

The IFOAM **NORMS** for Organic Production and Processing

Version 2014

Includes:

- Common Objectives and Requirements of Organic Standards (COROS) – IFOAM Standards Requirements
- The IFOAM Standard for Organic Production and Processing
- IFOAM Accreditation Requirements for Bodies Certifying Organic Production and Processing



INTERNATIONAL FEDERATION OF
ORGANIC AGRICULTURE MOVEMENTS

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I. INTRODUCTION TO THE IFOAM NORMS

1. THE IFOAM NORMS AND ORGANIC GUARANTEE SYSTEM

The IFOAM Norms

The IFOAM Norms are composed of three documents:

- The Common Objectives and Requirements of Organic Standards (COROS) - IFOAM Standards Requirements,
- The IFOAM Standard for Organic Production and Processing, and
- The IFOAM Accreditation Requirements for Bodies Certifying Organic Production and Processing.

This publication provides these IFOAM Norms and related information in an electronic book form. Electronic copies are available for free download on IFOAM website, www.ifoam.org. The Norms are the basis for IFOAM's Organic Guarantee System, which is described below. The COROS fulfills additional purposes, including serving as a template for equivalence assessments carried out by governments, and as a guideline for private and governmental agencies that set their own regional or other specialized standards for direct use in certification. Additional information about each of the three norms is presented in their introductory sections.

IFOAM's Organic Guarantee System

Supporting the worldwide adoption of environmentally, socially, and economically sound systems based on the principles of organic agriculture.

The IFOAM Organic Guarantee System Facilitates Trade, Upholds Organic Integrity and Assures Consumers Internationally

In the rapidly growing environment of marketing and trade of products claiming to be "organic," IFOAM supports a market guarantee of the integrity of organic claims. The Organic Guarantee System (OGS) unites the organic world of organic assurance by providing tools for the recognition of standards and verification systems and for market identity. It fosters equivalence of participating certifiers and thereby facilitates the trade of organic products between operators certified by different participating certification bodies. It also provides a unique tool to facilitate equivalence recognitions amongst government organic regulations and the equivalence recognition of private systems by governments. Hence the IFOAM organic guarantee system not only upholds organic integrity but helps to remove technical barriers to organic trade and to facilitate market access for all, especially small producers.

The IFOAM Family of Standards is the centerpiece of the IFOAM OGS. It contains all standards and technical regulations that have been approved by IFOAM as equivalent to the Common Objectives and Requirements of Organic Standards (COROS) – IFOAM Standards Requirements. The Family of Standards is hence the tool that draws the line between organic and non-organic standards. All standards and government regulations approved in the IFOAM Family of Standards are recognized by IFOAM as true organic standards, and hence can be used for certification connected to other OGS components.

The IFOAM Organic Guarantee System enables organic certifiers to become “IFOAM Accredited” or “IFOAM Global Organic System Accredited”. These accreditation are the only organic international accreditations existing to date, and hence represent the ultimate mark of competence for organic certifiers. Operators certified by such accredited certifiers in the scope of their accredited programs can label their products with the corresponding IFOAM Seal (“IFOAM Accredited” or “IFOAM System Accredited”), next to the logo of their accredited certifier.

The OGS Offers Conformity Assessment to Accepted International Norms

IFOAM Accreditation and the IFOAM Global Organic System Accreditation (IGOSA) guarantee to buyers, government authorities, other control agencies, and the public, that a product has been produced within a system that conforms to internationally recognized standards for organic production, processing, and certification.

In both accreditation programs, compliance of certifiers with the IFOAM Accreditation Requirements is required. In the IFOAM Accreditation, the certifier must use a certification standard compliant with the IFOAM Standard. In the IGOSA, the certifier must use a certification standard approved in the IFOAM Family of Standards, hence equivalent to the COROS.

Aside from accreditation of certifiers, the IFOAM Organic Guarantee System also provides additional services based on the use of, or compliance with, the IFOAM norms. Certifiers, associations or Participatory Guarantee System (PGS) initiatives wishing to use the IFOAM Standard directly for certification in their programs can do so after signing a contract with IFOAM. Standard owners wishing to have their standard internationally recognized can apply for inclusion of their standard in the IFOAM Family of Standards. If approved, they will feature in the IFOAM Family Frame, can claim equivalence to the COROS and will be able to use the IFOAM Family of Standards logo.

The Common Objectives and Requirements of Organic Standards (COROS) and the IFOAM Standard are rooted in IFOAM’s Principles of Organic Agriculture. The Principles of Organic Agriculture are the basis for all of IFOAM’s work, particularly as it relates to organic standards. For this reason, the Principles are presented in this Introduction to the IFOAM Norms. The IFOAM Accreditation Requirements are based on the International ISO norms for the operation of certifying bodies, and they are additionally developed to reflect the particular circumstances of certifying organic production and processing.

The IFOAM Norms are generally respected as the international guideline from which national standards and control systems may be built; and they have been used as a reference by standard-setters and legislators in national and international arenas. IFOAM Basic Standards (a previous component of the IFOAM Norms, now replaced by the IFOAM Standard) have had a strong influence on the development of Codex Alimentarius Guidelines for the Production, Labeling, and Marketing of Organically Produced Foods. The development of the IFOAM Standard conforms to ISO/IEC Guide 59 Code of good practice for standardization, to the ISEAL Code of Good

Practice for Setting Social and Environmental Standards, and the WTO Technical Barriers to Trade (TBT) Agreement Annex 3 Code of good practice for the preparation, adoption and application of standards. The COROS has been developed through a joint effort of IFOAM, FAO (the Food and Agriculture Organization of the United Nations) and UNCTAD (the UN Conference on Trade and Development). The document has been approved by the three organizations in 2011.

The development and approval processes of the three documents composing the IFOAM Norms is now regulated by IFOAM's Policy 20 on the Revision of the IFOAM Norms. Any changes in any of the three documents are decided by the IFOAM membership through vote.

The Implementation of the OGS is a Collaboration Among IFOAM and the IOAS

IFOAM Accreditation and the IFOAM Global Organic System Accreditation are administered by an independent organization, the IOAS. The IOAS evaluates the compliance of certification systems with the requirements of those accreditation programs through a system of document review and site evaluation, and execution of accreditation decisions by a committee with global representation and expertise.

The OGS is Governed by Policies and Procedures

The policies and procedures provide the framework for revisions and interpretations of the Norms. They prescribe under which circumstances revisions of the various documents constituting the IFOAM norms can be initiated and how decisions on changes are taken. The policies and procedures also regulate the responsibilities of the committees that are engaged in the continuous development of the Norms. Finally, OGS policies and procedures regulate the use of OGS services, including the process for approval of standards in the IFOAM Family of Standards, the use of the IFOAM seals, and the use of the IFOAM Standard. The policies related to the OGS can be found in the OGS section of the IFOAM website at www.ifoam.org.

2. THE PRINCIPLES OF ORGANIC AGRICULTURE

Preamble

These Principles are the roots from which organic agriculture grows and develops. They express the contribution that organic agriculture can make to the world, and a vision to improve all agriculture in a global context.

Agriculture is one of humankind's most basic activities because all people need to nourish themselves daily. History, culture and community values are embedded in agriculture. The Principles apply to agriculture in the broadest sense, including the way people tend soils, water, plants and animals in order to produce, prepare and distribute food and other goods. They concern the way people interact with living landscapes, relate to one another and shape the legacy of future generations.

The Principles of Organic Agriculture serve to inspire the organic movement in its full diversity. They guide IFOAM's development of positions, programs and standards. Furthermore, they are presented with a vision of their world-wide adoption.

Organic agriculture is based on:

The principle of health
The principle of ecology
The principle of fairness
The principle of care

Each principle is articulated through a statement followed by an explanation. The principles are to be used as a whole. They are composed as ethical principles to inspire action.

Principle of health

Organic Agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible.

This principle points out that the health of individuals and communities cannot be separated from the health of ecosystems - healthy soils produce healthy crops that foster the health of animals and people.

Health is the wholeness and integrity of living systems. It is not simply the absence of illness, but the maintenance of physical, mental, social and ecological well-being. Immunity, resilience and regeneration are key characteristics of health.

The role of organic agriculture, whether in farming, processing, distribution, or consumption, is to sustain and enhance the health of ecosystems and organisms from the smallest in the soil to human beings. In particular, organic agriculture is

intended to produce high quality, nutritious food that contributes to preventive health care and well-being. In view of this it should avoid the use of fertilizers, pesticides, animal drugs and food additives that may have adverse health effects.

Principle of ecology

Organic Agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them.

This principle roots organic agriculture within living ecological systems. It states that production is to be based on ecological processes, and recycling. Nourishment and well-being are achieved through the ecology of the specific production environment. For example, in the case of crops this is the living soil; for animals it is the farm ecosystem; for fish and marine organisms, the aquatic environment.

Organic farming, pastoral and wild harvest systems should fit the cycles and ecological balances in nature. These cycles are universal but their operation is site-specific. Organic management must be adapted to local conditions, ecology, culture and scale. Inputs should be reduced by reuse, recycling and efficient management of materials and energy in order to maintain and improve environmental quality and conserve resources.

Organic agriculture should attain ecological balance through the design of farming systems, establishment of habitats and maintenance of genetic and agricultural diversity. Those who produce, process, trade, or consume organic products should protect and benefit the common environment including landscapes, climate, habitats, biodiversity, air and water.

Principle of fairness

Organic Agriculture should build on relationships that ensure fairness with regard to the common environment and life opportunities.

Fairness is characterized by equity, respect, justice and stewardship of the shared world, both among people and in their relations to other living beings.

This principle emphasizes that those involved in organic agriculture should conduct human relationships in a manner that ensures fairness at all levels and to all parties - farmers, workers, processors, distributors, traders and consumers. Organic agriculture should provide everyone involved with a good quality of life, and contribute to food sovereignty and reduction of poverty. It aims to produce a sufficient supply of good quality food and other products.

This principle insists that animals should be provided with the conditions and opportunities of life that accord with their physiology, natural behavior and well-

being.

Natural and environmental resources that are used for production and consumption should be managed in a way that is socially and ecologically just and should be held in trust for future generations. Fairness requires systems of production, distribution and trade that are open and equitable and account for real environmental and social costs.

Principle of care

Organic Agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment.

Organic agriculture is a living and dynamic system that responds to internal and external demands and conditions. Practitioners of organic agriculture can enhance efficiency and increase productivity, but this should not be at the risk of jeopardizing health and well-being. Consequently, new technologies need to be assessed and existing methods reviewed. Given the incomplete understanding of ecosystems and agriculture, care must be taken.

This principle states that precaution and responsibility are the key concerns in management, development and technology choices in organic agriculture. Science is necessary to ensure that organic agriculture is healthy, safe and ecologically sound. However, scientific knowledge alone is not sufficient. Practical experience, accumulated wisdom and traditional and indigenous knowledge offer valid solutions, tested by time. Organic agriculture should prevent significant risks by adopting appropriate technologies and rejecting unpredictable ones, such as genetic engineering. Decisions should reflect the values and needs of all who might be affected, through transparent and participatory processes.

II. Common Objectives and Requirements of Organic Standards (COROS) – IFOAM Standards Requirements

Version 2011

*Ratified by the IFOAM General Assembly
through electronic vote in July 2011*

Introduction

Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved. The system is often further described by standards, which govern labeling and claims for organic products. A large number of standards have proliferated all over the world as a result of private and public initiatives to provide labeling and consumer assurance in both private and government contexts. There is now a need to support trade of organic products by finding ways and means of assessing the equivalence of organic standards.

Development

The Common Objectives and Requirements of Organic Standards (COROS) was developed as a joint venture of the IFOAM Organic Guarantee System (OGS) and the GOMA (Global Organic Market Access) project undertaken by FAO, IFOAM and UNCTAD. The concept of COROS was first developed by the International Task Force on Harmonization and Equivalence (ITF) through the Annex of the Guide for assessing Equivalence of Organic Standards and Technical regulations (EquiTool) in 2008 (www.goma-organic.org). The document was compiled on the basis of the IFOAM Basic Standards and Codex Alimentarius as the two pre-existing international reference organic standards, and through the review of a significant number of existing standards and regulations across the world.

Scope and content

The COROS articulates the broad objectives which the production rules in organic standards and regulations commonly seek to achieve, and presents the common detailed requirements that relate to these various objectives. The COROS contains only requirements that were commonly found in organic standards and regulations globally. The COROS includes production requirements related to general organic management, crop and animal production, beekeeping, processing and handling and social justice. Organic aquaculture, textile processing and cosmetics are not included in the scope of the COROS, primarily due to the fact that these are emerging scopes that are currently not yet covered by the majority of organic standards and regulations.

Purpose

The COROS is intended for use in international equivalence assessments of organic standards and regulations. As an annex to the Equitool developed by the International Task Force on Harmonization and Equivalence (ITF), it is proposed as a template to guide governments and other stakeholders in conducting objective-based equivalence assessments of two or more organic standards or regulations. In the context of the IFOAM Organic Guarantee System, it serves as the IFOAM Standards Requirements: the international reference against which all organic standards and regulations will be assessed against, for the purpose of inclusion in the IFOAM Family of Standards. Equivalence assessment of all standards against the COROS will be conducted by IFOAM following its policies and procedures available on www.ifoam.org, and the results will be made available to the public within the frame of the IFOAM Family of Standards. Governments are encouraged to use the Family of Standards as a basis for granting equivalence to other organic standards and regulations for the purpose of regulating imports. Hence the IFOAM Family of Standards is intended to become a voluntary tool for international multi-lateral equivalence agreements between governments or between private standard owners. Governments may also use the equivalence assessments done by IFOAM against the COROS as a basis to facilitate their own unilateral or bilateral decisions on equivalence.

