



CARICOM REGIONAL CODE OF PRACTICE

CODE OF PRACTICE FOR ORGANIC PRODUCTION AND PROCESSING

CRCP 09: 201X

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DRAFT CARICOM REGIONAL CODE OF PRACTICE

Code of Practice for organically produced foods

DCRCP 09: 201X

NOTICE

This is a draft code of practice and shall not be used or referred to as a Regional Code of practice. It is subject to change without notice.

Recipients of this draft are invited to submit their voting positions during the designated voting period. (Nb. Any comments received will be logged and considered during the review stage)

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Foreword

This Code of Practice was prepared through the CARICOM Regional Organisation for Standards and Quality (CROSQ). It was approved by the CROSQ Council on _____.

1. Organic agriculture is one among a broad spectrum of methodologies which are supportive of the environment. Organic production systems are based on specific and precise standards of production which aim at achieving optimal agro ecosystems which are socially, ecologically and economically sustainable.

2. "Organic" is a labelling term that denotes products that have been produced in accordance with organic production standards and certified by a duly constituted verification body or competent authority. Organic production is based on optimizing soil health and sustaining ecosystems and people while minimizing the use of external inputs, and avoiding the use of synthetic fertilizers and pesticides. Organic agriculture practices cannot ensure that products are completely free of residues, due to general environmental pollution. However, methods are used to minimize pollution of air, soil and water. Organic food handlers, processors and retailers adhere to standards to maintain the integrity of organic agriculture products.

3. Apart from a small portion of agricultural commodities marketed directly from the farm to consumers, most products find their way to consumers via established trade channels. To minimize deceptive practices in the market place, specific measures are necessary to ensure that trade and processing enterprises can be audited effectively. Therefore, the regulation of a process rather than a final product demands responsible action by all involved parties.

4. The purposes of the Code of Practice are as follows:

- a) to protect consumers against deception and fraud in the market place and unsubstantiated product claims;
- b) to protect producers of organic produce against misrepresentation of other agricultural produce as being organic;
- c) to ensure that all stages of production, preparation, storage, transport and marketing are subject to inspection and comply with these practices;
- d) to harmonize provisions for the production, certification, identification and labelling of organically grown produce;
- e) to provide regional practices for organic food control systems in order to facilitate recognition of national systems as equivalent for the purposes of imports; and
- f) to maintain and enhance organic agricultural systems in each country so as to contribute to local and global preservation.

5. For the purpose of this Code of Practice the word "should" is used to indicate that among several possibilities one is recommended as particularly suitable, without mentioning or excluding others, or that a certain course of action is preferred but not necessarily required.

While the word "shall" is used to indicate requirements strictly to be followed in order to conform to the Code of Practice and from which no deviation is permitted, unless accepted by all involved parties.

6. These practices are at this stage a first step into official regional harmonization of the requirements for organic products in terms of production and marketing standards, inspection arrangements and labelling requirements. Within CARICOM consumer perception on the organic production method may differ from country to country. Therefore, the following is recognized at this stage:

- a) these practices are a useful instrument in assisting countries to develop national regimes regulating production, marketing and labelling of organic foods;
- b) these practices need periodic review and updating in order to take into account technical progress and the experience with their implementation;
- c) the practices do not prejudice the implementation of more restrictive arrangements and more detailed rules by regional countries; in order to maintain consumer credibility and prevent fraudulent practices, and to apply such rules to products from other countries on the basis of equivalency to such more restrictive provisions.

7. Recognizing that organic production systems continue to evolve and that organic principles and standards will continue to be developed under these guidelines, the CARICOM Regional Organisation for Standards and Quality (CROSQ) shall **conduct systematic** review of this **Code of Practice every 5 years**. The CROSQ shall initiate this review process by inviting member governments and regional organizations to make proposals to the CROSQ regarding amendments to these guidelines prior to each CROSQ meeting.

In preparing this Code of Practice, reference was made to the following documents:

- a) CODEX Alimentarius Commission GUIDELINES FOR THE PRODUCTION, PROCESSING, LABELLING AND MARKETING OF ORGANICALLY PRODUCED FOODS (CAC/ GL 32 – 1999, Rev. 1 – 2001)
- b) Jamaica Organic Agriculture Movement (JOAM) STANDARDS FOR ORGANIC PRODUCTION & PROCESSING JULY 2003
- c) Pacific Organic Standard,
- d) Australian Standard for Organic and Biodynamic Products
- e) IFOAM Norms for Organic production and processing
- f) IFOAM Organic Standards and Certification

1 Scope

1.1 This Code of Practice describes the requirements for organic production. It covers plant production, animal husbandry, beekeeping, collection of wild products and aquaculture, and also the processing and labelling of products derived from these activities. It provides a mechanism to define the expectations for organic production. It applies to any operator involved in activities, at any stage of production, preparation, **processing** and distribution, relating to the organic products. When complied with, it also enables producers to label their products as organic.

1.2 A product will be regarded as bearing indications referring to organic production methods where, in the labelling or claims, including advertising material or commercial documents, the product, or its ingredients, is described by the terms "organic", "biodynamic", "biological", "ecological", or words of similar intent including diminutives which, in the country where the product is placed on the market, suggests to the purchaser that the product or its ingredients were obtained according to organic production methods.

1.3 This Code of Practice applies without prejudice to other regional or national provisions governing the production, preparation, **processing**, marketing, labelling, inspection and control, including legislation on foodstuffs and animal nutrition of the products specified herein. Requirements in this Code of Practice are complementary and additional to other health, agricultural, environmental, food and production related regulatory requirements of law or standards at regional, national or other relevant levels.

1.4 This Code of Practice also outlines specifications for allowed inputs and approved products.

2 Terms and definitions

For the purpose of this Code of Practice, the following definitions apply:

2.1 accreditation. The procedure by which an authoritative body gives a formal recognition that a body or person is competent to carry out specific tasks.

2.2 allopathic. The treatment of a disease by using remedies whose effects differ from those produced by that disease.

2.3 annual seedling. A plant grown from seed that will complete its life cycle or produce a harvestable yield within the same crop year or season in which it was planted.

2.4 audit. A systematic and functionally independent examination to determine whether activities and related results comply with planned objectives.

2.5 audit trail. **Documentation that is sufficient to determine the source, transfer of ownership, and transportation of any agricultural product labelled as "organic".**

2.6 ayurvedic. The traditional Indian system of medicine.

2.7 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).

2.8 biodynamic. An agricultural method underlain by the concept of the farm itself as an organism. Emphasis is placed on plant and animal integration, nutrient recycling, soil maintenance, and the health and well-being of crops and livestock; the farmer, too, is part of the whole. To this extent it is akin to organic agriculture. Biodynamic farming injects a spiritual element into farm production emphasizing the spiritual world and its interrelationship with the physical world.

2.9 breeding. The selection of plants or animals to reproduce and / or to further develop desired characteristics in succeeding generations.

2.10 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.

A buffer zone shall be sufficient in size or other features (e.g., windbreaks or a diversion ditch) to prevent the possibility of unintended contact by prohibited substances applied to adjacent land areas with an area that is part of a certified operation.

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

2.12 certification body/certifying agent. The body that is accredited to grant certification and is responsible for verifying that a product sold or labelled as "organic" is produced, processed, prepared, handled, and imported according to these guidelines; as distinct from standard setting and inspection.

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

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

2.15 commingling. Physical contact between unpackaged organically produced and non-organically produced agricultural products during production, processing, transportation, storage or handling, other than during the manufacture of a multi-ingredient product containing both types of ingredients.

2.16 common land. Land in public/communion ownership to which everyone has right to access.

2.17 competent authority. A government agency having jurisdiction to formally recognize the competence of an inspection and/or certification body to provide inspection and certification services. For organic production the competent authority may delegate this function to a private body.

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

2.19 conventional. Any material, production or processing practice that is not certified organic or organic "in conversion".

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

2.21 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.

2.22 culture. A microorganism, tissue, or organ growing on or in a medium.

2.23 detergents. Substances and preparations which are intended to be used for cleaning certain products (See Appendix 5).

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

2.25 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.

2.26 drift. The physical movement of prohibited substances from the intended target site onto an organic operation or portion thereof.

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

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

2.29 feed, feeding stuffs. Edible materials, which are consumed by livestock for their nutritional value. Feed may be concentrates (grains) or roughages (hay, silage, fodder). The term, "feed," encompasses all agricultural commodities, including pasture ingested by livestock for nutritional purposes.

2.30 feed additive. A substance added to feed in micro quantities to fulfil a specific nutritional need; i.e., essential nutrients in the form of amino acids, vitamins, and minerals.

2.31 feed supplement. A combination of feed nutrients added to livestock feed to improve the nutrient balance or performance of the total ration and intended to be: (1) Diluted with other feeds when fed to livestock; (2) Offered free choice with other parts of the ration if separately available; or (3) Further diluted and mixed to produce a complete feed.

2.32 fertilizer. A natural or synthetic substance of inorganic origin that is applied to plants or a growth medium to increase the nutrient content or fertility.

2.33 food additive. An enrichment, supplement or other substance which can be added to a foodstuff to affect its keeping quality, consistency, colour, taste, smell or other technical property.

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

2.35 genetic engineering/modification techniques. A set of techniques 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 modification include, but are not limited to: recombinant DNA, cell fusion, micro and macro injection, encapsulation, gene deletion and doubling. Genetically engineered organisms do not include organisms resulting from techniques such as conjugation, transduction and natural hybridization.

2.36 genetically engineered/modified organism (GMO). A plant, animal, or microbe that is transformed by genetic engineering. GMOs and products thereof, are produced through techniques in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination.

2.37 GMO use. The use of GMO's and GMO derivatives as foodstuffs, food ingredients (including additives and flavourings), processing aids (including extraction solvents), feeding stuffs, compound feeding stuffs, feed materials, feed additives, processing aids for feeding stuffs, certain products used in animal nutrition, plant protection products, veterinary medicinal products, fertilisers, soil conditioners, seeds, vegetative reproductive material and livestock.

2.38 genetic resources. Genetic material of actual or potential value.

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

2.40 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.

2.41 hazard analysis and critical control point (HACCP). A system that identifies, evaluates; and controls hazards which are significant for food safety.

2.42 homeopathic treatment. A 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.

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

2.44 inspection. The examination of food or systems for control of food, raw materials, processing, and distribution including in-process and finished product testing, in order to verify that they conform to requirements.

2.45 irradiation (ionising radiation). High energy emissions from radio-nucleotides, capable of altering a food's molecular structure for the purpose of controlling microbial contaminants, pathogens, parasites and pests in food, preserving food or inhibiting physiological processes such as sprouting or ripening.

2.46 labelling. Any written, printed or graphic matter that is present on the label, accompanies the food or product, or is displayed near the food or product, including that for the purpose of promoting its sale or disposal.

2.47 livestock. Any domestic or domesticated animal including bovine (including buffalo and bison), ovine, porcine, caprine, equine, poultry and bees raised for food or the production of food. The products of hunting or fishing of wild animals shall not be considered part of this definition.

2.48 marketing. Holding for sale or displaying for sale, offering for sale, selling, delivering or placing on the market in any other form.

2.49 media (plural)/medium (singular). The substance in which an organism, tissue, or organ exists.

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

2.51 natural fibre. A non-synthetic filament of plant or animal origin.

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

2.53 organic. A labelling term that denotes products that have been produced in accordance with organic production standards and certified by a duly constituted certification body or authority.

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

2.55 organic seed and plant material. Seed and planting material that is produced under certified organic management.

2.56 organic feed, organic feeding stuff. Feed, feed materials produced in accordance with the rules of a pertinent organic standard, and duly certified as such.

2.57 organic system plan. A plan of management of an organic production or handling operation that has been agreed to by the producer or handler and the certifying agent and that includes written plans concerning all aspects of agricultural production or handling described in these standards.

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

2.59 participatory guarantee system (PGS). Locally focused quality assurance systems. They verify producers based on active participation of stakeholders and are built on a foundation of trust, social networks and knowledge exchange. Aimed specifically at small farmers PGS, just like third-party certification systems, aim to provide a credible guarantee for consumers seeking organic produce. The difference is in approach: direct participation of farmers, consumers and other stakeholders is required.

2.60 plant protection product. Any substance intended for preventing, destroying, attracting, repelling, or controlling any pest or disease including unwanted species of plants or animals during the production, storage, transport, distribution and processing of food, agricultural commodities, or animal feeds.

2.61 pre-packaged foodstuff. Any single item for presentation as such to the ultimate consumer, consisting of a foodstuff and the packaging into which it was put before being offered for sale, whether such packaging encloses the foodstuff completely or only partially, but in any case in such a way that the contents cannot be altered without opening or changing the packaging.

2.62 preparation / processing. The operations of preserving and/or processing of agricultural products (including slaughter and cutting for livestock products), and also packaging and/or alterations made to the labelling concerning the presentation of the organic production method of the fresh, preserved and/or processed products.

2.63 processing aid. Any substance or material, not including apparatus or utensils, and not consumed as a food ingredient by itself, intentionally used in the processing of raw materials, foods or its ingredients, to fulfil 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.

2.64 production. The operations undertaken to supply agricultural products in the state in which they occur on the farm, including initial packaging and labelling of the product.

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

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

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

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

2.69 veterinary drug. Any substance applied or administered to any food-producing animal, such as meat or milk-producing animals, poultry, fish or bees, whether used for therapeutic, prophylactic or diagnostic purposes or for modification of physiological functions or behavior.

2.70 veterinary medicinal products. Any substance or combination of substances presented for treating or preventing disease in human beings or animals. Any substance or combination of substances which may be administered to human beings or animals with a view to making a medical diagnosis or to restoring, correcting or modifying physiological functions in human beings or animals is likewise considered a medicinal product.

2.71 wild-harvesting. Any plant or portion of a plant that is collected or harvested from a site that is not maintained under cultivation or other agricultural management.

NOTE: These definitions are presented for the purpose of clarifying terms used in this text. It should be noted that additional organic terms exist which will be used to create a vocabulary, to guide the interpretation of organic standards currently under development.

3 Principles and objectives of organic agriculture

3.1 The principles of organic agriculture

Organic agriculture is based on:

- a) The Principle of Health
- b) The Principle of Ecology
- c) The Principle of Fairness
- d) The Principle of Care
- e) The Principle of Culture and traditions

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.

3.1.1 The principle of health

Health – organic agriculture sustains and enhances the health of the soil, which enables the production of healthy plants and animals to enhance the lives of people and their environment, as one and indivisible.

3.1.2 The principle of ecology

Ecology – organic agriculture is based on living ecological systems and cycles, works with them, emulates them and helps to sustain them.

3.1.3 The principle of fairness

Fairness – organic agriculture builds on relationships that ensure fairness with regard to the common environment and life opportunities. The key role of farmers and rural communities are recognised and benefits shared equitably with them.

3.1.4 The principle of care

Care – organic agriculture is managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment.

3.1.5 The principle of culture and traditions

Regional organic agriculture recognizes the value of contributions from traditional agriculture that are sustainable.

