

To IFOAM Members and other Stakeholders:

This document contains the first revision draft of the 2002 IFOAM Basic Standards. Only select IBS Sections containing revisions are presented in this first draft. The following main topics are addressed by these revisions:

- Resource Use
- Plant Breeding and Multiplication
- Forestry
- Animal Nutrition, Health and Welfare, Transportation and Slaughter
- Aquaculture
- Textiles
- Cleaning and Sanitizing
- Filtration (ion exchange)
- Criteria for Inputs in Organic Agriculture

There is also a change to one definition and one input added to Appendix 2. That input, Iron Phosphate, is based upon a dossier and subsequent evaluation by the Standards Committee. ***Please read the Commentary prepared by the Standards Committee. It will help you to understand the proposed changes.***

The Standards Committee solicits your comments, and especially invites you to address the questions it has posed in the Commentary section. The Comment period is 90 days, and ***comments are due by the 15th of August.*** However, we appreciate receiving your comments as soon as possible. We request that you provide comments in electronic format, either in Microsoft Word, RTF, or PDF format. Email your comments to D.Bowen@ifoam.org. Short comments in email text are also acceptable. If electronic submission is not possible, then please use the following information. The address for mailing hard copy comments is Diane Bowen, 9150 N. Santa Monica Blvd., Milwaukee, WI, 53217, USA. The fax number is (US country code 01) 253 669 7921. ***Please be sure to include the following information in your comments:***

- Name
- Organization
- State if you are an IFOAM Member
- Email, fax, and mailing address. ***Please provide these in the body of the document that contains your comments.*** It will be important to have this information so that we can acknowledge your comments and send you a response.

When providing comments please be sure to cite the specific section and section number of the draft standard to which you are referring, or the question in the Commentary to which you are responding.

The 2002 IBS will undergo two draft revision rounds, including comment periods. The Standards Committee hopes to complete this next major revision in Fall, 2004. In addition to the areas represented here, the SC is working on Biodiversity standards and the construction of an inputs list for animal husbandry. These revisions will be released in another draft document, and are subject to a different revision schedule.

On behalf of the IFOAM Standards Committee, thank you for your consideration of these proposals. We look forward to having your comments.

Diane Bowen
Organic Guarantee System Manager

Commentary on Selected Areas of This Revision Draft

In setting standards worldwide for organic production and handling, IFOAM prepared and adopted draft standards in aquaculture, textiles, and forestry. The Standards Committee is aware that these have been draft standards for quite some time, and that the membership should resolve their status. The last General Assembly also approved draft standards both for plant breeding and multiplication and for cleaning, sanitizing, and disinfecting.

Integration of Draft Standards into the IBS

The standards committee invites comments from IFOAM membership and the interested public on the acceptability to integrate the aquaculture, forestry and textile standards into the IFOAM Basic Standards. It is the opinion of the Standards Committee that much of the Draft Standards are already included in the current draft of the IFOAM Basic Standards. While the SC understands that some members question whether these areas should be included at all in the IBS, it is the consensus of the SC that these standards need to be integrated into the IBS. Stakeholders will have an opportunity to express their opinion whether or not these belong through two rounds of consultation and a final vote of the membership. The Standards Committee has put considerable effort into identifying redundancies, conflicts, inconsistencies, and questions for consultation on these areas.

Where the standards appear redundant, the Standards Committee invites interested parties to review the relevant sections of the IBS identified to see if this in fact addresses the subjects of concern. Where there was an a conflict or inconsistency with the current standard, the Standards Committee generally went with the standard rather than the draft standard, unless there was a consensus of the committee for proposing a change to the current standard in the relevant section. In many cases, the standards appeared to be too specific, too prescriptive, or too detailed to be Basic Standards. Respondents are reminded that the IFOAM Basic Standards are “Standards for Standards.” Basic Standards require a balance between being practical and objectively verifiable on the one hand, and not too specific or prescriptive on the other. In many cases where certain practices are desirable it is not necessarily appropriate that they be required.

With that in mind, the Standards Committee will pay special attention to comments to revise standards to be recommendations or to propose that recommendations be made standards. Members are reminded that broad consensus within the diverse organic movement and continuous improvement are expected to lead to recommendations being promoted to standards as the recommended practices become more widely accepted. In the interim, there is nothing to stop a given standard-setting organization from adopting a recommendation as a standard.

The SC believes that proposing these draft standards again as separate chapters may lead to them being rejected for adoption again. The remaining standards were redrafted to conform to the IFOAM Style Sheet, and the SC proposes to integrate them into the relevant sections. It is the SC’s belief that the integration of these draft standards into the existing framework reflects the will of the membership expressed at the 2000 General Assembly and repeated at the 2002 General Assembly.

Therefore, in order to make your analysis less difficult, the following table is used to cross-reference the draft standards with the proposed revised standards.

