reaction. Dossiers must document and meet *Food Chemical Codex* specifications for natural contaminants, such as heavy metals, radioactive isotopes, and salinity, and may be prohibited or restricted based on unacceptable levels of contamination.

2.3 Synthetic nature-identical products that are not available in sufficient quantities and qualities in their natural form may be allowed, ~~provided all other criteria are satisfied.~~

2.4 Synthetic substances from non-renewable resources are generally prohibited as additives and processing aids.

### **3. Environment**

All dossiers shall **considerdocument** the substance's environmental impact.

### 3.1 Documentation for environmental impact:

The release of any harmful waste stream or by-products from both manufacturing and use in processing. Food additives and processing aids that result in toxic by-products or polluting waste may be restricted or prohibited. This includes persistence, degradation, and areas of concentration.

## **4. Human Health**

All dossiers shall **considerdocument** the impacts of the substance on human health.

4.1 Documentation about human health includes, but is not limited to: acute and chronic toxicity; allergenicity; half-lives, degradants, and metabolites. Substances reported to have adverse effects may be prohibited or restricted in their use to reduce potential risks to human health.

4.2. Dossiers shall **considerdocument** any human who might be exposed by all possible pathways: workers and farmers who manufacture, apply, or otherwise use the substance; neighbors who may be exposed through release into the environment; and consumers exposed by ingestion of food-borne residues.

4.3. IFOAM will consider only processing aids and additives evaluated by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) of the Codex Alimentarius.<sup>1</sup>

a. A food additive shall have an Acceptable Daily Intake (ADI) level that is either 'not specified' or 'not limited' to qualify for use without limitation.

b. A food additive with any other status shall either be prohibited or have specific use restrictions to limit dietary exposure.

c. Evaluation of food additives shall also **considertake into account** known allergenicity and immunological responses.

4.4. Information about the practical daily intake of the substance by several groups of human should be taken into account. It should be demonstrated that no group has a normal intake which is higher than the accepted ADI.

## **5. Quality (in processed products)**

5.1 All dossiers shall document the substance's effect on product overall quality, including but not limited to, nutrition, flavour, taste, storage, and appearance.

5.2 Additives and processing aids shall not detract from the nutritional quality of the product.

5.3 A substance shall not be used solely or primarily as a preservative or to recreate or improve flavors, colors, textures, or nutritive value lost during processing, except where the replacement of nutrients is required by law.

5.4 Non-organic ingredients, additive, or processing aid used to process organic products shall not compromise the authenticity or overall quality of the product or deceive the consumer of the product's value.

5.5 Each additive shall be evaluated with respect to its specific uses and applications, and shall **be used only-be added to the list only** when it is demonstrated to be absolutely essential and necessary for the production of a specific food that is consistent with organic principles stated in the IBS.

## **6. Social, Economic, and Ethical Considerations**

6.1 All dossiers shall **considerdocument** the substance's social, economic, cultural, implications.

6.3 Social, economic, implications include, but are not limited to, adverse impacts on communities caused by the manufacture and use of the substance, whether certain economic structures or scales are favoured

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<sup>1</sup> [http://apps3.fao.org/jecfa/additive\\_specs/foodad-q.jsp](http://apps3.fao.org/jecfa/additive_specs/foodad-q.jsp)

by the use of the processing aid; and the historical use of the additive or processing aid in traditional foods.

6.4 Consumer perceptions of the compatibility of additives and processing aids shall be taken into account. Any additives and processing aids shall respect consumer preferences and be accepted by organic consumers. An input might be reasonably considered by consumers to be incompatible with organic production in situations where there is scientific uncertainty about the impact of the substance on the environment or human health. Inputs should respect the general opinion of consumers about what is natural and organic– e.g. genetic engineering is neither natural nor organic.

## **EVALUATION CRITERIA FOR MATERIALS USED IN ORGANIC FIBER PROCESSING.**

In addition to the above applicable criteria, the following additional considerations apply to substances used to process and handle fiber:

Substances may be allowed in organic textile processing only if they are biodegradable, generally recognized as safe, and hypoallergenic.

Substances shall be prohibited in organic textile processing if they are carcinogenic, mutagenic, teratogenic, toxic, or produced by genetically modified organisms or ionizing radiation.

