

OFDC Organic Certification Standards

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INTRODUCTION

Intended to push further forward the cause of rural environmental protection and agricultural cleaner production, reduce or control pollution of the environment by agricultural chemicals (such as pesticides, fertilizers, etc.) and agricultural wastes, promote sustainable development of the rural society, economy and environment, accelerate development of the organic food industry in China and ensure quality the production and processing of organic (ecological) food, so as to provide the society with natural, nutritional and high-grade environmentally and ecologically safe food and meet the demands of the domestic and foreign markets for organic food, and to meet the requirements of IFOAM accreditation, this Standard is worked out by the Organic Food Development and Certification Center (abbreviated as OFDC), on the basis of the IFOAM Standards for Organic Production and Processing and with reference to the EU's Council Regulation EEC No. 834/2007, and of standards of other organic farming associations or organizations in Germany, Sweden, UK, USA, Australia, New Zealand and so on.

This Standard is the fundamental requirement for organic production, processing and trading. Organic operators applying for certification shall sign an agreement with OFDC, assuring their abidance by the Standards in organic production, and acceptance of certification inspection by OFDC inspectors. The OFDC Certification Committee will issue organic certificates to those producers, processors and traders evaluated to be qualified, upon completing review of the inspection report prepared by the inspector, thus authorizing their use of OFDC organic logo on their organic products, and their use of IFOAM logo on those in the scope of IFOAM accredited.



Acknowledgement: For IFOAM accreditation, evaluation of certification standards is one of the most important contents. On February 14, 2003, OFDC officially acquired IFOAM accreditation, which means that this standards are fully in compliance with the IFOAM Standards for Organic Production and Processing. Hereby, special thanks are extended to the members of the OFDC Standard Committee and German GTZ-sponsored international experts who have made valuable contributions to the revision and amendment of the OFDC Standards in line with the recommendations IFOAM put forth in its evaluation.

1 Scope

These standards shall apply to the following products, where such products bear, or are intended to bear, the OFDC logo and where the operator for OFDC certification or is certified by OFDC:

1. unprocessed agricultural crop products; also livestock and unprocessed livestock products
2. processed agricultural crop and livestock products intended for human consumption
3. feeding stuff, compound feeding stuff and feed materials
4. aquaculture and aquaculture products
5. wild collected plants
6. textile products
7. fertilizers and plant protection products
8. honey, bee and bee products

Products covered by the OFDC certification will be inspected during the whole production chain. Any person that sells a product (write an invoice) with reference to the OFDC certification shall be registered and certified. Normally this applies until the product is in its final package/has its final label. Especially the following activities require inspection of OFDC:

1. agriculture production (the operations on the agricultural holding involved in producing including plant production and livestock production)
2. aquaculture production
3. preparation/processing (the operations of preserving and/or of agricultural products, including slaughter and cutting of livestock products)
4. packaging
5. labelling (any words, particulars, trade marks, brand names, pictorial matter or symbols on any packaging, document, notice, label, board or collar if referring to OFDC certification)
6. storage of products unless they are finally packaged
7. export of products

Storage and transportation of products which are not only finally packaged are under the responsibility of the owner of the product who has to be certified by OFDC. The inspection thereof will be covered by the certified operator.

2 Normative References

The following normative documents are indispensable for the application of this document. For dated references, only the dated edition of the publications referred to applies; for undated references, the latest edition of the publications referred to applies.

GB 5749 Hygiene Standards for Living and Drinking Water;

GB 11607 Water Quality Standards for Fisheries;

GB 5084 Standards for Irrigation Water Quality;

GB 2760 Hygiene Standards for Use of Food Additives;

GB 14880 Hygiene Standards for Use of Nutrition Fortifiers in Foodstuff;

GB/T 16764 Hygienic specification for formula feed enterprises

GB 4278 Emission Standards for Wastewater from Textile Dyeing and Finishing Industry;

GB 18596 Discharge standards of pollutants for livestock and poultry breeding

GB7959 Hygiene Requirements for Harmless Disposal of Night Soil

3 Terms and Definitions

3.1 Organic

It refers to production systems and products described in the Standards, rather than a definition of chemistry.

3.2 Organic farming

A kind of plant and animal production system that rejects synthetic chemical substances such as pesticides, fertilizers, growth regulators, fodder additives, etc. and genetically modified organisms (GMOs) and products thereof, and instead, by following the law of nature and the principle of ecology, harmonizes crop cultivation with animal rearing and by adopting a series of sustainable-development-oriented agricultural techniques maintains a stable sustainable agriculture.

3.3 Traditional farming

An agricultural production pattern that is based on the long accumulated farming experience, and features the use of man power and animal forces to till the land and control of crop insects, pest and weeds by means of agricultural practices, artificial measures or traditional herbal pesticides.

3.4 Organic food

Agricultural produce and their products produced, and processed in line with the Standards for Organic Certification from organic production systems and certified by independent certifying bodies.

3.5 Organic Products

Foodstuff and products of various kinds produced and certified in line with the Organic Certification Standards

3.6 Natural products

Products that grow naturally in regions with distinct geographic boundaries, and are free from any influence of GMOs and extraneous chemical compounds.

3.7 Conventional

Production systems and products thereof that have not been certified organic or organic in conversion.

3.8 Organic conversion period

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

3.9 Parallel production

A producer, handler, or processor that grows, breeds, raises, handles, or processes a given product as certified organic and as otherwise. This includes (a) as non-organic, (b) in conversion.

3.10 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.

3.11 Crop rotation

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

3.12 Genetic engineering

Genetic engineering is a set of techniques from molecular biology (such as recombinant DNA) by which the genetic material of plants, animals, micro-organisms, cells and other biological units may be altered in ways or with results that could not be obtained by methods of natural reproduction or natural recombination.

3.13 Homeopathy

Treatment of disease based on administration of remedies prepared through dilution and succession of a substance that in larger amounts produces symptoms in healthy animals similar to those of the disease itself.

3.14 Food ingredients

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

3.15 Food additives

Synthetic or natural materials or substances which may be added into foodstuff to improve its keeping quality, color, taste, or smell, or other technical property.

3.16 Processing aids

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

3.17 Ionizing radiation

High energy radiation from radioactive nuclides (e.g. ^{60}Co , ^{137}Se), capable of altering molecular structure of a food product for the purpose of controlling microbial contaminants, pathogens, parasites and pests in the product preserving the food product or inhibiting physiological processes such as germination or ripening.

3.18 Labeling

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

3.19 Permitted for use

Materials or substances or methods that can be used in organic production systems.

3.20 Restricted for use

Materials or substances or methods that can be used conditionally in organic production systems in the case that no permitted substitutes can be found available. Generally, it is

not advised to use this type of materials or methods. Usually, the material must have a specified source and evidence that it is not contaminated.

3.21 Prohibited for use

Materials or methods that are not allowed in organic production systems.

3.22 Certification

The procedure by which an independent third party gives written assurance that a clearly identified production or processing system is methodically assessed and conforms to specified requirements. Certification is based on standardized certification-oriented inspections, which include field inspections, quality control system auditing and product testing.

3.23 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.

3.24 High Conservation Value Area

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

4 Major Objectives of Organic Production and Processing

Based on the ideal and principle of sustainable development that harmonizes social economy with environment, organic production and processing is intended to realize the following objectives through trade of organic product:

- 4.1 Produce sufficient quality food to meet the demand of the society.
- 4.2 Increase cycling of biomes and material (including micro-organism, soil, soil fauna and flora, plants and animals) in the farming system so as to maintain and raise long-term fertility of the soil;
- 4.3 Care for all physiological requirements and living habits of poultry and livestock living in the natural environment and keep in balance crop production and animal rearing;
- 4.4 Make as much use as possible regenerable resources within the local production system to promote rational utilization and protection of water resources and others;
- 4.5 Maintain biodiversity of the production system and the surrounding environment, including protection of habitats of wild plants and animals;
- 4.6 Develop a sustainable aquatic products production system;
- 4.7 Minimize pollution of various forms through producing biodegradable organic products;
- 4.8 Improve organic producers' and processors' income, satisfy their basic needs, and endeavor to keep the production, processing and sales distribution developing towards justness, fairness and ecologically rationality.

5 Basic Requirements of Organic Certification

5.1 For farm

5.1.1 Scope

A farm applying for OFDC certification should be an agricultural production unit with clearly specified boundaries, ownership and management right. Once having passed organic certification, the farm can sell all the vegetative and animal products from its fields as organic.

In case that there are both organic production and conventional production in the farm, the operator must appoint full-time employees to manage and operate the land for organic production, and moreover, the operator should take effective measures to separate plants and animals from the certified fields and those from the non-organic (including conventional and in-conversional) fields. The measures include separate harvest, separate transport, separate processing, separate storage and complete audit-trailing records. Meanwhile, the operator should lay a cause to convert the conventional farm fields into organic within at least 5 years following the first certification of any portion of that farm and submit the written conversion plan to OFDC for verification.

Types of the farms OFDC may accept for certification include:

a) State- or Collective-run Organic Farm

It refers to a farm whose land is under the State or collective ownership and servitude.

b) Individual Managed Organic Farm under Lease

It refers to a tract of land an individual or a household has leased from the local government.

c) Company Managed Organic Farm under Lease

It is a tract of land a company has leased from the local government (over township level). If the company hires local farmers in the field, the farmers' conventional farm fields elsewhere are not counted as parallel production as long as the company does not purchase any produce from the farmers. If the land the company has leased is still managed by farmer households in accordance with the requirements of the company and the company purchases the produce from the farmers, the conventional crops the farmers have somewhere else ought to be regarded as parallel production.

d) Farmers Group Organic Farm

This is a tract of land, within a certain area, consisting of small farm fields run by their respective farmer households, who willingly follow the pattern of organic farming and have established a rigid organizational management system including an audit trailing system. In this case, the land within this area as a whole can be taken as an independent organic farming unit. OFDC permits all of the above types of organic farms (units) to expand, but the new recruited land should enter the organic conversion immediately.

Converted land and animals shall not get switched back and forth between organic and conventional management.

5.1.2 Parallel production

The same crop variety or product cannot be sold as OFDC-certified if the same crop variety or product is also produced elsewhere on the farm using materials or methods that do not conform to these standards. Exemption will only be provided when:

- a) Growers own or operate multiple farms and the parallel production occurs on farms which do not share equipment or transportation systems, or
- b) Growers notify OFDC of the type(s) of crops involved in the parallel production systems, enforce a plan for production, harvest and storage of crops that ensures that there will be segregation of the OFDC-certified crop from the conventional crop, and has complete and comprehensive record keeping systems for organic and conventional product.
- c) For operator applying for EU equivalence verification, in the case of the production of perennial crops, which has been cultivated at least three years, and the varieties cannot be easily differentiated, the producer may run organic and non-organic production units in the same area provided the following conditions are met:
 - (i) the production in question forms part of a conversion plan in respect of which the producer gives a firm undertaking and which provides for the beginning of the conversion of the last part of the area concerned to organic production in the shortest possible period which may not in any event exceed a maximum of five years;
 - (ii) appropriate measures have been taken to ensure the permanent separation of the products obtained from each unit concerned;
 - (iii) OFDC is notified of the harvest of each of the products concerned at least 48 hours in advance;
 - (iv) upon completion of the harvest, the producer informs the control authority or control body of the exact quantities harvested on the units concerned and of the measures applied to separate the products;
 - (v) the conversion plan and the control measures have been approved by OFDC; this approval shall be confirmed by OFDC each year after the start of the conversion plan.

5.1.3 Conversion

The change from conventional production to organic production calls for conversion, the sowed or harvested crops or born animals after the conversion can be sold as organic. During the conversion period, the operator should manage the farm fully in line with the requirements for organic production. After one year of conversion, the crops growing in the fields can be sold as organic-in-conversion.

The start of the conversion period shall be calculated from the date that an application has been received and agreed to by OFDC. The conversion period may be calculated retroactive to the application only on the basis of sound and incontrovertible evidence of full application of the standard, which will have to be checked and affirmed by OFDC Certification Committee. The evidence that can be accepted as support for start of conversion shall include at least:

- a. Land renting contract or agreement; and
- b. History documentation of farm management.

In addition, written statements or related news media reports also can be referred in

affirming conversion period.

Once a certified farm returns conventional, it has to undergo conversion again before being eligible for organic certification.

5.1.4 Buffer zone

If an organic farm has fields under possible pollution from neighboring conventional fields, buffer zones or physical barriers have to be set up in between the organic and conventional fields so as to ensure the organic fields freedom from pollution.

5.1.5 Farming history

An applicant must hand in a whole set of information about land use of all the field plots of his/her farm, production methods, materials or substances used, harvest and post-harvest treatment of crops and crop yields of recent four years (including the application year) and the current production practices as well.