Draft Chapter Section	Title / Reference	Proposed Chapter or Section	Title / Reference
9.1	Organic Varieties	9.1	
9.2	Organic Seed and plant material	4.1.3	Referenced
10.1	Aquaculture Scope	A	Definitions
10.2	Conversion to Organic Aquaculture	3.1, 4.2, 5.2	Conversion sections
10.2.1	Conversion	3.1	Conversion
10.2.2	Parallel production	3.1	Split Production and Parallel Production
10.2.3	Conversion period	4.2.3; 5.2.3	Length of Conversion Period
10.2.4	Brought-in animals	5.3.2	Animal Sources/Origin
10.2.5	Collected animals	5.3.3	Animal Sources/Origin
10.3	Basic Conditions	2.5; 4.8; 5.10	Aquatic Ecosystems; Aquatic Animals; Aquatic Plants?
10.3.1	Needs of organisms	2.2; 5.1	Animal Management
10.3.2	Artificial light	5.1.5	Animal Management
10.3.3	Construction materials	5.1.1	Animal Management
10.3.4	Escapes	5.2.2	Aquatic Animals
10.3.5	Predation	5.1.2	Animal Management
10.3.6	Water	2.2.6	Soil and Water Conservation
10.4	Location of Production Units		Criteria
10.4.1	Distance from Conventional		Criteria
10.4.2	Separation distances		Criteria
10.5	Location of Collection Areas	2.4	Wild harvested products
10.5.1	Definition of area	2.4.1; 2.4.2; 4.8	Defined collection areas; Prohibited substances.
10.5.2	Distance from pollution	2.4.3	Distance from pollution and conventional operations
10.6	Health and Welfare	5.7	Veterinary Medicine
10.6.1	Use of veterinary medicines	5.7.2	When preventive measures fail.
10.6.2	Prohibition of prophylactic drug use		Vaccines
10.6.3	Vaccines		Vaccines
10.6.4	Hormones	5.7.5	Hormones
10.6.5	Medication records	C	Criteria
10.6.6	Irregular behaviour	5.10	Aquatic animals
10.6.7	Mutilation	5.5	Mutilations
10.7	Breeds and Breeding	5.3; 5.4	Animal Sources/Origin; Breeds and Breeding
10.7.1	Natural birth and fish eggs	5.4.1	Natural reproduction
10.7.2	Brought-in fish from organic sources	5.3.1	Organic from birth
10.7.3	Minimum time for organic	5.3.1	Organic from birth
10.7.4	Polyploidy	5.3.3	Animal Sources/Origin
10.8	Nutrition (Aquaculture)	5.6	Animal Nutrition
10.8.1	Feed sources	5.6.1	Organic feed
10.8.2	Brought-in inputs		None
10.8.3	Exceptions	5.6.1	Derogation 2
10.8.4	Nutrition sources	5.6.5	Vitamins, trace elements, supplements
10.8.5	Prohibited feed ingredients	5.6.4	Prohibited feed ingredients
10.8.6	Vitamins, trace elements, supplements	5.6.5	Vitamins, trace elements, supplements
10.8.7	Preservatives	5.6.7	Preservatives
10.9	Harvesting	4.8; 5.10.5	Aquatic Plants; Aquatic Animals
10.9.1	Handling live organisms	4.8.x; 5.10.x	Aquatic Plants; Aquatic Animals

Draft Chapter Section	Title / Reference	Proposed Chapter or Section	Title / Reference
10.9.2	Sustainable yield	2.4.1	Sustainable yield
10.10	Transportation of Living Marine Animals	5.8	Transport and Slaughter
10.10.1	Stress / injury	5.8.3	Adverse effects
10.10.2		5.8.3	Adverse effects
10.10.3	Tranquillizers	5.8.4	Tranquillizers
10.10.4	Responsibility for welfare	5.8	New text
10.11	Slaughter	5.8	Transport and Slaughter
10.11.1	Stress	5.8.3	Stress
10.11.2	Unconsciousness	5.8.7	New text
10.11.3	Humane slaughter	5.8.9	New text
11.1	Cleaning and Disinfecting	6.6.1	Contamination precautions
11.2	Direct food contact	6.6.2	
11.3	Food contact surfaces	6.6.3	Organic integrity
11.4	Boiler additives	6.6.4	
12.1	Textile Scope	A	Introduction and Definitions
12.2	Raw Materials	4; 5	
12.2.1			
12.2.2			
12.2.3			
12.3	Processing in General		
12.3.1			
12.3.2			
12.4	Environmental Criteria for Wet Processing		
12.4.1			
12.4.2			
12.4.3			
12.5	Processing Inputs—General		
12.5.1	Declaration		
12.5.2	Biodegradability / Toxicity		
12.5.3	Positive / Negative Lists		
12.6	Special Regulations		
12.6.1	Oils		Resource use
12.6.2	Recycling sizes		Resource use
12.6.3	Mercerizing		Resource use / inputs
12.6.4	Bleaching		Resource use / inputs
12.6.5	Mordants		
12.6.6	Dyes		
12.6.7	Mechanical / physical treatments	6.3	
12.6.8	Other materials	6.	Appendix 4
12.7	Labeling of Textiles		See Chapter 7
12.7.1			
12.7.2	Textiles part of the product		
13	Forestry Introduction	A	Introduction / Definitions
13.1	Conversion	3.1; 4.2; 5.2	Conversion
13.1.1	Management plan		Criteria
13.1.2	Conversion period	4.2	Conversion Period
13.1.3	Calculation of conversion period	3.1.2	Calculation of conversion period
13.1.4	Fulfilment of conversion	3.1.3; 4.2	No conversion period
13.2	Environmental impact	2	