## **Appendix 1-Appendix 2**

### **Fertilizers and Soil Conditioners**

#### **Substances description, compositional requirements with conditions for use**

#### **I. Plant and Animal Origin**

- Farmyard manure, slurry and urine
- Guano
- Source separated human excrement from separated sources which are monitored for contamination (Not to be directly applied on edible parts)
- vermicastings
- blood meal, meat meal, bone, bone meal
- hoof and horn meal, feather meal, fish and fish products, wool, fur, hair, dairy products
- biodegradable processing by-products, plant or animal origin, e.g. by-products of food, feed, oilseed, brewery, distillery or textile processing.
- crop and vegetable residues, mulch, green manure, straw
- wood, bark, sawdust, wood shavings, wood ash, wood charcoal
- seaweed and seaweed products
- peat (prohibited for soil conditioning) (Excluding synthetic additives; permitted for inclusion in potting mixes.)
- plant preparations and extracts
- compost made from ingredients listed in this appendix, spent mushroom waste, humus from worms and insects, urban composts from separated sources which are monitored for contamination

#### **II. Mineral Origin**

- basic slag
- calcareous and magnesium amendments
- limestone, gypsum, marl, maerl, chalk, sugar beet lime, calcium chloride,

- magnesium rock, kieserite and Epsom salt (magnesium sulfate)
- mineral potassium (e.g. sulfate of potash, muriate of potash, kainite, sylvanite, patentkali) (Shall be obtained by physical procedures but not enriched by chemical processes)
- natural phosphates
- pulverized rock, stone meal
- clay (e.g. bentonite, perlite, vermiculite, zeolite)
- sodium chloride
- trace elements
- sulfur

### III. Microbiological

biodegradable processing by-products of microbial origin, e.g. by-products of brewery or distillery processing.

microbiological preparations based on naturally occurring organisms

### IV. Others

- biodynamic preparations

## Appendix 2 Appendix 3

### Crop Protectants and Growth Regulators

#### Substances Description, compositional requirements and conditions for use

#### I. Plant and Animal Origin

- algal preparations
- animal preparations and oils
- beeswax
- chitin nematicides (natural origin)
- coffee grounds
- corn gluten meal (weed control)
- dairy products (e.g. milk, casein)
- gelatine
- lecithin
- natural acids (e.g. vinegar)
- neem (*Azadirachta indica*)
- plant oils
- plant preparations
- plant based repellents
- propolis
- pyrethrum (*Chrysanthemum cinerariaefolium*), (The synergist Piperonyl butoxide is prohibited. Where certification bodies have previously permitted its use, it shall be prohibited after 2005)
- quassia (*Quassia amara*)
- rotenone (*Derris elliptica*, *Lonchocarpus* spp. *Thephrosia* spp.)
- ryania (*Ryania speciosa*)
- sabadilla
- tobacco tea (pure nicotine is forbidden)

#### II. Mineral Origin

- chloride of lime

- clay (e.g. bentonite, perlite, vermiculite, zeolite)
- copper salts (e.g. sulfate, hydroxide, oxychloride, octanoate) (Max 8 kg/ha per year (on a rolling average basis))
- diatomaceous earth
- light mineral oils (paraffin)
- lime sulfur (Calcium polysulfide)
- Potassium bicarbonate
- potassium permanganate
- quicklime
- silicates (e.g. sodium silicates, quartz)
- sodium bicarbonate
- sulfur

### III. Microorganisms

- fungal preparations
- bacterial preparations (e.g. *Bacillus thuringiensis*)
- release of parasites, predators and sterilized insects
- viral preparations (e.g. *granulosis virus*)

### IV. Others

- biodynamic preparations
- calcium hydroxide
- calcium lignosulfonate
- carbon dioxide
- ethyl alcohol
- homeopathic and Ayurvedic preparations
- iron phosphates (for use as molluscicide)
- seasalt and salty water
- soda
- soft soap
- sulfur dioxide

### V. Traps, Barriers, Repellents

- physical Methods (e.g. chromatic traps, mechanical traps,)
- mulches, nets
- pheromones – in traps and dispensers only

## Appendix 4

### List of Approved Additives and Processing Aids

Where the substances listed in this annex can be found in nature, natural sources are preferred. Substances of certified organic origin are preferred.