3.2 Objectives of organic production and processing

Organic production systems are guided by the following objectives:

- a) To produce sufficient quantities of high quality food, fibre and other products.
- b) To work compatibly with natural cycles and living systems through the soil, plants and animals in the entire production system.
- c) To recognize the wider social and ecological impact of and within the organic production and processing system.
- d) To maintain and increase long-term fertility and biological activity of soils using locally adapted cultural, biological and mechanical methods as opposed to reliance on **artificial or manufactured** inputs.
- e) To maintain and encourage agricultural and natural biodiversity on the farm and surrounds through the use of sustainable production systems and the protection of plant and wildlife habitats.
- f) To maintain, conserve and/or increase as appropriate, genetic diversity through attention to on-farm management of genetic resources.

- g) To promote the responsible use and conservation of water.
- h) To use, as far as possible, renewable resources in production and processing systems and avoid pollution and waste.
- i) To foster local and regional production and distribution.
- j) To create a harmonious balance between crop production and animal husbandry.
- k) To provide living conditions that allows animals to express the basic aspects of their innate behaviour.
- m) To provide those involved in organic farming and processing with a quality of life that satisfies their basic needs, within a safe, secure and healthy working environment.
- n) To support the establishment of an entire production, processing and distribution chain which is both socially just and ecologically responsible.
- o) To recognize the importance of, and protect and learn from, indigenous knowledge and traditional farming systems.
- p) To mitigate the adverse impacts of farming in relation to climate change and provide strategies for adapting production systems to the effects of climate change.
- q) To promote wise use of land, water and vegetation and minimise the off farm effects of agriculture on aquatic and terrestrial systems.
- r) To provide balanced nutrients, optimise opportunities to cycle nutrients within the farm, and recycle nutrients and energy that leave the farm or other farms in food and fibre products that are not consumed (that is, organic waste containing energy and nutrients), with the aim of feeding the soil ecosystem.
- s) To provide viable alternative to the use of genetically modified organisms inputs and practices based on genetic engineering techniques.

4 Guidelines for organic production and preparation

4.1 Organic ecosystems

General principle

- a) Organic farming benefits the quality of ecosystems.
- b) Organic farming methods conserve and build soil, maintain water quality and use water efficiently and responsibly.
- c) Genetically modified organisms (GMOs) and products produced from or by GMOs are incompatible with the concept of organic production and consumers' perception of organic

products. They shall therefore not be used in organic farming or in the processing of organic products.

- d) 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 neighbouring land, air, and water.

4.2 Ecosystem management

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

4.2.2 Clearing of primary ecosystems is prohibited.

4.2.3 At least 10% of the farm/production unit shall be part of a biodiversity program. Biodiversity areas may include: natural fallow without grazing; hedgerows; ecologically diversified (extensive) field margins; extensively used agro-forestry systems; natural, non-commercial forests; waterways, pools, springs, ditches, floodplains, wetlands, swamps and other water rich areas which are not used for intensive agriculture or aquaculture production; wildlife corridors that provide linkages and connectivity to native habitat.

4.2.4 The operator shall take measures to limit the incursion of preventable pests, diseases and weeds on to the property. These shall include as appropriate:

- a) managing the movement of visitors
- b) avoiding the sharing of equipment. However, if sharing cannot be avoided then shared equipment should be properly cleaned and sanitized before being used.
- c) creating buffer zones with neighbours
- d) isolating seedlings and livestock that are recently introduced to the property

4.3 Soil and water conservation

4.3.1 Operators shall define and implement specific soil conservation measures to prevent soil erosion. These measures shall be appropriate to local climatic conditions and soil, slope and land use. These shall include, as appropriate:

- a) minimizing the loss of topsoil through minimal tillage, contour ploughing and crop selection;
- b) maintaining soil plant cover and using other management practices that conserve soil;
- c) preventing the burning of organic matter, except when required to suppress the spread of disease or to stimulate seed germination. Burning shall require prior approval from the verification body and actions should be documented;
- d) avoiding the cultivation of steep hills with annual crops, unless appropriate measures to prevent soil erosion are implemented;

e) avoiding the overgrazing of pastures.

4.3.2 Land preparation by burning shall be restricted and only permitted where it is part of an indigenous traditional practices e.g. for the control of invasive species, and then only under strict controls so as to protect soil (topsoil and humus) and biodiversity. This does not restrict the use of cooking fires or controlled fires for pest control. If burning is deemed necessary, prior approval from the verification body is needed before doing so.

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

4.3.4 At least the amount of nutrients removed by harvesting the crops shall be returned to the land by mulch, cover crops, green manure or compost.

4.3.5 Deep rooting leguminous plants should further be used to maintain or increase soil fertility.

4.3.6 Soil analyses should be carried out at the start of production prior to inspection to certification and at regular intervals thereafter, to show that the soil fertility (organic matter) is maintained or enhanced.

4.3.7 Where climatic conditions or other factors do not allow a permanent vegetative ground cover, vegetative or plastic mulches (as outlined in section 6.7.5) may be used. These shall be removed from the field at the end of the growing or harvest season.

4.4 Use and management of water resources

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

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

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

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

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

4.4.6 Operators should respect sustainable resource management and the common good.

4.4.7 Operators shall not deplete or excessively exploit water resources, and shall take action to preserve water quality. Where possible, they shall recycle rainwater and monitor water extraction.

4.4.8 Water used for irrigation shall not pose food safety risks arising from toxic substances. Where concern is noted in regard to safety or quality issues, a monitoring and testing program may be required by the operator which verifies ongoing safety of supply.

4.5 Grazing management

4.5.1 Grazing systems shall have a beneficial influence not only on the fattening of the animals but also on the sustainable use of the pastures. Overgrazing affecting soil fertility and/or leading to soil depletion is prohibited.

4.5.2 Grazing pressure, expressed as the relationship between the forage available for animals to graze and the need for forage, shall be considered in grazing plans.

4.5.3 Grazing plans shall be coordinated with the vegetation cycles in order that both animals and plants remain in good condition.

4.5.4 Annual grasses shall be allowed to set seed in order to survive.

4.5.5 If permanent grazing systems cannot be avoided, the stocking rate shall be kept at a level that allows natural recovery of the pasture.

4.5.6 Methods of organic grazing management should include, as appropriate:

- a) the improvement of pastures with leguminous plants,
- b) mixed grazing using different animal species reared in accordance to these standards as outlined in 7.2.11.
- c) rotational grazing

4.6 Prevention of soil and water salination

4.6.1 When irrigation is practiced, care shall be taken concerning the irrigation water quality. Water analyses shall be carried out to ensure that salinity levels do not exceed generally accepted levels.

4.6.2 Sufficient drainage shall be provided to prevent build-up of salts in the topsoil.

4.6.3 Annual soil analyses should be carried out to show levels of salts in the soil.

4.7 Genetic engineering

4.7.1 The deliberate use or negligent introduction of genetically engineered organisms or their derivatives to organic farming systems or products is prohibited. This shall include animals,

seed, propagation material, and farm inputs such as food, feed, fertilizers, soil conditioners, micro-organisms, vaccines or crop protection materials.

4.7.2 Organic processed products shall not use ingredients, additives or processing aids derived from GMO's.

4.7.3 Inputs, processing aids and ingredients shall be traceable 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 GMO's.

4.7.4 On farms with split (including parallel) production, the use of genetically engineered organisms is not permitted in any production activity on the farm. Contamination of organic products by genetically modified organisms (GMOs) will mean a loss of certification.

4.8 Mitigating the effects of climate change

4.8.1 In selecting crops and animals, their suitability for dealing with and adapting to climate change effects should be considered.

4.8.2 Operators should identify sources of greenhouse gas emissions from their farming operations and aim to minimize these where practical. In ruminant production systems, active efforts shall be made to offset methane emissions.

4.8.3 The use of renewable forms of energy, e.g. wind and solar power, shall be considered for meeting the energy supply requirements of organic farms, processing units and other activities.

4.8.4 In recognition of the energy inputs and greenhouse gas emissions associated with the production of resources used in the production and processing of organic products, operators shall reduce, recycle or reuse resources used in producing and processing organic products to increase the efficiency of resource use.

4.9 Wild-harvested products and common/public land management

4.9.1 Areas to be certified under the Wild Harvest label need to be clearly defined and identifiable on a regional map. The area of production must be large and distinct enough to reduce the risk of commingling with non-certified production.

4.9.2 The collection or harvest areas shall be at an appropriate distance from conventional farming areas, and potential sources of pollution and contamination. The size of buffer zones between wild and conventional farming areas shall depend on the character of the potential risks and the products harvested as well as on local conditions.

4.9.3 Wild-harvest products shall only be obtained from areas where no prohibited substances have been applied.

4.9.4 Harvest shall occur within a management system which is verified, on an on-going basis, as not degenerating to the natural ecosystem within which the harvested products are grown. Such harvested areas are required to be verified on an on-going basis by the operator to be naturally self-sustaining and regenerating.

4.9.5 Harvesting of produce shall not involve the clear-felling of flora or stripping of fruits of an area which may compromise the area's on-going ability to function naturally as a complete ecosystem.

4.9.6 The production environment shall encourage commingling of species of wild harvested products and native species so as to mimic as much as is feasibly possible the natural ecosystems within which these species have evolved. Such practices would lead to the encouragement and fostering of a wide range of flora and fauna which would naturally occur within such ecosystems.

4.9.7 The operator and the people who harvest, gather or wild-craft shall comply with all local and national regulations regarding use of common and public lands.

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

4.9.9 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.

4.9.10 The wild harvest area must not be grazed by conventional livestock.

4.9.11 Operators shall identify any appropriate authority that may have a landholding right, governance or oversight role over the area and obtain permission to access the area and undertake any harvesting or gathering. They shall work with a positive intent with these authorities and where appropriate provide payments for harvesting/ access rights.

4.9.12 Operators shall identify any regulations and traditional rules/ controls/taboo that have been established that relate to the access, management and harvesting/gathering activity in the area and comply with these.

4.9.13 The operator must issue instructions to the collectors and any local agents (middlemen), that at least defines the area of collection and informs them about the Standard and other requirements for certification. The collectors and middlemen must sign statements to say that they have followed the instructions. The operator must keep a record of these instructions and statements.

4.9.14 The operator must keep a record of all collectors, and the quantities bought from each collector.

4.9.15 Any local agents (middlemen) must be under contract to the operator. The operator must keep a record of these contracts.

4.9.16 Products containing a total content of wild-harvest products may be labelled “Wild-harvest”. Products containing mixtures of wild-harvest and organic may be labelled “Organic”, but not “Wild-harvest”.

5 Guidelines for crop production and animal husbandry

5.1 Conversion requirements

5.1.1 There shall be a period of at least 12 months organic management for annuals and at least 18 months for perennials that meets all the requirements of these standards before the resulting product can be considered “In Conversion to Organic”. An exemption to this requirement may be approved where there is a verifiable record of the unbroken use of traditional practices with no inclusion of non-permitted inputs or activities. A conversion plan shall be documented to establish the steps and the timeframes for whole farm conversion. The plan shall define the distinct boundaries and buffer zones that identify the area of the operation.

NOTE Minimum conversion periods for land and crops are given in 6.2 and for livestock husbandry in 7.5.

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

5.1.3 A full conversion period shall not be required where de facto full standards requirements have been met for at least three years, and where this can be independently verified. Verification by means of a formal inspection shall be carried out prior to the first harvest.

5.1.4 A period of at least 3 years must elapse since the last application of non-permitted inputs before full certification status can be attained.

5.2 Split production and parallel production

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

5.2.2 Parallel production is deemed to occur where similar certified and uncertified products, or products of both certified organic and certified in conversion to organic status, are produced during the same season in the same production unit. Where these cannot be distinguished by visual appearance and varietal difference, this shall not be allowed.

5.2.3 Where farms engage in split (including parallel) production the use of genetically engineered organisms is prohibited in any production activity on the farm. Properties below 1 hectare are not permitted to have split production and are permitted to have only one level of organic certification status. An exemption to this requirement may be permitted to allow for the continued ownership and management of non-organic animals on a property, if these are for the operator’s own use.

5.3 Maintenance of organic management

5.3.1 Land converted to organic production shall not be alternated (switched back and forth) between organic and conventional production.

6 Crop production

6.1 Choice of crops and varieties

6.1.1 Organic seed and plant materials of appropriate varieties and quality shall be used. Where they are not commercially available, approved time limits for the use of non-organic seed and plant material as specified by the certifying body shall apply.

6.1.2 When organic seed and plant materials are not available, conventional materials may be used provided that they have not been treated with pesticides not otherwise permitted by these standards.

6.2 Length of conversion period (plant and plant products)

6.2.1 Plant products from annual production shall only be considered organic when a conversion period of at least 24 months has elapsed prior to sowing/planting. In the case of perennials (excluding pastures and meadows) a period of at least 36 months prior to harvest shall be required. The verification body may decide, under certain conditions, to extend or reduce that period, having regard to previous parcel use.

6.2.2 There shall be at least a 24 month conversion period prior to pastures, meadows and products harvested from them, being considered organic. The verification body may decide, under certain conditions, to extend or reduce that period, having regard to previous parcel use.

6.2.3 The conversion period may be extended by the verification body depending on conditions such as past use of the land, management capacity of the operator and environmental factors.

6.2.4 Where conversion periods exceeding those stated in 5.1 are required, and labelling of product as "produce of organic agriculture in the process of conversion" or a similar description is permitted, the standards requirements shall have been met for at least 12 months prior to such labelling.

6.3 Plant breeding and multiplication

6.3.1 To be an organic variety, only suitable methods of breeding shall be used as listed in this standard. All multiplication practices except in-vitro-cultivation shall be under certified organic management. The use of genetically modified organisms and/or any products derived from such organisms is prohibited.

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

6.3.3 The following plant breeding methods and materials are permitted for organic plant breeding:

- a) combination breeding
- b) crossing varieties
- c) bridge crossing
- d) backcrossing hybrids with fertile F1
- e) temperature treating
- f) grafting style
- g) cutting style
- h) untreated mentor pollen

6.3.4 The following selection techniques are permitted:

- a) mass selection
- b) pedigree selection
- c) site-determined selection
- d) change in surroundings
- e) change in sowing time
- f) ear bed method
- g) test crossing
- h) indirect selections
- i) DNA diagnostic methods

6.3.5 Permitted maintenance and multiplication methods include the use of the following:

- a) generative propagation
- b) vegetative propagation
- c) partitioned tubers
- d) scales, husks, partitioned bulbs, brood bulbs, bulbils

- e) offset bulbs, etc.
- f) layer, cut and graft shoots
- g) rhizomes
- h) meristem culture

6.4 Diversity in crop production

6.4.1 Diversity in plant production and activity shall be assured by minimum crop rotation requirements and/or variety of plantings. Minimum rotation practices for annual crops shall be established unless the operator demonstrates diversity in plant production by other means.

6.4.2 For annual crops, intercropping, companion planting or crop rotation shall be practiced. Crop rotation may include green manure, legumes and deep rooting plants;

6.4.3 For perennial crops that are grown as monocultures, other plants shall be intercropped; where this is not possible, other means of securing diversity shall be applied.

6.4.4 There shall be appropriate coverage of the soil with diverse plant species for as much of the year as possible.

6.4.5 Where climatic conditions or other factors do not allow a permanent vegetative ground cover, vegetative or plastic mulches may be used. These shall be removed from the field at the end of the growing or harvest season.