5.1.6 Production and management plan

5.1.6.1 In order to maintain and improve soil fertility, and reduce incidence of pest, plant diseases and weed, the organic producer shall formulate a strict site-specific non-perennial crop rotation program, which should include at least one leguminous crop (for nitrogen fixation) or green manure crop.

5.1.6.2 The organic producer shall formulate and implement a practical and feasible soil building program so as to raise soil fertility and minimize reliance on input of off-farm sources.

5.1.6.3 The organic producer shall formulate an effective pest, crop disease and weed control plan including application of agricultural, biological, ecological and physical control measures.

5.1.6.4 The organic producer shall take effective measures to ensure that his/her farming practices will neither pollute the soil or crops, nor undermine local ecosystem.

5.1.6.5 The organic producer shall work out an effective eco-environmental protection program including planting of trees and turf, control of soil erosion, setting-up of habitats and protective zones of natural predators, and conservation of biodiversity.

5.1.7 Internal quality control

5.1.7.1 The organic producer shall keep a complete file of production management and sales records, covering sources and amounts of on-farm and off-farm inputs used or purchased, and an end-to-end process of plantation, management, harvesting, processing and selling of crops.

5.1.7.2 The organic animal farm shall keep a complete file of production management and sales records, covering sources and amounts of all feed, additives, medicines, etc..

5.1.7.3 The organic animal farm shall keep a complete file of records covering an end-to-end process from birth to slaughter of each animal or each lot of poultry.

5.1.7.4 Animals that have been treated with conventional medicines must be distinctly tagged, indicating name of the medicine and date of its use.

5.1.7.5 The operator shall take appropriate actions on complaints related to the

compliance with certification requirements, and keep a record of the complaints and the corrective actions taken.

5.1.7.6 When the control arrangements are first implemented, the operator shall draw up and subsequently implement an internal quality management measures, including at least:

- a) a full description of the unit and/or premises and/or activity;
- b) all the practical measures to be taken at the level of the unit and/or premises and/or activity to ensure compliance with the organic production rules;
- c) the precautionary measures to be taken in order to reduce the risk of contamination by unauthorized products or substances and the cleaning measures to be taken in storage places and throughout the operator's production chain.
- e) to perform the operations in accordance with the organic certification standard;
- d) to accept, in the event of infringement or irregularities, the enforcement of the measures of the organic certification standard, and to undertake to inform in writing the buyers of the product in order to ensure that the indications referring to the organic production method are removed from this production.

The above mentioned information shall be contained in a quality system document or declaration, signed by the responsible operator, and then submitted to OFDC for review. OFDC shall review and identify the possible deficiencies and non-compliances in the document or declaration, and inform the operator who must then take the necessary corrective measures.

5.1.8 Inappropriate technologies

5.1.8.1 In organic production system or for organic products, the deliberate use or negligent introduction of genetically modified organisms (GMOs) and products derived thereof shall be prohibited, including plants, animals, seeds, pollen, propagation materials, and farm inputs such as fertilizers, soil amendment products, vaccines and plant protection materials.

5.1.8.2 On farms with simultaneous organic and conventional production the use of genetically engineered organisms is not permitted on the conventional part.

5.1.8.3 Inputs shall be traced back one step in the biological chain to the direct source organism (see definition) from which they are produced to verify that they are not derived from GMOs.

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

5.1.8.5 The use of nanomaterials is prohibited in organic production, including in packaging and product contact surfaces. No substance allowed under this standard shall be allowed in nano-form.

5.1.9 Inspection

Organic-certification-oriented inspection at least once a year for each parcel of land (including wild plant gathering zones under certification) is to be conducted while crops are still growing in the field and animals living in the pens. When inspecting farms with

parallel production, the inspector must conduct an extra inspection through all the process from growing, harvest, transport, storage to selling. In response to recommendations of the Certification Committee, OFDC may decide to dispatch inspectors at any time to make unannounced inspections on organic operators' production, processing or trade.

5.1.10 Laboratory testing

In the following cases, samples of soil, water and crops are to be taken for analysis and test for residues of prohibited materials or substances and of pollutants.

- a. When a farm is making its first application for certification;
- b. When a piece of land under inspection is suspected to have been applied with forbidden substances;
- c. When the land is suspected to be contaminated with prohibited substances that the farmer once used in the past.

For farm fields nearby industrial zones, air samples shall be taken for pollutant analysis. Concentration of pollutants must be in line with relevant standards for environmental quality and for food hygiene.

5.2 For processor, handler and trader

5.2.1 Scope

Processor/handler/trader applying for certification must be an operator with clearly defined ownership and management right. An organic trader/retailer involved in domestic marketing and foreign import and export businesses must have relative government-recognized qualification.

5.2.2 Parallel operation

It is permissible that a processor/handler/trader can handle organic and conventional products of the same variety simultaneously, providing that efficient measures be taken to ensure clear separation of organic processing from conventional one, and avoid organic products in contact with or commingling with conventional products, or in contact with prohibited substances.

5.2.3 Raw material and processing technology

5.2.3.1 All raw materials for processing/handling must come from organic production systems.

5.2.3.2 Processing technologies adopted shall be able to maintain as much nutrient elements as possible in the organic food as well as organic integrity of the product.

5.2.4 Storage, transport, packaging and labeling

The operation must be in compliance with the standards specified for storage, transport, packaging and labeling in Chapter 14 and 15 of this Standards.

5.2.5 Environment

5.2.5.1 If pollution sources or potential pollution sources do exist in the surroundings of the processing, handling, or storage unit, it is essential to take efficient measures to ensure that the product in processing/handling/storage will not be affected.

5.2.5.2 Risk of environmental impact of the processing/handling/trading activities shall be identified and minimized.

5.2.6 Inappropriate technologies

5.2.6.1 The deliberate use or negligent introduction of any genetic engineering techniques or products thereof is prohibited.

5.2.6.2 Processing aids and ingredients shall be traced back one step in the biological chain to the direct source organism *(see 3.2.3 definition) from which they are produced to verify that they are not derived from GMOs.

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

5.2.6.4 The use of nanomaterials is prohibited in organic processing, including in packaging and product contact surfaces. No substance allowed under this standard shall be allowed in nano form.

5.2.7 Internal quality control

5.2.7.1 5.1.7.6 When the control arrangements are first implemented, the operator shall draw up and subsequently implement an internal quality management measures, including at least:

- a) a full description of the unit and/or premises and/or activity;
- b) all the practical measures to be taken at the level of the unit and/or premises and/or activity to ensure compliance with the organic production rules;
- c) the precautionary measures to be taken in order to reduce the risk of contamination by unauthorized products or substances and the cleaning measures to be taken in storage places and throughout the operator's production chain.
- e) to perform the operations in accordance with the organic certification standard;
- d) to accept, in the event of infringement or irregularities, the enforcement of the measures of the organic certification standard, and to undertake to inform in writing the buyers of the product in order to ensure that the indications referring to the organic production method are removed from this production.

The above mentioned information shall be contained in a quality system document or declaration, signed by the responsible operator, and then submitted to OFDC for review. OFDC shall review and identify the possible deficiencies and non-compliances in the document or declaration, and inform the operator who must then take the necessary corrective measures.

5.2.7.2 The operator must keep a complete file of records encompassing end-to-end processes from purchase of raw materials, through processing, storage, transport, packing, and on through the distribution system, with related invoices and receipts attached, and set up a sound audit trail system using lot numbers, serial numbers, or the like.

Appropriate system of documentary accounts must be taken at the level of the unit to ensure that the products the operator places on the market can be traced to, as appropriate, their suppliers, sellers, consignees and buyers.

5.2.7.3 The operator shall take appropriate actions on complaints related to the compliance with certification requirements, and keep a record of the complaints and the corrective actions taken.

5.2.8 Inspection

Organic-certification-oriented inspection is to be conducted for a processor at least once a year. Products covered by the OFDC certification will be inspected during the whole production chain. Especially the following activities require inspection of OFDC:

- a. preparation/processing (the operations of preserving and/or of agricultural products, including slaughter and cutting of livestock products)
- b. packaging
- c. labelling (any words, particulars, trade marks, brand names, pictorial matter or symbols on any packaging, document, notice, label, board or collar if referring to OFDC certification)
- d. storage of products unless they are finally packaged
- e. export of products

Storage and transportation of products which are not only finally packaged are under the responsibility of the owner of the product who has to be certified by OFDC. The inspection thereof will be covered by the certified operator.

The inspection should be carried out while the processor/handler/trader is in operation if possible. In cases where an operator participates in processing/handling/trading both organically and conventionally, the inspector must conduct extra inspection on the non-organic section. In response to the need for management, OFDC may decide to dispatch inspectors at any time to make unannounced inspections.

6 Crop Production

6.1 Conversion

6.1.1 For annual crops, the conversion period is usually set not less than 24 months before sowing, and for perennial crops, not less than 36 months before the first harvest of organic products.

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

Lands newly reclaimed from wilderness or from land deserted for years will have to undergo a conversion period of at least 12 months.

6.1.3 Conversion period may be extended in certain cases where the land had been contaminated with prohibited materials.

6.1.4 In the case of parcels which have already been converted to or were in the process of conversion to organic farming, and which are treated with a prohibited product, the parcels shall undergo conversion period from the start again. The conversion period laid down in 5.1.1 may be shortened where the treatment was as part of a compulsory disease or pest control measure imposed by the competent authority of the local government, and the length of the conversion period shall be fixed taking into account of degradation of the product concerned, and shall guarantee, at the end of the conversion period, an insignificant level of residues in the soil and, the harvested products are not sold as organic before the end of conversion.

6.2 Breeding of organic varieties

6.2.1 To produce organic varieties, plant breeders shall select their varieties under organic conditions that comply with the requirements of this standard. All multiplication practices except meristem culture shall be under certified organic management.

6.2.2 Organic plant breeders shall develop organic varieties only on the basis of genetic material that has not been contaminated by products of genetic engineering.

6.2.3 Organic plant breeders shall disclose the applied breeding techniques. Organic plant breeders shall make the information about the methods, which were used to develop an organic variety, available for the public latest from the beginning of marketing of the seeds.

6.2.4 The genome is respected as an impartible entity. Technical interventions into the genome of plants are not allowed (e.g. ionizing radiation; transfer of isolated DNA, RNA, or proteins).

6.2.5 The cell is respected as an impartible entity. Technical interventions into an isolated cell on an artificial medium are not allowed (e.g. genetic engineering techniques;

destruction of cell walls and disintegration of cell nuclei through cytoplasm fusion).

6.2.6 The natural reproductive ability of a plant variety is respected and maintained. This excludes techniques that reduce or inhibit the germination capacities (e.g. terminator technologies).

6.2.7 Organic plant breeders may obtain plant variety protection, but organic varieties shall not be patented.

6.3 Seeds and propagating material

6.3.1 Organic seeds and plant propagating materials of appropriate varieties and quality shall be used.

6.3.2 Conventional seeds and plant propagating materials that have not been treated with prohibited materials or substances may be used when certified organic seeds or plant propagating materials are not available (for instance, at the initial stage of organic farming). Annual seedlings shall be produced organically.

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

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

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

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

6.3.6 Vegetal propagation materials, bedding materials and substrates shall only consist of substances listed in Annex A.

6.3.7 Crop varieties adaptable to the local soil and climate conditions and resistant to crop pest and diseases are to be chosen. In making choice, the operator should take into full account the issue of preserving crops' genetic diversity.

6.3.8 Any GM-related crops are prohibited. For crops where commercial cultivation of GMO species has been approved by the government, the producer shall provide sufficient proof that the species they used or plan to use are not GMOs.

6.4 Cultivation

6.4.1 Organic terrestrial plant production shall be based on soil or substrate, and hydroponic production of such crops is not allowed. "Soil-based" means that apart from the propagation or seedling stages, a plant must spend its life in the soil. For herbs, flowers and ornamentals in pots that are sold directly to the final consumer, the production on permitted growing media is allowed.

6.4.2 Crop rotation systems consisting of at least 3 crops each should be adopted. And each system must have a leguminous crop or green manure crop.

6.4.3 In only one-crop-a-year regions, a two-crop rotation system may be adopted, but one of the two must be a leguminous crop.

6.4.4 It is prohibited to grow the same crop for years in a row in a same field, but pasture grass, perennial crops and rice in certain areas with special geographic and climatic conditions are exceptions.

For perennial crops, an organic operator shall grow green manure etc. in the orchard as floor cover and/or maintain refuge plantings in or around the orchard to avoid soil erosion and enhance biodiversity of the orchard.

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

6.5 Building-up of Soil Fertility

6.5.1 Appropriate farming and cultivation measures shall be applied to maintain and improve soil fertility, to minimize soil erosion, and to protect plant health. Material of microbial, plant or animal origin shall form the basis of the fertility program.