Structure and functioning of the COROS

The highest degree of functionality of the COROS is provided in the form of an electronic spreadsheet containing three sheets:

- The first sheet is proposed as a data entry sheet: requirements of the COROS are laid out following the most classical structure of organic standards. For each requirement, the person or group performing the assessment can enter the corresponding requirement in the assessed standard, and a judgment on whether the requirement is equivalent, additional (positive variation) or absent/incomplete (negative variation). The evaluation matrix also contains space for the owner of the assessed standard to provide justification for the observed variations to the COROS if appropriate, and for the assessors to place comments and to agree (or not) with the justification provided.
- All this data is automatically fed into the second sheet that reorganizes this analysis according to the broader objectives that the requirements help to achieve. Hence the second sheet enables the assessor to look at the equivalence assessment results from an Objective-based angle and to judge how well the assessed standard is addressing the various Common Objectives of Organic Standards and Regulations.
- Finally, a third sheet is provided to help the assessors summarize the results of the equivalence assessment for the purpose of making the final decision and communicating with other parties or the public. The summary should provide a quick view of the strength and weaknesses of the assessed

standard as compared to the COROS.

Approval and maintenance of the COROS

The draft COROS underwent one round of public consultation in the late 2010, and another early in 2011. All comments were reviewed and taken into account prior to approval by the GOMA Steering Committee on one hand and by the IFOAM General Assembly on the other.

The first edition of the COROS will be published by IFOAM, FAO and UNCTAD under a revised edition of the Equitool (www.goma-organic.org) and by IFOAM under the 2011 edition of the IFOAM Norms (www.ifoam.org/ogs). The document is available for public use, free of charge. Although IFOAM will use the tool in the version in which it has been approved, governments and other stakeholders may use and adapt the tool to their own needs.

The COROS reflects the status of organic standards and regulations at the time it was developed (2010-2011). Organic standards and regulations are however not static, and issues that were not commonly included in standards in 2010-11 might become common requirements after a few years. The COROS will therefore be maintained and updated as necessary by IFOAM within the frame of its Organic Guarantee System. Revision of the COROS will be done following the IFOAM Policies and Procedures related to the revision of the IFOAM Norms (see www.ifoam.org/ogs).

Main objectives and detailed requirements of the COROS

Main objectives and detailed requirements in the COROS:
1. Organic Management is long-term, ecological and systems-based.
<i>1.1 All Farming Management Systems:</i>
Organic management does not rely upon switching back and forth between organic and conventional management.
<i>1.2 Crop Production Management Systems:</i>
Organic crop production systems conserve or improve the soil's structure, organic matter, fertility and biodiversity.
Organic crop production management includes a diverse planting scheme as an integral part of the system of the holding. For perennial crops, this includes plant-based ground cover. For annual crops, this includes diverse crop rotation practices, cover crops (green manures), intercropping or other diverse plant production with comparable achievements.
Organic crop production management employs interrelated positive processes and mechanisms for the management of pests, diseases, and weeds. These include but are not limited to site and crop adapted fertility management and soil cultivation, choice of appropriate varieties, enhancement of functional biodiversity, and in case additional measures are required, restricted use of crop protectants and growth regulators.
Organic crop production systems produce terrestrial crops in soil-based systems.
<i>1.3 Livestock systems</i>
Organic operations producing livestock integrate crop and animal production at the farm or regional scale.

1.4 Wild Collection Management Systems:
Organic collection management ensures that collection does not exceed sustainable yield of the collected species or otherwise threaten the local ecosystem.
Organic operators collect products only from within the boundaries of the clearly defined wild collection area.
1.5 Transition/Conversion Requirements for Systems of Organic Production:
Organic guarantee systems clearly identify when organic practices begin and how long they are applied before the operation and products can be considered organic. This may include specific conditions for simultaneous transition/conversion of land and animals.
Organic guarantee systems require a period of time that is suitable for allowing the establishment of healthy soils and sustainable ecosystems before deeming a crop organic. <ul style="list-style-type: none"> • Common minimum time periods: <ol style="list-style-type: none"> a) organic management for least 12 months for annuals and 18 months for perennials. b) the absence of any inputs that do not accord with organic principles and applicable standards for at least 36 months.
Organic guarantee systems require that animal production systems raise animals organically from birth or hatching, or when this is not possible from early ages subject to a minimum transition/conversion requirement. <ul style="list-style-type: none"> • Common minimum transition/conversion requirements: dairy – 90 days; eggs and poultry meat – 42 days; other meat – 12 months; bee colonies – time needed for wax replacement with minimum twelve months.
Organic beekeeping introduces bees coming from organic production units when available.
2. Soil fertility is long-term and biologically-based.
2.1 Soil Fertility Management:
Organic crop production systems enhance soil primarily by incorporating manures and other biodegradable inputs, and/ or by nitrogen fixation from plants.
Organic soil fertility management uses only naturally occurring mineral fertilizers and only as a supplement to biologically-based fertility methods.
Organic crop production does not use sodium (chilean) nitrate.
Organic guarantee systems restrict land preparation by burning vegetation.
3. Synthetic inputs at all stages of the organic product chain and exposure of people and the environment to persistent, potentially harmful chemicals are avoided/minimized.
3.1 Crop Production:
Organic soil fertility management uses only crop fertility substances that are on (a) list(s) referenced by the standard. Such lists are based on lists and/or criteria in international organic standards.
Organic soil fertility management does not use synthetic fertilizers or fertilizers made soluble by chemical methods, e.g. superphosphates.
Organic crop production uses only active substances for pest/disease/growth management that are on (a) list(s) referenced by the standard. Such lists are based on lists and/or criteria in international organic standards.
Organic crop production ensures that co-formulants (e.g. inerts and synergists) in formulated farm input products are not carcinogens, mutagens, teratogens or neurotoxins.
Organic soil fertility management does not use human excrement on crops for human consumption without measures to protect humans from pathogens.
3.2 Animal Production:
Organic animal management does not use any of the following synthetic feed rations: amino acids (including isolates), nitrogen compounds (e.g. urea), growth promoters, stimulants, appetizers, preservatives, coloring agents, or any solvent-extracted substance.
Organic animal management provides animals with vitamins, trace elements and supplements only from natural sources unless they are not available in sufficient quantity and/ or quality.
Organic animal management does not practice any prophylactic use of synthetic allopathic veterinary drugs.

Organic animal management strictly limits use of antibiotic and other allopathic chemical veterinary drugs for animals to the treatment of illness and injuries under the supervision of qualified personnel, and subject to defined withdrawal periods. • Common withdrawal period: at least twice the legislated withdrawal period or 48 hours, whichever is longer.
When veterinary medical products are administered to bees, conversion requirements apply.
Organic beekeeping disinfects hive and honeycomb only through methods and substances that are on (a) list(s) referenced by the standard. Such lists are based on lists and/or criteria in international organic standards.
Organic beekeeping does not use synthetic chemical bee repellents.
Organic beekeeping minimizes use of smoke and uses only natural smoking materials.
3.3 Processing:
For food and feed production, organic processing uses only processing methods that are biological and physical in nature.
Organic processing uses only additives, processing aids, other substances that modify organic products and solvents used for extraction if they that are on (a) list(s) referenced by the standard. Such lists are based on lists and/or criteria in international organic standards.
3.4. Contamination: all systems:
Organic management takes precautionary measures to avoid contamination (commonly this includes barriers/buffers in production, cleaning of farm equipment, separation and cleaning in processing).
Organic processing management identifies and minimizes risks of product contamination.
Organic collection management ensures that wild collection areas are not compromised by improper treatment or environmental pollution.
Organic beekeeping management places hives on organically managed fields or wild/natural areas with sufficient separation from conventional fields and other pollution sources, and in a way that minimizes the risk of contamination.
4. Pollution and degradation of the production/processing unit and surrounding environment from production/processing activities are minimized.
4.1 Farm Production and Beekeeping:
Organic management maintains or enhances biodiversity in crop and non-crop habitats on the farm holding.
Organic crop production systems employ measures to prevent land degradation, such as erosion and salinization.
Organic soil fertility management prevents pollution of the environment, including land and water, by inputs and practices.
Organic management ensures that water resources are used sustainably.
Organic management does not undertake any actions that negatively impact high conservation value areas.
Organic guarantee systems restrict use of synthetic coverings and mulches in organic production systems.
Organic animal management systems manage stocking density to ensure sustainable land and water use.
5. Certain unproven, unnatural and harmful technologies are excluded from the system.
5.1 Genetically Modified Organisms
Organic management systems do not use genetically modified organisms (GMO) or their derivatives, except vaccines, in all stages of organic production and processing.
5.2 Irradiation
Organic processing does not use irradiation (ionizing radiation) technologies.
5.3 Breeding Techniques:
Organic animal management uses only breeding techniques consistent with organic production methods. This includes artificial insemination but excludes embryo transfer techniques and cloning.
Organic animal management does not use hormones to induce ovulation or birth, unless for medical reasons.
5.4 Nanotechnology (this aspect is increasingly being covered by organic standards but is still new and mostly non covered by regulations)
Organic production and processing systems do not intentionally manufacture or use nanomaterials. (see note worksheet 2 line 76)

6. Animals are treated responsibly.

6.1 Living conditions

Organic animal management systems ensure that living conditions (including housing) provided to animals:

- afford them comfort and safety
- allow them to exhibit natural behavior
- give them freedom of movement
- allow access, whenever weather allows, to pasture, open air and/or exercise areas, including shade.

6.2 Physical alterations:

Organic animal management does not generally perform physical alterations on animals.

- Standards may allow specific exemptions when good management practices are insufficient to ensure the health and welfare of the animal and/ or operator or when it is specifically required for meat quality. Physical alternations performed under exceptions employ measures to minimize suffering.

Organic beekeeping does not clip the wings of queen bees.

6.3 Breeding:

Organic animal management uses breeds that reproduce successfully under natural conditions and without routine human involvement.

6.4 Transport and Slaughter:

Organic animal management avoids animal stress and suffering during the movement, handling and slaughter of animals.

- Does not use any injurious devices such as electric prods, and tranquilizers and stimulants.

Organic beekeeping does not deliberately kill bees during honey harvesting.

7.The natural health of animals is promoted and maintained.

7.1 Nutrition

Livestock production:

Organic animal management systems provide a weaning period for young mammals, which is based on the natural behavior of the species.

Organic animal management includes feed rations that meet the nutritional and dietary requirements of the species, for example access to roughage for ruminants.

Organic animal management does not feed animals slaughter products of the same species or any type of excrements, and does not feed slaughter waste to ruminants.

Beekeeping:

Organic beekeeping management ensures that harvesting methods provide sufficient food reserves left behind for the survival of the colony during the dormancy period.

In cases of temporary feed shortages, organic beekeeping provides supplementary feed that is organic.

7.2 Health Care

Livestock production:

Organic animal management systems follow the principle of positive health, which consist of a graduated approach of prevention (including vaccinations and anti-parasite treatments only when essential), then natural medicines and treatment, and finally if unavoidable, treatment with allopathic chemical drugs.

Organic animal management never withholds medical treatment considered necessary for the welfare of an animal in order to maintain the organic status of the animal.

Beekeeping:

Organic beekeeping management achieves health and welfare of bee colonies primarily through good management and hygienic practices, followed if necessary by phytotherapeutic and/or homeopathic treatments, and then by substances that are on (a) list(s) referenced by the standard. Such lists are based on lists and/or criteria in international organic standards.

8. Organic integrity is maintained throughout the supply chain.

8.1 Crop Production
Seeds and Planting Material
Organic crop production uses organic seed and planting materials unless such seed and materials are unavailable.
Organic crop production systems non-chemically treated seeds and planting materials whenever available.
Parallel and Split Production
Organic management completely and clearly separates the non-organic and organic parts and products of holdings with split or parallel production, e.g. physical barriers, management practices, storage of inputs and products.
8.2 Animal Production:
Organic animal management takes measures to ensure the organic integrity of animals during movement, handling and slaughter.
Organic animal management limits the use of non-organic feed to non-accessibility of organic feed and organic guarantee systems apply time limits or review periods to its use.
8.3 Processing and Handling
Organic processing management takes measures to prevent co-mingling of organic products with non-organic products in processing, packaging, storage and transport.
Organic processing uses only organic ingredients except for when they are not available.
Organic processing never uses the same ingredient in both organic and non-organic form in a single product.
Organic processing only uses minerals (including trace elements), vitamins, essential fatty, amino acids, and other isolated nutrients when their use is legally required or strongly recommended in the food products in which they are incorporated.
Organic management employs only those systems for cleaning and disinfecting surfaces, machinery and processing facilities that prevent contamination of organic product.
Organic processing management systems control pests according to a hierarchy of practices starting with prevention, and then physical, mechanical, biological methods and substances that are on (a) list(s) referenced by the standard. Such lists are based on lists and/or criteria in international organic standards. Where these practices are not effective, and other substances are used, they do not come into contact with the organic product.
Organic processing restricts disinfecting and sanitizing substances that may come in contact with organic products to water and substances that are on (a) list(s) referenced by the standard. Such lists are based on lists and/or criteria in international organic standards. In cases where these substances are ineffective and others must be used, organic processing ensures that these other substances do not come into contact with any organic products.
Organic processing ensures that packaging and storage/transportation containers do not contaminate the organic product they contain.
9. Organic identity is provided in the supply chain.
Labeling fully discloses ingredients, including whether or not they are organic.
Labeling identifies the person or company legally responsible for the product and the body that assures conformity to the applicable organic standard.
Claims that processed products are “organic” are made only if the product contains at least 95% organic ingredients (by weight excluding water and salt).
Claims that processed products are “made with organic ingredients” or similar terms are made only if the product contains at least 70% organic ingredients (by weight excluding water and salt).
Labeling does not make “organic” or “made-with organic ingredients” or similar terms, or make any organic certification claims on products with less than 70% organic ingredients (by weight excluding water and salt), although “organic” may be used to characterize ingredients on the list of ingredients.
Labeling clearly distinguishes in-conversion products or similar terms from organic products.
10. Fairness, respect and justice, equal opportunities and non-discrimination is afforded to employees and workers
<i>*** this objective is commonly addressed in private standards although not usually in the scope of government organic standards.</i>
Organic operations in countries where social legislation is not in place or not enforced have social policies in place. Such policies should be in accordance with the International Labor Organization’s Declaration on Fundamental Principles and Rights at Work.