Draft Chapter Section	Title / Reference	Proposed Chapter or Section	Title / Reference
13.2.1	Assessment	2.6.x	
13.2.2	Conservation zones	2.6.x	
13.2.3	Maintenance		
13.2.4	Protection of existing ecosystems	2.6.x	
13.3	Maintenance of Natural Forest	2.6	
13.3.1	Regeneration	2.6.1	
13.3.2	Replanting	2.6.1	
13.3.3	Invasive species	2.6.2	
13.4	Plantations	4.7	Plantations
13.4.1	Plantation management	4.7.1; 4.7.2	
13.4.2	Plantation design	4.7.3	
13.4.3	Diversity	4.7.4	
13.4.4	Species selection	4.7.5	
13.4.5	Restoration	4.7.6	
13.4.6	Inputs	2.2; 4.4	
13.4.7	Inputs	4.4	
13.4.8	Assessment		
13.5	Non-timber forest products	2.4	Redundant
13.5.1	Reference to 2.4	2.4	Redundant
13.5.2	Management plan		
13.5.3	Management plan		
13.5.4	Cultural		
13.5.5	Harvest methods	2.4	

Aquaculture Commentary

Conversion and sources appear to be covered under sections 3.1, 4.2, and 5.2. The Standards Committee is aware that conversion is a matter in need of further discussion by the membership and invites those concerned with aquaculture and forestry to participate in the discussion. The Standards Committee believes aquaculture conversion should be consistent with conversion for plants and animals. Any differences should be explained and justified. Similarly, the location question, nutrification and contamination issues need to be addressed in the standards as a whole, and should be dealt with consistently. While pollution and contamination in aquatic environments pose risks that are distinct from air pollution (e.g. pesticide drift) and soil contamination, the current draft standard does not give an adequate basis for certifiers to develop clear criteria and standards to establish what locations would be prohibited under the Basic Standards. These should be further explained and developed in a way consistent with the system approach of organic agriculture.

Recommendations

The standards committee is recommending that all aquatic animal protein in a diet should come from by-products or other waste and/or other material that would not be used for human consumption, and is not proposing a numerical portion as the standard. The proposed standard is derogated to permit emergency use of such protein. Comment is invited to justify the use of any by-products that would be used for human consumption and indeed to justify the use of products

unsuitable for human consumption, harvested specifically for the organic diet . Comment is also sought to determine if this standard is necessary, appropriate, verifiable, and practical.

Aquaculture Questions

1. What is aquaculture? Is the proposed definition complete and correct?
2. Should wild-harvested fish be excluded from the standards? On what basis?
Please review the current IBS section 2.4.1 about wild harvested product labeled as organic. Should aquatic plants and animals—including fish—be an exception to this standard? If so, then please state rationale.
3. Should a parallel distinction be made for terrestrial and aviary wild game?
4. Should hydroponic production (soilless production of contained plants) be considered as part of the aquaculture standards?
5. What is the basis to allow wild-caught fish as a ration?
6. What is the basis to allow that 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 to be used in systems using brought-in feed inputs? Why allow any, if such a source is undesirable? Isn't the real problem by-catch of large-scale drift-net fishing? If a given species were edible for humans, but unpalatable, unpopular, or unsuitable, would it be more appropriate for producing higher quality, more valued sources of human protein or is the conversion to "luxury" protein too inefficient? If this basic construct is justified, then what is the best threshold limit? Should it be 50% or something else.
7. Should unnatural feeding (e.g. force feeding) be prohibited for all animals?

Textile Commentary

Textile standards were first presented to the membership as draft standards in the 1990s. Since that time, the SC has received a large number of comments with the membership deciding in 2000 to leave them as Draft standards. .In the meantime genetically engineered cotton production has increased in many parts of the world, increasing demand for the organic alternative, but also introducing another layer of complexity to the standards.