6.5.2 It is encouraged to grow leguminous crops to build up soil fertility. In making soil building-up plan, it is essential to ensure application of enough amounts of organic manure to maintain soil fertility and bioactivity therein.

6.5.3 It is advocated to adopt the practice of keeping fields in fallow to restore soil fertility.

6.5.4 Maintenance of fertility shall rely mainly on the above mentioned cultivation measures and on-farm inputs, and may not rely solely on off-farm inputs. All nutrients and fertility products shall be applied in a way that does not harm soil, water, and biodiversity. The introduction of manures from off-farm shall be no greater than 15 tons per hectare annually. Exceptions can be made by certification committee for isolated intensive crops, for farms in a period of focused soil building, or farms where other extra need for nutrients and soil organic matter can be proven. The total amount of livestock manure applied on the holding may not exceed 170 kg of nitrogen per year/hectare of agricultural area used.

6.5.5 When documentary evidence shows that the measures described in 6.4.1 to 6.4.4 are not enough for maintaining soil fertility, and thus there is a need to use off-farm inputs, the inputs listed in Annex A may be used according the conditions described. Inputs not listed in Annex A are prohibited for use.

6.5.6 Non-synthetic mineral fertilizers and bio-fertilizers may only be used as supplements in building up soil fertility and can not be a replacement of nutrient cycling in the system. Their use shall be justified by appropriate soil and leaf analysis or diagnosed by an independent expert. Mineral fertilizers shall be applied in their natural composition and shall not be rendered more soluble by chemical treatment.

6.5.7 In organic vegetable production, it is essential to choose proper organic manure, and to apply vegetable-specific manure in a scientific way. It is important not to over-dose

organic manure lest that the content of nitrite in the vegetable should exceed related standards.

6.5.8 Manures containing human excrement (feces and urine) shall not be used on vegetation for human consumption, except where they are from clearly defined sources and all sanitation requirements listed in GB7959 Hygiene Requirements for Harmless Disposal of Night Soil are met. They shall not be in contact with edible parts of crops. Application of human excrements on leafy crops, tuber crops and root crops is prohibited.

6.5.9 Microbes used as additive in composting should come from nature, instead of from genetic engineering.

6.5.10 It is forbidden to use Chilean Nitrate (sodium nitrate), synthetic fertilizers (such as urea), and sewage sludge in soil building.

6.5.11 The removal of soil from the farm is prohibited. Incidental removal of soil when harvesting crops is permitted.

6.5.12 Where there is reason to expect high concentrations, fertilisers and soil conditioners shall be analysed, before spreading, for their content of heavy metals or other contaminating factors. This always applies in the case of mined rocks or by-products of industry such as basic slag, fly ash, etc. Heavy metal levels in the fertilizers should comply with the limits set in following table. As an exemption, the Cd content in mined phosphate shall comply with the restriction in Annex A.

| Contaminant factor | Limit in the fertilizer or soil conditioner (mg/kg) |
|---------------------------|--|
| Mercury | 5 |
| Cadmium | 5 |
| Arsenic | 75 |
| Lead | 250 |
| Copper | 250 |
| Chromium | 250 |
| Nickel | 200 |
| Zinc | 500 |

6.6 Pest, disease and weed control

6.6.1 pests, diseases and weeds shall be controlled by a combination of the following measures:

- a. Choice of disease and pest resistant species or varieties;
- b. Proper plans for management of water and soil fertility, crop rotation and multi-crop interplanting;
- c. protection of natural enemies of pests through provision of favorable habitat, such as hedges, nesting sites and ecological buffer zones that maintain the original vegetation to house pest predators;
- d. natural enemies including release of predators and parasites, natural repelling plant ;
- e. mechanical controls such as traps, barriers, light and sound.

- f. mechanical cultivation;
- g. mulching and mowing;
- h. grazing by animals.

6.6.2 Thermic weed control is permitted.

6.6.3 When the measures in 6.6.1 are not sufficient, pest, disease and weed management products that are prepared on the farm from local plants, animals and micro-organisms, or substances permitted under Annex B, may be used, provided that they do not jeopardize the ecosystem or the quality of organic products. Inputs not listed in Annex B are prohibited for use.

6.6.4 Thermal sterilization of soil is prohibited. Exceptions may be granted by OFDC certification committee to protect cropping structures in instances of severe disease or pest infestation that cannot be otherwise remedied through measures in 6.6.1 to 6.6.3.

6.6.5 Any formulated input shall have only active ingredients in Annex B. All other ingredients shall not be carcinogens, teratogens, mutagens, or neurotoxins.

6.6.6 It is prohibited to use GMOs and their derivatives.

6.6.7 It is prohibited to use synthesized crop protectants and growth regulators.

6.7 Control of contamination

6.7.1 The operator shall monitor crop, soil, water, inputs for risks of contamination by prohibited substances and environmental contaminants.

6.7.2 All equipment from conventional farming systems shall be properly cleaned and free from residues before being used on organically managed areas.

6.7.3 Only products listed in Annex H may be used for cleaning and disinfection of buildings and installations used for plant production, including storage on an agricultural holding.

6.7.4 For protected structure covering, plastic mulches, fleeces, insect netting and silage wrapping, only products based on polyethylene and polypropylene or other polycarbonates are allowed. These shall be removed from the soil after use and shall not be burned on the farmland. The use of polychloride-based products is prohibited.

6.7.5 OFDC may de-certify a farm field because of residues of undesirable substances in soil or crop, e.g. residues of previously used pesticides and herbicides. or excessive concentrations of heavy metals above related national standards.

6.8 Control of soil erosion and preservation of biodiversity

6.8.1 Full consideration shall be given to the sustainability of soil and water resources. Operators shall take positive measures to control soil erosion, desertification, and salinization and alkalization.

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

6.8.3 Operators shall design and implement measures to maintain and improve landscape

and enhance biodiversity quality, by maintaining on-farm wildlife refuge habitats or establishing them where none exist. Such habitats may include, but are not limited to:

- a. extensive grassland such as moorlands, reed land or dry land;
- b. in general all areas which are not under rotation and are not heavily manured: extensive pastures, meadows, extensive grassland, extensive orchards, hedges, hedgerows, edges between agriculture and forest land, groups of trees and/or bushes, and forest and woodland;
- c. ecologically rich fallow land or arable land;
- d. ecologically diversified (extensive) field margins;
- e. waterways, pools, springs, ditches, floodplains, wetlands, swamps and other water rich areas which are not used for intensive agriculture or aquaculture production;
- f. areas with ruderal flora;
- g. wildlife corridors that provide linkages and connectivity to native habitat.

6.8.4 It is encouraged to use straws for mulching or to adopt multi-crop interplanting to minimize exposure of the soil.

6.8.5 It is recommended to make full use of crop straws. Disposal of straws by burning is prohibited (exemption may be granted to burning of plants for disease control).

6.8.6 Over exploitation of wild resources is prohibited.

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

6.9 Irrigation

6.9.1 The quality of irrigation water in organic farming must meet the Standards for Irrigation Water Quality (GB 5084).

6.9.2 Effective measures should be taken to separate the irrigation and drainage system for organic fields from that for conventional ones so as to ensure that no water will seep or flood into organic fields from conventional ones.

7 Food Processing, handling and trading

7.1 General requirement

7.1.1 The processor shall have effective control on organic processing and its following process referring to this standard, so as to keep organic integrity of the processing.

7.1.2 Additives, processing aids and other substances and ingredients used for processing food or feed and any processing practice applied, shall respect the principle of good manufacturing practices, Organic food processor shall meet the requirements of GB 14881 General hygienic regulation for food enterprises, organic feed processor shall meet the requirements of GB 16764 Hygienic regulation for formula feed enterprises, and other processor shall meet the related governmental regulations.

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

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

7.1.5 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.

7.2 Ingredients, Additives and Processing Aids

7.2.1 All raw materials used for organic processing must be certified by OFDC or OFDC-recognized organizations and shall represent not less than 95% of the final product in weight or volume.

7.2.2 In cases where an ingredient of organic origin is not available in sufficient quality or quantity, conventional non-synthetic materials may be accepted, but labeling of the product shall meet the requirements of 15.2.2, 15.2.3 or 15.2.4. However, the non-organic ingredients shall not be non-GMOs or products thereof or containing nanomaterial, and get approval from OFDC that updates each year. Once conditions ripe for acquisition of organic ingredients certified by OFDC or OFDC-recognized organizations, these non-certified ingredients shall be replaced instantly. All processors who use non-organic ingredients must hand in a plan for turning the ingredients they use into 100% organic.

7.2.3 It is not allowed to have an ingredient of both organic and conventional sources in a same organic product.

7.2.4 Table salt and water may be exempt from certification as long as they are up to the national hygiene standards for foodstuff. But they shall not be counted as organic raw material specified in Item 7.2.1.

7.2.5 For the production of organic micro-organisms for processed food and feed, only organically produced substrate shall be used. .

7.2.6 Natural pigments, spices and additives specified in the "Hygiene Standards for Use of Foodstuff Additives"(GB 2760) are acceptable. But synthetic ones are prohibited.

7.2.7 Additives and processing aids listed in Annex F of the Standards are acceptable, but

materials of non-natural sources outside the range are generally not allowed. Materials not included in Annex F are prohibited for use.

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

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

7.2.10 It is prohibited to use any genetic engineering products as ingredient, additive or aid in organic food processing.

7.3 Processing

7.3.1 A formalized sanitation program must be in place and conform to local and national health codes. Programs must be in place that provides proper sanitation for:

- a. The facilities exterior (dumpsters and waste collection areas, old equipment storage, landscape and parking areas).
- b. The facilities interior (including processing, packaging and warehouse areas).
- c. Processing and packaging equipment (programs to prevent unwanted yeasts, molds, and bacteria).
- d. Employee hygiene, including sanitation in lunchrooms, break areas, and restrooms.

7.3.2 An organic food processing plant shall be equipped with special facilities exclusive for organic food processing. If the facilities have to handle both organic and non-organic products, they should be cleaned thoroughly after handling conventional products, leaving no residue of any detergents detectable. If thorough cleaning of facilities is impossible, a small quantity of organic raw materials shall be processed to clean up the remaining substances from conventional processing either after the organic conversion or conventional processing or before the beginning of organic processing; in other words, purge process. Products from purge process shall not be sold as organic or organic in conversion products.

7.3.3 The technique adopted for organic product processing shall be biological, physical or mechanical in nature. Any additives, processing aids, or other materials that chemically react with or modify organic food shall appear in Appendix F and be used in accordance with noted restrictions.

Mechanical, freezing, heating, microwave treating, smoking and microbial fermentation are acceptable treating methods, and so are technologies of extraction, condensation, sedimentation and filtration. But for extraction and condensation, no other agents are allowed than water, alcohol, animal and plant oils, vinegar, carbon dioxide, or nitrogen that are up to the national hygiene standards for foodstuff.

7.3.4 Substances and techniques that reconstitute properties that are lost in the processing and storage of organic food, that correct the results of negligence in the processing of

these products or that otherwise may be misleading as to the true nature of these products shall not be used. Water may be used for re-hydration or reconstitution.

7.3.5 Water used in processing shall meet the criteria in related standards for water quality.

7.3.6 Wastes discharged from the plant shall be kept in compliance with related standards.

7.3.7 Ionizing radiation is not allowed for use in food processing and storage.

7.3.8 Intentional manufacture or use of nanomaterials in organic products is prohibited.

7.3.9 Equipment surfaces and utensils that might come into contact with organic products shall be free of nanomaterials, unless there is verified absence of contamination risk.

7.3.10 Filtration techniques that chemically react with or modify organic food on a molecular basis shall be restricted. Filtration substances shall not be made of asbestos nor may they be permeated with substances that may negatively affect the products.

7.3.11 Ethylene gas is permitted for ripening.

7.3.12 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.

7.4 Pest control

7.4.1 Organic processor, handler, and trader should use the following measures to prevent pest:

- a. Eliminate the pest habitats in the processing site.
- b. Prevent the pest access to facilities.
- c. Control the temperature, humidity, light, and atmosphere to prevent the pest breeding.

7.4.2 Mechanical, physical and biological methods, such as traps by means of mechanics, pheromones, aroma and glue, physical barrier, diatomaceous earth, and sound/light/electric devices are acceptable in pest control.

7.4.3 Materials or substances listed as permitted or restricted for use in Annex B are accepted.

7.4.4 In case of emergency of serious insect infestation in the processing and storage areas, preparations from Chinese medicinal herbs can be used for spray and fumigation. Sulfur may only be used in a restricted way. Fumigation with ethylene oxide, methyl bromide, aluminum phosphide or other substance not contained in Appendix B is prohibited.