6.5 Soil fertility and fertilization

6.5.1 The fertility and the biological activity of the soil shall be maintained or increased, by any or all of the following:

- a) cultivation of legumes, green manures or deep-rooting plants in an appropriate multi-annual rotation programme;
- b) incorporation of livestock manure from organic livestock production in accordance with the provisions of these standard;
- c) incorporation of other organic material, composted or not, from holdings producing the same in accordance with these standards.

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

6.5.3 Nutrients and fertility products shall be applied in a way that protects soil, water, and biodiversity.

6.5.4 Material applied to the land or crop shall be in accordance with Appendix 1 and 2.

6.5.5 Raw animal manure shall be composted unless it is:

- a) applied to land used for a crop not intended for human consumption;
- b) incorporated into the soil not less than 120 days prior to the harvest of a product whose edible portion has direct contact with the soil surface or soil particles; or
- c) incorporated into the soil not less than 90 days prior to the harvest of a product whose edible portion does not have direct contact with the soil surface or soil particles

6.5.6 Manures obtained from off the farm shall be composted and only applied at rates that do not cause negative environmental impacts. Use of non-organic manures requires approval from the verification body and should be used only when organically produced manures are not available.

6.5.7 Composted plant and animal materials should be produced through a process that:

- a) established an initial C:N ratio of between 25:1 and 40:1; and
- b) maintained a temperature of between 131°F and 170°F for 3 days using an in-vessel or static aerated pile system; or
- c) maintained a temperature of between 131°F and 170°F for 15 days using a windrow composting system, during which period, the materials shall be turned a minimum of five times.

6.5.8 Manures containing human excrement (faeces and urine) are prohibited for use on crops.

6.5.9 Only crop nutrients or soil amendments included in Appendix 1 are allowed for use in organic crop production. These shall be applied in accordance with limitations for their use set out in the Appendix 4.

6.5.10 The operator shall not use:

- a) sewage sludge (bio solids); or
- b) ash from burning of a plant or animal material, except wood ash, as listed in Appendix 1.

6.5.11 Operators shall not use burning as a means of disposal for crop residues produced on the operation. Except, that, burning may be used to suppress the spread of disease or to stimulate seed germination.

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

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

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

6.5.15 Under exceptional circumstances, and after consideration of all relevant information, and having regard to Appendix 4, the relevant authority may grant exception to this requirement. These exceptions shall not apply to mineral fertilizers containing nitrogen.

6.5.16 For the production of mushrooms, only the following substrates shall be used:

- a) farmyard manure and animal excrements from operations that meet these organic standards, or
- b) non-organic manures and excrements compliant with Appendix 1, comprising up to 25% of the substrate, as calculated on the weight of total components before composting (excluding covering material and any added water), and only when the organically produced manures are not available;
- c) organically produced agricultural products (e.g. straw);
- d) peat, not chemically treated;
- e) wood, not chemically treated after felling;
- f) mineral products listed in Appendix 1;
- g) water and soil.

6.6 Pest, disease and weed management including growth regulators

6.6.1 All organic production systems shall display a set of positive processes/mechanisms capable of accounting for management of significant pests, weeds and diseases under normal circumstances. Operators shall use management practices to prevent crop pests, weeds, and disease. These shall include, as applicable:

- a) crop rotation and soil and crop nutrient management practices,
- b) sanitation measures to remove disease vectors, weed seeds, and habitat for pest organisms; and
- c) cultural practices that enhance crop health, including selection of plant species and varieties with regard to suitability to site-specific conditions and resistance to prevalent pests, weeds, and diseases.
- d) protection and promotion of natural enemies of pests through provisions favourable to them (e.g. hedges, nesting sites, release of predators),
- e) non-synthetic controls such as lures, traps, and repellents.
- f) non-chemical weed controls such as mulching, mowing, livestock grazing, flame, heat or electrical weeding.

6.6.2 When the practices provided for in paragraphs 6.6.1 of this section are insufficient to prevent or control crop pests, weeds, and diseases, a biological or botanical substance or a substance included in the Appendix 2 list of synthetic substances allowed for use in organic crop production may be applied to prevent, suppress, or control pests, weeds, or diseases: The conditions for using the substance shall be documented in the organic system plan.

6.6.3 If the ecosystem or the quality of organic products might be jeopardised, the Procedure to Evaluate Additional Inputs to Organic Agriculture (Appendix 4) and other relevant criteria shall be used to establish whether the product is acceptable.

6.6.4 Any formulated input shall have only active ingredients on Appendix 2, and all other components shall meet the criteria of Appendix 4. Formulated products with only active ingredients on Appendix 2 but with other components that have not been reviewed and approved by the verification body against the above criteria may not be used.

6.6.5 If fertilizers are used, small and regular applications are recommended, rather than infrequent applications of large amounts of fertilizers. As an example – in the production of ginger – instead of using steam/flames, the use of bacteria or specialist plants for the removal of nematodes prior to planting should be investigated.

6.7 Avoiding contamination

6.7.1 The operator shall employ measures including barriers and buffer zones to avoid potential contamination and limit contaminants in organic products. This may include roadways and fallow areas; tree and shrub zones along borders; and/or sections of crops or produce which shall be deemed uncertified along relevant boundaries.

6.7.2 Where water contamination, or waterborne agents, poses risks to certify farm units, appropriate management practices and technical means such as spillways, trenches, runoffs and/or wetland areas may be required to ensure no contamination may occur.

6.7.3 In certain instances, ambient or environmental contamination may be such as to preclude operators and operations from certification, where it cannot be demonstrably shown that contamination threats are able to be managed in a way as to avoid contamination of certified products and the farming system. Rigorous and on-going monitoring and residue testing may be required where such concerns exist. **Records of such monitoring and residue testing should also be maintained / required.**

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

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

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

7 Livestock and livestock products

7.1 Animal husbandry

General Principle

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

7.2 Animal management

7.2.1 Livestock production should contribute to the equilibrium of agricultural production systems by providing for the nutrient requirements of crops and by improving the soil's organic matter. It should establish and maintain soil-plant, plant-animal and animal-soil interdependence. By utilizing renewable natural resources (livestock manure, legumes and fodder crops), the cropping, stockfarming and the pasturage systems should allow soil fertility to be maintained and improved in the long term and should contribute to the development of sustainable agriculture.

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

- a) sufficient free movement and opportunity to express normal patterns of behaviour
- b) sufficient fresh air, water, feed 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) the maintenance of social structures by ensuring that herd animals are not kept in isolation from other animals of the same species
- e) construction materials and production equipment that do not significantly harm human or animal health

7.2.3 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.

7.2.4 Housing conditions shall ensure:

- a) ample access to fresh water and feed according to the needs of the animals

b) animals have sufficient space to stand naturally, lie down easily, turn around, groom themselves and assume all natural postures and movements such as stretching, and wing flapping

c) where animals require bedding, adequate natural materials are provided

d) that construction provides for ventilation of the building, that permits air circulation, dust levels, temperature, relative air humidity, and gas concentrations to within levels that are not harmful to the livestock

e) that poultry, rabbits and pigs shall not be kept in restrictive cages that prevents natural movements as outlined in (b) above

f) that animals are protected from predation by wild and feral animals

7.2.5 Animal husbandry systems that do not include free range areas are prohibited.

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

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

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

7.2.9 In organic stock-farming, all livestock on one and the same production unit shall be reared in accordance with these standards.

7.2.10 Livestock not reared in accordance with these standards may be present on the holding provided they are reared on units where the buildings and parcels are separated clearly from the units producing in accordance with these standards, and a different species is involved.

7.2.11 The sharing of pasturage with livestock not reared in accordance with these standards shall be limited to 90 days per calendar year, provided that such animals come from husbandry in keeping with the grazing density requirements of these standards, and do not share the pasturage at the same time as livestock being reared according to these standards.

7.2.12 No mingling is permitted with uncertified stock at any time where identification of stock is not possible or where non-certified stock poses a contamination risk to certified stock.

7.2.13 Certified stock shall not have access to areas that uncertified stock are travelling through where it cannot be verified that uncertified stock have not been treated with prohibited treatments for more than 3 weeks prior to commons access.

7.2.14 Identification of potential contamination points and preventative management is required of the certified operator to ensure maintenance of certification status of stock when on common lands and/or following movement of uncertified stock through stock routes.

7.2.15 Where livestock is reared on common land, the following shall apply:

a) the land shall not have been treated with products other than those allowed in accordance with these guidelines, for at least three years;

b) any livestock products produced by animals reared whilst using this land, shall not be regarded as being from organic production, unless adequate segregation from other animals not reared in accordance with these standards can be proved to the satisfaction of the verification body.

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

7.3 Breeds and breeding

7.3.1 Breeding systems shall be based on breeds that can reproduce successfully under natural conditions without human involvement. Breeds have to be well adapted to organic production methods. Breeds or strains of animals shall be selected to avoid specific diseases or health problems associated with some breeds or strains used in intensive production (e.g. porcine stress syndrome, PSE Syndrome, sudden death, spontaneous abortion, difficult births requiring caesarean operations, etc.). Preference is to be given to indigenous breeds and strains.

7.3.2 Artificial insemination is permitted.

7.3.3 Embryo transfer techniques and cloning are prohibited.

7.3.4 The use of substances to promote growth or production, (including antibiotics, coccidiostatics and other artificial aids for growth promotion purposes) and the use of hormones or similar substances to control reproduction (e.g. induction or synchronisation of oestrus), or for other purposes, is prohibited. Nevertheless, natural aids such as turmeric and hormones may be administered to an individual animal, as a form of therapeutic veterinary treatment.

7.3.5 Operators shall not utilize artificially polyploid organisms.

7.4 Animals sources/origin

7.4.1 Livestock products that are to be sold, labelled, or represented as organic shall be from livestock under continuous organic management from the last third of gestation or hatching.

7.4.2 Livestock used as breeder stock may be brought from a non-organic operation onto an organic operation at any time. Provided that, if such livestock are gestating and the offspring are

to be raised as organic livestock, the breeder stock shall be brought onto the facility no later than the last third of gestation. The following are prohibited:

a) livestock or edible livestock products that are removed from an organic operation and subsequently managed on a non-organic operation may be not sold, labelled, or represented as organically produced.

b) breeder or dairy stock that has not been under continuous organic management since the last third of gestation may not be sold, labelled, or represented as organic slaughter stock.

7.4.3 Where livestock is obtained from non-organic operations, special attention shall be paid to animal health measures. The verification body may apply, depending on local circumstances, special measures, such as screening tests, and quarantine periods.

7.4.4 When organic livestock is not available conventional animals may be brought in according to the following age limits:

- 2 day old chickens for meat production
- 18 week old hens for egg production
- 2 weeks for any other poultry
- piglets up to 6 weeks and after weaning
- dairy calves up to 4 weeks old that have received colostrum and are fed a diet consisting mainly of full milk.

7.4.5 Livestock that do not comply with the above conditions can never be converted to organic status.

7.4.5 Breeding stock may be brought in from conventional farms subject to a maximum of 10% of adult equine or bovine (including *bubalus* and bison species) livestock and 20 % of the adult porcine, ovine and caprine livestock, livestock may be brought in, as female (nulliparous) animals, from non-organic production stockfarms per year, for supplementing natural growth and for the renewal of the herd or flock, when organically reared animals are not available, and only when authorised by the national certifying body. Provided, that, if such livestock are gestating and the offspring are to be raised as organic livestock, the breeder stock shall be brought onto the facility no later than the last third of gestation.

7.4.6 Exceptions may be granted by the national certifying body for breeding stock to exceed 10% of the adult animals, but shall be limited to circumstances of:

- a) unforeseen severe natural or manmade 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

7.4.7 Males for breeding may be brought in from non-organic-production stock-farms provided that the animals are subsequently reared and always fed in accordance with these standards.

7.4.8 Any livestock introduced from outside sources, other than certified livestock – as organic or in conversion to organic – shall be segregated from certified stock in a designated holding area for a minimum period of three weeks prior to mingling with certified animals on other certified areas of the farm. Exceptions to this are for breeding purposes only.

7.5 Length of conversion period

7.5.1 Animal products may be sold as "product of organic agriculture" only after the land and animals have all met the appropriate established conversion requirements. Management of the land, or relevant part of it, shall be subject to the requirement under 5.1 prior to animal products being considered organic.

7.5.2 Land and animals shall be converted simultaneously, and shall satisfy the minimum conversion periods stipulated for both land and animals. With regard to dairy and egg production this period shall be at least 30 days.

7.5.3 Livestock and their products can hold no greater status (whether in conversion or organic) than is currently held by the production unit itself.

7.5.4 Animals on a farm that is converting to organic production may undergo a one-time minimum conversion period according to the following schedule and type of the production:

- bovines 12 months
- small ruminants 6 months
- pigs 4 months
- broilers 10 weeks
- layers 6 weeks

7.6 Feed/Nutrition

7.6.1 Feed shall ensure quality production rather than maximizing production, while meeting the nutritional requirements of the livestock at various stages of their development.

7.6.2 Authorized fattening practices shall be reversible at any stage of the rearing process. Force-feeding is forbidden.

7.6.3 Animals shall be fed organic feed.

7.6.4 At least 50% of the feed shall come from the farm unit itself or be produced in cooperation with other organic farms in the region. For the calculation of feeding allowances

only, feed produced on the farm unit during the first year of organic management (in conversion), may be classed as organic. This refers only to feed for animals that are being produced within the farm unit. Such feed shall not be sold or otherwise marketed as organic.

7.6.5 Up to 30 % of the feed formula of rations may comprise of in conversion feeding stuffs. When the conversion feeding stuffs come from the farm unit, this percentage can be increased to 60 %. The national verification body may allow exceptions with regard to local and regional conditions, and shall set a time limit.

7.6.6 Young stock from mammals shall be provided maternal milk or organic milk from their own species and shall be weaned only after a minimum time that takes into account the natural behaviour of the relevant animal species, which shall be three months for bovines (including *bubalus* and bison species) and equidae, 45 days for sheep and goats and 40 days for pigs.

7.6.7 Non-organic milk shall only be substituted by operators when organic milk is proven to be not available.

7.6.8 Operators shall provide milk substitutes only in emergencies, provided that they do not contain antibiotics, synthetic additives or slaughter products.

7.6.9 Rearing systems for herbivores shall be based on the maximum use of pasturage according to the availability of pastures in the different periods of the year. At least 60 % of the dry matter in daily rations should consist of roughage, fresh or dried fodder, or silage. The verification body may permit a reduction to 50 % for animals in dairy production for a maximum period of three months in early lactation.

7.6.10 For poultry, the feed formula used in the fattening stage shall contain at least 65% cereals.

7.6.11 All ruminants shall have daily access to roughage.

7.6.12 Fodder preservatives such as the following may be used:

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

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

7.6.13 Conventional feed materials of agricultural origin shall be used for animal feeding only if listed in Appendix 3 (feed materials from plant origin), subject to the quantitative restrictions imposed in this appendix, and only if they are produced or prepared without the use of chemical solvents.

7.6.14 Feed materials from animal origin (whether conventional or organically produced) can only be used if listed in Appendix 4, and subject to the quantitative restrictions imposed in this appendix.

7.6.15 Animals shall only be fed vitamins, trace elements and supplements from natural sources. Synthetic vitamins, minerals and supplements may be used when natural sources are proven to be not available in sufficient quantity and quality. Only products listed in Appendix 3 may be used for animal feeding.