Organic operations ensure that employees and contracted workers have the freedom to associate, the right to organize and the right to bargain collectively.
Organic operations provide all employees and contractors with equal opportunities and do not subject them to discrimination.
Organic operations do not violate human rights and they provide fair working conditions for employees and contracted workers.
Organic operations do not use any type of forced or involuntary labor.
Organic operations guarantee the integral well-being of any children who work in the operation.

Additional assessment (related to Objective 3 mainly):
Lists of substances:
Compare list of approved substances in the standard with lists in a reference international standard. Is it overall equivalent? (Also look for allowed/prohibited substances in the body of the standards)
Criteria for lists of substances:
Compare criteria for the inclusion of substances used by the standard setter with criteria in the COROS (these may be criteria of the standard setter or international criteria). Is it equivalent?

Definitions

Additive: A substance that is added to a processed product for a technological purpose and becomes a component of the final product and/or affects its characteristics.

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.

Certification: The procedure by which an operator or a group of operators received written and reliably endorsed assurance that a clearly identified process has been methodically applied in order to assess that the operator is producing specified products according to specific requirements or standards.

Contamination: Contact of organic crops, animals, land or products with any substance that would compromise the organic integrity.

Conventional: Any production or processing practice or system that does not conform to organic production practices and standards.

Conversion: The time of transition from non-organic to organic farming.

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.

GMO Derivative: A substance that is produced by or from a GMO. This is traced one step back from the substance to its source. 'Produced from GMO' means that it consists in whole or in part of a GMO. 'Produced by GMO' means that it is a GMO metabolite.

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

Holding: The total area of land under control of one farmer or collective of farmers, and including all the farming activities or enterprises. The farm holding may consist of one or more farm units.

Genetic Engineering: Genetic engineering is a set of techniques from molecular biology (such as recombinant DNA) by which the genetic material of plants, animals, microorganisms, 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 engineering include, but are not limited to: recombinant DNA, cell fusion, micro and macro injection, encapsulation. 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.

Green Manure: A crop that is grown and then incorporated into the soil for the purpose of soil improvement, prevention of erosion, prevention of nutrient loss, mobilization and accumulation of plant nutrients, and balancing soil organic matter. Green manure may include spontaneous crops, plants or weeds.

Habitat: The area over which a plant or animal species naturally exists. Also used to indicate types of habitat, e.g. ocean, seashore, riverbank, woodland, grassland.

High Conservation Value Areas: Areas that have been recognized as having outstanding and critical importance due to their environmental, socioeconomic, biodiversity or landscape values.

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

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

Irradiation: Technology using high-energy emissions from radio-nucleotides, capable of altering a product's molecular structure for the purpose of controlling microbial contaminants, pathogens, parasites and pests in products (generally food), preserving products or inhibiting physiological processes such as sprouting or ripening. (Also referred

to as ionizing radiation although definitions of this term in technical and legal texts vary.) Irradiation does not include low-level radiation sources such as the use of X rays for foreign body detection.

Nanomaterials: substances deliberately designed, engineered and produced by human activity to be in the nanoscale range (approx 1-300 nm) because of very specific properties or compositions (e.g. shape, surface properties, or chemistry) that result only in that nanoscale. Incidental particles in the nanoscale range created during traditional processing methods such as homogenization, milling, churning, and freezing, and naturally occurring particles in the nanoscale range are not intended to be included in this definition.

Operation: For the purposes of this document an operation is an individual or business enterprise producing, processing or handling agricultural products.

Organic Product: A product that has been produced, processed, or handled in compliance with organic standards.

Parallel Production: A situation where the same operation is producing visually indistinguishable products in both an organic system and a non-organic system. A situation with “organic” and “in conversion” production of the same product may also be parallel production.

Processing: The handling, treatment, transformation or packaging of agricultural or wild collected products.

Processing Aid: Any substance used in the processing of a product to fulfill a technical purpose and which is not normally a constituent of the product. This includes filtration auxiliaries.

Restrict: Limit a practice, generally to conditions under which it may be used.

Sanitizing: Any treatment that is effective in destroying or substantially reducing the numbers of vegetative cells of microorganisms of public health concern, and other undesirable microorganisms.

Split Production: Conventional, in conversion and/or organic production, breeding, handling or processing in the same operation.

Synthetic: A substance that is formulated or manufactured by a chemical process or by a process that chemically changes a substance extracted from naturally occurring plant, animal, or mineral sources. Substances created by naturally occurring biological processes are not considered synthetic.

Standards: Norms that specify how a product should be produced and processed. For the purposes of this document standards are used to define organic production practices.

Sustainable: Use of a resource in such a way that the resource is not depleted or permanently damaged, hence is not used faster than it can be regenerated.

CRITERIA For Substances Used in Organic Production and Processing

These basic criteria will facilitate the equivalence assessment of lists of substances, which, although they may differ, should be able to be justified against set criteria. These criteria summarize criteria that are presented in two international standards, the IFOAM Standards and the Codex Alimentarius Organic Guidelines.

Standard setting bodies should at minimum use the following criteria when evaluating substances for inclusion in their standards.

General Criteria

All substances used in organic production and processing should meet the following criteria:

- i) use of the substance is consistent with the principles and objectives of organic agriculture
- ii) the substance is necessary/essential for its intended use.
- iii) approved alternatives are not available in sufficient quantity and/or quality
- iv) manufacture, use and disposal of the substance does not result in, or contribute to harmful effects on the environment
- v) The substance has the lowest negative impact on human or animal health or the environment when compared to alternative substances.
- vi) * the consumer is not deceived concerning the nature and quality of the substance
- vii) * consideration is given to social and economic impacts of sourcing and manufacturing the substance.

**commonly and primarily used in the private sector for evaluating substances*

In addition, the following criteria should be applied in the evaluation process:

- a) if the substance is used for fertilization and/or soil conditioning purposes:
 - it is essential for obtaining or maintaining the fertility of the soil or to fulfill specific nutritional requirements of crops, or specific soil-conditioning and rotation purposes which cannot be satisfied by other organic fertility practices.
 - the ingredients are of biological or mineral origin and may have undergone the following processes: physical (e.g., mechanical, thermal), enzymatic, microbial (e.g., composting, fermentation);
 - *Synthetic nature identical products that are not available in*

sufficient quantity and quality in their natural form may be allowed provided all other criteria are satisfied.

- use does not have a harmful impact on the balance of the soil ecosystem or the physical characteristics of the soil, or water and air quality.
- use may be restricted to specific conditions, specific regions or specific commodities.

b) if the substance is used for plant protection, growth regulation or weed control:

- it must be essential for the control of a harmful organism or a particular disease for which other biological, physical, or plant breeding alternatives and/or other management practices consistent with the standard are not effective.
- it has the least harmful impact (compared to alternatives) on the environment, the ecological balance (in particular non-target organisms) and the health of consumers human, livestock, aquatic animals and bees.
- substances must be of biological or mineral origin and may undergo the following processes: physical (e.g. mechanical, thermal), enzymatic, microbial (e.g. composting, digestion);
 - *Synthetic substances may be used by exception such as the use in traps or dispensers, or substances that do not come into direct contact with produce, or those for which no natural or nature identical alternative is available provided that all other criteria are met.*
- use may be restricted to specific target organisms, conditions, specific regions or specific commodities;

c) if the substance is used as an additive and/or processing aid in the preparation or preservation of the product:

- it must otherwise be impossible to produce or preserve the product
 - *The substance is found in nature, and may have undergone mechanical/physical processes (e.g. extraction, precipitation), biological/enzymatic processes and microbial processes (e.g. fermentation).*
 - *Synthetic nature identical products that are not available in sufficient quantity and quality in their natural form may be allowed provided all other criteria are satisfied.*

**III. The IFOAM STANDARD for ORGANIC PRODUCTION and
PROCESSING**

Version 2.0

*Approved by the IFOAM General Assembly
through electronic vote in July 2014*

SECTION A - GENERAL

Scope of the IFOAM Standard

Organic agriculture [also known as “Biological” or “Ecological” agriculture or protected equivalent terms (in other languages)] is a whole system approach based upon a set of processes resulting in a sustainable ecosystem, safe food, good nutrition, animal welfare and social justice. Therefore organic production is more than a system of production that includes or excludes certain inputs. IFOAM defines organic agriculture as “a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved”.

The IFOAM Standard (IS) is an internationally applicable organic standard developed by IFOAM. It is a good, practical interpretation of the IFOAM Standards Requirements (Common Objectives and Requirements of Organic Standards), hence belongs to the IFOAM Family of Standards. IFOAM recognizes the need to harmonize organic standards worldwide whenever possible, but also the need to have organic standards that are regionally adapted. The IFOAM Standard is ready to use directly by those who want to be certified to an internationally recognized and respected standard. The IFOAM Standard is written in such a way that it may be used in the context of third party certification, Participatory Guarantee Systems (PGS), Community Supported Agriculture (CSA), or simply self-commitment by producers wishing to follow the standard. Hence, record keeping requirements or other requirements related to certification are not within the scope of this standard.

The IFOAM standard contains provisions for regional variations, in the form of regional or other exceptions. They can be permission(s) granted to an operator to be excluded from the need to comply with normal requirements of the standard. These exceptions (or derogations) are to be understood as typically requiring approval from the control body (see definition of control body). Exceptions must be granted on the basis of clear criteria, with clear justification and for a limited time period only. In the context of third party certification, and especially under the IFOAM Accreditation Program, these exceptions are left to the decision of the certification body and require certification body approval before being implemented. Under a PGS scheme, they would also require a decision by the relevant decision making level within the scheme, usually the same level as makes/validates the certification decisions. Under a CSA or other consumer-driven schemes, it is proposed that the producer submits exception requests to the decision of their consumer base.

The IFOAM Standard covers the areas of general organic management, crop production (including plant breeding), animal production (including beekeeping), aquaculture, wild collection, processing and handling, labeling, and social justice.

The IFOAM Standard is complementary and additional to all other relevant statutory requirements.

Relevance to the IFOAM Accreditation and to International Reference

The IFOAM Standards and the IFOAM Accreditation Requirements (IAR) are used by the International Organic Accreditation Service (IOAS) in the IFOAM accreditation process for organic certification bodies. The IOAS evaluates the standards (used by the certifier) against the IFOAM Standard, as well as the certification body's performance against the IFOAM Accreditation Requirements.

Certification bodies must implement all the requirements of the IFOAM Standard relevant to the certified farming or processing operations in order to become IFOAM Accredited Certification Bodies (ACBs). In other words, certification bodies wishing to be IFOAM accredited must use either the IFOAM Standard itself, or a standard compliant with the IFOAM Standard.

The IFOAM Standard may also be used (against payment) by non-accredited certification and standard-setting organizations as a way to outsource their standard-setting activity to IFOAM. In addition, governments and other standard setters may (and are recommended to) use freely the IFOAM Standard as a reference to develop their own regulation or standard.

Structure

Requirements in the IFOAM Standard are organized according to the following structure:

1. Definitions
2. Organic Ecosystems
3. General Requirements for Crop Production and Animal Husbandry
4. Crop Production
5. Animal Husbandry
6. Aquaculture Production Standards
7. Processing and Handling
8. Labeling
9. Social Justice

Each section contains subsections that are organized according to a similar structure, namely a statement of the general principle applicable to that section, followed by the requirements that have to be followed by the operators. The requirements are the minimum requirements that an operation, such as a farm or enterprise, must meet to be certified as organic.

Chapters 1, 2 and 3 are applicable to all crop and animal production systems, including aquaculture. Chapter 9 is applicable to all systems, including processing.

Technical terms are explained in the section on definitions below.

SECTION B – DEFINITIONS, PRINCIPLES, RECOMMENDATIONS AND STANDARDS

1. DEFINITIONS

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

Amino acid isolate: amino acid substance (e.g. methionine, lysine, threonine) that has been isolated or extracted to a more pure form than occurs in the parent material (e.g. soy, corn, etc).

Aquaculture: The managed production of aquatic plants and/or animals in fresh, brackish or salt water in a circumscribed (demarcated) environment.

Ayurvedic: Traditional Indian system of medicine.

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), as well as the dynamic effects they engender.

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 Body: The body that conducts (grants) certification, as distinct from standard setting and inspection.

Compost: Decayed organic material used as a fertility amendment in agricultural production, produced by a combination of actions over time by microbes, invertebrates, temperature, and other elemental factors (e.g., moisture content, aeration). Composted material shows practically no substantive indication as to the original substrate(s) from which it was made.

Contamination: Contact of organic product or land with a substance prohibited for organic production or handling.

Control Body: A third-party organization that has independent oversight of the organic status of an operation. A Control Body may be a certification body, a governmental competent authority, a participatory guarantee system, a cooperative, or a community supported agriculture program

Conventional: Conventional means any material, production or processing practice that is not organic or organic “in conversion”.

Conversion Period: The time between the start of the organic management and the acceptance 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 to break weed, pest and disease cycles and to maintain or improve soil fertility and organic matter content.