7.4.5 In the case of fumigation to processing and storing facilities, raw materials, semifinal and final products for organic production shall be moved out from the processing and storing facilities. No product may be brought into the area of treatment, either for storage or processing for a minimum of 7 days. Persistent or carcinogenic pesticides and disinfectants are not permitted.

7.4.6 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.

7.5 Cleaning, Disinfecting, and Sanitizing of Food and Food Processing Facilities

7.5.1 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.

7.5.2 Only water, alcohol, calcium or sodium hypochlorite, chlorine dioxide, and hydrogen peroxide may be used in processing as cleaners or disinfectants in direct contact with organic food. Disinfectants shall be approved by competent authorities as well.

Substances other than those listed above are only allowed if they are legally required.

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

7.5.4 The operator shall perform an intervening event between the use of any cleaner, sanitizer, or disinfectant and the contact of organic food with that surface sufficient to prevent residual contamination of that organic food.

8 Animal Husbandry

8.1 Conversion

8.1.1 All the requirements of this standard for land and animals must be met for the duration of the conversion period before the resulting product may be considered as organic. Land and animals may be converted simultaneously. The conversion period can be shortened to one year for grasslands used as open air runs by non-herbivore species.

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

8.1.3 The animals and the products thereof can be sold as organic products only after the end of conversion period, which varies with the species of animals:

- a. animals for meat production shall be raised organically from birth;
- b. e. milk may be considered organic only if the animals for milk production has been organically managed throughout the pregnancy preceding lactation;
- c. eggs may be considered organic only if the poultry for egg production has been organically managed from 2 days old.

8.2 Origin of the animals

8.2.1 Animals for meat shall be raised organically from birth. When organic poultry is not available, 2 day old conventional poultry may be brought in.

8.2.2 Breeding stock may be brought in from conventional farms with a yearly maximum of 10% of adult animals of the same species on the farm. Female adult breeding replacements must be nulliparous and be converted to organic management prior to the start of their gestation.

The Certification Committee may allow exceptions under the following circumstances, which in any case cannot exceed 40%. Moreover, the brought-in stock has to undergo conversion.

- a. Unforeseen severe natural or man-made events;
- b. Considerable enlargement of the farm;
- c. Establishment of a new type of animal production on the farm;
- d. Small holdings.

8.2.3 Male breeding stock may be from any source, but have to be reared in line with the organic pattern after they are brought in.

8.2.4 All animals or poultry brought in shall be free from contamination of genetic engineering product, including GM breeding materials, medicines, metabolic and biological regulators, feed and additives.

8.3 Feed

8.3.1 Livestock should be fed with organic feed and forage certified by OFDC or OFDC-recognized organizations. 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.

8.3.2 During the first year of organic management, fodder produced on the farm unit can be used as organic feed for livestock, but can not be sold as organic.

8.3.3 When organic feed is in short supply, Certification Committee may allow farms to purchase conventional feed and forage, of which the consumption can not exceed the following percentage of the annual total consumption of organic feed.

- a. For herbivores, 10% (based on dry matter);
- b. For non-herbivores, 15% (based on dry matter);

For all animals, the daily intake of conventional feed can not exceed 25% (based on dry matter) of their daily total feed consumption.

OFDC may allow exceptions with specific time limits and conditions in the following cases:

- a. Unforeseen severe natural or man-made events;
- b. Extreme weather conditions;
- c. Regions in their initial development stage of organic production.

The use of conventional feed shall be recorded in detail.

8.3.4 Animals shall be offered a balanced diet that provides all of the nutritional needs of the animals in a form allowing them to exhibit their natural feeding and digestive behavior. All ruminants shall have daily access to roughage adequate to meet their basic need for nutrients. Ruminants must be grazed throughout the entire grazing season(s).

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

8.3.5 Young stock from mammals shall be provided maternal milk or organic milk from their own species. Operators may provide non-organic milk when organic milk is not available.

Operators may provide milk replacers or other substitutes only in emergencies provided that they do not contain antibiotics, synthetic additives or slaughter products. Young stock shall be weaned only after the following minimum time:

- a. 6 weeks for pig, sheep and goat;
- b. 3 months for calves and horses.

8.3.6 Agricultural ingredients in companion animal feed must be certified organic. Substances and techniques that reconstitute properties that are lost in the processing and storage of organic feed, that correct the results of negligence in the processing or that otherwise may be misleading as to the true nature of these products shall not be used.

8.3.7 The following products shall not be fed:

- a. Animal by-products to ruminants, animals or their slaughter products of the same species;..

- b. Droppings, dung, or other manure even if processed.
- c. Feed (e.g. soy and rape seed meal) subjected to solvent (e.g. hexane) extraction or the addition of other chemical agents.

8.3.8 It is not allowed to use GMOs or their derivatives in the production of any feedstuff, feed ingredient and feed additives.

8.4 Feed additives

8.4.1 Fodder preservatives such as the following may be used:

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

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

8.4.2 Materials or substances listed as permitted for use in Annex D can be used.

8.4.3 Natural minerals, like magnesium oxide, green sand, and trace elements are acceptable additives.

8.4.4 Vitamins to be added should come from germinated grains, fish liver oil, brewer's yeast or other natural materials or substances.

8.4.5 With permission from OFDC, materials or substances listed as restricted for use in Annex D can be used.

8.4.6 Materials not listed in Annex D including the following substances are prohibited for use:

- a. Synthetic growth promoters, growth suppressants, or stimulants (including antibiotics, hormones, and trace elements used to stimulate growth) implanted, injected, or ingested.
- b. Synthetic appetisers.
- c. Preservatives, except when used as a processing aid.
- d. Artificial coloring agents.
- e. Urea and other synthesized nitrogen compounds.
- f. Pure amino acids.
- g. Genetically engineered organisms or products thereof.

8.5 living conditions

8.5.1 Conditions for livestock and poultry husbandry (stock, pens etc.) shall meet the livestock's biological and ethological needs and ensure:

- a. sufficient room for free movement and rest; 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;

- b. adequate natural daylight;
- c. provides for insulation, heating, cooling and ventilation of the building that can avoid excess sunlight, temperature, rain and wind, and permits air circulation, dust levels, temperature, relative air humidity, and gas concentrations to within levels that are not harmful to the livestock;
- d. adequate natural bedding, if appropriate; bedding materials that are normally consumed by the animals shall be organic;
- e. ample access to fresh water and feed according to the needs of the animals; the quality of drinking water shall meet the requirements in Annex E.1;
- f. no construction materials or production equipment shall be used in a way that may significantly harm human or animal health;
- g. on the condition that health of the animals will not be affected (e.g. they will not bite or fight against each other), it is required to keep at least two animals of the same species in one pen.
- h. animals are protected from predation by wild and feral animals.
- i. in addition to these general welfare conditions for all animal categories, provisions for specific animal groups also have to be taken into account, e.g. for cattle: social grooming and grazing; for pigs: rooting, separate lying-, activity/dunging- and feeding-areas, free farrowing, group housing; for poultry: nesting, wing stretching/flapping, foraging, dust-bathing, perching and preening.

8.5.2 When necessary, daytime can be prolonged by artificial lighting. But this shall not lead to a day length longer than 16 hours.

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

Animals may be temporarily kept indoors because of inclement weather, health condition, reproduction, specific handling requirements or at night. Lactation shall not be considered a valid condition for keeping animals indoors.

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.

8.5.4 Landless animal husbandry system and/or any confinement-based production that restrict expressing of animal's natural behaviors are prohibited. No animals shall be kept in closed cages.

8.5.5 Herd/flock animals shall not be kept individually with the exception of adult male animals, sick animals and those in late pregnancy.

8.6 Prevention/Control of diseases

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

- a. Selection of appropriate breeds or strains of animals;

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

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

8.6.2 Operators shall manage pests and diseases in livestock housing and shall use the following methods according to these priorities:

- a. preventative methods such as disruption, elimination of habitat and access to facilities;
- b. mechanical, physical and biological methods;
- c. substances (other than pesticides) used in traps;
- d. substances listed in Table E.2 of Annex E of this standard.

8.6.3 Areas to be disinfected shall be empty of livestock, and manure shall be physically removed regularly.

8.6.4 If an animal becomes sick or injured despite preventative measures that animal shall be treated promptly and adequately, if necessary in isolation and in suitable housing. Operators shall give preference to natural medicines and treatments, including homeopathy, Ayurvedic medicine and acupuncture.

8.6.5 Use of synthetic allopathic veterinary drugs or antibiotics will cause the animal to lose its organic status. Producers shall not withhold medication where it will result in unnecessary suffering of the livestock, even if the use of such medication will cause the animal to lose its organic status.

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

- a. the operator can demonstrate compliance with 5.7.1, and
- b. preventive and alternative practices are unlikely to be effective to cure sickness or injury, and
- c. they are used under the supervision of a veterinarian, and
- d. withholding periods shall be not less than double of that required by legislation, or a minimum of 14 days, whichever is longer.
- e. this exception is granted for a maximum of three courses of remedial treatments with chemically synthesized allopathic veterinary medicinal products or antibiotics within 12 months, or one course of treatment if the productive lifecycle of the animal is less than one year.

8.6.6 When the risk of diseases is known to exist in the farm environment and cannot be controlled by other techniques, vaccinations (including vaccination to stimulate production of maternal antibodies) are permitted. Legally required vaccinations are also allowed. The vaccines shall not be genetically modified.

8.6.7 The use of substances to promote growth or production, including antibiotics, coccidiostatics, and other growth stimulants, and the use of hormones to control regeneration behaviors of animals (e.g. induction or synchronisation of oestrus, superovulation) are prohibited. Hormones, however, can be used to treat individual animals for curing diseases under the supervision of a veterinarian.

8.6.8 The operator shall keep records of veterinary medicinal products used (indication of active pharmacological substances involved), together with details of the diagnosis, the dosage, the method of administration, the duration of the treatment, , and the legal withdrawal period. The animals that have been medicated shall be labeled with tag, one by one for large-sized animals and lot by lot for small-sized and poultry.

8.7 Non-therapeutic operation

8.7.1 Non-therapeutic operations are prohibited. The following exceptions are accepted, only if animal suffering is minimized and anesthetics are used where appropriate.

- a. Castration for the purpose of maintaining quality of the product or out of traditional product practices (meat-type pigs, bullock, capons);
- b. Dehorning;
- d. Tail docking of lambs to prevent myiasis;
- e. Ringing.

8.7.2 The following non-therapeutic operations are prohibited

- a. Tail cutting (except lambs);
- b. Debeaking;
- c. Clipping wing feathers;
- c. Wing burning;
- d. Mulesing except breeds that require mulesing.
- d. All others not clearly defined as permissible.

8.8 Breeding

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

8.8.2 Propagation methods of various forms are tolerated, provided they do not unduly restrict genetic pool.

8.8.3 Embryo transfer techniques and cloning are prohibited.

8.9 Transportation and slaughter

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

8.9.2 There should be a person designated to maintain the welfare of the animal during loading, unloading, transportation, holding and slaughter, and ensure the animal be handled calmly and gently.

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

- a. stress;
- b. loading and unloading;
- c. mixing different groups of animals or animals of different sex;
- d. quality and suitability of mode of transport and handling equipment;
- e. temperatures and relative humidity;
- f. hunger and thirst; and
- g. the specific needs of each animal.

8.9.4 Any contact (by sight, sound or smell) of organic animals with dead animals or animals in slaughtering process should be avoided.

8.9.5 The handling during transport and slaughter shall be calm and gentle. The use of electric sticks and such instruments is prohibited. No chemically synthesized tranquilizers or stimulants shall be given prior to or during transport.

8.9.6 When transport is by axle, the journey time to the slaughterhouse shall not exceed 8 hours. Where there is no organic slaughterhouse within 8 hours travel time the animal may be transported for a period in excess, and shall be provided with an adequate food and water supply.

8.9.7 Slaughter shall be effected in slaughterhouses approved by regulatory sanitary quarantine agencies.

8.9.8 Each animal shall be effectively stunned before being bled to death. The equipment used for stunning shall be in good working order. Shackling, hoisting, or slaughtering prior to having rendered the animal unconscious is prohibited. Exceptions may be granted due to religious and cultural reason.

8.9.9 Organic and conventional animals shall be slaughtered separately and then stored separately with clear marks.

8.10 Environmental impact

8.10.1 It is essential to ensure that the population of livestock reared in the farm will not exceed the maximum carrying capacity of the farm per se and its cooperative units. Its feed production capacity, animal health and impact on the environment should be taken into full account when deciding its carrying capacity. If overgrazing has already caused detrimental impact on the environment, the farm will not be certified.

8.10.2 It should be ensured that the farm's capacity of waste storage facilities is large enough to prevent water bodies from contamination of animal waste through direct discharge, surface runoff or soil percolation. Pollutant emission of animal farms shall be compliant with GB 18596 Discharge standards of pollutants for livestock and poultry breeding.