7.6.16 The following substances are prohibited in the diet:

- a) farm animal by-products (e.g. abattoir waste) to ruminants
- b) all types of excrements including droppings, dung or other manure (all types of excrements)
- c) feed subjected to solvent extraction (e.g. hexane) or the addition of other chemical agents
- d) amino acid isolates
- e) urea and other synthetic nitrogen compounds
- f) synthetic growth promoters or stimulants
- g) synthetic appetizers
- h) preservatives, except when used as a processing aid
- i) artificial colouring agents.
- j) plastic pellets for roughage

7.6.17 Antibiotics, coccidiostats, medicinal substances, growth promoters or any other substance intended to stimulate growth or production shall not be used in animal feeding.

7.6.18 Feeding stuffs, feed materials, compound feeding stuffs feed additives, processing aids for feeding stuffs and certain products used in animal nutrition shall not have been produced with the use of genetically modified organisms or products derived from genetically modified organisms.

Special cases:

7.6.19 The verification body may allow exceptions for non-organic feed with regard to local and regional conditions, subject to a set time limit. Operators may feed a limited percentage of non-organic feed under specific conditions for a limited time in the following cases:

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

The maximum percentage of conventional feeding stuffs authorized per year is 10% in the case of herbivores and 20% for other species. These figures shall be calculated annually as a percentage of the dry matter of feeding stuffs from agricultural origin. The maximum percentage authorized of conventional feeding stuffs in the daily ration, except during the transhumance period, shall be 25%, calculated as a percentage of the dry matter.

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

- unforeseen severe natural or man-made events
- extreme climatic or weather conditions.

The prevailing part (50% at a minimum) of the feed shall come from the farm unit itself or be produced in cooperation with other organic farms in the region.

7.7 Veterinary medicine

General Principles

- a) 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.
- b) Operators should identify the cause of outbreaks of disease or infection.
- c) Operators should implement management practices, including criteria for choosing a site that can diminish causative events and future outbreaks of disease.
- d) Operators should use natural methods and medicines, as the first choice, when treatment is necessary.

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

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

7.7.3 The use of veterinary medicinal products in organic farming shall comply with the following principles:

- a) Phytotherapeutic (e.g. plant extracts (excluding antibiotics), essences, etc.), homeopathic products (e.g. plant, animal or mineral substances) and trace elements and products listed in Appendix 5b, shall be used in preference to chemically synthesized allopathic veterinary medicinal products or antibiotics, provided that their therapeutic effect is effective for the species of animal, and the condition for which the treatment is intended;

- b) Use of chemical allopathic veterinary drugs and antibiotics is prohibited for invertebrates.
- c) If the use of the above products should not prove, or is unlikely to be, effective in combating illness or injury, and treatment is essential to avoid suffering or distress to the animal, chemically synthesized allopathic veterinary medicinal products or antibiotics may be used under the responsibility of a veterinarian;
- d) The use of chemically synthesized allopathic veterinary medicinal products or antibiotics for preventive treatments is prohibited;

7.7.4 Substances of synthetic origin used to stimulate production or suppress natural growth are prohibited. Prophylactic use of veterinary drugs is also prohibited.

7.7.5 Vaccinations are allowed with the following limitations:

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

7.7.6 This Code of Practice requires that the use of veterinary medicinal products shall require prior written veterinary advice. Whenever veterinary medicinal products are used the type of product shall be recorded clearly, (including an indication of the active pharmacological substances involved) together with details of the diagnosis; the posology; the method of administration; the duration of the treatment, and the legal withdrawal period. This information shall be declared to the verification body before the livestock or livestock products are marketed as organically produced. Livestock treated shall be clearly identified: individually in the case of large animals; individually or by batch, in the case of poultry and small animals.

7.7.7 The use of prohibited allopathic veterinary treatments (such as drugs and antibiotics) shall require a quarantine period for such identified stock of three times the legal withholding period of the substance in question, or a minimum of 48 hours, whichever is longer. Quarantine shall occur separate from certified stock and other certified areas as specified elsewhere in this Standard. Following the quarantining process, treated stock may mingle on certified areas of land with certified stock on strict condition that treated stock are identifiable and traceable via documents as separate from certified stock.

7.7.8 With the exception of vaccinations, treatments for parasites and any compulsory governmental eradication schemes, where an animal or group of animals receives more than two or a maximum of three courses of treatments with chemically-synthesized allopathic veterinary medicinal products or antibiotics within one year (or more than one course of treatment if their productive lifecycle is less than one year) the livestock concerned, or produce derived from them, shall not be sold as organic products, and the livestock shall undergo the conversion periods stipulated in paragraph 7.5.4, subject to the agreement of the verification body.

7.7.9 The use of anaesthetics will not result in the loss of certification status, but shall require three times the legal withholding period of the substance in question or a minimum of 48 hours, whichever is longer, prior to sale or killing.

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

7.8 Transport and slaughter

7.8.1 Animals shall be handled calmly and gently during transport and slaughter

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

7.8.3 Organic animals shall be treated during transportation and slaughter in a manner that reduces and minimizes the adverse effects of:

- stress
- loading and unloading
- mixing different groups of animals or animals of different sex
- quality and suitability of mode of transport and handling equipment
- temperatures and relative humidity
- the fitness of animals for travel in accordance with the National Public Health Standards.
- hunger and thirst; and
- the specific needs of each animal

7.8.4 The person specifically responsible for the well-being of the animals should be present during transport. Animals shall not be treated with synthetic tranquilizers or stimulants prior to or during transport.

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

7.8.6 Slaughterhouse journey times shall not exceed eight hours.

7.8.7 When there is no certified organic slaughterhouse within eight hours travel time, the verification body may allow extended travel, provided that travel conditions are appropriate for the extended duration of travel.

7.8.8 For poultry, the minimum age at slaughter shall be:

- 81 days for chickens,
- 49 days for Peking ducks,

- 70 days for female Muscovy ducks,
- 84 days for male Muscovy ducks,
- 92 days for Mallard ducks,
- 94 days for guinea fowl,
- 140 days for turkeys and roasting geese.

Where producers do not apply these minimum slaughter ages, they shall use slow-growing strains.

7.8.9 All measures shall be taken to ensure no cross contamination may occur in transit, and all measures shall be taken to ensure no mixing of certified with uncertified stock occurs. This shall entail clear identification and differentiation of all certified stock.

7.8.10 Transport operators shall be made aware of certification requirements, including washdown/sweep down requirements for all transport equipment and trailers prior to loading and unloading of certified stock. Such considerations shall include loading systems which minimize stress to livestock.

7.9 Mutilation and restriction of movement

General Principle

Organic farming respects the animal's distinctive characteristics. Operators should select species and breeds that do not require mutilation.

7.9.1 Mutilations are prohibited.

7.9.2 The following exceptions shall be used only for reasons of safety (e.g. dehorning in young animals) or if they are intended to improve the health, welfare or hygiene of the livestock. Animal suffering shall be minimized and anaesthetics used where appropriate:

- castrations
- tail docking of lambs
- dehorning
- ringing
- mulesing only for breed that require mulesing

7.9.3 Livestock shall not be continuously tethered. The national verification body may authorize this practice for individual animals upon justification by the operator that this is necessary for safety or welfare reasons, and that such tethering is only for a limited period of time.

7.9.4 Cattle in small holdings may be tethered if it is not possible to keep the cattle in groups appropriate to their behaviour requirements, provided they have at least twice a week access to pastures, open air runs or exercise areas.

7.9.5 Where livestock are reared in groups, the size of the group shall depend upon their stage of development and the behavioural needs of the species concerned. The keeping of livestock in conditions, or on a diet, which may encourage anaemia, is prohibited.

7.10 Free range areas and livestock housing

7.10.1 Housing conditions for livestock shall meet the livestock's biological and ethological needs (e.g. behavioural needs as regards appropriate freedom of movement and comfort). The livestock shall have access to feeding and watering. Ventilation of the buildings shall ensure that air circulation, dust level, temperature, relative air humidity and gas concentration, are kept within limits which are not harmful to the animals. The buildings shall permit plentiful natural ventilation and light to enter.

7.10.2 Free-range, open-air exercise areas or open-air runs shall provide sufficient protection against rain, wind, sun and extreme temperatures, depending on the local weather conditions and the breed concerned.

7.10.3 Housing for livestock shall not be mandatory in areas with appropriate climatic conditions to enable animals to live outdoors.

7.10.4 The stocking density in buildings shall provide for the comfort and well-being of the animals, which, in particular, shall depend on the species, the breed and the age of the animals. It shall also take account of the behavioural needs of the animals, which depend in particular on the size of the group and the animals' sex. The optimum density should seek to ensure the animals' welfare by providing them with sufficient space to stand naturally, lie down easily, turn round, groom themselves, assume all natural postures and make all natural movements such as stretching and wing flapping.

7.10.5 The minimum surface areas for indoor housing and outdoor exercise areas, and other characteristics of housing for different species and categories of animals, shall be as laid down in the table of housing and free range areas in Table 1 of this Code of Practice.

7.10.6 The outdoor stocking density of livestock kept on pasturage, other grassland, heathland, wetland, heather, and other natural or semi-natural habitats, shall be low enough to prevent poaching of the soil and over grazing of vegetation.

7.10.7 Housing, pens, equipment and utensils shall be properly cleaned and disinfected to prevent cross-infection and the build-up of disease carrying organisms. Only the products listed in Appendix 5b shall be used for such cleaning and disinfection of livestock buildings and installations. Faeces, urine and uneaten or spilt food shall be removed as often as necessary to minimize smell and to avoid attracting insects or rodents. Only the products listed in Appendix 5b shall be used for the elimination of insects and other pests in buildings and other installations where livestock is kept.

7.11 Housing and rearing of mammals

7.11.1 All mammals shall have access to pasturage or an open-air exercise area or an open-air run which may be partially covered, and they shall be able to use those areas whenever the physiological condition of the animal, the weather conditions and the state of the ground permit. Herbivores shall have access to pasturage whenever conditions allow.

7.11.2 If the final fattening phase of cattle, pigs and sheep for meat production takes place indoors, this indoors period shall not exceed the lesser of one fifth of their lifetime or three months.

7.11.3 Livestock housing shall have smooth, but not slippery floors. At least half of the total floor area shall be solid, that is, not of slatted or of grid construction.

7.11.4 The housing shall be provided with a comfortable, clean and dry laying/rest area of sufficient size, consisting of a solid construction that is not slatted. Ample dry bedding strewn with litter material shall be provided in the rest area. The litter shall comprise straw or other suitable natural material. The litter may be improved and enriched with any mineral product authorized for use as a fertilizer in organic farming in accordance with Appendix 1.

7.11.5 The housing of calves in individual boxes is forbidden after the age of one week.

7.11.6 Housing of pigs shall comply with the minimum requirements set out in the table of housing and free range areas in Table 1 of this Code of Practice. Sows shall be kept in groups, except in the last stages of pregnancy and during the suckling period. Piglets shall not be kept on flat decks or in piglet cages. Exercise areas shall permit dunging and rooting by the animals. For the purposes of rooting different substrates can be used.

7.12 Housing and rearing of poultry

7.12.1 Poultry shall be reared in open-range conditions and shall not be kept in cages.

7.12.2 Waterfowl shall have access to a stream, pond or lake whenever the weather conditions permit in order to respect animal welfare requirements or hygienic conditions.

7.12.3 Buildings for all poultry shall meet the following minimum conditions:

a) at least one third shall be solid, that is, not of slatted or of grid construction, and covered with a litter material such as straw, wood shavings, sand or turf;

b) in poultry houses for laying hens, a sufficiently large part of the floor area available to the hens shall be available for the collection of bird droppings

c) they shall have perches of a size and number commensurate with the size of the group and of the birds as laid down in the table of housing and free range areas in Table 1 of this Code of Practice.

d) they shall have exit/entry pop-holes of a size adequate for the birds, and these pop-holes shall have a combined length of at least 4 m per 100 m² area of the house available to the birds

e) each poultry house shall not contain more than:

- 4,800 chickens,
- 3,000 laying hens,
- 5,200 guinea fowl,
- 4,000 female Muscovy or Peking ducks or 3,200 male Muscovy or Peking ducks or other ducks,
- 2,500 geese or turkeys

f) the total usable area of poultry houses for meat production on any single production unit, shall not exceed 1,600 m²

7.12.4 In the case of laying hens natural light may be supplemented by artificial means to provide a maximum of 16 hours light per day. The continuous nocturnal rest period without artificial light shall be at least eight hours.

7.12.5 Poultry shall have access to an open-air run whenever the weather conditions permit and, whenever possible, shall have such access for at least one third of their life. These open-air runs shall be mainly covered with vegetation, be provided with protective facilities, and permit animals to have easy access to adequate numbers of drinking and feeding troughs.

7.12.6 For health reasons, buildings shall be emptied of livestock between each batch of poultry reared. The buildings and fittings shall be cleaned and disinfected during this time. In addition, when the rearing of each batch of poultry has been completed, runs shall be left empty to allow vegetation to grow back, and for health reasons.

7.12.7 These requirements shall not apply to small numbers of poultry which are not kept in runs and which are free to roam, throughout the day.

7.12.8 Where housing units accommodate more than the usual social group size, sufficient distribution of feeders, drinkers and other facilities shall be maintained to allow for the development of natural social groups within the housing unit.

7.12.9 Clean, dry nesting boxes shall be provided which allow no less than 20% of laying hens to nest at any one time.

7.13 Livestock manure

7.13.1 Storage facilities for livestock manure shall be of a capacity to preclude the pollution of water by direct discharge, or by run-off and infiltration of the soil.

7.13.2 To ensure sound fertilizer management, the capacity of such storage facilities for livestock manure shall exceed the storage capacity required for the longest period of the year in which any application of fertilizer the land is either inappropriate, or when such application is prohibited in cases where the production unit is located within a designated nitrate vulnerable zone.

8 Specific production requirements

8.1 Bee keeping

8.1.1 General principles

8.1.1.1 Beekeeping activities shall contribute to the protection of the environment and support agricultural and forestry productions through the pollination action of bees.

8.1.1.2 The certification of beekeeping products shall be dependent on the conditions for extraction, processing and storage of beekeeping products, as well as the characteristics of the hives treatments and the quality of the environment.

8.1.1.3 All beekeeping units of an operation within the same area shall comply with the requirements of these standards. Exceptions may be made where the locations of some units do not meet the requirements, but all other requirements are satisfied. In such cases, the products shall not be sold, labelled, or represented as organic.

8.1.1.4 Bee products may be sold as organically produced when the requirements of these Standards have been complied with for at least one year. During the conversion period the wax shall be replaced according to the requirements laid down in paragraph 6.6.2

8.1.1.5 In the choice of breeds, account shall be taken of the capacity of animals to adapt to local conditions, their vitality and their resistance to disease. Preference should be given to the use of European breeds of *Apis mellifera* and their local ecotypes.

8.1.1.6 Apiaries shall be constituted by means of the division of colonies or the acquisition of swarms or hives from organic bee units complying with these standards, or their equivalent.

8.1.1.7 Where bee colonies are converted to organic production, introduced bees shall come from organic production units when available.

8.1.1.8 The reconstitution of the apiaries shall be authorized by the verification body when organically managed apiaries are not available, or in cases of high mortality of animals caused by health or catastrophic circumstances. This shall be subject to the conversion period.