Questions for the Membership

1. How should blends be handled?
2. Should the same fiber be allowed from organic and conventional sources in a product labelled as "organic"?
3. Should blends be based on organic and in-conversion product?
4. If non-organic cotton is permitted, what considerations should the standards give to the sources of GMO cotton?

5. Should synthetic fibers be allowed in textile products that are labelled as containing organic cotton? If so, why? Should there be any restrictions or limitations on what may be blended?
6. How should the standards address the substances used to process organic fiber?
7. Should IFOAM publish an input list for textiles, or not?
If so, what should be the criteria and process used to generate such a list?
8. Should the list be a list of allowed substances, with substances not on the list prohibited (closed, positive), as it is in processing food? What should be on that list? What should not be on that list?
9. Should IFOAM publish a negative list, where every substance not expressly forbidden is permitted?
10. Should IFOAM publish criteria to evaluate inputs used to process fiber? If so, should that be an Appendix used by certifiers to generate lists? (See also the questions in the Commentary on Criteria.)
11. Please consider the new section on cleaning, disinfecting, and sanitizing. Should this apply to fiber products as well?
12. Please also consider the new draft section on Resource Use. This was drafted in part to broadly address subjects identified with more specificity and detail in the Draft Textile Standards (e.g. wet processing). Is this section appropriate and effective for textiles?
13. Should the Social Justice standards be revised if the IBS includes fiber and textiles? In particular, should child labor be addressed?

Forestry Commentary

The SC proposes to integrate the draft forestry standards into the rest of the standards. In a number of cases, the standards were redundant, inconsistent, too specific, too vague, or were actually accreditation criteria and not standards. New sections were created in Chapter 2 and Chapter 4 to accommodate the new standards required to specifically address forestry. One of the objectives of repositioning the various forestry sectors was to differentiate between forestry as a conservation activity with respect to natural or pristine areas vs. plantation or managed forestry. The question of where managed forestry meets purely forest conservation activities and whether there is a role for organic in the latter is one for the membership.

Criteria

The draft standards require that certification bodies evaluate a number of factors, e.g. tree planting areas; density; introduced exotic species; and the minimum levels of natural forest cover. Recordkeeping is also more appropriate in accreditation criteria, not in the IBS, and should be consistent with all operations.

The social justice standards also appear to need possible revision, but much is already covered under recommendations. A number of the social constructs in the standards may be more appropriate as criteria rather than as standards. Here again, the basic standards need to resolve some of the fundamental issue of biodiversity and human interaction with the ecosystem. Members are asked to reconcile agroforestry as a human activity with nature conservation as an objective

Questions

The following questions arise from the proposed revisions and additions.

1. Does organic forestry have a role in primary forests or areas of special cultural or genetic diversity?
2. Should there be any limits on species selection (native vs. exotic) for organic plantation forestry?
3. Should issues of hydrology be included in standards?
4. Should any particular silvicultural techniques be required?
5. Should processing and handling be included?
6. Which restrictions if any should be placed on timber extraction, handling and processing?
7. How should labelling and claims be regulated with organic forest products and how far down the manufacturing chain should claims be verifiable?
8. Should there be lists of approved processing materials?
9. Should forest products (e.g. paper) be handled similarly to other fiber products?

Commentary on Materials Used for Food Processing

The final draft of the IFOAM Basic Standards presented to the August 200-2 General Assembly contained a sentence regarding materials used in food processing that was removed as ambiguous by a friendly amendment proposed by the International Organic Accreditation Service. The intent was not to change the meaning of the standards, and the Standards Committee indicated that they would develop language to clarify the intent and make it consistent with the rest of the standards.

Section 6.2 establishes that all substances classified as ingredients, additives or processing aids are in the scope of the IBS. Subsection 6.3.1 states:

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

Consistent with that, Subsection 6.3.4 states:

“Filtration techniques that chemically react or modify organic food on a molecular basis shall be restricted. Filtration equipment shall not contain asbestos, or utilize techniques or substances that may negatively affect the product.”

Section 6.5 specifies requirements for packaging materials.

With the addition of a draft standard 11, Cleaning, and disinfecting also fall within the scope of the standards.

Clarification:

The scope of the standards includes ingredients, additives, processing aids, filtration materials, packaging material, disinfectants, sanitizers, and cleaners. The Standards Committee indicated in

the meeting in Victoria, BC in August 2002 that the IFOAM *Basic Standards* 6.3.1 and 6.3.4 included ion exchange resins and adsorbent media within their scope. The removal of the specific reference was not intended to change this status. However, the Standards Committee is aware that some certification bodies and standard setting organizations are not all interpreting the IBS in this way, and that further clarification of this is needed. The Standards Committee makes it clear that other methods that do not react with the food or which do not modify organic foods by adding or removing substances on molecular basis are not included in the scope of these standards. That means all food contact surfaces, equipment, and machinery that changes the foods only by physical or mechanical impact are not in the scope of this standards.