Culture: Microorganisms, tissue, or organ, growing on or in a medium and substrate.

Direct Source Organism: The specific plant, animal, or microbe that produces a given input or ingredient.

Disinfect: To reduce, by physical or chemical means, the number of potentially harmful microorganisms in the environment, to a level that does not compromise product safety or suitability.

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

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

Genetic Engineering: A set of techniques from molecular biology (such as recombinant DNA) by which the genetic material of plants, animals, microorganisms, 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 engineering include, but are not limited to: recombinant DNA, cell fusion, micro- and macro-injection, and encapsulation. 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 material of actual or potential value.

Green Manure: A crop that is incorporated into the soil for the purpose of soil improvement. This 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.

High Conservation Value Area: An area that has been identified as having outstanding and critical importance due to its environmental, socioeconomic, biodiversity or landscape values.

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.

Hydroponic Systems: Crop production systems in inert media and/or water solutions using dissociated nutrients (in suspension or solution) as prime source of nutrient supply. Growing crops in water only is not considered a hydroponic system.

Ingredient: Any substance, including additives, used in the manufacture or preparation of a product 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 product'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, or for the purpose of inducing mutations for selection and breeding.

Label: Any written, printed or graphic representation that is present on a product, accompanies the product, or is displayed near the product.

Landless animal husbandry systems: systems by which the operator of the livestock does not manage agricultural land and/or has not established a long-term cooperation agreement with another operator organically managing agricultural land, whether it be for pasture, supply of feed or disposal of manure & effluent.

Manure: All livestock excrement that may be mixed with litter material.

Media (plural) or Medium (singular): The substance in which an organism, tissue, or organ exists, which includes the substrate.

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

Nanomaterials: substances deliberately designed, engineered and produced by human activity to be in the nanoscale range (approx 1-300 nm) because of very specific properties or compositions (e.g. shape, surface properties, or chemistry) that result only in that nanoscale. Incidental particles in the nanoscale range created during traditional food processing such as homogenization, milling, churning, and freezing, and naturally occurring particles in the nanoscale range are not intended to be included in this definition.

Operator: An individual or business enterprise responsible for ensuring that products meet the requirements of an organic standard.

Organic agriculture: Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.

Organic Product: A product that 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 an organic system and in a 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 product ingredient by itself, intentionally used in the processing of raw materials, the product 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. This includes filtration auxiliaries and solvents used for extraction.

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

Protected cropping: The growing of crops under forms of constructed or man-made protection such as greenhouses, polytunnels, plastic roofs, nets, fleece, or cloches.

Ruderal: (of a plant) growing in waste places, along roadsides or in rubbish.

Sanitize: To adequately treat produce or product-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.

Soil: Soil is the natural living ecosystem that develops on the surface of the earth as a result of the influence of climate, topography, biological activity, time, and sometimes cultivation, on the mineral parent material. Soil is composed of air, water, minerals, organisms and organic matter and is connected to the outermost layer of the earth.

Soil fertility: The potential capacity of the soil to supply nutrients required for plant growth.

Soil health: Soil health is the continued capacity of the soil to function as a vital living system, within ecosystem and land use boundaries, to sustain biological productivity, maintain the quality of air and water environments, and promote plant, animal and human health. Soil health is the ability of soil to perform according to its potential and changes over time due to human use and management or to natural events.

Soil quality: Soil quality is the functional capacity of the soil, within ecosystem and land-use boundaries, to sustain biological productivity, maintain environmental quality and promote plant, animal, microbial and human health. Soil quality is a function of its biological, physical and chemical properties, many of which are a function of soil organic matter content, which influence the capacity of soil to perform crop production and environmental functions, including the absence of contaminants.

Source separated: Human excrement collected separately from waste streams that contain prohibited substances.

Split Production: Where only part of the farm or processing unit is organic. The remainder of the property can be (a) non-organic, and/or (b) in conversion. Also see parallel production.

Substrate: The substance that an organism grows in and lives upon.

Synthetic: A substance that is formulated or manufactured by a chemical process or by a process that chemically changes a substance extracted from a naturally occurring plant, animal or mineral source, except that such a term shall not apply to substances created by naturally occurring biological processes.

2. ORGANIC ECOSYSTEMS

2.1 *Ecosystem Management*

General Principle

Organic farming benefits the quality of ecosystems.

Requirements

2.1.1 Operators shall design and implement measures to maintain and improve landscape and enhance biodiversity quality, by maintaining on-farm wildlife refuge habitats or establishing them where none exist. Such habitats may include, but are not limited to:

- a. extensive grassland such as moorlands, reed land or dry land;
- b. 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;
- c. ecologically rich fallow land or arable land;
- d. ecologically diversified (extensive) field margins;
- e. waterways, pools, springs, ditches, floodplains, wetlands, swamps and other water-rich areas which are not used for intensive agriculture or aquaculture production;
- f. areas with ruderal flora;
- g. wildlife corridors that provide linkages and connectivity to native habitat.

2.1.2 Clearing or destruction of High Conservation Value Areas is prohibited. Farming areas installed on land that has been obtained by clearing of High Conservation Value Areas in the preceding 5 years shall not be considered compliant with this standard.

2.2 *Soil and Water Conservation*

General Principle

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

Requirements

2.2.1 Operators shall take defined and appropriate measures to prevent erosion and minimize loss of topsoil. Such measures may include, but are not limited

to: minimal tillage, contour plowing, crop selection, maintenance of soil plant cover and other management practices that conserve soil.

2.2.2 Land preparation by burning vegetation or crop residues is prohibited.

Regional or other exception

Exceptions may be granted in cases where burning is used to suppress the spread of disease, to stimulate seed germination, to remove intractable residues, or other such exceptional cases.

2.2.3 Operators 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 Stocking densities and grazing shall not degrade land or pollute water resources. This applies also to all manure management and applications.

2.2.5 Operators shall prevent or remedy soil and water salinization where these pose a problem.

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 *Inappropriate technologies*

General Principle

Organic agriculture and aquaculture are based on the precautionary principle and should prevent significant risks by adopting appropriate technologies and rejecting unpredictable ones.

Requirements

2.3.1 The deliberate use or negligent introduction of genetically engineered organisms or their derivatives is prohibited. This shall include animals, seed, propagation material, feed, and farm inputs such as fertilizers, soil conditioners, or crop protection materials, but shall exclude vaccines.

2.3.2 Organic operators shall not use ingredients, additives or processing aids derived from GMOs.

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

- 2.3.4 On farms with split (including parallel) production, the use of genetically engineered organisms is not permitted in any production activity on the farm.
- 2.3.5 The use of nanomaterials is prohibited in organic production and processing, including in packaging and product contact surfaces. No substance allowed under this standard shall be allowed in nano form.

2.4 *Wild Harvested Products and Common/Public Land Management*

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.

Requirements:

- 2.4.1. Wild harvested products shall only be derived from a sustainable growing environment. Products shall not be harvested at a rate that exceeds the sustainable yield of the ecosystem, or threatens the existence of plant, fungal or animal species, including those not directly exploited.
- 2.4.2 Operators shall harvest products only from a clearly defined area where prohibited substances have not been applied.
- 2.4.3 The collection or harvest area shall be at an appropriate distance from conventional farming or other pollution sources in order to avoid contamination.
- 2.4.4 The operator who manages the harvesting or gathering of common resource products shall be familiar with the defined collecting or harvesting area, including the impacts of collectors not involved in the organic scheme.
- 2.4.5. Operators shall take measures to ensure that wild, sedentary aquatic species are collected only from areas where the water is not contaminated by substances prohibited in these standards.

3. GENERAL REQUIREMENTS FOR CROP PRODUCTION AND ANIMAL HUSBANDRY

3.1 *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.

Requirements:

- 3.1.1** If the whole farm is not converted (split production) the organic and conventional parts of the farm shall be clearly and continuously separated.
- 3.1.2** Simultaneous production of the same products (parallel production) is only permitted where such production is undertaken in a way that allows clear and continuous and verifiable separation of all operations and products claimed as organic. Organic and non-organic units in parallel production must be physically, financially and operationally separated.
- 3.1.3** Prohibited materials shall not be stored where organic products are grown and handled.

3.2 Maintenance of Organic Management

General Principle

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

Recommendations:

In case of split or parallel production, the operator should demonstrate continuous efforts towards bringing the entire farm under organic management, such as increasing the size of the organic operation relative to the conventional or adopting organic practices in the conventional operation.

Requirements:

- 3.2.1** The production system shall not rely upon continuous switching between organic and conventional management.

4 . CROP PRODUCTION

4.1 Choice of Crops and Varieties and propagation of planting materials

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 organic.

Recommendation:

Operators should give preference to organically bred varieties (varieties from organic breeding programs, see 4.7) when available.

Requirements:

4.1.1 Operators shall use organically produced seed and planting material whenever available in appropriate varieties and quality. When organic seed and planting materials are not available in sufficient quantity or quality for the required variety or equivalent varieties, in-conversion materials may be used. When none of these are available, conventional materials may be used provided that they have not been treated with post-harvest pesticides not otherwise permitted by this standard.

Regional or other exception

Where post-harvest chemical treatment is prescribed by law for phytosanitary purposes, treated seed and plant material may be used.

4.1.2 Seeds and plant materials shall be propagated under organic management for one generation, in the case of annuals, and for perennials, two growing periods, or 18 months, whichever is the longer, before being certified as organic seed and plant material.

4.1.3 Propagation may be based on generative propagation (seeds) as well as vegetative propagation derived from various plant organs e.g.

- a. partitioned tubers, scales, husks;
- b. partitioned bulbs, brood, bulbs, bulbils, offset bulbs etc.;
- c. layer, cut and graft shoots;
- d. rhizomes;
- e. meristem culture.

4.1.4 All multiplication practices on the farm, except meristem culture, shall be under organic management.

4.1.5 Vegetal propagation materials, bedding materials and substrates shall only consist of substances listed in appendices 2 and 3.

4.2 Conversion Period (Plant Production)

General Principle

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

Requirements:

- 4.2.1** All the requirements of this standard shall be met for the duration of the conversion period.
- 4.2.2** The start of the conversion period shall be calculated from the date that an application has been received and agreed to by the control body.

Regional or other exception

The conversion period may be calculated retroactive to the application only on the basis of sound and incontrovertible evidence of full application of the standard for a period at least as long as 4.2.3.

- 4.2.3** The length of the conversion period shall be at least:
 - 12 months before sowing or planting in the case of annual production
 - 12 months before grazing or harvest for pastures and meadows
 - 18 months before harvest for other perennials.
- 4.2.4** Crops harvested less than 36 months after the application of a prohibited input to crop or soil shall not be used or sold as organic.
- 4.2.5** Plant products may be used or sold as “in-conversion” provided that they have undergone a 12-month conversion period.

4.3 Diversity in Crop Production

General Principle

The development of living soils is the foundation of organic production. Soil health and quality are the basis of soil management practices and are critical to successful pest, disease and weed management. Organic growing systems are soil based, care for the soil and surrounding ecosystems, provide support for a diversity of species, are based on nutrient recycling and mitigate soil and nutrient losses.

Requirements:

- 4.3.1** Crop rotations for annual crops shall be established to manage pressure from pests, weeds and diseases and to maintain soil fertility, unless the operator ensures diversity in plant production by other means. Crop rotations shall be diverse and include soil-improving plants such as green manure, legumes or deep rooting plants.

4.3.2 For orchards and plantations, there shall be managed floor cover and diversity or refuge plantings.

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.

Recommendation:

The fertility program should be based on material of microbial, plant or animal origin, such as green manure, compost or mulch, obtained through the following sources in this order of priority:

- a. organically produced on the farm;
- b. of organic quality, obtained from the surrounding farms or natural environment;
- c. other inputs allowed under Appendix 2.

Nutrients and fertility products should be applied in a way that does not harm soil, water, and biodiversity (requirement 4.4.3). This should be evaluated through the use of appropriate indicators, such as:

- a. no significant accumulation of heavy metals or phosphorus in the soil.
- b. no significant contribution to the eutrophication of water bodies.
- c. balanced nutrient supply as compared to the nutrient needs.
- d. maintenance or increase in soil carbon content over time.

Requirements:

4.4.1 Soil organic matter, microbial activity and general soil health and fertility shall be improved if low and maintained or improved if satisfactory. The operator shall prevent over-accumulation of heavy metals and other pollutants in the soils.

4.4.2 Material of microbial, plant or animal origin shall form the basis of the fertility program. Maintenance of fertility may not rely solely on off-farm inputs.

4.4.3 Nutrients and fertility products shall be applied in a way that does not harm soil, water, and biodiversity.

4.4.4 Material applied to the land or crop shall be in accordance with Appendix 2.

4.4.5 Fertility amendments in Appendix 2 that are rapidly available to the plants are exceptionally allowed only as a necessary complement when other fertility building techniques have been applied and are insufficient.

- 4.4.6** Human excrement shall be handled in a way that reduces risk of pathogens and parasites and shall not be applied within six months of the harvest of annual crops for human consumption with edible portions in contact with the soil.
- 4.4.7** 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, crop rotations and nitrogen fixation by plants. Their use shall be justified by appropriate soil and leaf analysis or diagnosed by an independent expert.
- 4.4.8** 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.
- 4.4.9** Chilean nitrate and all synthetic fertilizers, including urea, are prohibited.
- 4.4.10** The production of terrestrial plants shall be soil-based. The production of such crops in hydroponic systems is prohibited. "Soil-based" means that apart from the propagation or seedling stages, a plant must spend its life in the soil. For herbs, flowers and ornamentals in pots that are sold directly to the final consumer, the CB can allow production on permitted growing media.
- 4.4.11** The removal of soil from the farm is prohibited. Incidental removal of soil when harvesting crops is permitted.
- 4.4.12** For mushroom production, substrates shall be made of products of organic agriculture, or other non-chemically treated natural products such as peat, wood, mineral products or soil.