8.1.1.9 For renovation of the apiaries, the incorporation of non-organic queen bees and swarms shall not exceed 10% per year. The queen bees and swarms shall be placed in hives with combs or comb foundations coming from organic production units.

8.1.2 Location of apiaries and provision of nutrition

8.1.2.1 Hives shall be situated in organically managed fields and/or wild natural areas. A map on an appropriate scale listing the location of hives shall be provided to the verification body by the beekeeper. Where no such areas are identified, the beekeeper shall provide the verification body with appropriate documentation and evidence, including suitable analyses if necessary, that the areas accessible to his colonies meet the conditions required in these standards.

8.1.2.2 The operator shall not place hives within foraging distance of fields or other areas with a high contamination risk. The organic production plan shall demonstrate that the location of apiaries will maintain enough distance from any non-agricultural production sources possibly leading to contamination, for example: urban centres, motorways, industrial areas, waste dumps, waste incinerators, etc.

8.1.2.3 Hives shall be placed in an area that ensures access to sources of honeydew, nectar and pollen that meets organic crop production requirements sufficient to supply all of the bees' nutritional needs. This shall include access within a radius of 3 km from the apiary site, nectar and pollen sources consisting essentially of organically produced crops and/ or spontaneous vegetation, access to water.

8.1.2.4 Apiary locations shall not be located within a 5 kilometre radius of pollution sources which may cause contamination of honey by returning foraging bees. Such sources include conventional orchards and crops, livestock dip sites, urban centres, sanitary landfills, garbage dumps, contaminated water, golf courses and GE crops. This distance may be required to be larger where threats such as GMO crops pose potential risk to production and end product in regard to GMO pollen. Where threats to contamination may be present, additional verification and monitoring practices may be required to be in place to ensure conformance with this standard.

8.1.2.5 The above requirements do not apply to areas where flowering is not taking place, or when the hives are dormant.

8.1.2.6 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.

8.1.2.7 The artificial feeding of colonies is authorized where the survival of the hives is endangered due to extreme climatic conditions. Artificial feeding shall be made with organically produced honey, preferably from the same organic-production unit.

8.1.2.8 Certification bodies may authorize organically produced sugar syrup, or organic sugar molasses instead of organically produced honey in artificial feeding, in particular, when it is required by climatic conditions that provoke crystallization of honey.

8.1.2.9 Products other than those authorized above are prohibited in the feeding of colonies.

8.1.2.10 Artificial feeding, when necessary, shall be carried out only between the last honey harvest and 15 days before the start of the next nectar or honeydew flow period.

8.1.2.11 The following information shall be entered in the register of the apiaries with regard to the use of artificial feeding:

- a) type of product,
- b) dates used,
- c) quantities used, and
- d) identity of the hives where it is used.

8.1.2.12 All foraging areas shall be verified to have been in compliance with this Code of Practice for a minimum prior period of three (3) years and consist of organically managed crops and/or native vegetation and/or natural range land and pastures. Apiary locations for spring build-up shall be in or near wooded or naturally undisturbed areas. Hives must be provided with sufficient sources of honeydew.

8.1.3 Disease prevention and treatment

8.1.3.1 Disease prevention in beekeeping shall be based on the following principles:

- a) the selection of appropriate hardy breeds;
- b) the application of certain practices encouraging strong resistance to disease and the prevention of infections, such as: regular renewal of queen bees, systematic inspection of hives to detect any health anomalies, control of male broods in the hives, disinfecting of materials and equipment at regular intervals, destruction of contaminated material or sources, regular renewal of beeswax and sufficient reserves of pollen and honey in hives.

8.1.3.2 For pest and disease control the following are permitted:

- lactic, formic acid
- oxalic, acetic acid
- sulphur
- natural essential oils (e.g. menthol, eucalyptol, camphor)
- bacillus thuringiensis
- steam, direct flame and caustic soda for hive disinfection.

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

- a) phytotherapeutic and homeopathic products shall be used in preference to allopathic products chemically synthesized, provided that their therapeutic effect is effective for the condition for which the treatment is intended;

b) if the use of the abovementioned products should prove or is unlikely to be effective to eradicate a disease or infestation which risks destroying colonies, allopathic chemically synthesized medicinal products may be used under the responsibility of a veterinarian, or other persons authorized by the relevant Government authority.

c) if allopathic chemically synthesized medicinal products are used, the bee products shall not be sold as organic

d) if a treatment is applied with chemically synthesized allopathic products, during such a period, the colonies treated shall be placed in isolation apiaries and all the wax shall be replaced with wax complying with the conditions laid down in this **Code of Practice**. Subsequently, the conversion period of one year will apply to those colonies.

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

8.1.3.4 Whenever veterinary medicinal products are to be used, the type of product (including the indication of the active pharmacological substance) together with details of the diagnosis, the posology, the method of administration, the duration of the treatment and the legal withdrawal period shall be recorded clearly and declared to the inspection body or authority before the products are marketed as organically produced.

8.1.4 Hive management

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

8.1.4.2 The use of combs, which contain broods, is prohibited for honey extraction.

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

8.1.4.4 The replacement of the queen bees involving the killing of the old queen is permitted.

8.1.4.5 Artificial insemination of queen bees is permitted.

8.1.4.6 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.

8.1.5 Identification and recordkeeping

8.1.5.1 The maps and other documentation describing the areas of beekeeping shall be in accordance with all applicable restrictions and guidelines of the relevant national authorities.

8.1.5.2 The zone where the apiary is situated shall be registered with the relevant authority, together with the identification of the hives. The relevant local authority and the verification body shall be informed of and agreed to the moving of apiaries.

8.1.5.3 Particular care shall be taken to ensure adequate extraction, processing and storage of beekeeping products. All the measures to comply with these requirements shall be recorded.

8.1.5.4 The removals of the supers and the honey extraction operations shall be entered in the register of the apiary.

8.1.6 Hive characteristics and materials

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

8.1.6.2 During the conversion period the wax shall be replaced by organically produced wax. Where the operator can prove that no prohibited products have been previously used in the hive and there is no risk of contamination of wax, replacement of wax is not necessary.

8.1.6.3 In the case of new installations or during the conversion period, non-organically produced bees wax may be authorized by the verification body in exceptional circumstances where organically produced beeswax is not available on the market and provided that it comes from the cap.

8.1.6.4 In cases where all the wax cannot be replaced during a one-year period, the conversion period and extension of the conversion period may be approved by the verification body.

8.1.7 Harvesting and extraction

8.1.7.1 Chemically based bee repellents shall not be used for harvesting. Non-chemical repellent systems only shall be used for harvesting. This may include smoke, escape boards and forced-air bee blowers. Use of smoke shall be kept to a minimum and rely on natural materials only, whilst ensuring no contamination to honey throughout the process.

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

8.1.7.3 Settling tanks or strainers should be used to remove foreign materials. Extraction and processing temperatures shall remain limited in time and not exceed 45 degrees Celsius.

8.1.7.4 Certified honey heated to over 45 degrees Celsius shall not be labelled "raw" or "pure" honey due to heat denaturing of enzymes. Pasteurisation is prohibited. Honey extracted with heat above 45 degrees Celsius shall be used for processing purposes only, shall be labelled to denote processing grade only and shall not be sold as pure honey.

8.1.8 Storage

8.1.8.1 Honey shall be stored below 45 degrees Celsius and shall not be stored under conditions which pose risk of contamination from containers or surrounds. All containers must be food industry approved.

8.1.8.2 Storage containers shall be cleaned and dried before use. Hot water pressure washers are recommended.

8.1.8.3 Storage containers shall be labelled with the operator's name, address and signage denoting certified organic status, the client's certification number, date of harvest and floral source where known.

8.2 Aquaculture

8.2.1 Scope

8.2.1.1 Aquaculture covered in this Code of Practice includes the farming of many different species using diverse forms of production in fresh, brackish or salt water. This Code of Practice covers aquatic plants, fish, and carnivorous, omnivorous, and herbivorous organisms of all types and at all stages of growth, produced in a variety of enclosures such as earthen ponds, tanks and cages (open and closed systems). Wild, stationary organisms in open collecting areas are covered. However, this Code of Practice excludes organisms that move freely in open waters, and/or cannot be inspected according to the general procedures for organic production.

8.2.2 General principles

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

8.2.2.2 The nutritional needs of organic aquatic animals are met from good quality, organic and wild marine sources of feed. Organic aquaculture will be characterized by the development of sustainable systems that operate with minimal reliance on additional feed inputs and that work in harmony with the wider environment.

8.2.2.3 Organic management practices promote and maintain the health and wellbeing of animals through providing balanced organic nutrition and stress free living conditions appropriate to the species, and selecting breeds with resistance to diseases, parasites and infections. The health of farmed aquatic animals is often influenced by impacts from adjacent land areas, e.g. runoff and erosion, so land management practices must control these potential risks.

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

8.2.2.5 Operators must comply with this Code of Practice throughout the conversion period and with all relevant requirements of Section 6 (Crop Production) and Section 7 (Animal Husbandry).

8.2.2.6 The conversion period shall be at least 12 months or one life cycle of the organism, whichever is shorter. Where the entire production unit is not converted, then individual sections of the unit must fully comply with these production standards before they can be certified as organic. Conventional production areas must be physically separated from converting areas and clearly identifiable.

8.2.2.7 The conversion period must take into account the life cycles, species, environmental factors and past use of the site with respect to waste, sediments and water quality, and may be extended to address these issues.

8.2.2.8 No conversion period is required for the collection of wild, sedentary organisms where the water is free-flowing and not contaminated by substances prohibited in this standard and where all other relevant sections of this standard are complied with.

8.2.3 Aquatic ecosystems

8.2.3.1 Aquatic ecosystems shall be managed to comply with the relevant requirements of Section 4 (Principles for organic production).

8.2.3.2 Operators shall take adequate measures to prevent escapes of introduced or cultivated species and document any escapes that are known to occur. Regional and other invasive aquatic species management guidelines (e.g. those disseminated by SPREP) must be complied with.

8.2.3.3 Operators shall take verifiable and effective measures to minimize the release of nutrients and waste, including those resulting from soil erosion, into aquatic ecosystems.

8.2.3.4 Fertilizers and pesticides are prohibited, except for those listed in Appendices 1 and 2.

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

8.2.4 Breeds and breeding

8.2.4.1 Animals farmed in organic aquaculture systems begin life in organic units. They are adapted to local conditions and natural methods are used for breeding. Organic aquaculture systems are not dependent on conventional raising systems.

8.2.4.2 Animals shall be raised organically from birth. When organic stock is not available, conventional sources may be used. However, breeding stock brought in from conventional sources shall spend not less than two-thirds of their life span in the organic system. The following conversion periods apply:

- 9 months in the case of 3-year-old fish produced for food, or at least three-quarters of their lifetime.
- 6 months in the case of juvenile fish less than 2 years old.
- 10 weeks for the production of fingerlings brought in before they weigh 20 grams.

- 12 months in the case of fish raised for caviar production.

8.2.4.3 Operators shall not use artificially polyploid or genetically engineered organisms.

8.2.5 Aquatic animal nutrition

8.2.5.1 To meet their nutritional needs, animals shall be fed rations from plants and animals appropriate for the digestive system, metabolism and physiological needs of their species. Animals shall be fed 100% organic feed or feed from wild sources. Where the quantity or quality of organic feed available from an approved feedstock origin is inadequate, the daily maximum percentage of non-organic feed shall be 10% based on an annual dry-matter basis.

8.2.5.2 Wild feed sources – operators may use non-organic aquatic animal protein and oil sources provided they are:

- a) harvested from local, independently verified, sustainable sources;
- b) verified to have contamination levels below limits established by the appropriate national, regional or Codex standards.

8.2.5.3 Commercial fish meal (i.e. meal made from fish caught only for the production of fish meal and fish oil) – this feed must not constitute more than 90% of the diet with the balance being from organic sources. The percentage of commercial fish meal and fish oil that is permitted will decrease to 50% by 2020.

8.2.5.4 Diets given to aquatic animals shall comply with the requirements of 7.6.15 and 7.6.16.

8.2.5.5 Operators shall feed animals efficiently, with minimum loss of feed to the environment.

8.2.5.6 Feeding aquatic animals on feed produced from the same species as them is prohibited.

8.2.6 Aquatic animal health and welfare

8.2.6.1 Ensuring the health and well-being of animals shall be primarily based on preventing problems through selecting appropriate operating sites and maintaining good levels of nutrition and living conditions so as to enhance the resilience of animals to problems that occur and decrease the risk that these will occur. Operators shall comply with the relevant sections of 7.6.12.

8.2.6.2 The following are prohibited: prophylactic use of veterinary drugs; allopathic veterinary drugs; antibiotics; synthetic hormones; and synthetic growth promotants.

8.2.6.3 Stocking densities shall be maintained that do not compromise animal welfare.

8.2.6.4 Regular monitoring shall be undertaken and records maintained of the following: water quality; stocking densities; and the health and behaviour of animals during each production cycle.

8.2.7 Transport and harvest of aquatic animals

8.2.7.1 Operators shall comply with relevant requirements of Section 7.8.

8.2.7.2 Operators shall handle live organisms in ways that are compatible with their physiological requirements and minimize stress to the organisms.

8.2.7.3 Operators shall implement defined measures to ensure that organic aquatic animals are provided with conditions during transportation and slaughter that meet the animals' specific needs, including minimizing the adverse effects of:

- a) diminishing water quality
- b) time spent in transport
- c) stocking density
- d) toxic substances
- e) escape

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

8.2.7.5 The slaughter of fish and other aquatic organisms shall be managed so as to avoid unnecessary suffering.

8.2.7.6 Systems shall be established to effectively track organic animals through handling and transport processes.

8.2.7.7 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.

9 Processing and handling

9.1 General principles

- a) Organic processed products are made from organic ingredients.
- b) Organic product packaging has minimal adverse impacts on the product or on the environment.
- c) 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.
- d) Organic food is protected from pests and diseases by the use of good manufacturing practices that include proper cleaning, sanitation and hygiene, without the use of chemical treatment or irradiation.

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

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

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

9.2 Pest and disease control for processing facilities

9.2.1 A handler or processor shall manage pests using the following methods according to these priorities:

- a) Removal of pest habitat, food sources, and breeding areas;
- b) Preventative methods such as disruption, elimination of habitat and access to facilities;
- c) Management of environmental factors, such as temperature, light, humidity, atmosphere, and air circulation, to prevent pest reproduction;
- d) Use of mechanical or physical controls including but not limited to traps, light, or sound;
- e) Use of lures and repellents using non-synthetic or synthetic substances consistent with Appendix 2.

9.2.2 If the practices provided for in paragraphs 9.2.1(a) through (e) of this section are not effective to prevent or control pests, a non-synthetic or synthetic substance consistent with Appendix 5b may be applied.

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

- pesticides not contained in Appendix 2
- fumigation with ethylene oxide, methyl bromide, aluminium phosphide or other
- substance not contained in Appendix 5b
- ionizing radiation

The direct use or application of a prohibited method or material shall render that product no longer organic.

9.2.4 The operator shall take necessary precautions to prevent contamination, including the removal of organic product from the storage or processing facility, and measures to decontaminate the equipment or facilities.

9.2.5 Any operator who applies a non-synthetic or synthetic substance to prevent or control pests shall update the operation's organic handling plan to reflect the use of such substances and methods of application. The updated organic plan shall include a list of all measures taken to prevent contact of the organically produced products or ingredients with the substance used.