<sup>2</sup> Int'l Numbering System	Product	Additive	Pro. Aid	Limitation / Note

<sup>2</sup> Food additives may contain carriers which shall be evaluated

INS 170	calcium carbonate	X	X	
INS 181	tannin		X	only for wine
INS 184	tannic acid		X	filtration aid for wine
INS 220	sulfur dioxide	X		only for wine
INS 224	potassium metabisulphite	X		only for wine
INS 270	lactic acid	X	X	
INS 290	carbon dioxide	X	X	
<u>INS 296</u>	<u>l-malic acid</u>	<u>X</u>	<u>X</u>	
INS 300	ascorbic acid	X		
INS 306	tocopherols, mixed natural concentrates	X		
INS 322	lecithin	X	X	
INS 330	citric acid	X	X	
INS 331	sodium citrates	X		
INS 332	potassium citrates	X		
INS 333	calcium citrates	X		
INS 334	tartaric acid	X	X	only for wine
INS 335	sodium tartrate	X	X	
INS 336	potassium tartrate	X	X	
INS 341	mono calcium phosphate	X		only for "raising flour"
INS 342	ammonium phosphate	X		restricted to 0.3 gm/l in wine
INS 400	alginic acid	X		
INS 401	sodium alginate	X		
INS 402	potassium alginate	X		
INS 406	agar	X		
INS 407	carrageenan	X		
INS 410	locust bean gum	X		
INS 412	guar gum	X		
INS 413	tragacanth gum	X		
INS 414	arabic gum	X		only for milk products, fat products, confectionary, sweets, eggs.
INS 415	xanthan gum	X		only fat, fruit and vegetable products and cakes and biscuits
INS 440	pectin	X		unmodified
INS 500	sodium carbonates	X	X	
INS 501	potassium carbonates	X	X	

INS 503	ammonium carbonates	X		only for cereal products, confectionery, cakes and biscuits
INS 504	magnesium carbonates	X		
INS 508	potassium chloride	X		
INS 509	calcium chloride	X	X	
INS 511	magnesium chloride	X	X	only for soybean products
INS 513	sulfuric acid		X	pH adjustment of water during sugar processing
INS 516	calcium sulfate	X		for soybean products, confectionery and in bakers' yeast
INS 517	ammonium sulfate	X		only for wine, restricted to 0.3 mg/l
INS 524	sodium hydroxide	X	X	for sugar processing and for the surface treatment of traditional bakery products.
INS 526	calcium hydroxide	X	X	food additive for maize tortilla flour. processing aid for sugar
INS 551	silicon dioxide (amorphous)		X	for wine, fruit and vegetable processing
INS 553	talc		X	
INS 901	beeswax		X	
INS 903	carnauba wax		X	
INS 938	argon	X		
INS 941	nitrogen	X	X	
INS 948	oxygen	X	X	
	activated carbon		X	
	bentonite		X	only for fruit and vegetable products
	casein		X	only for wine
	diatomaceous earth		X	only for sweeteners and wine
	egg white albumen		X	only for wine
	ethanol		X	
	gelatin		X	only for wine, fruit and vegetable
	isinglass		X	only for wine
	kaolin		X	
	perlite		X	
	preparations of bark		X	only for sugar

**Appendix 4, Table 2**

**For use as food contact cleaners and disinfectants:**

Acetic acid

Alcohol, ethyl (ethanol)

Alcohol, isopropyl (isopropanol)

Calcium hydroxide (slaked lime)

Calcium hypochlorite

Calcium oxide (quicklime)

Chloride of lime (calcium oxychloride, calcium chloride, and calcium hydroxide)

Chlorine dioxide

Citric acid

Formic acid

Hydrogen peroxide

Lactic acid

Natural essences of plants

Oxalic acid

Ozone

Peracetic acid

Phosphoric acid (dairy equipment only)

Plant extracts

Potassium soap

Sodium carbonate

Sodium hydroxide (caustic soda)

Sodium hypochlorite (e.g. as liquid bleach)

Sodium soap

### **Flavoring Agents**

- Organic flavoring extracts (including volatile oils)
- Volatile (essential) oils produced by means of solvents such as oil, water, ethanol, carbon dioxide and mechanical and physical processes
- Natural smoke flavor
- Natural flavoring preparations are only to be approved based on the IFOAM Procedure to Evaluate Additives and Processing Aids (Appendix [51](#))

### **Preparations of Micro-organisms and Enzymes for use in food processing (see 6.2.4.)**

These may be used as ingredient or processing aids with approval based on the IFOAM Procedure to Evaluate Additives and Processing Aids for Organic Food Products.