9 Bee-keeping and Processing of Bee Products

9.1 Conversion

9.1.1 Beekeeping has to undergo at least 12 months conversion before certified organic.

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

In cases where all the wax cannot be replaced during a 12-month period, the conversion period may be extended with the approval of OFDC.

9.2 Origin of bees

9.2.1 For replacement of the colonies, the organic production unit may introduce up to 10% of queen bees and colonies managed in line with this standard. The foundation or combs for the introduced queen bees and colonies shall come from organic production units. In this case, the introduced bees do not have to go through conversion period.

9.2.2 In case of death of great amounts of bees caused by health problem or disasters, and organic bee colonies are not available, replacement bees may be from non-organic sources provided that the requirements set out in 9.1 of this part are met.

9.3 Siting of the apiaries

9.3.1 The apiaries shall be located in organic agricultural fields or areas of natural vegetation where no chemical substances have ever been applied for the most recent three years.

9.3.2 The area should have sufficient nectar and pollen sources and clean water sources.

9.3.3 The apiaries shall be set up far from conventional farm fields and from places liable to pollution, for instance, major towns or cities, industrial zones, highways, railroads, landfill sites, incinerators, etc. (at least 3 kilometers).

9.4 Feeding of bees

9.4.1 At the end of the production season hives must be left with reserves of honey and pollen sufficiently abundant for bee to survive the winter.

9.4.2 Throughout the season, the bees shall be provided with sufficient certified organic feed, better from the same production unit.

9.4.3 When bees are in starvation and can not get feed:

- a. Before August 24, 2002, they can be fed with conventional sugar syrup or molasses.
- b. After August 24, 2002, they can be fed only with organic sugar syrup or molasses.

9.4.4 Artificial feeding may be performed only between the last honey harvest and 15 days before the start of the next nectar or honeydew flow period.

9.5 Prevention / control of disease

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

9.5.2 Keep strongest hives and destroy weak hives.

9.5.3 Preference is given to phyto-therapeutic and homeopathic treatment in case of disease occur. Where preventative measures fail, veterinary medicinal products may be used provided the following materials or substances can be used to control pest and diseases.

- a. Steam, direct flame and caustic soda for hive disinfection
- b. Lactic, oxalic and acetic
- c. Formic acid
- d. Essential oil
- e. Elemental sulfur
- f. *Bacillus Thuringiensis*
- g. Menthol to control tracheal mite parasite.

9.5.4 Keep obviously diseased hives in isolation.

9.5.5 Beehives and materials used by seriously infected bees shall be destroyed.

9.5.6 The use of antibiotics or allopathic chemically synthesized medicinal products is prohibited, except when the health of the whole colony is endangered. The treated beehive shall be removed immediately and put into re-conversion, and the bee products of that year cannot be sold as organic.

9.5.7 The operator shall keep records of veterinary medicinal products used (indication of active pharmacological substances involved), together with details of the diagnosis, the dosage, the method of administration, the duration of the treatment, , and the legal withdrawal period.

9.5.8 allopathic chemically synthesized medicinal products are prohibited to use for disease preventing purpose.

9.5.9 It is strictly prohibited to use any veterinary drugs to treat bees during nectar or honeydew flow period.

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

9.6 Beeswax and beehive

9.6.1 Beeswax to be used for organic apiaries shall come from organic bee keeping units. But for apiaries in conversion non-organic beeswax may be used with permission from OFDC in the case that no organic beeswax are available either in the market or from other sources.

9.6.2 Appropriate methods shall be adopted in processing organic beeswax that is intended for organic apiary.

9.6.3 Beeswax of unknown sources is prohibited in organic honey production.

9.6.4 Each beehive shall primarily consist of natural materials such as wood untreated with chemicals. Use of construction materials with potentially toxic effects are prohibited.

9.7 Harvesting/treatment of honey

9.7.1 Chemical bee repellents are prohibited. Bee blower or smoker may be used to remove bees from hives. Acceptable smoking materials should be natural or from materials that meet the requirements of the standards.

9.7.2 Methods for beehive management and honey extraction shall be based on protection and upkeep of bee colonies. It is forbidden to destroy the bee colony after honey extraction.

9.7.3 Heat to not more than 47 °C/116 °F and keep this process as short as possible.

9.7.4 Mechanical means are preferred to heating to uncap combs.

9.7.5 Gravitational deposition of impurities from the honey is preferred, while filtration with a fine mesh filter is prohibited.

9.7.6 The surface of all utensils in contact with honey shall be of anti-corrosive materials such as stainless steel, glass, ceramics, china, or be coated with beeswax or coatings permissible in foodstuff and beverage packaging and then re-coated with beeswax.

9.7.7 Honey extraction facility should be bee tight to prevent robbing and the spread of disease.

9.7.8 Extracting facilities shall be well lit with facilities to wash down daily with copious amounts of fresh, clean, hot water.

9.7.9 Accumulated numbers of bees in extracting area should be allowed to gather and then washed down with water and disposed of or put in a nearby hive.

9.7.10 Honey barrels must be of a known origin, washed, and stored inside. If not new, they should have previously been used in food service. Preferably they should be coated with beeswax. Oxidized barrels are prohibited.

9.7.11 Floors and walls must be sealed from insects and rodents. Presence of insect pests such as flies in extracting facility will not be permitted.

9.7.12 The extracting rooms and packaging rooms shall be properly sealed to prevent intrusion of harmful insects.

9.7.13 For pest and parasite control, in addition to the above-described techniques of beeswax coating, only the physical methods such as trapper and electrical insect killer can be used in pest control.

9.7.14 The use of chemical agents such as calcium cyanide as fumigant is prohibited.

9.8 Storage of honey, frame, wax, and beehives

9.8.1 Finished honey products require stable storage temperature and airtight package so as to avoid deterioration of the honey in quality.

- 9.8.2 Honey can be stored for a maximum of 2 years before sold as organic.
- 9.8.3 Naphthalene (moth balls) is prohibited for the control of wax moths in storage of honey and honey products.

9.9 Rearing of queens and bees

- 9.9.1 Cross breeding of bee families is encouraged.
- 9.9.2 To prevent spreading of diseases, it is encouraged to rear their own queens.
- 9.9.3 Purchase of traditional bee colonies is acceptable but not allowed to exceed 10% of the bee colonies of the whole apiary.
- 9.9.4 Breeding of bees in a selective way is acceptable, but artificial insemination is prohibited.
- 9.9.5 Killing colonies of bees in fall is prohibited.
- 9.9.6 Mutilations such as wing clipping is not allowed.
- 9.9.7 The replacement of queen bees involving the killing of the old queen is permitted.

10 Special Crops

10.1 Edible mushrooms

10.1.1 Medium

10.1.1.1 Only materials from organic farm or from certified natural source may be used in the cultivation of edible mushrooms.

10.1.1.2 All supplements like synthetic fertilizers and pesticides are prohibited.

10.1.1.3 Log and spores site coatings used to prevent moisture loss shall be food-grade products. Petroleum-based coatings, latex and oil paints are prohibited.

10.1.2 Spores

Choices of appropriate spores with known sources shall be made. Certified organic spores are preferable if available.

10.1.3 Insects and weed fungi

10.1.3.1 Preventative management shall be adopted such as sanitation, proper airflow and removal of affected blocks.

10.1.3.2 During non-cultivation period dilute chlorine bleach used as a disinfectant is acceptable.

10.1.3.3. Use of physical controls (traps and physical barriers with addition of pheromones or attractants, spray of diatomaceous earth, insecticidal soap solutions and other OFDC-approved natural pesticides), and biological controls (natural predators and parasites) are acceptable for pest control.

10.1.3.4 The use of any synthetic pesticides is prohibited.

10.1.4 Management of cultivation site

A mushroom cultivation site must have a buffer strip above 30m separating the site from the adjoining conventional farm field to avoid agricultural drift. The use of herbicides in or around the site is prohibited.

10.1.5 Water

Only clean water from wells, streams and ponds may be used to soak the wood medium. Use of tap water in urban areas is also acceptable. Contaminated water is prohibited for use.

10.1.6 Handling

Harvesting, storage and shipping procedures that ensure freshness and nutritional quality of the product to a maximum extent are encouraged.

10.2 Tea

10.2.1 Soil management of tea garden

10.2.1.1 Tea trees shall be planted in the area thick in soil layer, and high in bioactivity, with appropriate pH.

10.2.1.2 When a tea garden has a slope of 15-25 degrees, the garden shall be built up into leveled terrace fields in line with the requirements for soil and water conservation.

10.2.1.3 Inter-planting of leguminous green manure crops and/or forage crops between tree rows is encouraged in tea gardens in young age, or cutting back or root pruned.

10.2.1.4 By taking advantage of deep plowing, the prunings and weedings can be incorporated into the soil or just used as mulch around the tree roots so as to ameliorate soil physical and chemical properties and optimize soil bioactivity.

10.2.1.5 In tea gardens with a high vegetation coverage, minimal or non-tillage shall be exercised. Biological means (e.g. earthworms) are encouraged to improve soil structure and fertility.

10.2.1.6 Garden-specific erosion control measures shall be taken. For instance, mulching the rows in-between the tree lines with straws and other plants.

10.2.1.7 The materials listed in Annex A is allowed to use in fertilization and soil conditioning.

10.2.1.8 The use of chemical-, petroleum- and amino acid-based herbicides, synergists and soil regulators is forbidden in tea gardens.

10.2.2 Disease, pest and weed control in tea garden

10.2.2.1 Tea trees shall be duly picked and pruned.

10.2.2.2 Plant preparations and microbial preparation listed in Annex B are allowed for use to control pest and diseases.

10.2.2.3 Measures shall be taken to protect and make use of natural predators, and artificial breeding of predators is allowed.

10.2.2.4 When the tea garden is closed in late fall, the restrictive use of limesulfur mixture or Bordeaux solution is allowed to reduce incidence of pest and diseases in the following year. Beware of copper accumulation in the soil and tea leaves, when the latter is applied.

10.2.2.5 If diseases or pests affect the tea garden in large area, the affected branches and leaves shall be cut off, removed and disposed outside the garden or in the area isolated from the other tea trees.

10.2.2.6 Manual and mechanical means shall be adopted timely to weed the gardens.

10.2.2.7 Antagonism between plants may be made use of to control weeds.

10.2.2.8 Chemical herbicides are strictly prohibited.

10.2.3 Tea Processing

10.2.3.1 The processing of organic tea shall abide by the State Law for Foodstuff Hygiene and the standards for food processing.

10.2.3.2 Processing of organic tea shall avoid using timber as main fuel in tea processing.

10.2.3.3 Only physical means and natural fermentation are allowed in tea or tea product processing.

10.2.3.4 If possible only certified flower-based perfume, fruit (lemon) and crop oils are

used as supplement in tea processing. When certified organic supplement is not available, natural flower-based perfume and oil are acceptable.

10.2.5 Storage and transportation of organic tea

Besides the basic requirements for storage and transportation of organic products, the following items call for attention:

10.2.5.1 In storage organic tea shall be kept dry, with moisture content tallying with the national standard for export tea. The storehouses for organic tea shall be equipped with dehumidifiers and other dehumidifying materials, which shall be replaced regularly. It is essential to prevent the tea from contacting the dehumidifying materials.

10.2.5.2 Positive measures such as ventilation, airtight sealing, moisture absorption, temperature lowering, and periodical monitoring of moisture content in organic tea shall be adopted.

11 Wild Plants

11.1 Wild Plants to be certified shall be growing in a clearly defined sustainable production system.

11.2 Wild plants shall be collected from an area that has been free from contamination of any prohibited material for the most recent three years.

11.3 If chemically synthetic substances were used in the history, the inspector may ask for residue testing.

11.4 Alongside busy roads or in the vicinity of conventional farming or possible pollution sources, a wide enough buffer zone shall be set up.

11.5 The quantities of wild plants harvested or gathered shall not bring about adverse effect on the environment or endanger wild species (plant, fungal or animal species, including those not directly exploited) in the region, or exceed the yield of the sustainable ecosystem.

11.6 The operator who manages the harvesting or gathering of common resource products shall be familiar with the defined collecting or harvesting area, including the impacts of collectors not involved in the organic scheme.

11.7 The administrator of wild plant collection shall submit a detailed plan for management of the collection to OFDC.

11.8 In case of collection of wild plants, the practical measures shall include any guarantees given by third parties which the operator can provide to ensure that the provisions of 11.2 and 11.5 are complied with.

12 Aquaculture

12.1 Conversion

12.1.1 Organic aquatic production units should have an appropriate distance from contamination sources and conventional aquaculture, so as to prevent pollution from outside of the system.

12.1.2 All the related requirements in the organic animal production part of this standard should also be complied. (Include the conversion period, the split and parallel production, the maintenance of the organic management system, the source, breed and breeding of animals, the nutrition, the medicine use, as well as the transportation and slaughtering.)