4.5 *Pest, Disease and Weed 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, functional biodiversity, habitat management, beneficial organisms and other recognized organic practices as described in this standard.

Recommendation:

In case operators need to use commercial formulated inputs, preference should be given to formulations approved for use in organic agriculture by a specialized organic material review organization/program.

Requirements:

- 4.5.1** The organic production system shall include biological, cultural and mechanical mechanisms to manage pests, weeds and diseases. These include:
- a. choice of appropriate species and varieties;
 - b. appropriate rotation programs, intercropping and companion planting;
 - c. mechanical cultivation;
 - d. 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;
 - e. natural enemies including release of predators and parasites;
 - f. mulching and mowing;
 - g. grazing by animals;
 - h. mechanical controls such as traps, barriers, light and sound.
 - i. on-farm preparations from local plants, animals and micro-organisms.
- 4.5.2** When the measures in 4.5.1 are not sufficient, pest, disease and weed management substances permitted under Appendix 3 may be used.
- 4.5.3** Substances that do not appear on Appendix 3 are prohibited for use in organic production.
- 4.5.4** Physical methods for pest, disease and weed management are permitted, including the application of heat.
- 4.5.5** Thermal sterilization of soils is prohibited.

Regional or other exception

Exceptions may be granted to protected cropping structures in instances of severe disease or pest infestation that cannot be otherwise remedied through measures in 4.5.1, 4.5.2 and 4.5.4.

- 4.5.6** Any formulated input shall have only active ingredients listed in Appendix 3. All other ingredients shall not be carcinogens, teratogens, mutagens, or neurotoxins.

4.6 *Avoiding Contamination*

General Principle

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

Requirements:

- 4.6.1** The operator shall monitor crops, soil, water, and inputs for risks of contamination by prohibited substances and environmental contaminants.
- 4.6.2** The operator shall employ measures including barriers and buffer zones to avoid potential contamination and limit contaminants in organic products.
- 4.6.3** All equipment from conventional farming systems shall be thoroughly cleaned of potentially contaminating materials before being used on organically managed areas.
- 4.6.4** For synthetic structure coverings, mulches, fleeces, insect netting and silage wrapping, only products based on polyethylene and polypropylene or other polycarbonates, and biodegradable materials (e.g. starch based), are permitted. These shall be removed from the soil after use and shall not be burned on the farmland.

4.7 *Protected cropping*

General principle

All the rules on crop production apply to protected cropping, including those concerning conversion period (4.2), diversity of crop production (4.3), and soil fertility and fertilization (4.4). Natural light, air and water are essential components of organic plant production.

Recommendations:

Energy used for light and climate control should be from renewable resources. Technologies that reduce energy consumption should be used.

Requirements:

- 4.7.1** Artificial light is only allowed for plant propagation and as a complement to sunlight to extend the day length to a maximum of 16 hours.

- 4.7.2** Operators shall monitor, record and optimize any energy used for artificial light, heating, cooling, ventilation, humidity and other climate control.

4.8 Breeding of organic varieties

Explanatory Note: This section refers to breeding of organic varieties, not simply use or production of organic seeds from regular (conventional) varieties.

General Principles

Organic plant breeding and variety development is sustainable, enhances genetic diversity and relies on natural reproductive ability. It aims for new varieties particularly suited for organic production systems. Organic breeding is always creative, cooperative and open for science, intuition, and new findings. Organic plant breeding is a holistic approach that respects natural crossing barriers. Organic plant breeding 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.

Requirements:

- 4.8.1** To produce organic varieties, plant breeders shall select their varieties under organic conditions that comply with the requirements of this standard. All multiplication practices except meristem culture shall be under certified organic management.
- 4.8.2** Organic plant breeders shall develop organic varieties only on the basis of genetic material that has not been contaminated by products of genetic engineering.
- 4.8.3** Organic plant breeders shall disclose the applied breeding techniques. Organic plant breeders shall make the information about the methods, which were used to develop an organic variety, available for the public latest from the beginning of marketing of the seeds.
- 4.8.4** The genome is respected as an impartible entity. Technical interventions into the genome of plants are not allowed (e.g. ionizing radiation; transfer of isolated DNA, RNA, or proteins).
- 4.8.5** The cell is respected as an impartible entity. Technical interventions into an isolated cell on an artificial medium are not allowed (e.g. genetic engineering techniques; destruction of cell walls and disintegration of cell nuclei through cytoplasm fusion).
- 4.8.6** The natural reproductive ability of a plant variety is respected and maintained. This excludes techniques that reduce or inhibit the germination capacities (e.g. terminator technologies).

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. Stocking rates for livestock should be appropriate for the region in question taking into consideration the body size/weight of the breeds maintained, feed production capacity, stock health, nutrient balance, and environmental impact.

Requirements:

- 5.1.1 Landless animal husbandry systems are prohibited.
- 5.1.2 The operator shall ensure that the environment, the facilities, stocking density and flock/herd size provides for the behavioral needs of the animals.
- 5.1.3 In particular, the operator shall ensure the following animal welfare conditions:
 - a. sufficient free movement and opportunity to express normal patterns of behavior, such as space to stand naturally, lie down easily, move around freely, groom themselves, sleep and nest comfortably, as well as assume all natural postures and movements such as stretching etc.;
 - b. sufficient fresh air, water, feed, thermal comfort and natural daylight, to satisfy the needs of the animals;
 - c. access to resting areas, shelter and protection from sunlight, temperature, rain, mud and wind adequate to reduce animal stress;
 - d. provision of suitable materials and areas for exploratory and foraging behaviors;
 - e. in addition to these general welfare conditions for all animal categories, provisions for specific animal groups also have to be taken into account, e.g. for cattle: social grooming and grazing; for pigs: rooting, separate lying-, activity/dunging- and feeding-areas, free farrowing, group housing; for poultry: nesting, wing stretching/flapping, foraging, dust-bathing, perching and preening.

Note: animals whose management system requires outdoor tethering to make use of grazing can still be managed in compliance with these requirements.

Regional or other exception

On holdings where, due to their geographical location and structural constraints, it is not possible to allow free movement of animals, indoor tethering (stanchioning) of animals may be allowed for a limited period of the year or of the day. In such cases, animals may not be able to turn around freely but the tethering conditions should permit the other requirements of 5.1.3 (especially 5.1.3.a) must be fulfilled.

- 5.1.4** Herd animals shall not be kept in isolation from other animals of the same species. 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.
- 5.1.5** Construction materials and methods and production equipment that might significantly harm human or animal health shall not be used.
- 5.1.6** Operators shall manage pests and diseases in livestock housing and shall use the following methods according to these priorities:
- a. preventative methods such as disruption, elimination of habitat and access to facilities;
 - b. mechanical, physical and biological methods.
 - c. substances (other than pesticides) used in traps.
 - d. substances listed in Appendix 5 of this standard;

Regional or other exception

Other products may be used if required by law for the control of notifiable diseases.

- 5.1.7** When animals are housed, the operator shall ensure that:
- a. where animals require bedding, adequate natural materials are provided. Bedding materials that are normally consumed by the animals shall be organic.
 - b. building construction provides for insulation, heating, cooling and ventilation of the building, ensuring that air circulation, dust levels, temperature, relative air humidity, and gas concentrations are within levels that are not harmful to the livestock.
 - c. no animals shall be kept in closed cages.
 - d. animals are protected from predation by wild and feral animals.
 - e. the above animal welfare requirements are fulfilled.
 - f. animals are regularly visited and monitored.
 - g. when welfare and health problems occur, appropriate management adjustments are implemented (e.g. reducing stocking density).
- 5.1.8** All animals shall have unrestricted and daily access to pasture or a soil-based open-air exercise area or run, with vegetation, whenever the physiological condition of the animal, the weather and the state of the ground permit. Such areas may be partially covered. Animals may temporarily be kept indoors because of inclement weather, health condition, reproduction,

specific handling requirements or at night. Lactation shall not be considered a valid condition for keeping animals indoors.

- 5.1.9** 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. For laying hens, a minimum daily rest period of 8 continuous hours without artificial light shall be respected.

5.2 Animal Origin and Conversion Period

General Principle

Organic animals are born and raised on organic holdings. Animal husbandry systems that change from conventional to organic production require a conversion period.

Requirements:

- 5.2.1** All the requirements of this standard for land and animals must be met for the duration of the conversion period before the resulting product may be considered as organic. Land and animals may be converted simultaneously.

- 5.2.2.** Offspring may be considered organic only if their mother has been organically managed throughout the pregnancy.

Milk may be considered organic only if the dairy animal has been organically managed throughout the pregnancy preceding lactation.

Eggs may be considered organic only if the poultry has been organically managed from 2 days old.

- 5.2.3** Animals for meat shall be raised organically from birth.

Regional or other exception

<p><i>When organic poultry is not available 2 day old conventional poultry may be brought in.</i></p>

- 5.2.4** 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. Non-organic female breeding replacements must be nulliparous.

Regional or other exception

Exceptions of more than 10% may be granted, limited to the following circumstances:

- a. unforeseen severe natural or man-made events;*
- b. considerable enlargement of the farm;*
- c. establishment of a new type of animal production on the farm;*
- d. holdings with less than 10 animals.*

5.3 Breeds and Breeding

General Principle

Breeds are adapted to local conditions.

Requirements:

- 5.3.1** Breeding systems shall be based on breeds that can reproduce successfully under natural conditions without human involvement.
- 5.3.2** Artificial insemination is permitted.
- 5.3.3** Embryo transfer techniques and cloning are prohibited.
- 5.3.4** Hormones are prohibited to induce ovulation and birth unless applied to individual animals for medical reasons and under veterinary supervision.

5.4 Mutilations

General Principle

Organic farming respects the animal's distinctive characteristics.

Requirements:

- 5.4.1** Mutilations are prohibited.

Regional or other exception

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

- a. castrations;*
- b. tail docking of lambs;*
- c. dehorning;*
- d. ringing, except for pigs;*
- e. mulesing is permitted until December 31, 2015.*

5.5 **Animal Nutrition**

General Principle

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

Requirements:

5.5.1 Animals shall be fed organic feed.

Regional or other exception

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

- a. organic feed is of inadequate quantity or quality;*
- b. areas where organic agriculture is in early stages of development;*
- c. grazing of non-organic grass or vegetation during seasonal migration.*

In no such 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 higher percentage of non-organic feed for a limited time under specific conditions, following extreme and exceptional weather conditions or manmade or natural disasters beyond the control of the operator

5.5.2 Animals shall be offered 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.

5.5.3 More than 50% of the feed shall come from the farm unit itself, surrounding natural grazing areas, or be produced in co-operation with other organic farms in the region.

Regional or other exception

Exceptions may be permitted in regions where organic feed production is in an early stage of development or temporarily deficient, or in cases of unpredictably low crop production on the farm or in the region.

5.5.4 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.

5.5.5 The following substances are prohibited in the diet:

- a.** farm animal byproducts (e.g. abattoir waste) to ruminants;
- b.** slaughter products of the same species;
- c.** all types of excrements including droppings, dung or other manure;
- d.** feed subjected to solvent extraction (e.g. hexane) or the addition of other chemical agents;
- e.** synthetic amino-acids and amino-acid isolates;

- f. urea and other synthetic nitrogen compounds;
- g. synthetic growth promoters or stimulants;
- h. synthetic appetizers;
- i. preservatives, except when used as a processing aid;
- j. artificial coloring agents.

5.5.6 Animals may be fed vitamins, trace elements and supplements from natural sources.

Regional or other exception

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

5.5.7 All ruminants shall have daily access to roughage. Ruminants must be grazed throughout the entire grazing season(s).

Regional or other exception

Ruminants may be fed with organic carried fresh fodder during the grazing season where weather and soil conditions do not permit grazing. The organic carried fresh fodder shall not exceed 20% of the amount of forage grazed during the grazing season. Animal welfare shall not be compromised.

5.5.8 Fodder preservatives such as the following may be used:

- a. bacteria, fungi and enzymes;
- b. natural products of food industry;
- c. plant based products.
- d. vitamins and minerals subject to the order of preference in 5.5.6.

Regional or other exception

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

5.5.9 Young stock from mammals shall be provided maternal milk or organic milk from their own species and shall be weaned only after a minimum period as specified below:

- a. Calves and foals: 3 months
- b. Piglets: 6 weeks
- c. Lambs and kids: 7 weeks

5.6 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.

Requirements:

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

- a. selection of appropriate breeds or strains of animals;
- b. 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;
- c. provision of good quality organic feed;
- d. appropriate stocking densities;
- e. grazing rotation and management.

5.6.2 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. Operators shall give preference to natural medicines and treatments, including homeopathy, Ayurvedic medicine and acupuncture.

5.6.3 Use of synthetic allopathic veterinary drugs or antibiotics will cause the animal to lose its organic status. Producers shall not withhold such medication where doing so will result in unnecessary suffering of the livestock.

Regional or other exception

The animal may retain its organic status if:

- a. *the operator can demonstrate compliance with 5.6.1, and*
- b. *natural and alternative medicines and treatments are unlikely to be effective to cure sickness or injury, or are not available to the operator, and*
- c. *the chemically synthesized allopathic veterinary medical products or antibiotics are used under the supervision of a veterinarian, and*
- d. *withdrawal periods shall be not less than double of that required by legislation, or a minimum of 14 days, whichever is longer.*
- e. *this exception is granted for a maximum of three courses of remedial treatments with chemically synthesized allopathic veterinary medicinal products or antibiotics within 12 months, or one course of treatment if the productive lifecycle of the animal is less than one year.*

5.6.4 Prophylactic use of any synthetic allopathic veterinary drug is prohibited.

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

- 5.6.6** Vaccinations are allowed only in the following cases:
- a. when an endemic disease is known or expected to be a problem in the region of the farm and where this disease cannot be controlled by other management techniques, or
 - b. when a vaccination is legally required.