Commentary on Appendix 1 Criteria for Materials Evaluation.

The SC addresses the following questions to respondents regarding the possible inclusion of criteria for textile processing:

1. Do stakeholders consider that there should be provision for the organic certification of organically produced textiles where a variety of chemicals are used in the processing, or should they simply state “made with organic fibre, wool, cotton, hemp etc)?
2. Should the standards include criteria for evaluation of input products and what additional criteria are required? .Should such criteria consider both the biodegradability and the toxicity of the product and metabolites derived from biodegradation of the input product? Should the criteria review heavy metals and seek to comply with internationally accepted criteria?.
3. Are the following parameters appropriate as criteria?
 - 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
4. Which special requirements if any should be placed on the operator to maintain separation between organic and non organic fibres?

First Revision Draft of the 2002 IFOAM Basic Standards for Organic Production and Processing

03-04-15

Definitions

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.~~

Chapter 2

A new section on Resource Use added to Chapter 2

DRAFT 2.7 Resource Use (DRAFT)

General Principles

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.

Standards shall require that:

2.7.1

Crop production, processing and handling systems shall recycle nutrients, carbon and other waste products generated through harvesting, processing and packaging.

2.7.2

Management practices shall conserve non-renewable resources.

Changes to Chapter 4 Regarding Plant Multiplication

4.4. Crop Production

4.1. Choice of Crops and Varieties

General Principles

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 v~~arieties known to be suited to organic cultivation should be preferred.

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

Standards shall require that:

4.1.1.

Seed and plant materials shall be propagated under organic management for 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.

4.1.12.

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

4.1.23.

~~Operators may use non-organic seed or plant material only. When organic seed and plant materials are not commercially available, conventional materials may be used provided that they have not been treated with pesticides not otherwise permitted by these standards.~~

Where untreated conventional seeds and plant materials are not commercially available chemically treated seed and plant material may be used. ~~The certification body shall establish time limits and conditions for exemptions that permit use of any chemically treated seeds and plant materials.~~

9. 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 programme.

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 minimise depletion of natural resources.

Standards shall require that:

9.1

To be an organic variety, only suitable methods of breeding shall be used as listed in appendix 6. All multiplication practices except meristem culture shall be under

certified organic management.

9.2

~~Organic seed and plant materials shall be propagated under organic management for 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.~~

Appendix 6 *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"> • combination breeding • crossing varieties • bridge crossing • backcrossing • hybrids with fertile F1 • temperature treating • grafting style • cutting style • untreated mentor pollen 	<ul style="list-style-type: none"> • mass selection • pedigree selection • site-determined selection • change in surroundings • change in sowing time • ear bed method • test crossing • indirect selections • DNA diagnostic methods 	<ul style="list-style-type: none"> • generative propagation • vegetative propagation <ul style="list-style-type: none"> - partitioned tubers - scales, husks, partitioned bulbs, brood bulbs, bulbils - offset bulbs etc. - layer, cut and graft shoots - rhizomes • meristem culture 	

13. Forest Management New Draft Standards

Forestry is proposed to be integrated into the standards rather than standing alone as it has in previous drafts. In so doing it is intended that the general provisions of the standards will apply to forestry e.g, conversion, crop production, ecosystems management, wild harvest (where applicable) and processing (where applicable)

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. <Background, not standards>~~

The following section 13.2 previously titled “Environmental Impact” is proposed to be moved to Chapter 2, Ecosystem Management” and given the new number 2.5

2.5. Forest Ecosystems

General Principle

Organic forest management recognises and realises ecosystem potential, conserves and enhances biological diversity and its associated values, including the protection of water resources, soil conservation, maintaining threatened and endangered species, and conservation of unique and fragile forest ecosystems and landscapes, and provides long-term sustainable yields.

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, optimise standing biomass and diversity, encourage regeneration and permit successional forces to proceed and maximise energy flow.

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

2.5.2

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 and landscapes.

2.5.3

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.

2.5.4.

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

2.5.5.

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.

The following section previously numbered 13.3 and titled “Maintenance of natural forest” is proposed to be moved to 2.4. “Wild harvested products and common/public land management”

2.6 Natural Forest Maintenance

General Principle

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 unregulated tour 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.

Forest 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:

2.6.1.

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

2.6.2

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

2.6.3.

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

The following section previously numbered 13.4 and titled “Plantations” is proposed to be moved to Section 4. Crop Production.

4.7 Plantations

General Principle

In organic plantation forestry, species are suited to site, no matter where they come from.

Recommendations

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

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

Hydrological cycles should be considered when planning and establishing forestry plantations

Standards shall require that:

4.7.1

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

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

4.7.4

Plantations shall be sufficiently diverse in their composition to enhance economic, ecological and social stability.