9.2.6 When required by local regulations, any application of prohibited substances to equipment or facilities shall not contaminate organic product handled or processed therein.

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

9.3 Processing methods

9.3.1 Techniques used to process organic food shall be biological, physical, and mechanical in nature.

9.3.2 Any additives, processing aids, or other substances that chemically react with or modify organic foods shall comply with the requirements of Appendix 5a.

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

9.3.4 Irradiation is not permitted.

9.3.5 Filtration techniques that chemically react with or modify organic food on a molecular basis shall be restricted. It shall be carried out by the restriction of permitted filtration techniques and materials (e.g. certain ion exchange resins and absorption techniques).

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

9.3.7 The following conditions of storage are permitted:

- controlled atmosphere
- temperature control
- drying
- humidity regulation

9.3.8 Ethylene gas is permitted for ripening.

9.4 Packaging

9.4.1 Packaging material shall not contaminate organic food.

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

9.4.3 Processors of organic produce shall use reusable, recycled, recyclable, and biodegradable packaging wherever possible but shall not be packaged in reused bags or containers that have been in contact with any substance likely to compromise the organic integrity of product or ingredient placed in those containers.

9.5 Ingredients

9.5.1 All ingredients used in an organic processed product shall be organically produced except for those additives and processing aids that appear in Appendix 5a and non-organically produced ingredients that are in compliance with the labelling provisions.

9.5.2 If organic ingredients are not available then non-organically produce ingredients of agricultural origin may be used provided that:

- a) they are permitted by the certifier
- b) they are not genetically engineered
- c) they do not exceed 5% of the content of the agricultural origin component of the product. 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. The use of non-organic raw materials will be subject to periodic review and revaluation

9.5.3 Flavouring additive shall be from non-synthetic sources only and shall not be produced using synthetic solvents and carrier systems or any artificial preservative.

9.5.4 Any processing practice, such as smoking, shall be carried out and any ingredient or such processing aid shall be used only in accordance with relevant national legislation and, in the absence thereof, in accordance with the principles of good manufacturing practice for foodstuffs.

Processing practices shall be documented.

9.5.5 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.

9.5.6 Preparations of microorganisms and enzymes commonly used in food processing may be used, with the exception of genetically engineered microorganisms and their products.

9.5.7 Processors shall use microorganisms grown on substrates that consist entirely of organic ingredients and substances on Appendix 5a, if available. This includes cultures that are prepared or multiplied in-house.

9.6 Cleaning, disinfecting, and sanitizing

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

9.6.2 Only water and substances that appear in Appendix 5b may be used in direct contact with organic food.

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

9.6.4 The operator is required to perform an intervening event between the use of any cleaner, sanitizer, or disinfectant and the contact of organic food with that surface, unless the substance is otherwise noted in Appendix 5b.

9.6.5 Acceptable intervening events include a hot-water rinse, a sufficient flush of organic product that is not sold as organic or adequate time for the substance to volatilize.

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

9.7 Textile fibre processing

General principle

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

9.7.1 Fibre processing shall comply with the requirements of sections 9.1 and 9.2.

9.7.2 Labelling of textiles shall comply with the requirements of Section 10, "Labelling".

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

10 Labelling

General principle

Organic products are clearly and accurately labelled as organic.

10.1 Organic products labelling

10.1.2 Products for export, produced and certified to foreign national organic standards or foreign contract buyer requirements, may be labelled in accordance with the organic labelling

requirements of the receiving country or contract buyer: Provided, that, the shipping containers and shipping documents meet the labelling requirements specified in these standards.

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

10.1.4 The labelling and advertising of a product may refer to organic production methods only where:

- a) such indications show clearly that they relate to a method of agricultural production;
- b) the product was produced in accordance with these standards or imported from a third country having a recognized organic verification/certification programme in place;
- c) the product was produced or imported by an operator who is subject to the national inspection measures;
- d) wild ingredients or products shall be declared as such as well as organic;

10.2 Mixed products labelling

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

10.2.2 Where a minimum of 95% of the ingredients are of certified organic origin, products may be labelled "certified organic" or similar and may carry the certification mark of the verification body. Provided that:

- a) all the other ingredients of agricultural origin of the product shall be from those listed in Appendix 5a.,
- b) the product shall contain only substances listed in Appendix 5a, as ingredients of non-agricultural origin,
- c) the products or its ingredients of agricultural origin shall not have been subjected to treatments involving the use of substances not listed in Appendix 5a.
- d) the product or its ingredients shall not have been subjected to treatments involving the use of ionizing radiation
- e) the product shall have been prepared or imported by an operator who is subject to the inspection measures consistent with these standards.
- f) the labelling shall refer to the name and/or the code number of the verification body to which the operator who has carried out the most recent preparation operation is subject.

g) the indications referring to organic production methods shall make it clear that they relate to a method of agricultural production and shall be accompanied by a reference to the ingredients of agricultural origin concerned, unless such reference is clearly given in the list of ingredients.

h) the product shall have been produced without the use of genetically modified organisms and/or any products derived from such organisms.

10.2.3 Where less than 95% but not less than 70% of the ingredients are of certified organic origin, products shall not be called "organic". The word "organic" shall only be used on the principal display in statements such as "made with organic ingredients" provided there is a clear statement of the proportion of the organic ingredients.

10.2.4 Any indication that the product is certified in accordance with this Code of Practice shall be shown in close proximity to the indication of proportion of organic ingredients. Such indications shall appear in the same colour and with an identical size and style of lettering as the other indications in the list of ingredients. Such indications shall also appear in a separate statement set in the same visual field as the sales description and indicating the percentage of the ingredients in the product. The statement shall be in the following form: 'X% of the agricultural ingredients was produced in accordance with the rules of organic production'.

10.2.5 Where less than 70% of the ingredients are of certified organic origin and have been handled in accordance with these standards, the indication that an ingredient is organic may appear in the ingredient list. Such product shall not be called "organic".

10.2.6 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.

10.2.7 Multi-ingredient products shall not include organic and non-organic forms of the same ingredient.

10.2.8 A raw or processed livestock feed product sold, labelled, or represented as "100% organic", shall contain (by weight or fluid volume, excluding water and salt) not less than 100% organically produced raw or processed agricultural product. Such feed product shall have been produced and handled in accordance with these standards.

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

10.2.10 The percentage of all organically produced ingredients in an agricultural product sold, labelled, or represented as "100% organic," "organic," or "made with organic (specified ingredients or food group(s))," or that include organic ingredients shall be calculated as follows:

a) the total net weight (excluding water and salt) of combined organic ingredients at formulation shall be divided by the total weight (excluding water and salt) of the finished product.

b) where product and its ingredients are liquid, the fluid volume of all organic ingredients (excluding water and salt) shall be divided by the fluid volume of the finished product (excluding water and salt).

c) where the liquid product is identified on the principal display panel or information panel as being reconstituted from concentrates, the calculation shall be made on the basis of single-strength concentrations of the ingredients and finished product.

d) where products contain organically produced ingredients in both solid and liquid form, the combined weight of the solid ingredients and the weight of the liquid ingredients (excluding water and salt) shall be divided by the total weight (excluding water and salt) of the finished product.

e) the percentage of all organically produced ingredients in an agricultural product shall be rounded down to the nearest whole number.

f) where 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.

10.2.11 The percentage shall be determined by the operator who affixes the label on the consumer package and shall be verified by the verification body of that operator. The operator may use information provided by the certified production operation in determining the percentage.

10.3 Labelling of conversion products

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

10.3.2 Crop products shall bear indications referring to conversion to the organic production method only where:

a) the requirements of these standards are fully satisfied, with the exception of those concerning the length of the conversion period,

b) a conversion period of at least 12 months before the harvest has been complied with

c) such indications do not mislead the purchaser of the product regarding its difference from products that satisfy all the requirements of these standards.

d) such indications take the form of the words 'product under conversion to organic farming', and appear in a colour, size and style of lettering which is not more prominent than the sales description of the product; in this indication the words 'organic farming' shall not be more prominent than the words 'product under conversion to'.

e) the product contains only one crop ingredient of agricultural origin.

f) the labelling refers to the name and/or the code number of the verification body to which the operator who has carried out the most recent production or preparation operation is subject.

g) the product has been produced without the use of genetically modified organisms and/or any products derived from such organisms.

10.3.3 The product labels of the organically certified products shall only bear the verification body's seal, where this is agreed upon in the contract with the verification body. The verification body retains the right to withdraw the permission to use its seal in case of non-compliance with its standards.

10.4 Labelling for types of packaging

10.4.1 Packages containing not less than 95% organically produced raw or processed agricultural products may display, on the principal display panel, information panel, and any other panel of the package and on any labelling or market information concerning the product, the following:

- a) The term, "100% organic" or "organic," as applicable, to modify the name of the product;
- b) For products labelled "organic," the percentage of organic ingredients in the product; (The size of the percentage statement shall not exceed one-half the size of the largest type size on the panel on which the statement is displayed and shall appear in its entirety in the same type size, style, and colour without highlighting.)
- c) The term, "organic," to identify the organic ingredients in multi-ingredient products labelled "100% organic";
- d) The verification body logo or seal; and/or
- e) The seal, logo, or other identifying mark of the verification body which certified the production or handling operation producing the finished product and any other certifying agent which certified production or handling operations producing raw organic product or organic ingredients used in the finished product.

10.4.2 The operator producing the finished product shall maintain records, in accordance with these standards, verifying organic certification of the operations producing such ingredients.

10.4.3 Packaging containing products labelled "organic," shall identify each organic ingredient in the ingredient statement with the word, "organic," or with an asterisk or other reference mark, which shall be defined below the ingredient statement to indicate the ingredient is organically produced. Water or salt included as ingredients shall not be identified as organic.

10.4.4 Packaging of such product shall identify the name of the verification body that certified the handler of the finished product. This identification shall be on the information panel, below the information identifying the handler or distributor of the product and preceded by the statement, "Certified organic by..." or similar phrase. The packaging may display the business address, Internet address, or telephone number of the certifying agent in such label.

10.4.5 Packaged products labelled “made with organic (specified ingredients or food group(s)).” shall display on the principal display panel, information panel, and any other panel and on any labelling or market information concerning the product:

a) The statement:

(i) “Made with organic (specified ingredients)”: Provided, that, the statement does not list more than three organically produced ingredients; or

(ii) “Made with organic (specified food groups)”: Provided, that, the statement does not list more than three of the following food groups: beans, fish, fruits, grains, herbs, meats, nuts, oils, poultry, seeds, spices, sweeteners, and vegetables or processed milk products; and, Provided Further, that, all ingredients of each listed food group in the product shall be organically produced; and

(iii) Which appears in letters that do not exceed one-half the size of the largest type size on the panel and which appears in its entirety in the same type size, style, and colour without highlighting.

b) The percentage of organic ingredients in the product. The size of the percentage statement shall not exceed one-half the size of the largest type size on the panel on which the statement is displayed and shall appear in its entirety in the same type size, style, and colour without highlighting.

c) The seal, logo, or other identifying mark of the verification body that certified the handler of the finished product.

10.4.6 Packaging containing less than 95% but at least 70% organically produced ingredients:

a) Shall identify in the ingredient statement, each organic ingredient with the word, “organic,” or with an asterisk, or other reference mark, which shall be defined below the ingredient statement to indicate the ingredient is organically produced. Water or salt, if included as ingredients, shall not be identified as organic.

b) Shall, on the information panel, below the information identifying the handler or distributor of the product and preceded by the statement, “Certified organic by...” or similar phrase, identify the name of the verification body that certified the handler of the finished product: The business address, Internet address, or telephone number of the certifying agent may be included in such label.

10.4.7 Packaged product containing less than 95% organically produced ingredients shall not display the verification body logo or seal.

10.4.8 Multi-ingredient packaged products with less than 70% organically produced ingredients shall identify the organic content of the product only as follows:

a) the packaging shall identify each organically produced ingredient in the ingredient statement with the word, “organic,” or with an asterisk or other reference mark which is defined below the ingredient statement to indicate the ingredient is organically produced.

b) where the organically produced ingredients are identified in the ingredient statement, the packaging shall display the product’s percentage of organic contents on the information panel.

10.4.9 Agricultural products with less than 70% organically produced ingredients shall not display any certification body’s seal, logo or other identifying mark which represents organic certification of a product or product ingredients.

10.4.10 Raw or processed livestock feed product sold, labelled or represented as either “100% organic” or “organic” may display on any package panel the following terms:

a) The statement, “100% organic” or “organic,” as applicable, to modify the name of the feed product;

b) The seal, logo, or other identifying mark of the verification body which certified the production or handling operation producing the raw or processed organic ingredients used in the finished product;

c) The word, “organic,” or an asterisk or other reference mark that is defined on the package to identify ingredients that are organically produced. Water or salt included as ingredients shall not be identified as organic.

10.4.11 Such packaging shall display the name of the verification body that certified the handler of the finished product. This shall be displayed on the information panel, below the information identifying the handler or distributor of the product and preceded by the statement, “Certified organic by...” or similar phrase. The business address, Internet address, or telephone number of the certifying agent may be included.

10.4.12 Non-retail containers used only to ship or store raw or processed agricultural product labelled as containing organic ingredients may display the following terms or marks:

a) The name and contact information of the verification body which certified the handler which assembled the final product;

b) Identification of the product as organic;

c) Special handling instructions needed to maintain the organic integrity of the product;

d) The seal, logo, or other identifying mark of the verification body that certified the organic production or handling operation that produced or handled the finished product.

10.4.13 Non-retail containers used to ship or store raw or processed agricultural product labelled as containing organic ingredients shall display the production lot number of the product if applicable.

10.4.14 Shipping containers of domestically produced product labelled as organic intended for export to international markets may be labelled in accordance with any shipping container labelling requirements of the foreign country of destination or the container labelling specifications of a foreign contract buyer, provided that:

- a) the shipping containers and shipping documents accompanying such organic products shall be clearly marked "For Export Only", and
- b) proof of such container marking and export shall be maintained by the handler in accordance with recordkeeping requirements for exempt and excluded operations.

10.4.15 Agricultural products displayed and/or sold in bulk or in other than packaged form may use the term, "100% organic" or "organic," as applicable, to modify the name of the product in retail display, labelling, and display containers: Provided, that, the term, "organic," shall be used to identify the organic ingredients listed in the ingredient statement.

10.4.16 Where the product has been produced in a certified facility, the retail display, labelling, and display containers may use:

- a) The seal, logo, or other identifying mark of the verification body that certified the production or handling operation producing the finished product and any other certification body which certified operations producing raw organic product or organic ingredients used in the finished product.

10.4.17 Agricultural products in other than packaged form containing between 70% and 95% organically produced ingredients may use the phrase, "made with organic (specified ingredients or food group(s))," to modify the name of the product in retail display, labelling, and display containers, provided:

- a) Such statement shall not list more than three organic ingredients or food groups.
- b) In any such display of the product's ingredient statement, the organic ingredients shall be identified as "organic."

10.4.18 Where the product has been produced in a certified facility, such agricultural products labelled as "made with organic (specified ingredients or food group(s))" in retail displays, display containers, and market information may display the verification body's seal, logo, or other identifying mark.