12.1.3 The conversion period of the production unit shall be at least one year. All introduced aquatic organisms shall be subsequently managed at least at the latter two thirds of the animal life cycle.

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

12.1.5 Production units must be located at an appropriate minimum distance from contamination sources and conventional aquaculture. The quality of water used in the unit and of the water resource shall be in compliance with the national water quality standard for fishery (GB 11607).

12.2 Aquatic ecosystems

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

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

- a. encourage and enhance biological cycles;
- b. utilize preventive, system based methods for disease control;
- c. provides for biodiversity through polyculture and maintenance of riparian buffers with adequate plant cover.

12.2.3 Aquatic ecosystems shall be managed to maintain and improve landscape and enhance biodiversity quality. Clearing of primary ecosystems is prohibited.

12.2.4 Operators shall take adequate measures to prevent escapes of introduced, or cultivated species and document any that are known to occur.

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

12.2.6 Fertilizers and pesticides are prohibited unless they appear in Appendices A and B.

12.2.7 No any kind of GMO technology and products should be allowed to use in organic

aquaculture.

12.3 Aquatic plants

12.3.1 Organic aquatic plants are grown and harvested sustainably without adverse impacts on natural areas. The act of collection should not negatively affect any natural areas.

12.3.2 Aquatic plant production shall comply with the relevant requirements on ecology and cultivation of this standard.

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

12.3.4 To ensure that a wide gene-pool is maintained, the collection of juvenile seaweed in the wild should take place on a regular basis to supplement indoor culture stock.

12.3.5 Fertilisers shall not be used except in indoor facilities and only if they are in Annex A of this standard.

12.4 Aquatic animal breeds and breeding

12.4.1 Animals shall be raised organically from birth. If organic animals are not available, brought-in conventional animals shall spend not less than two thirds of their life span in the organic system.

12.4.2 Breeds should be locally adapted and regionally established. For the species that may be reproduced by the farm itself the introduction of non-organic sourced animals must be replaced soonest by the organic ones bred within the farm. For the species that may not be reproduced by the farm itself non-organic animals may only be introduced with no organic animals are available in the same region.

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

12.4.4 Aquatic animals should be reproduced and bred by natural methods. Artificially polyploid organisms shall not be used.

12.5 Aquatic animal nutrition

12.5.1 The biological diversity of areas that are managed and adequate representation of naturally-occurring organisms should be maintained.

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

12.5.3 Animals should be fed efficiently according to their natural feeding behavior, with minimum losses to the environment.

12.5.4 Systems should be designed so that the production area comprises the entire food chain with minimal reliance on outside inputs.

12.5.5 Animals shall be fed organic feed.

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

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

12.5.8 Use of the following materials in diet is prohibited:

- a. slaughter products of the same species;
- b. all types of excrements including droppings, dung or other manure;
- 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 coloring agents.

12.5.9 Use of water containing human excrement is prohibited.

12.6 Aquatic animal health and welfare

12.6.1 Organic management practices should 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.

12.6.2 The cause of outbreaks of disease or infection should be identified. Management practices, including criteria for choosing a site that can diminish causative events and future outbreaks of disease should be implemented.

12.6.3 Natural methods and medicines should be used as the first choice, when treatment is necessary.

12.6.4 Relevant requirements of section 8.6 of this standard shall be complied.

12.6.5 Prophylactic use of veterinary drugs is prohibited.

12.6.6 Use of chemical allopathic veterinary drugs and antibiotics is prohibited for invertebrates.

12.6.7 Synthetic hormones and growth regulators are prohibited for use to stimulate or suppress natural growth or reproduction of animals.

12.6.8 Stocking densities should not compromise animal welfare.

12.6.9 Water quality, stocking densities, health, and behavior of each cohort (school) and shall be routinely monitored. The operation should be well managed so as to maintain

water quality, animal health, and natural behavior.

12.7 Aquatic animal transport and slaughter

12.7.1 Organic animals are subjected to minimum stress during transport and slaughter. A person specifically responsible for the well being of the animals should be present during transport. To avoid unnecessary suffering, organisms should be in a state of unconsciousness before slaughter.

12.7.2 Relevant requirements of section 8.9. of this standard should be complied with.

12.7.3 The live organisms should be handled in ways that are compatible with their physiological requirements.

12.7.4 Defined measures shall be implemented to ensure that organic aquatic animals are provided with conditions during transportation and slaughter that meet animal specific needs and minimize the adverse effects of:

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

12.7.5 Aquatic vertebrates shall be stunned before killing. Equipment used to stun animals shall be ensured to be sufficient to remove sensate ability and/or kill the organism and is maintained and monitored.

12.7.6 Animals shall be handled, transported and slaughtered in a way that minimizes stress and suffering, and respects species-specific needs.

13 Textile

13.1 General

13.1.1 Fiber processing shall comply with the requirements of sections 7.1 and 7.4.

13.1.2 Labeling of textiles shall comply with all the requirements of section 15.2 if applicable and of section 15.3.

13.2 Production of raw materials

The production of textile raw materials must meet the requirements for the production of organic crops.

13.1.1 Mulberry cultivation

Organic mulberry gardens should be located far away from fluorine-emitting plants and other pollution sources. Contaminated mulberry leaves make cocoons non-organic.

13.1.2 Silkworm rearing

13.1.2.1 Healthy disease-resistant species of silkworms are to be selected. It is prohibited to use genetic engineering related silkworm eggs.

13.1.2.2 Mulberry leaves must be gathered from certified organic mulberry gardens.

13.1.2.3 Silkworm houses shall be located at sites dry, high in topography, close to mulberry gardens, and have good aeration and lighting facilities.

13.1.2.4 For sterilization, physical means can be used, such as boiling or steaming tools, exposing the room to sunlight, etc. It is acceptable to use bleach and lime, but they must be cleaned.

13.1.2.5 Containers for carrying mulberry leaves shall be separated from those holding silkworm droppings.

13.1.2.6 It is forbidden to use growth stimulant in silkworm rearing.

13.1.2.7 Adequate supply of mulberry leaves and adequate living space for silkworms shall be ensured.

13.1.2.8 Prevention/control of diseases

- a. Regularly checks of silkworms shall be performed, keeping physically strong ones and kicking out the weak and those late in dormancy.
- b. It is permitted to add disease control substances of biological sources, such as mashed garlic, into mulberry leaves.
- c. When a certain disease infects silkworms in a large scale, the sick shall be removed duly and put into an isolated area for medication.
- d. It is prohibited to use any synthetic drugs, unless health of the worms is under serious threat. Cocoons from those medicated worms may not be sold as organic.

13.1.2.9 Silkworm cocoons shall be sorted and dried duly. It is prohibited to mix cocoons of different grades. The lower grade of cocoons can not be used as raw material for organic silk.

13.3 Processing

13.3.1 Raw materials

13.3.1.1 Organic textile shall be manufactured from 100% organic raw material.

13.3.1.2 In processing raw material into fiber, efforts shall be made to minimize its adverse effect on the environment.

13.3.1.3 Raw materials used as aid in weaving and eventually disposed as waste shall not render any hazard to the environment and mankind.

13.3.1.4 Pentachlorobenzene acid, tetrachlorophenol and polychlorodiphenyl are prohibited as ingredient in any formula of raw materials.

13.3.2 Environmental requirements

13.3.2.1 All textile-processing plants should have established their own environment quality management systems.

13.3.2.2 The processing of textile shall adopt optimal technologies and minimize its impact on the environment.

13.3.2.3 The processing shall not use any substances harmful to the human beings and environment. Any agents to be used shall not contain any carcinogenic, mutagenic and deformative substances or toxicity LD₅₀ less than 2000mg/kg to mammals.

13.3.2.4 It is forbidden to use the substances known to be easy to accumulate and hard to degrade in organisms.

13.3.2.5 Textile processing shall minimize energy consumption and utilize as much regenerable energy as possible.

13.3.2.6 Where separation of organic processing from conventional one would lead to substantial environmental or economic disadvantage, and where there is no risk of the possible contact of an organic product with recycled fluids that have been previously used for conventional production (mercerising, sizing, rinsing etc.), it is permitted to have organic and conventional textiles share the same equipment or process. However, the processor must ensure that the organic textile is not contaminated.

13.3.2.7 The processor shall take effective measures to treat their wastewater and keep it up to the Emission Standards for Wastewater from Textile Dyeing and Finishing Industry (GB 4287).

13.3.2.8 In the year the first certificate is acquired, the processor should work out a plan for better environment management in production.

13.3.2.9 Surface activating agents used in boiling cocoons or washing wool should be something easy to biodegrade, and the processor should have a matching wastewater treatment installation.

13.3.2.10 The waste slurry shall eventually degrade or at least 80% of it can enter into recycling.

13.3.2.11 In the polishing technological process, it is allowed to use sodium hydroxide or some other alkaline materials, which should be recycled to the utmost.

13.3.2.12 Lubricant oil used in spinning and weaving should be something easy to

degrade or something extracted from plants.

13.3.3 Printing and dyeing

13.3.3.1 Dyestuff of biological or botanic origin shall be used if available.

13.3.3.2 Whenever it is possible, heavy-metal-containing mineral dyes shall be excluded. In printing and dyeing only natural thickenings can be used.

13.3.3.3 Only softeners easy to biodegrade are acceptable.

13.3.3.4 To clean printing and dyeing equipment, only cleaning agents that do not contain substances that will form organic haloid compounds may be used.

13.3.3.5 Heavy metal contents in dyestuff are not allowed to exceed the following limits (mg/kg).

| Heavy metal | Limit | Heavy metal | Limit | Heavy metal | Limit |
|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| Stibium | 50 | Arsenic | 50 | Barium | 100 |
| Lead | 100 | Cadmium | 20 | Chromium | 100 |
| Iron | 2500 | Copper | 250 | Manganese | 1000 |
| Nickel | 200 | Mercury | 4 | Selenium | 20 |
| Silver | 100 | Zinc | 1500 | Tin | 250 |

13.3.4 Technological requirements of finished products

13.3.4.1 Materials of accessories (e.g. lining, adorning, button, zipper, seam, etc.) used shall not render any detrimental effect on the environment. Natural materials are preferred.

13.3.4.2 The finishing process (sand-washing, water-washing, etc) may not use aids hazardous to human bodies and the environment.

14 Storage and Transport

14.1 Storage

14.1.1 In storage, OFDC certified products shall not be subjected to contamination of other materials. It is essential to ensure integrity of the organic products.

14.1.2 Warehouses for OFDC certified organic products shall be kept clean and free of harmful insects and residues of any hazardous materials, and have not been treated with any prohibited materials or substances in the past week.

14.1.3 Besides storage at ambient temperature, the following special conditions of storage are permitted:

- a. Controlled atmosphere
- b. Temperature control
- c. Drying
- d. Humidity regulation

14.1.4 OFDC certified organic products should be stored in organic warehouses. If conditions are not available, a special place should be demarcated in the warehouse for organic products, which shall be packaged and labeled to ensure that they are not mixed up with non-organic ones. And before the storage of organic products, suitable cleaning measures, the effectiveness of which has been checked, have been carried out; operators shall record these operations.

14.1.5 The warehouse should establish a complete file of records covering ins and outs of products with related bills and receipts attached.

14.1.6 In case of organic plant and animal production units, storage of input products other than those authorised under this Standards is prohibited in the production unit.

14.2 Transport

14.2.1 Transport tools shall be washed clean before handling organic products.

14.2.2 During transportation, organic products shall be kept free from mingling with conventional products and contaminants.

14.2.3 In transporting organic products, the packages, or containers shall be labeled with: a) the name and address of the operator and, where different, of the owner or seller of the product; b) the name or description of the product and specification of its organic status; c) the name and/or logo of the certification body, where the products are to be exported to EU, the OFDC code number CN-BIO-103 assigned by the EC; and d) where relevant, the lot identification mark of the products.

The information referred to in points (a) to (d) of the first subparagraph may also be presented on an accompanying document, if such a document can be undeniably linked with the packaging or container of the product. This accompanying document shall include information on the supplier and/or the transporter.

Operators shall ensure that organic products are transported to other units, including

wholesalers and retailers, only in appropriate packaging, containers or vehicles closed in such a manner that substitution of the content cannot be achieved without manipulation or damage of the seal.

14.2.4 A complete file of records shall be kept to cover all the loading, unloading and transporting process with related bills and receipts attached.

14.2.5 On receipt of an organic product, the operator shall check the closing of the packaging or container. The operator shall crosscheck the information on the label with the information on the accompanying documents. The result of these verifications shall be explicitly mentioned in the documentary accounts referred to 14.2.4.