5.7 Transport and Slaughter

General Principle

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

Requirements:

- 5.7.1** Animals shall be handled calmly and gently during transport and slaughter.
- 5.7.2** The use of electric prods and other such instruments is prohibited.
- 5.7.3** Organic animals shall 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, extreme temperatures and relative humidity. The type of transport shall meet the specific needs of the species being transported.
- 5.7.4** The operator shall ensure an adequate food and water supply during transport and at the slaughterhouse.
- 5.7.5** Animals shall not be treated with synthetic tranquilizers or stimulants prior to or during transport.
- 5.7.6** Each animal or group of animals shall be identifiable at each step in the transport and slaughter process.
- 5.7.7** Slaughterhouse journey times shall not exceed eight hours.

Regional or other exception

When there is no certified organic slaughterhouse within eight hours travel time, an animal may be transported for a longer period if the animals are given a rest period and access to water.

- 5.7.8** Those responsible for transportation and slaughtering shall avoid contact (sight, sound or smell) of each live animal with dead animals or animals in the killing process.

- 5.7.9** Each animal shall be effectively stunned before being bled to death. The equipment used for stunning shall be in good working order.

Regional or other exception

Exceptions can be made according to religious practice. Where animals are bled without prior stunning this should take place in a calm environment. Slaughter techniques must prioritize animal welfare and aim to eliminate any stress, pain, or suffering endured by the animal.

5.8 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.

Requirements:

- 5.8.1** The areas within a 3 km radius of the hives shall consist of organically managed fields, uncultivated land and/or wild natural areas in a way 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.
- 5.8.2** The operator shall not place hives within a foraging distance (5 kms) of fields or other areas with a high contamination risk (e.g. conventional fields, industrial zones and highways).
- 5.8.3** The hives shall consist primarily of natural materials and present no risk of contamination to the environment or the bee products. Use of construction materials with potentially toxic effects is prohibited.
- 5.8.4** 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 in response to unexpected need 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 organic sugar shall be used.
- 5.8.5** 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 this standard have been complied with for at least one year.
- 5.8.6** During the conversion period, the wax shall be replaced by organically produced wax, except where no prohibited products have been previously used in the hive and where is no risk of contamination of wax. In cases where

all the wax cannot be replaced during a one-year period, the conversion period shall be extended to cover the full replacement of the wax.

- 5.8.7** For pest and disease control the following are permitted:
- a. lactic acid, formic acid;
 - b. oxalic acid, acetic acid;
 - c. sulfur;
 - d. natural essential oils (e.g. menthol, eucalyptol, camphor);
 - e. *Bacillus thuringiensis*;
 - f. steam, direct flame and caustic soda for hive disinfection.
- 5.8.8** Where preventative measures fail, veterinary medicinal products may be used provided the following are adhered to:
- a. preference is given to phyto-therapeutic and homeopathic treatment;
 - b. if allopathic chemically synthesized medicinal products are used, the bee products shall not be sold as organic;
 - c. treated hives shall be placed in isolation and undergo a conversion period of one year.
- 5.8.9** The practice of destroying the male brood is permitted only to contain infestation with *Varroa* (mites).
- 5.8.10** The health and welfare of the hive shall be primarily achieved by hygiene and hive management.
- 5.8.11** The destruction of bees in the combs as a method of harvesting of bee products is prohibited.
- 5.8.12** Mutilations, such as clipping of the wings of queen bees, are prohibited.
- 5.8.13** Artificial insemination of queen bees is permitted.
- 5.8.14** The use of chemical synthetic bee repellents is prohibited. 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.
- 5.8.15** Honey temperatures shall be maintained as low as possible, and not exceed 45°C, during the extraction and processing of products derived from bee keeping.

6 . AQUACULTURE PRODUCTION STANDARDS

6.1 *Conversion to Organic Aquaculture*

General Principle

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

Requirements:

- 6.1.1 Operators shall comply with all the relevant general requirements of chapters 3 and 5.
- 6.1.2 The conversion period of the production unit shall be at least one life cycle of the organism or one year, whichever is shorter.
- 6.1.3 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.
- 6.1.4 Production units must be located at an appropriate minimum distance from contamination sources and conventional aquaculture.

6.2 Aquatic Ecosystems

General Principle

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.

Requirements:

- 6.2.1 Aquatic ecosystems shall be managed to comply with relevant requirements of chapter 2.
- 6.2.2 Operators shall take adequate measures to prevent escapes of introduced or cultivated species and document any that are known to occur.
- 6.2.3 Operators shall take verifiable and effective measures to minimize the release of nutrients and waste into the aquatic ecosystem.
- 6.2.4 Fertilizers and pesticides are prohibited unless they appear in Appendices 2 and 3.

6.3 Aquatic Plants

General Principle

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

Requirements:

- 6.3.1 Aquatic plant production shall comply with the relevant requirements of chapters 2 and 4.
- 6.3.2 Harvest of aquatic plants shall not disrupt the ecosystem or degrade the collection area or the surrounding aquatic and terrestrial environment.

6.4 Breeds and Breeding

General Principle

Organic aquatic animals begin life on organic units.

Requirements:

- 6.4.1 Aquatic animals shall be raised organically from birth.

Regional or other exception

When organic aquatic animals are not available, brought-in conventional animals shall spend not less than two thirds of their life 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, the control body shall set time limits for the selected use of non-organic sources.

- 6.4.2 Operators shall not utilize artificially polyploid organisms or artificially produced monosex stock.
- 6.4.3 Aquatic animal production systems shall use breeds and breeding techniques suited to the region and the production method.

6.5 Aquatic Animal Nutrition

General Principle

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

Requirements:

- 6.5.1 Aquatic animals shall be fed organic feed.

Regional or other exception

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

- a. organic feed is of inadequate quantity or quality;*
- b. areas where organic aquaculture is in early stages of development.*

Non-organic aquatic animal protein and oil sources must be from independently verified sustainable sources.

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

6.5.3 Use of water containing human excrement is prohibited.

6.6 Aquatic Animal Health and Welfare

General Principles

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.

Requirements:

6.6.1 Operators shall comply with relevant requirements of section 5.7.

6.6.2 Prophylactic use of veterinary drugs is prohibited.

6.6.3 Operators must use natural methods and medicines, as the first choice, when treatment is necessary. Use of chemical allopathic veterinary drugs and antibiotics is prohibited for invertebrates.

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

6.6.5 Stocking densities do not compromise animal welfare.

6.6.6 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.

6.7 Aquatic Animal Transport and Slaughter

General Principle

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

Requirements:

- 6.7.1** Operators shall comply with relevant requirements of section 5.8.
- 6.7.2** The operator shall handle live organisms in ways that are compatible with their physiological requirements.
- 6.7.3** 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 minimize the adverse effects of:
 - a.** diminishing water quality;
 - b.** time spent in transport;
 - c.** stocking density;
 - d.** toxic substances;
 - e.** escape.
- 6.7.4** Aquatic vertebrates shall be stunned before killing. 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.
- 6.7.5** Aquatic animals shall be handled, transported and slaughtered in a way that minimizes stress and suffering, and respects species-specific needs.

7 . PROCESSING AND HANDLING

7.1 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.

Requirements:

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

- 7.1.2 Handlers and processors shall ensure traceability in the organic processing and handling chain.
- 7.1.3 All organic products shall be clearly identified as such and processed, stored and transported in a way that prevents substitution by or contact with conventional products through the entire process.
- 7.1.4 When non-organic products are prepared or stored in the preparation unit, the operator shall inform the control body.
- 7.1.5 The handler or 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.
- 7.1.6 The handler or processor shall identify and minimize risks of environmental pollution resulting from their activity.
- 7.1.7 Processors shall respect the principles of good manufacturing practices. This shall include maintaining appropriate procedures based on identification of critical processing steps.

7.2 *Ingredients*

General Principle

Organic processed products are made from organic ingredients.

Requirements:

- 7.2.1 All ingredients used in an organic processed product shall be organically produced except for those additives and processing aids that appear in Appendix 4.

Regional or other exception

In cases where an ingredient of organic origin is commercially unavailable in sufficient quality or quantity, operators may use non-organic raw materials, provided that:

- a. they are not genetically engineered or contain nanomaterials , and*
- b. the current lack of availability in that region is officially recognized¹ or prior permission from the control body is obtained.*
- c. the requirements in section 8.1.3 shall be met.*

¹ This may be by inclusion on a government or certification body list of permitted non-organic agricultural ingredients.

- 7.2.2** Using organic and non-organic forms of the same ingredient in a single product is prohibited.
- 7.2.3** 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.
- 7.2.4** 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 in the market to which the particular batch of product is destined.
- 7.2.5** 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. Cultures that are prepared or multiplied in-house shall comply with the requirements for the organic production of microorganisms.
- 7.2.6** For the production of organic micro-organisms for processed food and feed, only organically produced substrate shall be used.

7.3 Processing Methods

General Principle

Organic processing and handling provides the consumer with high quality supplies of organic products without compromise to the integrity of the products and protects the environment.

Requirements:

- 7.3.1** Techniques used to process organic products shall be biological, physical, and mechanical in nature. Any additives, processing aids, or other material that reacts chemically with organic products or modifies it must be organically produced or appear in Appendix 4 Table 1 and shall be used in accordance with noted restrictions.
- 7.3.2** Substances and techniques shall not be used that:
- a.** reconstitute properties lost by the processing and storage of organic products;
 - b.** conceal negligent processing;
 - c.** or may otherwise be misleading as to the true nature of these products.
- Water may be used for re-hydration or reconstitution.

- 7.3.3** Solvents used to extract organic products shall be either organically produced or food grade substances that appear on Appendix 4, Table 1 consistent with the annotation.
- 7.3.4** Irradiation is not permitted for any ingredient or the final product.
- 7.3.5** Filtration equipment shall not contain asbestos, or utilize techniques or substances that may contaminate the product. Filtration agents and adjuvants are considered processing aids and therefore must appear in Appendix 4.
- 7.3.6** The following conditions of storage are permitted (for allowed substances in these conditions, see Appendix 4):
- a. controlled atmosphere;
 - b. temperature control;
 - c. drying;
 - d. humidity regulation.
- 7.3.7** Intentional manufacture or use of nanomaterials in organic products is prohibited.
- 7.3.8** Equipment surfaces and utensils that might come into contact with organic products shall be free of nanomaterials, unless there is verified absence of contamination risk.

7.4 *Pest and Disease Control*

General Principle

Organic products are protected from pests and diseases by the use of good manufacturing practices that include proper cleaning, sanitation and hygiene, without the use of chemical pest control treatments or irradiation.

Requirements:

- 7.4.1** Handlers and processors shall manage pests and shall use the following methods according to these priorities:
- a. preventative methods such as disruption, elimination of habitat and access to facilities;
 - b. mechanical, physical and biological methods, including visual detection, sound, ultra-sound, light and UV-light, temperature control, controlled atmosphere and diatomaceous earth.
 - c. substances according to the Appendices of this standard;
 - d. substances (other than pesticides) used in traps.

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

- a. pesticides not contained in Appendix 3;
- b. fumigation with ethylene oxide, methyl bromide, aluminum phosphide or other substance not contained in Appendix 4;
- c. ionizing radiation.

7.4.3 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 products and related packaging materials 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 and shall be documented to attest this.

7.5 Packaging

General Principle

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

Recommendation:

Polyvinyl chloride (PVC) and aluminum should be avoided.

Requirements:

7.5.1 Operators shall not use packaging material that may contaminate organic products. This includes reused bags or containers that have been in contact with any substance likely to compromise the organic integrity. Packaging materials, and storage containers, or bins that contain a synthetic fungicide, preservative, fumigant, or nanomaterials are prohibited.

7.5.2 Operators shall demonstrate efforts to minimize packaging and/or choose packaging materials with minimum environmental impact. The total environmental impact of production, use and disposal of packaging must be considered.

7.6 Cleaning, Disinfecting, and Sanitizing of Processing Facilities

General Principle

Organic products are safe, of high quality, and free of substances used to clean, disinfect, and sanitize the processing facilities.

Requirements:

- 7.6.1** Operators shall take all necessary precautions to protect organic products against contamination by substances prohibited in organic farming and handling, pests, disease-causing organisms, and foreign substances.
- 7.6.2** Water and substances that appear in Appendix 4, Table 2, may be used as equipment cleansers and equipment disinfectants that may come into direct contact with the product.¹
- 7.6.3** Operations that use other cleaners, sanitizers, and disinfectants on product contact surfaces shall use them in a way that does not contaminate the product. The operator shall perform an intervening event between the use of any cleaner, sanitizer, or disinfectant and the contact of organic product with that surface sufficient to prevent residual contamination of that organic product.

8 . LABELING

8.1 General

General Principle

Organic products are clearly and accurately labeled as organic.

Requirements

- 8.1.1.** Products produced in accordance with this standard may be labeled as organic.
- 8.1.2** Labels must identify the following:
 - a. the person or company legally responsible for the product
 - b. the body that assures conformity to the applicable organic standard.
- 8.1.3** Processed products shall be labeled according to the following minimum requirements:
 - a. Where 95 to 100% of the ingredients (by weight) are organic, the product may be labeled as “organic”.

¹ Note: this clause does not preclude other terminal sanitizers to be used, as the list is simply indicative.