10.4.19 Any agricultural product organically produced or handled on an exempt or excluded operation shall not:

- a) Display any certification body's seal or other identifying mark which represents the exempt or excluded operation as a certified organic operation, or
- b) Be represented as a certified organic product or certified organic ingredient to any buyer.

10.4.20 An agricultural product organically produced or handled on an exempt or excluded operation may be identified as an organic product or organic ingredient in a multi-ingredient product produced by the exempt or excluded operation. However such product or ingredient shall not be identified or represented as “organic” in a product processed by others.

10.5 Labelling of fibre, textiles and apparel

10.5.1 Labelling of textiles follows all standards on labelling organic food with the exceptions in this section.

10.5.2 Only substances allowed by the verification body based upon the criteria for textile processing in Appendix 4 shall be used to process fibre products labelled as “organic.”

10.5.3 Apparel and other textile products labelled as organic consist of at least 95% by weight organic fibre as described in section 9.7*.

10.5.4 Textiles may be labelled “made with (X%) organically produced fibres” only if at least 70% of the fibres are organic as described in section 9.7*.

*(Percentages in 10.5.3 and 10.5.4 refer to the total weight of the fibres, and do not include the weight of the non-textile accessories such as buttons and zippers.)

11 Social responsibility

General principle

This Code of Practice aims to ensure that the principles of social justice and human rights are an integral part of organic agriculture and processing in the Caribbean. The Code of Practice also recognizes the need to establish fair and sustainable trading relationships based on trust, transparency, equity, accountability and continuity.

11.1 Commitment to social justice and human rights

Operators should comply with all national and international conventions and law, for example, the International Labour Organization (ILO) conventions relating to labour welfare and the UN Charter of Rights for Children.

11.1.1 Operators with 10 or more persons hired full-time for labour should have a documented policy on social justice.

11.1.2 Operators who hire fewer than ten (10) full-time persons for labour are not required to have such a policy.

11.1.3 In cases where evidence is found that production operations are based on violation of basic human rights and documented cases of social injustice, product from such operations shall not be declared or certified as organic.

11.1.4 Operators shall not hire child labour. Children are allowed to experience work on their family's farm or a neighbouring farm provided that:

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

11.1.5 All workers shall be employed under legally binding labour contracts.

11.2 Employee rights

11.2.1 Operators shall not use forced or involuntary labour.

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

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

11.2.4 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.

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

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

11.3 Work environment

11.3.1 All employees and their families who live on an organic property shall have access to potable water, food, housing, education, transportation and health services.

11.3.2 Workplaces, machinery and equipment shall be safe and without risk to health. Independent inspection may be required to be carried out by a competent authority or independent inspection agency to assure on-going safety.

11.3.3 The following persons are not allowed to work with the application of bio-pesticides that are otherwise approved for use under the CARICOM Organic Products Code of Practice: persons younger than 18 years, pregnant or nursing women, persons with incapacitated mental conditions; persons with chronic, hepatic or renal diseases, and persons with respiratory diseases.

Table 1: Table of Housing & Free Range Areas

(Minimum indoor and outdoor surface areas for different species and types of production)

1. BOVINES, OVINE AND PIGS

	Indoor area (net area available to animals)		Outdoor area (exercise area, excluding pasturage)
	Live weight minimum (Kg)	M2/head	M2/head
Breeding and fattening bovine and equidae	Up to 100	1.5	1.1
	Up to 200	2.5	1.9
	Up to 350	4.0	3
	Over 350	5 with a minimum of 1 m2/100 kg	3.7 with a minimum of 0.75 m2/100 kg
Dairy cows		6	4.5
Bulls for breeding		10	30
Sheep and goats		1.5 sheep/goat 0.35 lamb/kid	2.5 2.5 with 0.5 per lamb/kid
Farrowing sows with piglets up to 40 days		7.5 sow	2.5
Fattening pigs	Up to 50	0.8	0.6
	Up to 85	1.1	0.8
	Up to 100	1.3	1
Piglets	Over 40 days and up to 30 kg	0.6	0.4
Brood pigs		2.5 female	1.9
	6.0 male	8.0	

2. POULTRY

	Indoor area (net area available to animals)			Outdoor area (m2 of area available in rotation/head
	No animals/m2	cm perch/animal	nest	
Laying hens	6	18	8 laying hens per nest or in case of common nest 120 cm2/bird	4, provided that the limit of 170 kg of N/ha/year is not exceeded
Fattening poultry (in fixed housing)	10 with a maximum of 21 kg live weight/m2	20 (for guinea fowl only)		4 broilers and guinea fowl 4,5 ducks 10 turkey 15 geese In all the species mentioned above the limit of 170 kg of N/ha/year is not exceeded
Fattening poultry in mobile Housing	16 (*) in mobile poultry houses with a maximum of 30 kg live weight/m2			2.5, provided that the limit of 170 kg of N/ha/year is not exceeded

(*) Only in the case of mobile houses not exceeding 150 m2 floor space which remain open at night.

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APPENDICES

Introduction to Appendices

In organic agriculture the maintenance of soil fertility is achieved through the recycling of minerals and organic matter where the nutrients are made available to crops through the activity of soil micro-organisms.

Pests, diseases, and weeds can be managed through cultural practices. Organic foods are processed primarily by biological, mechanical, and physical means. The following appendices are used as a guideline, and are not intended to be comprehensive.

Appendix 4 is used to evaluate products included in Appendix 1, 2 and 3.

Appendix 6 is used to evaluate products included in Appendix 5.

Taking into consideration factors such as contamination, risk of nutritional imbalances, importation of inputs from outside the farm, and depletion of natural resources, the use of many of these inputs is already restricted.

Where there is doubt about whether products should be included in the appendices the precautionary principle should be applied.

Revision Procedure for Appendices

Any CARICOM member can request that CROSQ add, delete, or change the status of an input. A member who wishes CROSQ to determine whether or not an input should be permitted for use in organic production or processing shall submit a dossier. A dossier addresses all of the criteria in Appendices 4 and/or 6 and follows the format prescribed by the Committee. A dossier requesting deletion needs only to address the criteria/the non-fulfilment of which are the reason for deletion. Requests from non-members may also be considered at the discretion of the Committee.

Dossiers shall be submitted to the Committee when the verification body or inspection body recommends an input that does not appear in the appendices or that is not clearly covered by the general standards or generic groups in the standards. Inputs that are the subject of dossiers may be used during the assessment period but any user, certification body or inspection body does so at their own risk and should be mindful that a negative decision may be made.

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

1. Insufficient information. The dossier is returned to the member with a request to provide more information.
2. Clarification of existing standards. The member is informed that the input is already covered (allowed, restricted, or prohibited) by the Code of Practice.
3. Reference to Experts. The Committee requires the opinion of recognized experts before it can make a decision. The Committee passes a dossier to one or several experts for evaluation. If the experts require further information, the Committee requests this information and passes it to the experts. The experts provide a recommendation to the Committee. The Committee passes expert comment back to the applicant for further comment. The Committee then makes a decision based on the recommendation and comments of the applicant.
4. Recommendation for Change of a Relevant Appendix. The Committee informs the member that the change is recommended by the Committee to be included into the CROSQ Code of Practice. The input then follows the procedure established for changes of the Code of Practice.

5. Rejection of the Change. The Committee informs the member that the input is not considered to be appropriate for inclusion in the Code of Practice. Final decisions and recommendations shall be published and circulated to all CARICOM members.

Appendix 1: Fertilisers and Soil Conditioners

Substance Description	CROSQ Conditions for use
I. Plant and Animal Origin	
Farmyard manure, slurry and urine	Only after composting/fermentation
Poultry manure	Only from extensive poultry production without use of hormones and other growth regulators used in factory farms
Ash from manure burning	Prohibited
Guano	Should be harvested in a sustainable manner
Source separated human excrement from separated sources which are monitored for contamination	Prohibited
Vermicastings and vermicompost	
Blood meal, meat meal, bone, bone meal	Only after approval by CROSQ; restricted to local consumption
Hoof and horn meal, feather meal, fish and fish products, wool, fur, hair, dairy products	Only after approval by CROSQ; restricted to local consumption
Liquid fish products	Can be pH adjusted with sulphuric, citric or phosphoric acid. The amount of acid used shall not exceed the minimum needed to lower the pH to 3.5.
Biodegradable processing by-products, plant or animal origin, e.g. by-products of food, feed, oilseed, brewery, distillery or textile processing.	Only of vegetative origin
Crop and vegetable residues, mulch, green manure, straw	
Wood, bark, sawdust, wood shavings, woodash, wood charcoal	Only from chemically untreated wood
Seaweed and seaweed products	If extracted see plant preparations below.
Plant preparations and extracts, such as liquid manures	Extraction processes are limited to the use of potassium hydroxide or sodium hydroxide; solvent amount used is limited to that amount necessary for extraction.
Compost made from ingredients listed in this appendix, spent mushroom waste, humus from worms and insects.	
Urban composts from separated sources which are monitored for contamination.	
Humic acids	Naturally occurring deposits. Water and alkali extracts only.
2. Mineral Origin	
Basic slag	

Calcareous and magnesium amendments	
Potassium Chloride	Prohibited unless derived from mined source and applied in a manner that minimizes chloride accumulation in the soil
Limestone, gypsum, marl, maerl, chalk, sugar beet lime, calcium chloride,	
Magnesium rock, kieserite and Epsom salt (magnesium sulphate)	Allowed with a documented soil deficiency.
Mineral potassium (e.g. sulphate of potash, kainite, sylvanite,)	Shall be obtained by physical procedures but not enriched by chemical processes
Natural phosphates	Cadmium content less than or equal to 90 mg/kg P205.
Pulverised rock, stone meal	
Clay (e.g. bentonite, perlite, vermiculite, zeolite)	
Lignin sulphonate	Chelating agent, dust suppressant, flotation agent
Trace elements	Use restricted to cases where soil/plant nutrient deficiency is documented by soil or tissue 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.
Sulphur	
Sulphate, carbonates, oxides, or silicates of zinc, copper, iron, manganese, molybdenum, selenium, and cobalt.	Not to be used as a defoliant, herbicide or desiccant. Those made from nitrates or chlorides are prohibited. Soil deficiency must be documented by testing.
Sodium Nitrate	Prohibited unless use is restricted to no more than 20% of the crop's total nitrogen requirement.
Soluble boron products	Not to be used as a defoliant, herbicide or desiccant. Those made from nitrates or chlorides are prohibited. Soil deficiency must be documented by testing.
3. Microbiological	
Biodegradable processing by-products of microbial origin, e.g. by-products of brewery or distillery processing. Microbiological preparations based on naturally occurring organisms	
4. Others	
Arsenic	Prohibited
Lead salts	Prohibited
Sodium Fluoaluminate (mined)	Prohibited
Strychnine	Prohibited
Nicotine Sulphate (tobacco dust)	Prohibited

Appendix 2: Crop Protectants and Growth Regulators

Substance Description	CROSQ Conditions for use
I. Plant and Animal Origin	
Algal preparations	
Beeswax	Pruning agent
Chitin nematocides (natural origin)	
Coffee grounds	
Corn gluten meal (weed control)	
Dairy products (e.g. milk, casein)	
Gelatine	
Lecithin	
Natural acids (e.g. vinegar)	
Neem (<i>Azadirachta indica</i>)	insecticide
Plant oils	
Plant preparations	
Plant based repellents	
Propolis	
Pyrethrum (<i>Chrysanthemum cinerariaefolium</i>), typically with a synergist, such as a vegetable oil.	The synergist Piperonyl butoxide is prohibited.
Quassia (<i>Quassia amara</i>)	
Rotenone (<i>Derris elliptica</i> , <i>Lonchocarpus</i> spp. <i>Thephrosia</i> spp.)	
Ryania (<i>Ryania speciosa</i>)	
Sabadilla	
Vitamin D3	Rodenticide
2. Mineral Origin	
Chloride of lime	
Clay (e.g. bentonite, perlite, vermiculite, zeolite)	
Diatomaceous earth	
Light mineral oils (paraffin)	As insecticide, and plant disease control
Lime sulphur (Calcium polysulfide)	As insecticide, and plant disease control
Potassium bicarbonate	Plant disease control
Potassium permanganate	

Quicklime	
Silicates (e.g. sodium silicates, quartz)	
Sodium bicarbonate	
Sulphur	As insecticide, and plant disease control
3. Microorganisms	
Fungal preparations	
Bacterial preparations (e.g. Bacillus thuringiensis,)	
Release of parasites, predators and sterilized insects	
Viral preparations (e.g. granulosis virus)	
4. Others	
Biodynamic preparations	
Ammonium	Large animal repellent only, no contact with soil or edible portion of crop.
Carbon dioxide	
Ethyl alcohol	
Ethylene	For regulation of pineapple flowering and for ripening of fruit
Hydrogen peroxide	Plant disease control
Homeopathic and Ayurvedic preparations	
Seasalt and salty water	
Soda	
Soft soap	Used in farmstead maintenance and insecticide on ornamental crops.
Boric acid	Structural pest control, no direct contact with food or crops.
Copper (copper hydroxide, copper oxide, copper oxychloride, Copper sulphate, hydrated lime)	Must be used in a manner that minimizes accumulation of copper in the soil. Prohibited as a herbicide.
Sulphur dioxide	Rodenticide, underground only (smoke bombs)
5. Traps, Barriers, Repellents	
Physical Methods	e.g. chromatic traps, mechanical traps
Nets	Petroleum based other than Polyvinyl Chloride (PVC)
Mulches	Newspaper or other recycled paper may not contain glossy finish or coloured inks.
Pheromones (Ammonium Carbonate, etc.)	in traps and dispensers only

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Appendix 3a: Feed Material

Substance Description	CROSQ Conditions for use
1. Feed materials from plant origin	
Cereals, grains, their products and by-products, including the following substances: Oats as grains, flakes, middlings, hulls and bran; barley as grains, protein and middlings; rice as grains, rice broken, bran, and germ expeller; millet as grains; rye as grains, middlings, feed and bran; sorghum as grains; wheat as grains, middlings, bran, gluten feed, gluten and germ; spelt as grains; triticale as grains; maize as grains, bran, middlings, bran, germ expeller and gluten; malt culms; brewers' grains.	
Oil seeds, oil fruits, their products and by-products, including the following substances: Rape seed, expeller, and hulls; soya bean as bean, toasted, expeller and hulls; sunflower seed as seed and expeller; cotton as seed and seed expeller; linseed as seed and expeller; sesame seed as seed and expeller; palm kernels as expeller; turnip rape seed as expeller and hulls; pumpkin seed as expeller; olive pulp (from physical extraction of olives).	
Legume seeds, their product and by-products, including the following substances: Chick peas as seeds; ervil as seeds; chickling vetch as seeds submitted to an appropriate heat treatment; peas as seeds, middlings, and bran; broad beans as seeds, middlings and bran; horse beans as seeds, vetches as seeds and lupin as seeds.	
Tuber roots, their products and by-products, including the following substances: Sugar beet pulp, dried beet, potato, sweet potato as tuber, manioc as roots, potato pulp (by-product of the extraction of potato starch), potato starch, potato protein and tapioca.	
Other seeds and fruits, their products and by-products, including the following substances: Carob pods, citrus pulp, apple pomace, tomato pulp, and grape pulp.	
Forages and roughages, including the following substances: Lucerne, lucerne meal, clover, clover meal, grass (obtained from	

forage plants), grass meal, hay, silage, straw of cereals, and root vegetables for foraging.	
Other plants, their products and by-products, including the following substances: Molasses as a binding agent in compound feeding stuffs seaweed meal (obtained by drying and crushing seaweed and washed to reduce iodine content), powders and extracts of plants, plant protein extracts (solely provided to young animals), spices and herbs.	
2. Feed materials from animal origin	
Milk and milk products, including the following substances: Raw milks, milk powder, skimmed milk, skimmed-milk powder, buttermilk, buttermilk powder, whey, whey powder, whey powder low in sugar, whey protein powder (extracted by physical treatment), casein powder and lactose powder.	Milk substitutes not containing antibiotics may be used in emergencies only.
Fish, other marine animals, their products and by-products, including the following substances: Fish, fish oil and cod-liver oil not refined; Fish molluscan or crustacean autolysates, hydrolysate and proteolysates obtained by an enzyme action, whether or not in soluble form, solely provided to young animals. Fish meal.	
3. Feed materials from mineral origin	
Sodium: unrefined sea salt, coarse rock salt, sodium sulphate, sodium carbonate, sodium bicarbonate, sodium chloride.	
Calcium: lithotamnion and maerl, Shells of aquatic animals (including cuttlefish bones), calcium carbonate, calcium lactate, calcium gluconate.	
Phosphorus: bone dicalcium phosphate precipitate, defluorinated dicalcium phosphate, defluorinated monocalcium phosphate.	
Magnesium: anhydrous magnesia, magnesium sulphate, magnesium chloride, magnesium carbonate.	
Sulphur: sodium sulphate	