4.7.5

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

4.7.6

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

4.7.7

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

Entire section for conversion to be integrated into Section 3.1/4.2 with the following stand alone Standards in relation to Forestry conversion

3. General Requirements for Crop Production, Forestry and Animal Husbandry

13.1. 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~~

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.~~

Standards shall require that:

13.1.1.3.1.3

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

- ~~• Recognition of Ecosystem Potential~~
- ~~• Suiting species and structure to the site~~
- ~~• Sustainability~~
- ~~• Persistent and intensive management history and existing situation~~
- ~~• Landscape recovery and re-integration 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 fertilisers 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~~

~~13.1.4.3.1.4~~

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 ~~13.1.24.2~~. This shall be supported by documentary evidence.

No changes to language are proposed for 4.2

The following section previously numbered 13.5 and titled “Non Timber Forest Products” is proposed to be moved to Section 2.4 “Wild harvested products and common/public land management”

13.52.4.37. Non Timber Forest Products

General Principle

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

Recommendations

Operators are encouraged to 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:

~~13.5.12.4.3.7.1.~~

~~Operators who harvest non-timber products shall sustain the population size and genetic diversity of the ecosystem.~~

~~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.

Where timber extraction is the priority in forest management, operators shall devise a the management plan shall that specifies y which the products are to be collected and and consider the long and short-term impact on non-timber forest products.

13.5.34.2.4.3.7.2

Operators shall harvest nHarvesting of non-timber forest products shall in a way that respects the cultural and religious significance of the forest, all of and its human and non-human inhabitants, organisms and products to local and indigenous communities.

13.5.45.2.4.37.3

Non-timber forest products are must shall be harvested by ing methods shall be appropriate methods for to the species or and species grouecosystem. Agroforestry is permitted.

New Section. Handling and Processing

6.6 Forest Products.

General Principles

Organic Forestry products are handled and processed in ways that enhance products without negative impact on the environmentn or workers

Recommendations

Organic forest products should not damage land and waters in their extraction.

Transport should minismise impact on the environment and incorporate energy efficient methods

Processing should not lead to negative environm~~ent~~al impacts including generation of waste products

Where possible waste products should be re-cycled

Standards shall require that:

6.76.1

Timber products from organic forestry are processed similarly to organic food and fiber products, with the exceptions and additional requirements contained in this section.

A harvest plan is developed which ameliorates against negative environemtal impact including;

Soil
Rivers and streams
Local communities
Remaining plant, animal and genetic diversity

6.76.2

Organic forest products are processed in a way that does not lead to contaminate ion of soil, water or products.

6.6.3

Timber products from organic forestry may not be processed using the following methods (list if any)

Aquaculture: *New Draft Standards*

Former Chapter 10. Now integrated into Chapters 2, 4 and 5.

Definitions

Aquaculture: ~~The~~ The managed production of aquatic plants and/or animals in an enclosed outdoor environment. ~~For the purposes of these standards, aquaculture does not include~~ ~~€~~The direct products of either hydroponics or wild harvest from open waters are excluded from this definition.

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

2.4.1.

Only ~~W~~wild harvested products shall be ~~shall o~~ Only be certified organic if they are derived from a stable and sustainable growing environment ~~can be labelled organic~~. The people who . .

2.4.2

Operators shall not harvest, gather, or wildcraft **plant, fungal or animal species** shall not take any products ~~organisms~~ at a rate that exceeds the sustainable yield of the ecosystem, or **which** threatens the existence of ~~plant, fungal or animal species, including those species~~ not directly exploited.

[Renumber the rest of 2.4 consistently.]

2.5 Aquatic Ecosystems

General Principles

Organic 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 methods for disease control
- Avoids the use of synthetic fertilisers, pesticides, and chemotherapeutic agents
- Provides for biodiversity through polyculture, maintenance of uncultivated buffers with wild areas.

Ideally, the production area has the entire food chain and no outside inputs are introduced.

Standards shall require that:

2.5.1

Organic aquatic ecosystems shall meet the **relevant** requirements of terrestrial ecosystems, **and additional considerations contained in this section.**

2.5.2

Operators shall take adequate measures to prevent escapes of introduced, domesticated or cultivated species.

4.8. Aquatic Plants

General Principles

Organic aquatic plants are grown and harvested sustainably without adverse impacts on natural areas.

Recommendations

The act of collection should not negatively affect natural areas.

Standards shall require that:

4.8.1

Organic aquatic plants shall meet the **relevant** crop production standards, **and** additional considerations contained in this section.

4.8.2

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

4.8.3

Hydroponic production is not organic.

4.8.4

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

5.3

Recommendation

Wild, sedentary aquatic organisms should be collected from open areas where the water is free-flowing and not contaminated by substances prohibited in these standards.