15 Packaging and Labeling

15.1 Packaging

15.1.1 It is encouraged to use packaging materials made of wood, bamboo, stems and leaves of plants, and paper. Other packaging materials that are in consistency with hygiene requirements are also acceptable.

15.1.2 Package of organic products shall be simple and practical. Excessive packaging should be avoided. Recycling of packaging materials shall be taken into consideration.

15.1.3 Carbon dioxide and nitrogen are acceptable packing stuff.

15.1.4 Packaging material shall not contaminate organic food.

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

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

15.2 Labeling

15.2.1 OFDC organic certification logo is a registered certification trademark and can only be used on OFDC-certified organic products.

15.2.2 If a product has not less than 95% of its ingredients OFDC certified, and is processed and packaged in an OFDC certified processor, it may be labeled as “organic” and bear OFDC logo.

15.2.3 If a product has less than 95% (but not less than 70%) of its ingredients OFDC certified, it may be labeled as “made with organic ingredient” or similar indications, and shall indicate in its label the names and proportions of the certified ingredients, but may not be labeled as “organic” and use OFDC logo. The terms and the indication of organic percentage shall appear in the same colour, identical size and style of lettering as the other indications in the list of ingredients.

Products for export to EU shall not be labeled as “made with organic ingredient”, and can only bear terms and indication of organic ingredients and their percentage in the list of ingredients.

15.2.4 If a product has less than 70% of the ingredients OFDC certified, it may not be labeled as “organic” or “made with organic ingredient”. The organic ingredients may be labeled as “organic” in the ingredient list and percentage of the ingredient shall be indicated. The terms and the indication of organic percentage shall appear in the same colour, identical size and style of lettering as the other indications in the list of ingredients.

15.2.5 A multi-ingredient product shall have on its outer package a printed ingredient list showing the names and percentages of each ingredient in a decreasing order. It shall be apparent which ingredients are of organic certified origin and which are not. All additives shall be listed with their full name.

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

15.2.6 OFDC certified in-conversion products may bear OFDC in-conversion logo, provided that the product contains only one crop ingredient of agricultural origin, and clearly labeled as in-conversion products.

In-conversion products of plant origin that are to be exported to EU may not bear The organic production logo of the European Union (hereinafter “Organic logo of the EU”), and may not bear the indication “organic farming” or “under conversion to organic farming”.

15.2.7 The outer package of a product shall be labeled with: a) the name and address of the operator and, where different, of the owner or seller of the product; b) the name or description of the product and specification of its organic status; c) the name and/or logo of the certification body; and d) where relevant, the lot identification mark of the products.

15.2.8 Products prepared from wild raw materials complete in compliance with the requirements shall be clearly labeled as “Wild” or “Natural”.

15.2.9 Multi-component products, live or unprocessed (such as vegetable boxes) may be sold or marketed as organic only if all the components are organic.

15.2.10 On the tag of the animal companion food it shall be clearly indicate what species of animal and what use this product fit and whether it is adequate in nutrient.

15.2.11 Labels on the product shall not mislead consumers. Organic products shall not be labeled as GMO-free except that they are certified GMO-free. Any reference to genetic engineering on product labels shall be limited to the production and processing methods themselves having not used GMOs.

15.2.12 Ink used to print the logo or instruction on the outer package of products should not be toxic and pungent. Colours for stamping meat shall be Brilliant Blue HCF (E133) or Allura Red AC (E129), colours for stamping or decorating eggshells shall be food grade listed in GB 2760.

15.2.13 The OFDC logo, when printed, can be larger or smaller, but must be kept true to its shape and color.

Use of EU Community organic logo

15.2.14 Where products are to be exported to EU and are labeled as organic:

(a) the OFDC code number CN-BIO-103 assigned by the EC shall also appear in the labeling;

(b) the Organic logo of the EU shall also appear on the packaging of pre-packaged food;

(c) where Organic logo of the EU is used, an indication of the place where the agricultural raw materials of which the product is composed have been farmed, shall also appear in the same visual field as the logo and shall take one of the following forms, as appropriate:

— ‘EU Agriculture’, where the agricultural raw material has been farmed in the EU,

— ‘non-EU Agriculture’, where the agricultural raw material has been farmed in third countries,

— ‘EU/non-EU Agriculture’, where part of the agricultural raw materials has been farmed in the Community and a part of it has been farmed in a third country.

The abovementioned indication ‘EU’ or ‘non-EU’ may be replaced or supplemented by a country in the case where all agricultural raw materials of which the product is composed have been farmed in that country.

For the abovementioned ‘EU’ or ‘non-EU’ indication, small quantities by weight of ingredients may be disregarded provided that the total quantity of the disregarded ingredients does not exceed 2% of the total quantity by weight of raw materials of agricultural origin.

The abovementioned ‘EU’ or ‘non-EU’ indication shall not appear in a colour, size and style of lettering more prominent than the sales description of the product.

The use of the EU Community logo is optional for products exported to EU. However, where the Community logo appears in the labeling, the indication referred to in the first subparagraph shall also appear in the labeling.

15.2.15 The indications referred to in 15.2.14 shall be marked in a conspicuous place in such a way as to be easily visible, clearly legible and indelible.

15.2.16 The Organic logo of the EU shall follow the model set out in Part A of Annex XI to EU Council Regulation (EC) No 834/2007.

For the purpose of labeling, the Organic logo of the EU shall only be used if the product concerned is produced in accordance with the requirements of EU Council Regulation (EC) No 834/2007, of Commission Regulation (EC) No 1235/2008 and of Commission Regulation (EC) No 889/2008, by operators who comply with the requirements of the control system of OFDC.

15.3 Labeling of fiber, textiles and apparel

15.3.1 Labeling of textiles follows all standards on labeling organic food in section 15.2 if applicable with the exceptions in this section.

15.3.2 Apparel and other textile products labeled as organic consist of at least 95% by weight organic fiber as described in Chapter 13.

15.3.3 Textiles may be labeled “made with (X%) organically produced fibers” only if at least 70% of the fibers are organic as described in Chapter 13.

15.3.4 Percentages in 15.3.2 and 15.3.3 refer to the total weight of the fibers, and do not include the weight of the non-textile accessories such as buttons and zippers.

16 Social Justice

16.1 Operators with more than 10 employees shall have a written policy on social justice, and maintain records to demonstrate full compliance with the requirements of this section. Workers will have access to their own files.

16.2 An certified operator must comply with the Labour Act of People's Republic of China, protecting all legal rights of its employees, and accepting supervision of official labour services and labour unions at all levels.

16.3 An operator that violates human rights and social justice cannot be certified organic.

16.4 Operators shall not violate indigenous land rights.

16.5 Standards shall require that operators not use forced or involuntary labor, or apply any pressure such as retaining part of the workers' wages, property or documents.

16.6 Operators shall not interfere with the right of their employees, suppliers, farmers and contractors to organize and to bargain collectively, free from interference, intimidation and retaliation.

16.7 Operators shall have a disciplinary procedure with a system of warning before any suspension or dismissal. Workers dismissed shall be given full details of reasons for dismissal.

16.8 Employees shall be granted the right to take at least one day off after six consecutive days of work. Operators shall not require workers to work more than the contracted hours and the national or regional sectorial legislation. Overtime shall be remunerated in the form of supplementary payments or time off in lieu.

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

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

16.11 Operators shall not hire child labor. Children are allowed to experience work on their family's farm or a neighboring farm provided that:

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

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

16.13 Operators shall provide written terms and conditions of employment to both permanent and temporary employees. The terms and conditions must specify at least: wages; frequency and method of payment; location, type and hours of work; ; recognition of worker's freedom of association; disciplinary procedure; health and safety procedure; and eligibility and terms of overtime, holiday pay, sickness benefit and other benefits

such as maternity and paternity leave.

In cases where:

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

16.14 Operators shall ensure adequate access to potable water.

16.15 Workers shall be provided with adequate protection from noise, dust, sunlight and exposure to chemicals in all production and processing operations.

16.16 Operators shall provide residential employees with habitable housing and access to potable water; to sanitary and cooking facilities and to basic medical care. If families reside on the operation, the operator shall also enable access to basic medical care for family members and to school for children under 13 years old.

16.17 Requirements in this section apply equally to all workers on the operation regardless of how they are employed, except for subcontractors performing non-production core business functions such as plumbing, machine repair, or electrical work.

17 Revision of the Standards

17.1 OFDC is supposed to convene at least one meeting every two years to discuss the standards. Members of the OFDC Standards Committee, OFDC-certified organic producers/processors/traders, experts in the field of organic farming consultation, agriculture, processing, eco-environment protection, etc. are invited to the meeting to make overall revision to the standards. Except the above-mentioned revision, the Standards can also be modified in some of its sections when necessary.

17.2 Any one can propose an alteration of the standards, but shall present a written proposal with reasons.

17.3 The OFDC Standards Committee assumes the responsibility of working out a draft standard.

17.4 The OFDC Standards Committee convenes meetings to discuss the draft or solicits for opinions and comments through various approaches on the draft.

17.5 The OFDC Standards Committee decides the final draft at the meeting or by procedure in writing.

17.6 Only when two-thirds or above of the members of the Committee vote for a certain amended or new clause, can it pass.

17.7 Once the new Standards has passed by the committee, it shall be distributed to organic certificate holders within 30 days.

17.8 Three months after the new Standards is promulgated, all the applicants shall observe it. When the Standards Committee thinks that the amended clause should be enforced immediately, the three months of transient period can be shortened. When important changes occur, the Standards Committee may set an enforcement schedule for the new Standards that may extend the transient period.

Annex A (Normative Annex)

Fertilizers and soil conditioners permitted for use in organic crop production

| Type | Name, composition and requirements | Conditions for use | |
|---------------------------|------------------------------------|--|---|
| I. plant or animal origin | Derived from organic farming | Crop straws and green manure | |
| | Derived from organic farming | Livestock and poultry excrements and composts derived from (including composted farmyard manure) | |
| | Not derived from organic farming | Straws | completely composted with animal excrements |
| | | Livestock and poultry excrements and composts derived from | Not from intensive factory farming and complying with the requirements for composts |
| | | Dried farmyard manure and dehydrated livestock and poultry excrements | Not from intensive factory farming and complying with the requirements for composts |
| | | Seaweeds and physically produced seaweed products | Not be chemically treated |
| | | Woods, bark, sawdust, wood chips, paring, wood ash, charcoal and humus materials which are not chemically treated. | As covering materials for soil or after composted |
| | | Meats, bones, hair and skin products not adulterated with preservatives | After composted or fermented |
| | | Mushroom culture wastes and earthworm culture substrates composted | Complying with the requirements for composts |
| | | By-products of food industry without synthetic additives | After composted or fermented |
| | | Straw ash | |
| | | Peat without synthetic additives | Prohibited using as soil amendment; only as substrates for potted plant |
| | | Seed cake | Not chemically processed |
| | | Fish meal | No chemically synthesized materials added |
| II. mineral origin | Phosphate rock | Natural or physically produced. Cadmium content less than or equal to 90 mg/kg of P ₂ O ₅ | |
| | Potassium rock powder | Natural or physically obtained, and can not be chemically condensed. Chloride content less than 60% | |
| | Borate rock | | |
| | Trace elements | Natural materials or | |

| | | |
|-----------------------|---|---|
| | | materials not chemically treated, no chemically synthesized materials added. |
| | Magnesium rock powder | Natural materials or materials not chemically treated, no chemically synthesized materials added. |
| | Natural sulfur | |
| | Limestone, gypsum and chalk | Natural materials or materials not chemically treated, no chemically synthesized materials added. |
| | clays (e.g. perlite, vermiculite, etc) | Natural materials or materials not chemically treated, no chemically synthesized materials added. |
| | Calcium chloride and sodium chloride | |
| | Basic slag | No chemically treated, no chemically synthesized materials added. |
| | Calcium and magnesium ameliorants | |
| | Hydrated Sulphate | |
| III. microbial origin | Biodegradable processing by-products of microbial origin, e.g. by-products of brewery or distillery processing. | |
| | microbiological preparations based on naturally occurring organisms | |

Annex B (Normative Annex)

Plant protection products and measures permitted for use in organic crop production

| Name | Name, composition and requirements | Conditions for use |
|---------------------------|---|---|
| I. Plant or animal origin | Azadirachtin extracts (neem) and its preparation | |
| | Natural pyrethrum preparation extracted from <i>Chrysanthemum cinerariaefolium</i> | |
| | Quassia extracted from <i>Quassia amara</i> | |
| | Preparations of Rotenone from <i>Derris elliptica</i> , <i>Lonchocarpus</i> , <i>Thephrosia spp.*</i> | |
| | <i>Sophora flavescens</i> Ait and products derived from | |
| | Plant oils and emulsion | |
| | Plant preparations | |
| | Repellent of plant origin (e.g. mint, lavender) | |
| | Natural seducers and nematocides (e.g. marigold, maidenhair) | |
| | Natural acids (edible vinegar, wood vinegar and bamboo vinegar, etc) | |
| | Extracts from mushroom | |
| | Milk and dairy | |
| | Bee wax | |
| | Propolis | |
| | Gelatine* | |
| Lecithin | | |
| II. Mineral origin | Copper salt (copper sulphate, copper hydroxide, copper oxychloride, copper octanoate*) | Can not pollute the soil, max 6 kg/ha per year (on a rolling average basis) |
| | Lime sulfur (calcium polysulfide) | |
| | Bordeaux liquid | |
| | Lime | |
| | Sulfur | |
| | Potassium permanganate* | |
| | Potassium bicarbonate | |
| | Sodium bicarbonate | |
| | Light mineral oil (wax oil)* | |
| | Calcium chloride | |
| | Diatomaceous earth | |
| | Clay (e.g. bentonite, perlite, vermiculite, zeolite, etc.) | |
| | Silicate (sodium silicate, quartz) | |
| III. Microbial origin | Fungi and fungal preparations, such as <i>beauveria bassiana</i> , <i>Verticillium</i> | |
| | Bacterial and bacterial preparations, such as <i>Bacillus thuringiensis</i> , Bt | |

| | | |
|----------------------------------|--|------------------------------|
| | Release of parasites, predators and sterilized insects | |
| | Virus and viral preparations (e.g. granulosis virus) | |
| IV. Others | Calcium hydroxide | |
| | Carbon dioxide | |
| | Ethyl alcohol | |
| | Salt and brine | |
| | Soda | |
| | Soft soap (e.g. fatty acid potassium salt) | |
| V. Traps, barriers or dispensers | Physical measures (color traps, mechanical traps) | |
| | Covers (net) | |
| | Insect pheromones | only in traps and dispensers |

*not allowed for use in farms that certified equivalent to EU regulation.