- Organic certified micro-organisms
- Preparations of micro-organisms

- Enzymes and enzyme preparations

## SECTION D DRAFT STANDARDS

### 9.—D1. Plant Breeding ~~and Multiplication~~ Draft Standards

*Explanatory Note: This section refers to breeding of organic varieties, not simply use of organic seed*

#### General Principles

Organic plant breeding and variety development is sustainable, enhances genetic diversity and relies on natural reproductive ability.

Organic plant breeding is a holistic approach that respects natural crossing barriers and is based on fertile plants that can establish a viable relationship with the living soil. Organic varieties are obtained by an organic plant breeding program.

The objectives of organic plant breeding are to maintain and further diversify organic production.

#### Recommendations

Plant breeders should use breeding methods that are suitable for organic farming. All multiplication practices should be under certified organic management.

Breeding methods and materials should minimize depletion of natural resources.

#### Standards shall require that:

##### 9-1.D1.1

To be an organic variety, only suitable methods of breeding shall be used as listed in appendix 6D1. All multiplication practices except meristem culture shall be under certified organic management.

##### 9-2 (Now chapter 4.1.1)

#### Appendix 6D1 Draft Standards

##### List of plant breeding methods ~~and materials~~ Draft Standard

	Variation induction techniques	Selection techniques	Maintenance and multiplication
Suitable and permitted for organic plant breeding	<ul style="list-style-type: none"> <li>• combination breeding</li> <li>• crossing varieties</li> <li>• bridge crossing</li> <li>• backcrossing</li> <li>• hybrids with fertile F1</li> <li>• temperature treating</li> <li>• grafting style</li> </ul>	<ul style="list-style-type: none"> <li>• mass selection</li> <li>• pedigree selection</li> <li>• site-determined selection</li> <li>• change in surroundings</li> <li>• change in sowing time</li> <li>• ear bed method</li> <li>• test crossing</li> </ul>	<ul style="list-style-type: none"> <li>• generative propagation</li> <li>• vegetative propagation               <ul style="list-style-type: none"> <li>- partitioned tubers</li> <li>- scales, husks, partitioned bulbs, brood bulbs, bulbils</li> <li>- offset bulbs</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• cutting style</li> <li>• untreated mentor pollen</li> </ul>	<ul style="list-style-type: none"> <li>• indirect selections</li> <li>• DNA diagnostic methods</li> </ul>	<ul style="list-style-type: none"> <li>• etc.</li> <li>- layer, cut and graft shoots</li> <li>- rhizomes</li> <li>• meristem culture</li> </ul>
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## **10. Aquaculture Production Draft Standards**

### **10.1. Scope (Now in definitions section under Aquaculture and Hydroponics)**

Aquaculture includes the farming of many different species using diverse forms of production in fresh, brackish and saltwater. These standards cover carnivorous, omnivorous and herbivorous organisms of all types and at all stages of growth, grown in any form of enclosure such as earthen ponds, tanks and cages (open and closed systems). Wild, sessile organisms in open collecting areas may be certified as organic. Organisms that are moving freely in open waters, and/or that are not capable of inspection according to general procedures for organic production, are not covered by these standards. This chapter has the status of draft standards.

### **10.2 Conversion to Organic Aquaculture (Now chapter 9.1)**

### **10.3 Aquatic Ecosystems (Now chapter 9.2)**

### **10.4. Location of Production Units**

#### **General Principle**

Location of organic production units maintains the health of the aquatic environment and surrounding aquatic and terrestrial ecosystem.

#### **Recommendations**

Production units should be at appropriate distances from contamination sources and conventional aquaculture.