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

5.3.3

Artificially polyploid organisms are prohibited.

5.6. Animal Nutrition

...

Recommendations

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.

Operators should good quality diet balanced according to the nutritional needs of the organism.

Operators should feed animals according to their natural feeding behaviour.

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

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, and 5% for aquatic animals, 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*

5.6.4.

The following substances are prohibited in the diet :

- slaughter products from the same species/genus/family as the one being fed (cannibalism).

5.7 Veterinary Medicine Health and Welfare

~~The cause of outbreaks of disease or infection should be identified, and management practices implemented to prevent the causative events and future outbreaks. When treatment is necessary the use of natural methods and medicines should be the first choice.~~

5.7.4

~~Prophylactic use of veterinary drugs is prohibited, except for Vaccinations are allowed with under the following limitations 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; or~~
- ~~—when a vaccination is legally required, and~~
- ~~—the vaccine is not genetically engineered.~~

5.7.5.

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

5.8 Transport and Slaughter

A person specifically responsible for the well-being of the animals should be present during transport.

Add to 5.8

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

5.8.3.

Organic animals be provided with conditions during transportation and slaughter that reduce and minimise the adverse effects of: **5.8.3.**

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

- air and water quality
- time spent in transport
- stocking density
- toxic substances
- escape
- the specific needs of each animal

5.8.8

Equipment used to stun animals shall be sufficient to remove sensate ability and/or kill the organism and shall be maintained and monitored.

5.8.9

Animal slaughter shall:

- Provide animals a recovery period after transport.
- Provide animals an interval between unconsciousness and bleeding.
- Use proper equipment to protect the quality of the flesh.
- Prevent contact between living and slaughtered organisms.
- Respect local cultural customs.

5.10. Additional requirements for Aquatic Animals

General Principles

Organic aquatic animals shall meet the relevant animal production standards, ~~with the exceptions~~ and additional considerations contained in this section.

Recommendations

Operators should mitigate negative environmental impacts through the following practices:

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

Production units should be at appropriate distances from contamination sources and conventional aquaculture.

Standards shall require that:

5.10.1

Aquatic animals shall be born or hatched by natural methods.

5.10.2

Operators shall analyze and adjust the water quality as necessary in case of irregular behaviour by the organisms.

5.10.3

Operators who bring in feed that contain aquatic animal protein in a diet shall use only by-products not suitable for human consumption.

Operators may use a limited amount of aquatic animal protein fit for human consumption on an emergency basis. Such protein shall not exceed 50% of the fish diet.

5.10.4

The operator shall handle live organisms in a way that ensures that harvest respects the natural behavior of the organism.

Cleaning and Disinfecting: *New Draft Standards*

Formerly Chapter 11 now moved to Chapter 6

6.6 11. Cleaning, Disinfecting, and Sanitizing — for farmers, food processing and handling

Draft Standards

General Principle

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

Recommendations

Operators should develop a management system for cleaning and disinfecting.

Operators Processors 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 and substances that appear on annex V (Should be developed)-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 (annex V)-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.

Graywater recycling for uses other than handling or processing food is preferred over either recirculation or disposal.

Standards shall require that:

6.61.1.

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.

6.61.2.

Only water and substances that appear in Appendix 4 ~~(4?)~~ may be used as cleaners or disinfectants in direct contact with organic food.

6.61.3.

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

~~{Note: Appendix 4 is still under development and currently contains no sanitizers. A list will be developed.}~~

6.61.4.

Operators shall use filters, traps, or other means to prevent steam carrying prevent the residues of boiler water additives boiler residues to get in direct contact with 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.~~

116.6.5

~~Criteria for the acceptance of new substances to be included in Annex V Appendix 4 have to shall be developed following the general principles for new input evaluated by the criteria for processing and handling substances that appear in Appendix 1.~~

Add to List: Appendix 4

(separate table?)

For use as food contact cleaners and disinfectants:

Acetic acid

Alcohol, ethyl (ethanol) Potassium and sodium soap

Peroxide

Alcohol, isopropyl (isopropanol)

Calcium hydroxide (lime) Water and steam

Calcium hypochlorite

Calcium oxide (quicklime)

Chloride of lime

Chlorine dioxide

Citric acid

Quicklime

Sodium hypochlorite (e.g. as liquid bleach)

Caustic soda

Caustic potash

Formic acid

Hydrogen peroxide

Lactic acid

Natural essences of plants

Citric, peracetic acid, formic, lactic, Oxalic and acetic acid

Alcohol

Nitric acid (dairy equipment)

Peracetic acid

Phosphoric acid (dairy equipment only)

Plant extracts

Formaldehyde

Cleaning and disinfecting products for teats and milking facilities ??????