- b. Where less than 95% but not less than 70% of the ingredients (by weight) are organic, these product cannot be labeled as “organic”, but phrases such as “made with organic ingredients” can be used, provided the proportion of organic ingredients is clearly stated.
- c. Where less than 70% of the ingredients (by weight) are organic, the product cannot be labeled as “organic”, nor bear phrases such as “made with organic ingredients” on the package front, nor bear any certification body seal, national logo, or other identifying mark which represents organic certification of a product or product ingredients, but individual ingredients may be called “organic” in the ingredients list.

Notes on calculating percentages:

Water and salt are not included in the percentage calculations of organic ingredients.

- 8.1.4** 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.
- 8.1.5** “In-conversion” ingredients may be used in multi-ingredient feed. However the ingredient list must identify their status and the total percentages of “in-conversion”, organic and non-organic ingredients on a dry matter basis.
- 8.1.6** Multi-component products, live or unprocessed (such as vegetable boxes) may be sold or marketed as organic only if all the components are organic.
- 8.1.7** The label for in-conversion products shall be clearly distinguishable from the label for organic products. Only single ingredient plant products may be labeled as “in-conversion”.

9. SOCIAL JUSTICE

General Principle

Social justice and social rights are an integral part of organic agriculture and processing. The fairness principle of organic agriculture emphasizes that those involved in organic agriculture should conduct human relationships in a manner that ensures fairness at all levels and to all parties involved.

Recommendation:

Operators should positively and actively encourage the collective organization of their employees or contracted smallholders.

Permanent employees and their families should have access to education, transportation and health services.

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.

Organic operations should make a positive social and cultural contribution over and above legal obligations. This could be in one or several of the following areas:

- Education and training
- Research and innovation
- Supporting the local and wider community
- Enhancing rural development.

Requirements:

- 9.1. Production that violates human rights and social justice requirements in this chapter cannot be declared organic.
- 9.2 Operators shall not violate indigenous land rights.
- 9.3 Operators shall not use forced or involuntary labor or apply any pressure such as retaining part of the workers' wages, property or documents.
- 9.4 Operators shall not interfere with the right of their employees, suppliers, farmers and contractors to organize and to bargain collectively, free from interference, intimidation and retaliation.
- 9.5 Operators shall provide their employees and contractors equal opportunity and treatment, and shall not act in a discriminatory way.
- 9.6 Operators shall have a disciplinary procedure with a system of warning before any suspension or dismissal. Workers dismissed shall be given full details of reasons for dismissal.
- 9.7 Employees shall be granted the right to take at least one day off after six consecutive days of work. Operators shall not require workers to work more than the contracted hours and the national or regional sectorial legislation. Overtime shall be remunerated in the form of supplementary payments or time off in lieu.

9.8 Operators shall never require an employee to work who is ill or requiring medical attention and shall not sanction an employee for the sole fact of missing work due to illness.

9.9 Operators shall not use child labor¹.

Regional or other exception

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

- a. such work is not dangerous or hazardous to their health and safety;*
- b. it does not jeopardize the child's educational, moral, social, mental, spiritual and physical development;*
- c. children are supervised by adults or have authorization from a legal guardian.*

9.10 Operators shall pay employees wages and benefits that meet legal minimum requirements of the operation's jurisdiction or, in the absence of this minimum, the sectorial benchmark.

9.11 Operators shall provide written terms and conditions of employment to both permanent and temporary employees, in a language and presentation understandable to the worker. The terms and conditions must specify at least:

- wages;
- frequency and method of payment;
- location, type and hours of work;
- recognition of workers' freedom of association;
- disciplinary procedure;
- health and safety procedure;
- eligibility and terms of overtime, holiday pay, sickness benefit and other benefits such as maternity and paternity leave; and
- worker's right to terminate employment.

Operators shall ensure that the workers understand the terms of their employment contract. Operators shall respect the terms of the contract in good faith, including timely payment of wages.

Regional or other exception

In cases where:

- the operator is unable to write, or*
 - workers are hired for periods of less than 6 days, or*
 - emergency labor is needed to address unpredictable problems*
- oral mutual agreements on the terms and conditions of employment are sufficient.*

9.12 Operators shall ensure adequate access to potable water.

¹ For the purpose of this standard, all people under 13 are considered children.

- 9.13** Operators shall provide appropriate safety training and equipment to protect workers from noise, dust, sunlight and exposure to chemicals or other hazards in all production and processing operations.
- 9.14** Operators shall provide residential employees with habitable housing and access to potable water; to sanitary and cooking facilities and to basic medical care. If families reside on the operation, the operator shall also enable access to basic medical care for family members and to school for children.
- 9.15** Operators shall comply with minimum national social requirements in the countries of operation
- 9.16** Operators with more than 10 employees must have a written employment policy and maintain records to demonstrate full compliance with the requirements of this section. Workers will have access to their own files.
- 9.17** Requirements in this section apply equally to all workers on the operation regardless of how they are employed¹, except for subcontractors performing non-production core business functions such as plumbing, machine repair, or electrical work.

¹ For example, direct employment, employment agencies, labor contractors and employment brokers.

SECTION C – APPENDICES

APPENDIX 1: 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, additives, processing aids, and other substances that are allowed for use in organic production, handling, and processing under this standard. These lists will be amended based on a review by the IFOAM Standard Committee, taking into account the below criteria for evaluation of inputs. The process for members or other stakeholders to request adding, deleting or otherwise changing the status of an input is located in IFOAM Policy 20 on the revision of the IFOAM Norms, which is accessible on the IFOAM website, www.ifoam.org, or can be ordered from the IFOAM Head Office (ogs@ifoam.org).

Production Input Criteria

Inputs used in organic production are consistent with the principles of organic farming outlined in the relevant chapters of the IFOAM Standard 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.

A) Crop and Livestock Criteria

The following criteria are applied to inputs that are used to evaluate dossiers submitted for crop production. The current IFOAM Standard does not have a separate appendix for livestock inputs. Development of a procedure and application of the criteria to inputs used in livestock production is a work in progress. See chapter 5 for livestock standards and inputs that may be used in organic livestock production.

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 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 and other organisms are generally allowed. Substances that undergo physical transformations, such as by mechanical processing, or biological methods, like 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. 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 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 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 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 its release into the environment; and consumers exposed by ingestion of food-borne residues.

5. Quality

All dossiers shall document the substance's effect on product quality. 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 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, and 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.
- 6.3 Inputs used for animal feed and livestock production shall be evaluated for their 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 behavior or physical functioning of animals kept at the farm may be prohibited or restricted.

B) Processing and Handling Criteria

Introduction

These criteria apply to the evaluation of additives and 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 the product. For 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 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 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 added when it is demonstrated to be absolutely essential and necessary for the production of a specific product that is consistent with organic principles stated in the IFOAM Standard.

- 1.1. All dossiers shall take into consideration the technical feasibility of the following alternatives:

- a) Whole products that are organically produced according to the standard.
 - b) Products that are organically produced and processed according to the standard.
 - 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 standard but appear on Appendix 4.
- 1.2 If an ingredient is required to manufacture a processed product to independently established minimum technical specifications recognized by consumers, and no organic substitute is available, then a non-organic ingredient may 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 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, flavors, 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 document the substance's environmental impact.

Documentation for environmental impact: the release of any harmful waste stream or by-products from both manufacturing and use in processing. 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 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, 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 document 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.
 - 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 take into account 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 that 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, to create, recreate or improve characteristics such as flavors, colors, or textures, or to restore or improve 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 without preference for any specific techniques or equipment, and shall be added to the list only when it is demonstrated to be absolutely essential and necessary for the formulation and production of a specific product that is consistent with organic principles stated in the IFOAM Standard.

6. Social, Economic, and Ethical Considerations

- 6.1 All dossiers shall document the substance's social, economic, and 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 products.

- 6.3 Consumer perceptions of the compatibility of additives and processing aids shall be taken into account. An input might be reasonably considered 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.

APPENDIX 2: FERTILIZERS AND SOIL CONDITIONERS

SUBSTANCES DESCRIPTION, COMPOSITIONAL REQUIREMENTS	CONDITIONS FOR USE
I. PLANT AND ANIMAL ORIGIN	
Farmyard manure, slurry and urine	Shall not constitute the main source of nitrogen in the absence of complimentary and additional nitrogen generating practices on farm and shall not be from conventional intensive livestock production systems without prior permission from the control body
Guano	
Source separated human excrement	Only in compliance with requirement 4.4.5.
Vermicastings	
Blood meal, meat meal, bone, bone meal	
Hoof and horn meal, feather meal, fish and shell products, wool, hide, 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	Free of significant contaminants; or composted before bringing onto organic land and confirmed free of significant contaminants
Crop residues and plant materials, mulch, green manure, straw	
Wood, bark, sawdust, wood shavings, wood ash, wood charcoal	Only if not chemically treated
Seaweed and seaweed products	As far as obtained by: (i) physical processes including dehydration, freezing and grinding; (ii) extraction with water or potassium hydroxide solutions, provided that the minimum amount of solvent necessary is used for extraction; (iii) fermentation.
Peat (prohibited for soil conditioning)	Excluding synthetic additives; permitted only in horticulture (floriculture, nursery plants, potting mixes).
Plant preparations and extracts	
Compost made from ingredients listed in this appendix,	
spent mushroom waste, humus from worms and insects,	
urban composts and household wastes from separated sources which are monitored for contamination	
II. MINERAL ORIGIN	

Calcareous and magnesium amendments:	
Limestone, gypsum, marl, maerl, chalk, sugar beet lime,	
calcium chloride,	
Magnesium rock, kieserite and Epsom salt (magnesium sulfate)	
Other non-synthetic calcareous and magnesium amendments	
Clay (e.g. bentonite, perlite, vermiculite, zeolite)	
Mineral potassium (e.g. sulfate of potash, muriate of potash, kainite, sylvanite, patenkali)	Shall be obtained by physical procedures but not enriched by chemical processes
Phosphates in non-synthetic form (e.g. rock phosphate, colloidal phosphate, apatite)	Cadmium content less than or equal to 90 mg/kg of P ₂ O ₅
Pulverized rock, stone meal, crushed stone.	
Sodium chloride	
Sulfur	
Trace elements, e.g.: boric acid, sodiumborate, calciumborate, borethanolamin, cobalt-acetate, cobalt-sulphate, copper oxide, copper sulfate, copper hydroxide, copper silicate, copper carbonate, copper citrate ferric oxide, ferric sulfate, ferrous sulfate, iron citrate, iron sulfate, or iron tartrate manganous oxide, manganese sulfate and manganese carbonate selenic acid, selenous acid, sodiummolybdate, molybdic oxide zinc carbonate, zinc oxide, zinc silicate, and zinc sulfate	Use restricted to cases where soil/plant nutrient deficiency is documented by soil or tissue testing or diagnosed by an independent expert. Micronutrients in either chloride or nitrate forms are prohibited. Micronutrients may not be used as a defoliant, herbicide, or desiccant.
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	
Calcium lignosulfonate	

APPENDIX 3: CROP PROTECTANTS AND GROWTH REGULATORS

SUBSTANCES DESCRIPTION, COMPOSITIONAL REQUIREMENTS	CONDITIONS FOR USE
I. PLANT AND ANIMAL ORIGIN	
Algal preparations	As far as obtained by: (i) physical processes including dehydration, freezing and grinding; (ii) extraction with water or potassium hydroxide solutions, provided that the minimum amount of solvent necessary is used for extraction; (iii) fermentation.
Animal preparations and oils	
Beeswax	
Chitin nematicides (natural origin)	Not processed by acid hydrolysis
Coffee grounds	
Corn gluten meal	
Dairy products (e.g. milk, casein)	
Gelatin	
Lecithin	
Natural acids (e.g. vinegar)	
Neem (<i>Azadirachta indica</i>)	
Plant oils	
Plant preparations	
Plant based repellents	
Propolis	
Pyrethrum (<i>Chrysanthemum cinerariaefolium</i>)	The synergist Piperonyl butoxide is prohibited.
Quassia (<i>Quassia amara</i>)	
Rotenone (<i>Derris elliptica</i> , <i>Lonchocarpus</i> spp. <i>Tephrosia</i> spp.)	Not near waterways. Subject to approval by the CB
Ryania (<i>Ryania speciosa</i>)	
Sabadilla	
II. MINERAL ORIGIN	
Chloride of lime (calcium chloride)	
Clay (e.g. bentonite, perlite, vermiculite, zeolite)	
Copper salts (e.g. sulfate, hydroxide, oxychloride, octanoate)	Max 6 kg Cu/ha per year (on a rolling average basis)
Diatomaceous earth	
Light mineral oils (paraffin)	
Lime sulfur (Calcium polysulfide)	
Potassium bicarbonate	

Calcium hydroxide (hydrated lime)	For application on aerial plant parts only
Silicates (e.g. sodium silicates, quartz)	
Sodium bicarbonate	
Sulfur	
III. MICROORGANISMS	
Fungal preparations (e.g. spinosad)	
Bacterial preparations (e.g. Bacillus thuringiensis)	
Release of parasites, predators and sterilized insects	
Viral preparations (e.g. granulosis virus)	
IV. OTHERS	
Biodynamic preparations	
Carbon dioxide	Shall not be the result of burning fuel solely to produce carbon dioxide; allowed only as a by-product of other processes.
Ethyl alcohol	
Homeopathic and Ayurvedic preparations	
Iron phosphates (for use as molluscicide)	
Seasalt and salty water	
Soft soap	
V. TRAPS, BARRIERS, REPELLENTS	
Physical methods (e.g. chromatic traps, mechanical traps)	
Mulches, nets	
Pheromones – in traps and dispensers only	

APPENDIX 4 – TABLE 1: LIST OF APPROVED ADDITIVES¹ AND PROCESSING / POST-HARVEST HANDLING AIDS

Substances of certified organic origin must be used if commercially available. If organic sources are not available, natural sources must be used if commercially available. Only if organic and natural sources are not available, synthetic forms of the substances below may be used.