Appendix 3b: Feed Additives

Substance Description, compositional requirements	CROSQ Conditions for use
1. Feed additives	
Trace elements, including the following substances:	
Iron: ferrous (II) carbonate, ferrous (II) sulphate monohydrate, ferric (III) oxide,	
Iodine: calcium iodate, anhydrous calcium iodate, hexahydrate potassium iodide.	
Cobalt: cobaltous (II) sulphate monohydrate and/or heptahydrate; basic cobaltous (II) carbonate, monohydrate.	
Copper: copper (II) oxide; basic copper (II) carbonate, monohydrate; copper (II) sulphate, pentahydrate.	
Manganese: manganose (II) carbonate; manganous oxide and manganic oxide; manganous (II) sulfate, mono- and/or tetrahydrate.	
Zinc: zinc carbonate; zinc oxide; zinc sulphate mono- and/or heptahydrate.	
Molybdenum: ammonium molybdate, natrium molybdate.	
Selenium: sodium selenate, sodium selenite.	
Vitamins, provitamins and chemically well-defined substances having a similar effect.	Vitamins authorized under Directive 70/524/EEC, and/or US FDA approved. Preferably derived from raw materials occurring naturally in feeding stuffs, or synthetic vitamins identical to natural vitamins only for monogastric animals.
D Vitamins	Max 200,000 IU/kg
Aspirin	Approved for healthcare use to reduce inflammation.
Enzymes	Enzymes authorized under Directive 70/524/EEC.
Micro-organisms.	Micro-organisms authorized under Directive 70/524/EEC.
Preservatives, including the following substances:	
Formic acid	only for silage
Acetic acid	only for silage
Lactic acid	only for silage
Propionic acid	only for silage

Binders, anti-caking agents and coagulants, including the following substances:	
Colloidal silica	
Kieselgur	
Sepiolite	
Bentonite	
Kaolinitic clays	
Vermiculite	
Perlite	
Processing aids used in feeding stuffs, including the following substances: Sea salt, coarse rock salt, enzymes, yeasts, whey, sugar, sugar beet pulp, cereal flour, molasses and lactic, acetic, formic, and propionic bacteria.	Processing aids for silage.
Glucose	

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Appendix 4: Evaluation of Additional Inputs to Organic Agriculture

Appendices 1, 2 and 3 refer to products for fertilisation, plant pest and disease control and feed material and feed additives in organic agriculture. Appendix 4 outlines the criteria to evaluate other inputs into organic production and processing.

4.1 Checklist for amending the permitted substance list for fertilisation and soil conditioning purposes.

Criteria to be considered	Comments
4.1.1 The material is essential for achieving or maintaining soil fertility or to fulfill specific nutrient requirements, for specific soil-conditioning and rotation purposes which cannot be satisfied by the practices outlined in Chapter 6 or of other products included in Appendix 1, and	
4.1.2 The ingredients are of plant, animal, microbial or mineral origin which may undergo the following processes:	
• physical (mechanical, thermal)	
• enzymatic	
• microbial (composting, digestion), and	
4.1.3 Their use does not result in, or contribute to, unacceptable effects on, or contamination of, the environment, including soil organisms, and	
4.1.4 Their use has no unacceptable effect on the quality and safety of the final product.	

4.2 Checklist for amending the permitted substance list of plant disease or pest and weed control

Criteria to be considered	Comments
4.2.1 The material is essential for the control of a harmful organism or a particular disease for which other biological, physical or plant breeding alternatives and/or effective management techniques are not available, and	
4.2.2 The substances (active compound) should be plant, animal, microbial or mineral origin which may undergo the following processes:	
• physical	
• enzymatic	
• microbial, and	
4.2.3 Their use does not result in, or contribute to, unacceptable effects on, or contamination of, the environment.	
4.2.4 Nature identical products such as pheromones, which are chemically	

synthesized, may be considered if the products are not available in sufficient quantities in their natural form, provided that the conditions for their use do not directly or indirectly contribute to contamination of the environment or the product.	
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Inputs should be evaluated regularly and weighed against alternatives. This process of regular evaluation should result in organic production becoming ever friendlier to humans, animals, the environment and the ecosystem.

4.3 Criteria for evaluation of additional inputs to organic agriculture.

4.3.1 Necessity

Each input must be necessary. This will be investigated in the context in which the product will be used. Arguments to prove the necessity of an input shall be drawn from such criteria as yield, product quality, environmental safety, ecological protection, landscape, human and animal welfare. The use of an input may be restricted to:

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

4.3.2 Nature and Way of Production

4.3.2.1 Nature:

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

- Organic - vegetative, animal, microbial,
- Mineral

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

4.3.2.2 Way of Production:

The ingredients of the inputs may undergo the following processes:

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

4.3.2.3 Collection:

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

4.3.3 Environment

4.3.3.1 Environmental Safety

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

4.3.3.2 Degradability

All inputs shall be degradable to CO₂, H₂O, and/or to their mineral form.

Inputs with a high acute toxicity to non-target organisms should have a maximum half-life of five days. Natural substances used as inputs which are not considered toxic do not need to be degradable within a limited time.

4.3.3.3 Acute toxicity to non-target organisms.

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

4.3.3.4 Long-term chronic toxicity.

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

4.3.3.5 Chemically synthesised products and heavy metals

Inputs shall not contain harmful amounts of manufactured chemicals (xenobiotic products). Chemically synthesised products may be accepted only if nature identical.

Mineral inputs should contain as few heavy metals as possible. Due to the lack of any alternative, and long-standing, traditional use in organic agriculture, copper and copper salts are exceptions for the time being.

The use of copper in any form in organic agriculture must be seen, however, as temporary and use shall be restricted with regard to environmental impact.

4.3.4 Human Health and Quality

4.3.4.1 Human Health

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

4.3.3.2 Product quality

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

4.3.5 Ethical Aspects - Animal Welfare

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

4.3.6 Socio-Economic Aspects

4.3.5.1 Consumers' perception:

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

4.3.7 Materials used in Organic Fibre Processing

In addition to the above applicable criteria, the following additional considerations apply to substances used to process and handle fibre:

- Substances may be allowed in organic textile processing only if they are biodegradable, generally recognized as safe and hypoallergenic.
- Substances shall be prohibited in organic textile processing if they are carcinogenic, mutagenic, teratogenic, toxic, or produced by genetically modified organisms or ionizing radiation.

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Appendix 5a: List of Approved Additives and Processing Aids

Where the substances listed in this annex can be found in nature, natural sources are preferred. Substances of certified organic origin are preferred.¹

International Numbering System	Product Name	Additive	Processing Aid	CROSQ Conditions for use
INS 170	calcium carbonate	X	X	
INS 181	tannin		X	only for wine
INS 184	tannic acid		X	filtration aid for wine
INS 220	Sulphur dioxide	X		Only for wine labeled "made with organic grapes", provided total sulphite concentration less than 100ppm.
INS 270	lactic acid	X	X	
INS 290	carbon dioxide	X	X	
INS 300	ascorbic acid	X		
INS 306	tocopherols, mixed natural concentrates	X		Anti-oxidant in fats and oils
INS 322	lecithin	X	X	
INS 330	citric acid	X	X	
INS 331	Sodium citrate	X		Acidity regulator, sequestrant, emulsifier, stabilizer.
INS 332	Potassium citrate	X		Acidity regulator, sequestrant, stabilizer
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 339	Sodium phosphates	X		For use only in dairy foods.
INS 341	mono calcium phosphate	X		only for "raising flour"
INS 400	alginate 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		
INS 415	xanthan gum	X		
INS 440	pectin	X		unmodified
INS 471	Mono- and di-glycerides of fatty acids	X		Emulsifier, stabilizer.
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		Only in agricultural products labeled "made with organic". Prohibited in agricultural products labeled "organic".
INS 508	Potassium chloride	X		Gelling agent
INS 509	calcium chloride	X	X	
INS 511	magnesium chloride	X	X	only for soybean products
INS 516	calcium sulphate	X		for soybean products, confectionery and in bakers' yeast
INS 518	Magnesium sulphate	X		As a firming agent
INS 524	sodium hydroxide	X	X	For sugar processing and for the surface treatment of traditional bakery products. Prohibited for use in lye peeling of fruits and vegetables.
INS 526	calcium hydroxide	X	X	Food additive for maize tortilla flour. Processing aid for sugar
INS 550	Sodium silicate	X	X	For tree fruit and fibre processing
INS 551	Silicon dioxide, amorphous	X		Anticaking agent.
INS 553	talc		X	

¹ Food additives may contain carriers which shall be evaluated

INS 558	bentonite		X	only for fruit and vegetable products
INS 901	beeswax		X	
INS 903	carnauba wax		X	
INS 917	Potassium iodide	X		Treatment of flour. Only in agricultural products labeled "made with organic".
INS 938	argon	X		Prohibited in agricultural products labeled "organic".
INS 941	nitrogen	X	X	
INS 948	oxygen	X	X	
	activated carbon		X	
	casein		X	only for wine
	Cornstarch (native)	X		Only when not available in organic form.
	diatomaceous earth		X	only for sweeteners and wine
	egg white albumen		X	only for wine
	ethanol		X	Disinfectant and sanitizer only.
	Ethylene		X	For postharvest ripening of tropical fruit
	gelatin	X	X	only for wine, fruit and vegetable
	Glycerin	X		Produced by hydrolysis of fats and oils.
	Gums (arabic, guar, locust bean, carob bean)	X		Water extracted only. Only when not available in organic form.
	Hydrogen peroxide		X	
	isinglass		X	only for wine
	kaolin		X	
	Kelp	X		Asa thickener and dietary supplement. Only when not available in organic form.
	Lecithin (unbleached)	X		Only when not available in organic form.
	Ozone		X	
	perlite		X	
	preparations of bark		X	only for sugar
	Tocopherols	X		Derived from vegetable oil when rosemary extracts are not a suitable alternative.
	Yeast	X		Non-synthetic only. Growth on petrochemical substrate and sulphite waste liquor is prohibited.

¹ Food additives may contain carriers which shall be evaluated

Flavouring Agents:

- Organic flavouring extracts (including volatile oils)
- Volatile (essential) oils produced by means of solvents such as oil, water, ethanol, carbon dioxide and mechanical and physical processes
- Natural smoke flavour
- Natural flavouring preparations are only to be approved based on the CROSQ Procedure to Evaluate Additives and Processing Aids (Appendix 6)

Preparations of Micro-organisms and Enzymes for use in food processing:

These may be used as ingredient or processing aids with approval based on the CROSQ Procedure to Evaluate Additives and Processing Aids for Organic Food Products (Appendix 6).

- Organic certified microorganisms
- Preparations of microorganisms
- Enzymes and enzyme preparations derived from edible, nontoxic plants, non-pathogenic fungi, or non-pathogenic bacteria.

Colouring Agents:

Colours from non-synthetic sources only.

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Appendix 5b: List of Approved Products for Cleaning and Disinfection

This list applies to the cleaning and disinfection of buildings, equipment, utensils, transportation carriers and transportation containers used in the handling of livestock, storage of products, and the processing and packaging of organic products.

Substance Description	CROSQ Conditions for use
Potassium and sodium soap	
Water and steam	
Milk of lime	
Lime, hydrated	Not permitted to cauterize physical alterations or deodorize animal wastes.
Quicklime	
Caustic soda	
Caustic potash	
Hydrogen peroxide	
Natural essences of plants	
Citric, peracetic acid, formic, lactic, oxalic and acetic acid	
Alcohol (ethanol, isopropanol)	
Chlorine (Calcium Hypochlorite, Chlorine Dioxide, Sodium Hypochlorite)	
Chlorohexidine	Allowed for surgical procedures conducted by veterinarian, and as a teat dip when alternative germicidal agents or physical barriers have lost their effectiveness.
Copper Sulphate	Livestock topical treatment, external parasiticide only.
Glycerin	Allowed as a livestock teat dip, must be produced through the hydrolysis of fats or oils.
Iodine	
Ivermectin	Allowed in emergency treatment for dairy and breeder stock when organic system plan-approved preventive management does not prevent infestation. Prohibited in slaughter stock
Lidocaine	Allowed as a local anesthetic only. Use requires a withdrawal period of 90 days after administering to livestock intended for slaughter and 7 days after administering to dairy animals.

Magnesium sulphate	
Mineral Oil	Livestock topical treatment, external parasiticide only.
Nitric acid	
Phosphoric acid	
Procaine	As a local anesthetic only. Use requires a withdrawal period of 90 days for slaughter animals, and 7 days for dairy animals.
Oxytocin	Allowed in post-parturition therapeutic applications only.
Formaldehyde	
Sodium carbonate	
Strychnine	Prohibited

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Appendix 6: Evaluation of Additives, Processing Aids, Cleaning & Disinfection Products

6 Introduction

Additives, processing aids, flavouring agents and colours shall be evaluated according to this Appendix. The following aspects and criteria should be used for evaluation of additives and processing aids in organic food production.

6.1 Necessity

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

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

6.2 Criteria for the Approval of Additives and Processing Aids

Additives and processing aid may be approved where:

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

6.3 Procedure for the use of Additives and Processing Aids

6.3.1 Instead of using additives or processing aids, the preferred first choice is:

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

6.3.2 The second choice is:

- Substance isolated from food and produced physically or by enzymes - e.g. starch, tartrates and pectin.
- Purified products of raw materials of non-agricultural origin and micro-organisms - e.g. acerola fruit extract, enzymes and

micro-organism preparations such as starter cultures.

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

- "Nature identical" substances.
- Synthetic substances primarily judged as being unnatural or as a "new construction" of food compounds such as acetylated cross linked starches.
- Additives or processing aids produced by means of genetic engineering.
- Synthetic colouring and synthetic preservatives.
- Carriers and preservatives used in the preparation of additives and processing aids shall also be taken into consideration.

END OF DOCUMENT

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