Aquaculture production should minimize negative environmental impact.

#### **Standards shall require that:**

##### **10.4.1.**

The distance between organic and conventional production units in open systems shall be defined in the standards.

##### **10.4.2.**

The standard setting organization shall set standards including appropriate separation distances to provide protection from pollution and contamination.

### **10.5. Location of Collecting Areas**

#### **General Principle**

Wild, sedentary/sessile organisms in open collecting areas may be certified as organic if they are derived from an unpolluted, stable and sustainable environment.

#### **Recommendations**

Collecting areas should be at appropriate distances from contamination and conventional aquaculture. Negative environmental impact from aquaculture production or harvesting shall be minimized.

**Standards shall require that:**

**10.5.1.**

The harvesting/production area shall be clearly defined and shall be capable of inspection with respect to water quality, feed, medication, input factors and other relevant sections of these Standards.

**10.5.2.**

Collecting areas shall be at appropriate distances from pollution and possible harmful influences from conventional aquaculture. These distances shall be specified by the standards.

**10.6\_\_ Health and Welfare (Now chapter 9.6)**

**10.7\_\_ Breeds and Breeding (Now chapter 9.4)**

**10.8\_\_ Nutrition (Aquaculture) (Now chapter 9.5)**

**10.9\_\_ Harvesting (Now chapter 9.3)**

**10.10\_\_ Transportation of Living Marine Animals (Now chapter 9.7)**

**10.11\_\_ Slaughter (Now chapter 9.7)**

**11. Cleaning, Disinfecting, and Sanitizing Draft Standards (Now chapter 6.6)**

**12. Processing of Textiles Draft Standards**

**12.1. Scope**

The textile standards are applicable to all kinds of natural fiber products including, but not limited to:

- yarn
- fabrics
- ready made clothes, clothing, rugs and furnishing textiles
- non woven products

These standards cover the processing of certified organic fibers and certified wild fibers.

**12.2. Raw Materials**

**General Principles**

The raw materials in a textile product labeled as organic are 100% organically produced.

The processing of raw materials into fibers is done with consideration to the environment.

The non-textile raw materials in a textile product to be labeled as organic are harmless to the environment and humans, in production, use and disposal.

The raw materials should contain the characteristics of the desired end product (e.g. natural colored fibers, natural flame retardant).

## **Recommendations**

Natural fibers should be used.

Where no preferred alternative is available, the standard setting organization may grant exceptions on a case-by-case basis. In all cases the standard setting organization should regulate the contents and/or the emission of non-desirable substances in both textiles and non-textile accessories.

### **Standards shall require that:**

#### **12.2.1.**

The use of cotton defoliants is prohibited.

Field retting of flax and other fibers is permitted. If wet retting and steam retting is used, the standard setting organization shall require appropriate wastewater treatment or use, to avoid water pollution.

Mulberry trees for silk production shall be organically cultivated.

If silk is certified, the standards shall include conditions for silkworm breeding and for reeling.

#### **Such Standards shall require that:**

- All agents including disinfectants in silkworm cultivation, egg cultivation and reeling shall fulfill the requirements for processing as laid down in these standards
- Hormones and veterinary treatments shall be regulated in line with IFOAM animal standards
- Tensides used in silk degumming (cocoon boiling) shall be readily biodegradable (OECD 301), and shall be an appropriate waste water treatment
- Tensides used in wools scouring shall be readily biodegradable (OECD 301) and there shall be an appropriate wastewater treatment.

#### **12.2.2.**

When needed to produce a long life quality, a certain function or fashion compatible with organic principles the standard setting organization may allow the use of non-certified materials on a case-by-case basis, according to the following conditions:

#### **Non-certified natural fibers**

When a certified organic natural fiber is not available in the required quantity and quality, the standard setting organization may allow non-certified natural fibers to be mixed with the certified fibers or used in certain details. The same type of fiber shall not be of certified organic and non-certified origin.

When synthetic, regenerated cellulose or recycled fibers are used, the following are excluded:

- halogen-containing fibers (chlorofiber, Teflon, etc.)
- fibers which are, or whose production is, hazardous to humans, workers or the environment

The standards shall include lists of approved synthetics and their permitted percentages. The mixing in of non-organic fibers shall be in accordance with IFOAM labeling standards (Chapter 10).