INT'L NUMBERING SYSTEM	PRODUCT	ADDITIVE	PROC. & Post Har. Han. AID	LIMITATION/ NOTE
INS 170	Calcium carbonate	X	X	Not for coloring
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	
INS 296	L-malic acid	X	X	
INS 300	Ascorbic acid	X		
INS 306	Tocopherols, mixed natural concentrates	X		
INS 322	Lecithin	X	X	Obtained without bleaches
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		

¹ Additives may contain carriers, which shall be evaluated.

INT'L NUMBERING SYSTEM	PRODUCT	ADDITIVE	PROC. & Post Har. Han. AID	LIMITATION/ NOTE
INS 415	Xanthan gum	X		
INS 428	Gelatin		X	
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	X	As processing aid for pH adjustment of water during sugar processing. As additive for wine and apple cider production
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	
INS 553	Talc		X	
INS 558	Bentonite		X	Only for fruit and vegetable products
INS 901	Beeswax		X	
INS 903	Carnauba wax		X	

INT'L NUMBERING SYSTEM	PRODUCT	ADDITIVE	PROC. & Post Har. Aid	LIMITATION/ NOTE
INS 938	Argon	X		
INS 941	Nitrogen	X	X	
INS 948	Oxygen	X	X	
	Ethylene		X	De-greening of citrus and ripening
	Activated carbon		X	
	Casein		X	Only for wine
	Cellulose		X	
	Diatomaceous earth		X	
	Ethanol		X	
	Isinglass		X	Only for wine
	Kaolin		X	
	Perlite		X	
	Plant and animal oils		X	For extraction only
	Preparations of bark		X	Only for sugar

Flavoring Agents

Operators may use:

- organic flavoring extracts (including volatile oils), and, if not available,
- natural flavoring preparations approved by the control body. Such approval shall include assessment that natural flavors shall meet the following criteria:
 - the sources are plant, animal or mineral;
 - the process of production is in accordance with a recognized organic standard;
 - they are produced by means of solvents such as vegetal oils, water, ethanol, carbon dioxide and mechanical and physical processes.

Preparations of Micro-organisms and Enzymes for use in food processing (see 7.2.5)

These may be used as ingredient or processing aids with approval from the control body:

- Organic certified micro-organisms
- Preparations of micro-organisms
- Enzymes and enzyme preparations

APPENDIX 4 – TABLE 2: INDICATIVE LIST OF EQUIPMENT CLEANSERS AND EQUIPMENT DISINFECTANTS

PRODUCT	LIMITATION/NOTE
Acetic acid	
Alcohol, ethyl (ethanol)	
Alcohol, isopropyl (isopropanol)	
Calcium hydroxide (slaked lime)	
Calcium hypochlorite	An intervening event or action must occur to eliminate risks of contamination
Calcium oxide (quicklime)	
Chloride of lime (calcium oxychloride, calcium chloride, and calcium hydroxide)	
Chlorine dioxide	An intervening event or action must occur to eliminate risks of contamination
Citric acid	
Formic acid	
Hydrogen peroxide	
Lactic acid	
Natural essences of plants	
Oxalic acid	
Ozone	
Peracetic acid	
Phosphoric acid	Only for dairy equipment
Plant extracts	
Potassium soap	An intervening event or action must occur to eliminate risks of contamination
Sodium carbonate	
Sodium hydroxide (caustic soda)	An intervening event or action must occur to eliminate risks of contamination
Sodium hypochlorite	An intervening event or action must occur to eliminate risks of contamination
Sodium soap	An intervening event or action must occur to eliminate risks of contamination

**APPENDIX 5: SUBSTANCES FOR PEST AND DISEASE CONTROL AND
DISINFECTION IN LIVESTOCK HOUSING AND EQUIPMENT**

PRODUCT
Alkali carbonates
Calcium oxide (lime, quicklime)
Caustic potash (potassium hydroxide)
Caustic soda (sodium hydroxide)
Citric, peracetic acid, formic, lactic, oxalic and acetic acid
Cleaning and disinfection products for teats and milking facilities
Ethanol and isopropanol
Hydrogen peroxide
Iodine
Milk of lime (=slack lime, cal, picklinglime, hydrated lime, slaked lime) = calcium hydroxide
Natural essences of plants
Nitric acid (dairy equipment)
Phosphoric acid (dairy equipment)
Potassium and sodium soap
Sodium carbonate
Sodium hypochlorite (e.g. as liquid bleach)
Water and steam

THE IFOAM ACCREDITATION PROGRAMS

IOAS

A non-profit organization

Head Office: 235 Sims Street, Suite 22B, Dickinson ND 58601, USA

Tel: +1 701 483 5504 Fax: +1 701 483 5508

E Mail: info@ioas.org, Web: www.ioas.org

What are the Accreditation Programs developed by IFOAM?

As part of its Organic Guarantee System, IFOAM has developed two alternative accreditation programs: the IFOAM Accreditation Program (IAP) and the IFOAM Global Organic System Accreditation (IGOSA). These accreditation programs are primarily a means of ensuring fair and orderly trade in organic products throughout the world. Accreditation is an assessment of the competence of certification bodies worldwide by confirming whether they satisfy IFOAM Norms. But it is more than this, much more.

Why should my organization become accredited under one of the IFOAM accreditation programs?

There are many reasons but the main ones are:

IFOAM Norms are set by the IFOAM membership. It is a fully democratic structure open to all who work in the field of organic agriculture and production. This means that standards and operating requirements for certification bodies are set by the people who live them day to day and whose livelihood depends upon them. The mechanism is accessible, transparent and global; an elegant example of industry self-regulation.

IOAS is an international accreditation body. In fact, the IOAS is one of a small number of sector specific, international accreditation bodies that have developed a novel solution to international equivalence problems. Equivalence is not an issue when the same accreditation body oversees all certification bodies. If all certification bodies around the world became IFOAM Accredited, or if governments more fully used the services of IOAS, equivalence problems that farmers and processors worldwide experience day to day would become a thing of the past.

IOAS is made up of experts. IOAS is committed to organic agriculture. Its entire professional staff as well as its Board and Accreditation Committee members are experts in this field and are drawn from across the world. This means that you will be subject to a rigorous but empathetic evaluation, both technically and culturally.

Isn't government approval of certification bodies enough?

It is true that governments are increasingly interested in regulating the organic sector and that is a good thing as they provide a backdrop of enforcement. Unfortunately, the trend is towards individual countries developing their own standards and approval procedures which are then imposed on imported products rather than using equivalence approaches and the international accreditation system. Over 70 countries have implemented legislation on organic agriculture and many more are in the process of drafting such rules. The subsequent requirement that other countries must demonstrate equivalence to the rules of the importing country is complex, slow and lacks accessibility and transparency. It adds unnecessary bureaucracy to the system and consequent higher costs for organic products. As a result, most certification bodies now run multiple programs in order to demonstrate that products comply with the many regulations that have been developed. In addition, many certification bodies are being evaluated by several authorities or accreditation bodies further duplicating and increasing the cost of an already complicated system. Ultimately the expansion of organic agriculture and the spread of its benefits are diminished. There is another way.

A partnership with government

IFOAM and the IOAS actively invite government involvement in these accreditation programs and encourage them to use our expertise and services. Two or more duplicating accreditation systems across the world that do not relate to each other does not make sense. Together however, we can make a powerful team.

Currently several country regulations require IFOAM Accreditation or the IFOAM Global Organic System Accreditation as their measure of equivalence for import approval. Other regulatory systems make use of assessment reports prepared by the IOAS on behalf of accredited certification bodies IOAS is also an approved Conformity Verification Body for the Canada Organic Regime. IOAS is in discussion with several governments concerning certification body oversight. We believe it is just a matter of time before common sense prevails and governments realize the potential for increasing the effectiveness of their control system by integrating the services of the IOAS. In a world of internationalized trade in organic products and internationalized certification services, international accreditation is the future.

From where does IOAS get its authority?

The IOAS has not been given its authority; it has earned it.

Over a number of years IFOAM and the IOAS have worked hard to gain the respect of governments, certification bodies and the trade. This culminated in August 2004 when the US Dept. of Commerce, National Institute of Standards and Technology (NIST) announced their recognition of IOAS as compliant to ISO17011 with scopes

IFOAM Norms and ISO65. Hereafter, IOAS is subject to ongoing surveillance by NIST. The Canada Food Inspection Agency also audits the IOAS against ISO 17011.

What's involved in the accreditation process?

Documentation from certification bodies is submitted for screening against the relevant IFOAM norms. Normally the screening will indicate required improvements which need to be rectified by the applicant. An evaluation visit is carried out by an IOAS evaluator, who then compiles a report. This report is assessed by the IOAS Accreditation Committee which makes the final accreditation decision. Accredited bodies are subject to continuous review through annual reporting and surveillance visits with complete re-evaluation every four years. Surveillance includes office and operator visits and where relevant, visits to foreign offices and operators. The IOAS also has the authority to investigate any complaints about an accredited certifier, wherever in the world the issue arises.

How can we demonstrate our accreditation?

An accreditation list is published on the IOAS website and in publications and is available from the IOAS office. This indicates details of accreditation scopes and countries of activity. As IFOAM Accreditation and the IFOAM Global Organic System Accreditation (IGOSA) are primarily a business-to-business guarantee, accredited certifiers are required to indicate on certificates the products to which IFOAM or IGOSA accreditation apply.

Accredited certification bodies may make their status known on their letterheads, and their own publicity material such as web sites and business cards. Since 1999 IFOAM Accredited Certification Bodies have also been able to sublicense the use of the IFOAM Seal to operators. The Seal is the mark of organic integrity around the world and allows consumers to see the global organic guarantee on product packaging . Two slightly different seals are now available for the IFOAM Accredited and the IGOSA Accredited certification programs.

For a complete list of IFOAM and IGOSA accredited certification bodies and applicants, please check www.ioas.org.

For contact information please also refer to the IOAS website at www.ioas.org. There you will find up to date information about the IOAS Board, the IOAS Accreditation Committee and IOAS personnel.

ABOUT IFOAM

IFOAM Head Office
Charles-de-Gaulle-Str. 5
53113 Bonn, Germany
Email: headoffice@ifoam.org
Tel: +49 - 228 - 92650 - 10
Fax: +49- 228 - 92650 – 99

What is IFOAM?

Founded in 1972, IFOAM is the (only) worldwide umbrella organization of the organic agriculture movement, uniting 870 member organizations in 120 countries. Among IFOAM's affiliates are, for example, organic farmers' associations, organizations from the organic food industry, NGOs, government institutions, organic networks, research institutions, as well as certifiers.

IFOAM's mission is **leading**, **uniting** and **assisting** the organic movement in its full diversity. The organization's goal is the worldwide adoption of ecologically, socially and economically sound systems. Democratically organized, it represents the common interest of the organic movement based on the four principles of Organic Agriculture (Health, Ecology, Fairness and Care).

With its dual identity of umbrella organization and global action network, IFOAM unites positions, implements projects and offers services to its clients that are relevant to the organic movement and for achieving its goals. It has identified five pillars of actions on which it rests its long term strategy:

- Organic Umbrella – Uniting the Organic Movement;
- Organic Advocacy – Promoting Sustainability in Agriculture;
- Organic Value Chain – Facilitating Production and Trade;
- Organic Programs – Assisting Organic Development;
- IFOAM Academy – Building Organic Leaders' Capacity.

More information about IFOAM, see www.ifoam.org.

What services does IFOAM provide under its Organic Guarantee System?

The IFOAM Family of Standards: 'That's Organic - Worldwide' is the slogan of the Family of Standards, expressing its function of drawing the line between organic and

not organic. The Family contains all standards and regulations that have passed an equivalence assessment against a normative reference approved by IFOAM's membership. Admission into the Family grants standard owners the use of the Family logo and the possibility to promote their standard through IFOAM to the international organic community. IFOAM encourages governments and standard users to recognize other standards in the Family as equivalent.

The IFOAM Standard: The IFOAM Standard is a convenient good practice off-the-shelf organic certification standard maintained by IFOAM and is part of the IFOAM Family of Standards. The clients of this service, certification bodies, outsource the constant development of their standard and obtain a widely accepted product, that is endorsed by the Organic Movement. They can participate in the standard development decisions.

The IFOAM Accreditation and the IFOAM Global Organic System Accreditation (IGOSA): The IOAS (International Organic Accreditation Service) implements these accreditation programs for IFOAM. The IGOSA can be obtained based on compliance with the IFOAM Accreditation Requirements and on using a standard approved in the IFOAM Family of Standards. The IFOAM Accreditation, is also based on compliance with the IFOAM Accreditation Requirements but requires the standard to comply with the IFOAM Standard.

The 10 reasons to apply for the IFOAM Family of Standards

Upon application to the Family of Standards, you will be able to access the following benefits:

1. Get a thorough, independent assessment of your standard.
2. Make your standard – and organization – more visible at the international level.
3. Be part of the global community of organic standard setters.
4. Contribute to IFOAM's work to help harmonize and improve organic standards worldwide.
5. Get to know the COROS and participate in its future development.

Once your standard has been approved in the Family of Standards, you will be able to access the following additional benefits:

6. Gain credibility through official IFOAM endorsement of your standard.
7. Efficiently communicate the strengths of your standard.
8. Access other OGS services that are contingent upon Family approval.
9. Set a basis for possible (not compulsory) entrance into bi- or multi- lateral equivalence agreements.
10. Add value to your standard by achieving increased market access for your clients.