Potassium soap

Sodium carbonate

Sodium hydroxide (caustic soda)

Sodium hypochlorite (e.g. as liquid bleach)

Sodium soap

Steam

Water

New section on substances used in Food Processing (see Commentary)

New subsection:

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 V and any substance that has a functional effect on food, such as ion exchange resins, must appear on Appendix IV.

Processing of Textiles: New Draft Standards

Formerly Chapter 12, now moved to Chapters 6 and 7

6.7. Fiber Processing

General Principle

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

Recommendation

Organic fiber processing should use appropriate techniques that are least damaging to the environment.

Organic fiber products should be untreated with any chemical substance whenever possible.

Any substance used in organic fiber processing should be used in minimal amounts.

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.

Standards shall require that:

6.7.1

Organic fiber and textile products are handled ~~the same as organic food~~ in ways which prevent co-mingling or contamination using spatial or temporal separation unless otherwise specified in these standards.

6.7.2. Tensides used shall be readily biodegradable (OECD 301) and there shall be an appropriate wastewater treatment.

6.7.3 When non organic natural or synthetic fibres have to be used they should not contain toxicologically relevant substances (e.g. chlorofiber, Teflon, etc.) or fibers which are, or whose production is, hazardous to humans, workers or the environment

6.7.32.

The operator shall use only substances that appear in Appendix 4 Table D when processing organic fiber products.

6.7.43.

The operator may use any substance to process fiber products labelled as “made with organic [specified fibers],” provided that:

- 1) The operator has the data required in Appendix 1 on file and documents that the substances used meets the criteria contained in that Appendix;
- 2) The application of the substances protects the environment and the final product from pollution by effluent within the parameters established in the standards; (note these remain to be defined)
- 3) ~~The final product does not contain specific prohibited substances in excess of established contamination thresholds.~~

6.7.5

The Textile production unit record, monitor and account for :

- the use of chemicals, energy and water
- disposal of sludge and analysis of effluents

7.3. Fiber, Textiles and Apparel

General principle

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

Recommendations

Operators should include on the label any allergenic substances used in manufacture.

Standards shall require that:

7.3.1

Textiles are labelled consistently ~~with food products~~, with the following exceptions.

7.3.2

Fiber products labelled as ‘organic’ shall contain at least 95% organic raw materials, by weight, and shall not contain any non-organic agricultural products or processed using substances that are not on Appendix 4 Table D.

7.3.3

Fiber products labelled as ‘made with organic [specified fiber]’ shall contain at least 70% organic raw materials by weight, and shall meet the standards specified for such products in Section 6.6.

- calculation shall exclude the weight of buttons, zippers, and other non-textile accessories;
- labels shall declare materials in non-textile accessories.

7.3.4.

On products where all textiles comprise less than 50% of the weight of the final product, the textiles may be labelled as ‘made with organic [specified fibers]’ only if the label specifies that the organic claim refers only to the textiles.

Because of virtually complete re-writing, the following section is not presented with changes tracked.

SECTION C APPENDICES

Appendix 1

Criteria for Materials Evaluation.

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 behaviour 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 are published by IFOAM.

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 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.
- 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 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 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 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 the substance's effect on product quality.

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

6. Social, Economic, and Ethical Considerations

All dossiers shall consider 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 behavior. 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, yield, 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.

1. Necessity and Alternatives

All dossiers shall document the necessity of the additive, processing aid, or carrier, its essential nature in organic processing, 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 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. Where a processor or handler has a choice of ingredients and processing aids, these choices must be evaluated in the following order:
 - 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 to make a 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. Inputs with measured levels of natural contaminants, such as heavy metals, radioactive isotopes, and salinity, may be prohibited or restricted.
- 2.3 Synthetic nature-identical products that are not available in sufficient quantities and qualities in their natural form may be allowed.
- 2.4 Synthetic substances from non-renewable resources are generally prohibited as additives and processing aids.

3. Environment

All dossiers shall consider 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 consider 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 consider 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.¹
 - 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 consider known allergenicity and immunological responses.
- 4.4. Information about the practical daily intake of the substance by several groups of humans 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 overall product quality, including but not limited to, nutrition, flavor, 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, additives, or processing aids 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 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 consider the substance's social, economic, cultural, implications.
- 6.2 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 favored by the use of the processing aid; and the historical use of the additive or processing aid in traditional foods.

¹ http://apps3.fao.org/jecfa/additive_specs/foodad-q.jsp

6.3 Consumer perceptions of the compatibility of additives and processing aids shall be taken into account. Additives and processing aids 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.

Appendix 2

Crop Protectants and Growth Regulators

Substances Description, compositional requirements

Conditions for use

IV. Others

- biodynamic preparations
- calcium hydroxide
- carbon dioxide
- ethyl alcohol
- homeopathic and Ayurvedic preparations
- iron phosphate
- seasalt and salty water
- soda
- soft soap
- sulphur dioxide

For use as a molluscicide