#### **12.2.3.**

The Standards shall require that products be not certified where non-textile accessories constitute the major part of the product, unless they have developed criteria for such details.

Accessories shall not contain Cadmium at levels greater than 0.1 mg/kg.

### **12.3 Processing in General (Now chapter 6.8)**

### **12.4. Environmental Criteria for Wet Processing**

#### **General Principle**

The wet processing of organic fibers into textiles prevents negative environmental impacts.

#### **Recommendations**

The standards should include conditions for the treatment of effluents and sewage regarding BOD and COD (or TOC or TOD), heavy metals and phosphorus, as well as disposal of sewage sludge and solids. The quality of the waste treatment resulting from inputs used should be considered.

#### **Standards shall require that:**

##### **12.4.1.**

Textile production units shall:

- comply with national, state and local authority environment regulations
- keep accurate, up to date records of the use of chemicals, energy, water consumption and wastewater treatment, including the disposal of sewage sludge and analysis of effluents
- develop an environmental plan for improving the environmental performance of the production unit within one year after the initial certification if not previously developed.

##### **12.4.2.**

The certification body shall only certify production units where there is at least functioning internal or external sewage water treatment (sedimentation, temperature, pH regulation).

##### **12.4.3.**

The certification body may apply these environmental criteria only to the processing of the certified textiles and not to the whole factory.

### **12.5. Processing Inputs—General**

The use of chemical inputs (dyes, auxiliaries, etc.) in textile processing is restricted. The standards do not apply to lubricating oils for machinery, paints for machines and facilities and similar, unless they are likely to contaminate the fibers.

#### **General principles**

The processing of organic fibers utilizes only organic or natural substances. Where this is not possible the processing avoids the use of synthetic chemicals and substances that may pollute the environment or pose a hazard for workers or consumers.

When assessing the environmental impact of input products, the total life cycle of the end product is considered.

#### **Recommendations**

Processing of organic textiles should avoid the use of synthetic chemicals, substances that are environmental pollutants and substances that pose a health or safety hazard for workers or consumers.

The use of bio-accumulating input products and heavy metals should be avoided.

#### **Standards shall require that:**

##### **12.5.1.**

All input products shall be declared by the operator. Relevant data assessment shall be made, including reference to material safety data sheets, etc. Preservatives shall always be declared.

The operator shall have all recipes used on file and the inspector shall check them at every inspection to verify the non-use of prohibited inputs or compliance with limitations on use of restricted products.

**12.5.2.**

The standards shall include criteria for evaluation of input products. Such criteria shall consider both the biodegradability and the toxicity of the product and metabolites derived from biodegradation of the input product. Criteria should seek to comply with international accepted criteria.

	Biodegradability 28 days (OECD 302 A)	Toxicity for aquatic organisms (LC50 or EC50 or IC50 for algae, water fleas and fish)
May be approved	< 70%	>100 mg/l
May be approved	> 70%	10-100 mg/l
Prohibited	<70%	< 100 mg/l
Prohibited		< 1 mg/l

The same rules should apply for metabolites.

*Considering the need for gaining more experience in the evaluation of input products, the standard setting organization may use existing models or develop alternative models if these ensure satisfactory environmental performance. Such alternative models shall be published and the standard setting organization shall document the results of such a model.*

In any case, products may not be used if they or their metabolites are either:

- carcinogenic (R45)\*
- mutagenic (R46)
- teratogenic (R60-63)
- toxic to mammals – LD50 < 2000 mg/kg shall not be permitted
- known to be bio-accumulative and are not biodegradable (<70% 28d OECD 302A)
- listed on the negative list in the list as below (8.5.3.)

(\*) **“R” refers to the European system as described in Reg. 92/32/EEC**

In addition the standard setting organization shall not approve the use of an input product if there are appropriate alternatives available that:

- are natural
- have less environmental impact

**12.5.3.**

The standards shall include a positive list of substances and a negative list, where substances not permitted by these Standards shall be identified.