Annex C (Normative Annex)

Cleaners and Disinfectants permitted for use in organic production

| Name | Usage |
|---|--|
| Acetic acid (nonsynthetic) | Equipment cleaning |
| Vinegar | Equipment cleaning |
| Ethanol | Disinfection |
| Isopropanol | Disinfection |
| Hydrogen peroxide | Only food grade hydrogen peroxide; equipment cleaning |
| Sodium carbonate and sodium bicarbonate | Equipment disinfection |
| Potassium carbonate and potassium bicarbonate | Equipment disinfection |
| Bleach | Including calcium hypochlorite, chlorine dioxide and sodium hypochlorite; may be used for disinfecting and cleaning the food contact surface. Residual chlorine content in rinse water that has direct contact with plant products should comply with the requirements of GB5749 |
| Peracetic Acid | Equipment disinfection |
| Ozone | Equipment disinfection |
| Potassium hydroxide | Equipment disinfection |
| Sodium hydroxide | Equipment disinfection |
| Citric acid | Equipment cleaning |
| Soap | Biodegradable soap only; equipment cleaning |
| Soap-based algaecide and demossifier | Algaecide, disinfectant and fungicide; for irrigation system cleaning; no prohibited materials contained |
| Potassium permanganate | Equipment disinfection |

Annex D (Normative Annex)

Products permitted or restricted for use as feed additives in animal husbandry

| Materials | Conditions for use |
|---|---|
| Shell meal | |
| Sea weeds | |
| Lime stone | |
| Dolomite | |
| Marl | |
| Magnesium oxide | |
| Green sand | |
| Selenium | Injection or take-up based on recommended dose |
| Germinated grains | |
| Fish liver oil | |
| Synthetic vitamins and trace element | Restricted for use in case of long winters, mountainous zones, poor forage due to bad weather or for nutritional needs of the animal that cannot be met otherwise. This will be determined by OFDC Certification Committee on a case-by-case basis. |
| Sea salt | |
| Crude rock salt | |
| Whey | |
| Sugar | |
| Sugar beet pulp | |
| Flour | |
| Syrup | |
| Enzymes | |
| Yeasts | |
| Lactic, acetic, formic and propionic bacteria | For fermentation of fodder |
| Formic acid, acetic acid, lactic acid, propionic acid | Used only when the weather conditions are not good enough for fermentation |

Annex E (Normative Annex)

Requirements for drinking water quality for organic livestock and poultry production and disinfectors permitted for use in organic animal husbandry

E.1 Drinking water quality for livestock and poultry

| | | Indicator value | |
|-----------------------|--|---|---------|
| | | Livestock | Poultry |
| | Chrome (°) ≤ | Less than 30° | |
| | Turbidity (°) ≤ | Less than 20° | |
| | Odor and smell ≤ | No peculiar smell and odor | |
| | Macroscopic objects ≤ | Should not contain these objects | |
| | Total hardness (by CaCO ₃) (mg / L) ≤ | 1500 | |
| | pH ≤ | 5.5~9 | 6.8~8.0 |
| | Total content of dissolved solids (mg/L) ≤ | 4000 | 2000 |
| | Chloride (by Cl ⁻) (mg/L) ≤ | 1000 | 250 |
| | Sulfate (by SO ₄ ²⁻) (mg/L) ≤ | 500 | 250 |
| Bacteriological index | Total Coliform amounts /100mL ≤ | 10 in the case of adult livestock, 1 in the case of young livestock and poultry | |
| | Fluoride (by F ⁻) (mg/L) ≤ | 2.0 | 2.0 |
| | Cyanide (mg/L) ≤ | 0.2 | 0.05 |
| | Total arsenic (mg / L) ≤ | 0.2 | 0.2 |
| | Total mercury (mg/L) ≤ | 0.01 | 0.001 |
| | Lead (mg/L) ≤ | 0.1 | 0.1 |
| | Chromium (Cr ⁶⁺) (mg / L) ≤ | 0.1 | 0.05 |
| | Cadmium (mg / L) ≤ | 0.05 | 0.01 |
| | Nitrate (by N) (mg / L) ≤ | 30 | 30 |
| | Malathion (mg / L) ≤ | 0.25 | |
| | Demeton (mg / L) ≤ | 0.03 | |
| | Parathion-methyl (mg / L) ≤ | 0.02 | |
| | Parathion (mg / L) ≤ | 0.003 | |
| | Dimethoate (mg / L) ≤ | 0.08 | |
| | Lindane (mg / L) ≤ | 0.004 | |
| | Chlorothalonil (mg / L) ≤ | 0.01 | |
| Carbaryl (mg / L) ≤ | 0.05 | | |
| 2,4-D (mg / L) ≤ | 0.1 | | |

E.2 Disinfectors permitted for use in organic husbandry

| Name | Conditions for use |
|---|---------------------------|
| Potassium and sodium soap | |
| Water and steam | |
| Milk of lime (Calcium hydroxide) | |
| Lime (Calcium oxide) | |
| Sodium carbonate | |
| Sodium hypochlorite | |
| Sodium hydroxide | |
| Potassium hydroxide | |
| Hydrogen peroxide | |
| Natural plant essence | |
| Citric acid | |
| Peracetic Acid | |
| Formic acid | |
| Lactic acid | |
| Oxalic acid | |
| Acetic acid | |
| Ethanol and isopropanol | |
| Nitric acid | dairy equipment |
| Phosphoric acid (dairy equipment) | dairy equipment |
| Iodine | |
| Cleaning and disinfection products for teats and milking facilities | |

Annex F (Normative Annex)

Ingredients of non agricultural origin and processing aids permitted for use in organic food processing

F.1 Non agricultural origin additives and processing aids

| Serial number | Substance | Note | Int'l Numbering System |
|---------------|------------------------------|--|------------------------|
| 1 | Agar | Thickening agent, used in various kinds of food. | 406 |
| 2 | Arabic gum | Thickening agent, used in beverage, chocolate, ice cream, and fruit jam. | 414 |
| 3 | Calcium carbonate | Puffing agent, food additives and processing aids, used in flour, at 30 mg/kg ^{a)} | 170 |
| 4 | Calcium chloride | Coagulation agent, used in soybean products. | 509 |
| 5 | Calcium hydroxide | Food additives for maize flour and processing aids used in sugar. | 526 |
| 6 | Calcium sulphate (natural) | Stabilizer, coagulation agent used in flour and soybean products. | 516 |
| 7 | Activated carbon | Processing aids | |
| 8 | Carbon dioxide | Preservative and processing aids that shall come from non-petrol products. Used in carbonic acid beverage and gas alcohol. | 290 |
| 9 | Citric acid | pH adjustment agents that shall be carbohydrate products fermented by microorganism. Used in all kinds of food. | 330 |
| 10 | Bentonite | Clarifying or filtrating aids | |
| 11 | Kaolin | Clarifying or filtrating aids | 559 |
| 12 | Diatomite | Filtrating aids | |
| 13 | Ethanol | Solvent | |
| 14 | Lactic acid | pH adjustment shall not come from GMO organisms. Used in all kinds of food. | 270 |
| 15 | Magnesium chloride (natural) | Stabilizer and coagulation agent, used in soybean products. | |
| 16 | Malic acid | pH adjustment that shall not be GMO organisms. Used in all kinds of food. | 296 |
| 17 | Nitrogen | Food preservation, with only non-petrol origin products allowed. | 941 |
| 18 | Perlite | Filtrating aids | |
| 19 | Potassium carbonates | pH adjustment agents, potassium carbonate used in wheat flour products, potassium bicarbonate used in infant formula food or special food for patient. | 501 |
| 20 | Potassium chloride | Used in mineral beverage, sport beverage and low-sodium sauce and low-sodium salt. | 508 |
| 21 | Potassium citrate | pH adjustment agents, used in all kinds of food. | 330 |
| 22 | Sodium carbonate | pH adjustment agents, used in flour products and cakes. | 500 |
| 23 | Sodium citrate | pH adjustment agents, used in infant formula food | 331 |
| 24 | Tartaric acid | pH adjustment agents, used in all kinds of foods | 334 |

| | | | |
|---|---------------------------|---|-----|
| 25 | Xanthan gum | Thickening agents, used in fruit jelly and colorful sources | 415 |
| 26 | Sulfur dioxide | Bleacher, used in wine and fruit wine | 220 |
| 27 | Potassium metabisulphite | Bleacher, used in fruit wines other than that made with grapes, maximum level is 50mg/l, expressed as SO ₂ | 224 |
| 28 | Ascorbic acid (Vitamin C) | Antioxidant, for beer and yeast flour products. | 300 |
| 29 | Lecithin | Antioxidant | 322 |
| 30 | Ammonium phosphate | Processing aids | |
| 31 | Pectin | Thickening agents, used in all kinds of food. | 440 |
| 32 | Magnesium carbonate | Processing aids, used in flour processing. | 504 |
| 33 | Sodium hydroxide | pH adjustment agents and processing aids | 524 |
| 34 | Silicon dioxide | Anti-coagulator, used in egg powder, milk powder, cacao powder, cacao grease, sugar powder, plant powder, instant coffee, powdery soup materials and powdery essence. | 551 |
| 35 | Talcum powder | Processing aids | 553 |
| 36 | Gelatin | Thickening agent, used in all kinds of food. | |
| 37 | Sodium alginate | Thickening agent, used in all kinds of food. | 401 |
| 38 | Potassium alginate | Thickening agent, used in all kinds of food. | 402 |
| 39 | Ammonium bicarbonate | Puffing agent, used in all kinds of food that need puffing agent. | 503 |
| 40 | Ar | Food preservation | 938 |
| 41 | Egg white albumen | Processing aids | |
| 42 | Guar gum | Thickening agent, used in all kinds of food. | 412 |
| 43 | Locust beam gum | Thickening agent, used in fruit jelly, fruit jam and ice cream. | 410 |
| 44 | Oxygen | Processing aids | 948 |
| 45 | Potassium tartrate | Puffing agent, used in yeast powder. | 336 |
| 46 | Tannin | Filtrating aids of alcohol | 184 |
| 47 | Carrageenan | Thickening agent, used in all kinds of food. | 407 |
| 48 | Carnauba wax | Processing aids | 903 |
| 49 | Casein | Processing aids | |
| 50 | Isinglass (talc) | Processing aids (filler) | |
| 51 | Plant oil | Processing aids | |
| a): This is the maximum level of this material that shall be used as required by the GB 2760. For substances with no maximum valued specified, the actual level shall be appropriate in accordance with production requirements | | | |

F. 2 Flavouring

- 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: approval is based on the IFOAM Procedure to Evaluate Additives and Processing Aids

F. 3 Preparation of Micro-organisms

- Preparations of microorganisms accepted for use in food processing. Genetically modified organisms are excluded.

F. 4 Other ingredients

- Drinking water
- Salt
- Minerals (including trace elements) and vitamins where their use is legally required or where severe dietary or nutritional deficiency can be demonstrated.