The following chemicals may not be present in any product at a level greater than 1%:

- MES
- antimony
- AOX – Absorbable halogenated hydrocarbons, and substances that can cause their formation.
- APEO
- DEHP
- DTPA
- EDTA

- halogenated flame proof agents
- heavy metals (see also 8.6.6)
- LAS
- organo-chloride carriers
- quaternary ammonium compounds (DTDMAC etc.)

## 12.6. Special Regulations for Different Steps in Processing of textiles.

### Standards shall require that:

Apart from the general criteria these special regulations for different steps apply:

#### 12.6.1.

Spinning oils (avivage) and knitting oils (needle oil) shall be readily biodegradable or made from vegetable or animal origin.

#### 12.6.2.

Sizes shall be ultimately degradable, or be recycled to a minimum of 75%.

#### 12.6.3.

Sodium hydroxide or other alkali is permitted for mercerizing, but shall be recycled to the highest possible extent.

#### 12.6.4.

Chlorine and perborate bleaching agents shall not be permitted for bleaching, color removal or stain removal.

#### 12.6.5.

Mordents may not contain heavy metals above the limits indicated under "dyestuffs".

#### 12.6.6.

The following dyes may be used:

- dyes derived from plants (CI 75 000-75 999)
- mineral dyes not containing heavy metals

The following are excluded:

- heavy metal dyes
- complex bonded metals in excess of 1g metal/kg textile.
- The standard setting organization may grant limited exceptions for pigments containing copper if other alternatives are not available.
- dyes capable of releasing aromatic amines that are known or suspected carcinogens
- dyes that are, or are suspected of being, allergenic or carcinogenic

For other dyestuffs the general criteria should be applied for evaluation of their use.

Dyestuffs shall not contain more than:

antimony 50 ppm arsenic 50 ppm barium 100 ppm  
 lead 100 ppm cadmium 20 ppm chromium 100 ppm  
 iron 2500 ppm copper 250 ppm manganese 1000 ppm  
 nickel 200 ppm mercury 4 ppm selenium 20 ppm  
 silver 100 ppm zinc 1500 ppm tin 250 ppm  
 (ETAD Agreement)

**Note:** While heavy metals as dyestuffs are prohibited, they can appear as contaminants in other dyes. The limits above relate to such contamination.

Only printing methods based on water or natural oils are permitted.

Aromatic solvents are prohibited.

Color residues shall be recycled or disposed of in a safe way.

#### 12.6.7.

No restrictions apply to mechanical and physical treatments.

**12.6.8.**

Standards shall include conditions to regulate other methods and treatments that shall at least satisfy the general criteria for chemicals.

## **12.7. Labeling of textiles (Now chapter 7.2)**

### **Abbreviations in the textile standards**

CI	Color Index
COD	Chemical Oxygen Demand
EC50	Effect concentration (50% effect)
ETAD	Ecological and Toxicological Association of the Dyestuff Manufacturing industries
IC50	Inhibition concentration (10% inhibition)
LC50	Lethal concentration (50% mortality)
OECD	Organisation of Economic Co-operation and Development
TOC	Total Organic Carbon
TOD	Total Oxygen Demand
MES,	methyl ester sulfonate (C16/18)
AOX	Absorbable halogenated hydrocarbons, and substances that can cause their formation
APEO	Alkylphenoloxylate
DEHP	Diethylhexylphthalate
DTPA	Diethylenetriamine penta-acetate
EDTA	Ethylendiamine tetra-acetate
LAS	Linear alkyl benzene sulfonate
PCB	Polychlorinated Biphenyls
PCP	Pentachlorophenol
TCP	Tetrachlorophenol

## **13. Forest Management Draft Standards**

### **Introduction**

Forest management includes both timber extraction and harvesting of non-timber forest products. This includes products from both natural forest (i.e. primary forest and well developed secondary forest) and plantations. Production or harvesting of non-timber forest products is covered in chapter 4 and/or 4.8. This chapter has the status of draft standards.

### **13.1. Conversion to Organic Forest Management (Now chapter 3.2)**

### **13.2 Environmental Impact (Now chapter 2.5)**

### **13.3 Maintenance of Natural Forest (Now chapter 2.4.2)**

### **13.4 Plantations (Now chapter 4.7)**

### **13.5 Non-Timber Forest Products (Now chapter 2.4.3)**