THAI AGRICULTURAL STANDARD

TAS 9000 PART 1-2009

ORGANIC AGRICULTURE

PART 1 : THE PRODUCTION, PROCESSING, LABELLING AND MARKETING OF PRODUCE AND PRODUCTS FROM ORGANIC AGRICULTURE

National Bureau of Agricultural Commodity and Food Standards
Ministry of Agriculture and Cooperatives

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The Thai Agricultural Standard on Organic Agriculture PART 1 : The Production, Processing, Labelling, and Marketing of Produce and Products from Organic Agriculture (TAS 9000 PART 1-2003) was notified by the Ministry of Agriculture and Cooperatives on 21 May 2003 and published in the Royal Gazette on 23 July 2003. To update the detail in the light of new development, Agricultural Standards Committee agreed to revise the TAS 9000 PART 1-2003. This revised standard is used as guidelines in improving the organic production and processing of produce and products from plants, aquaculture, and livestock to protect consumers and promote export.

In case of organic livestock production, this standard shall be used in conjunction with the Thai Agricultural Standard on Organic Agriculture PART 2 : Organic Livestock

The standard is based on the information of the following documents:

GL 32-1999, Rev.1-2001. Guidelines for The Production, Processing, Labelling and Marketing of Organically Produced Foods. Joint FAO/WHO Food Standards Programme, Rome.

IFOAM. 2007. The IFOAM Basic Standards for Organic Production and Processing version 2005. International Federation of Organic Agriculture Movements, Germany, August 2007.

NOTIFICATION OF THE AGRICULTURAL STANDARDS COMMITTEE SUBJECT: THAI AGRICULTURAL STANDARD: ORGANIC AGRICULTURE PART 1 : THE PRODUCTION, PROCESSING, LABELLING AND MARKETING OF PRODUCE AND PRODUCTS FROM ORGANIC AGRICULTURE

The Agricultural Standards Committee deemed appropriate to issue the Thai Agricultural Standard on Organic Agriculture Part 1 : The Production, Processing, Labelling, and Marketing of Produce and Products from Organic Agriculture as voluntary standard under the Agricultural Standard Act B.E. 2551 (2008) to improve quality, standard, and safety of the agricultural produce and products.

By virtue of Section 5, Section 15 and Section 16 of the Agricultural Standards Act B.E. 2551 (2008), the Minister of Agriculture and Cooperatives hearby issued the Notifies on the establishment of the Thai Agricultural Standard on Organic Agriculture Part 1 : The Production, Processing, Labelling, and Marketing of Produce and Products from Organic Agriculture as follows:

1. To annul the Notification of the National Committee on Agricultural Commodity and Food Standards on the Thai Agricultural Commodity and Food Standard entitled Organic Agriculture Part 1 : The Production, Processing, Labelling, and Marketing of Produce and Products from Organic Agriculture on 21 May B.E. 2546;

2. To establish the Thai Agricultural Standard on Organic Agriculture Part 1 : The Production, Processing, Labelling, and Marketing of Produce and Products from Organic Agriculture (TAS 9000 – 2009) to be used as voluntary standard as attached herewith.

Notified on 1 October B.E.2552 (2009)

(Mr. Theera Wongsamut)
Minister of Agriculture and Cooperatives

THAI AGRICULTURAL STANDARD

ORGANIC AGRICULTURE
PART 1: THE PRODUCTION, PROCESSING, LABELLING AND MARKETING OF PRODUCE AND PRODUCTS FROM ORGANIC AGRICULTURE

1 SCOPE

1.1 This standard has been established to provide the requirements for the production, processing, labelling, and marketing of organic produce and products.

1.2 This standard applies to produce from plants, aquatic animals, and livestock under organic agriculture including produce from forest and nature as well as products that are used as food or feed.

2 DEFINITIONS

For the purpose of this standard:

2.1 **Organic agriculture** means a holistic production management system which enhances and promotes an agroecosystem, including biodiversity and biological cycles. It emphasizes the use of natural materials and avoids the use of synthetic materials or plants, animals or microorganisms derived from genetic modification. An organic production system is designed to handle agricultural products with careful emphasis on processing methods in order to maintain the organic integrity and vital qualities of the product at all stages.

2.2 **Holistic** means placing emphasis upon all things and activities of the ecosystem.

2.3 **Synthetic chemicals** mean substances produced by chemical procedures and methods, so differing from substances from biological system that occur naturally.

2.4 **Genetic modification** means altering the genetics of living organisms in order to have a new trait which is desired by using modern biotechnology.

2.5 **Modern biotechnology** means the application of *in vitro* nucleic acid techniques, including recombinant deoxyribonucleic acid (DNA) and direct injection of nucleic acid into cells or organelles, or fusion of cells beyond the taxonomic family, that overcome natural physiological reproductive or recombinant barriers and that are not techniques used in traditional breeding and selection.

2.6 **Organic** is a labelling term for produce from plants, livestocks, and aquatic animals that have been produced in accordance with organic agriculture standards and products used as food or feed that have been processed in accordance with organic agriculture standards certified by a certification body recognized by the Ministry of Agriculture and Cooperatives. The labelling terms include “organic agriculture” or “organic” either in Thai or English.

2.7 **Transition to organic or Conversion to organic** is a labelling term that denotes produce and products of plant, livestock, and aquatic animal that are obtained through production and or processing in accordance with organic agriculture in transition period intended to market as food or feed and have been certified by a certification body recognized by the Ministry of Agriculture and Cooperatives.

2.8 **Transition period or conversion period** means the period when organic agriculture in accordance with the requirements of the standard is first practiced until the produce and products are certified as organic.

2.9 **Buffer zone** means a boundary area bordering a production site in accordance with organic agriculture standards which is established to prevent chemical contamination from an adjacent area.

2.10 **Crop rotation** means the practice of alternating the species of crops grown on a specific field to reduce widespread of weed, pest and disease or maintain soil fertility and improve soil organic matter content.

2.11 **Labelling** means any written, printed or graphic matter that is present on the label, accompanies the food, or is displayed near the food, including that for the purpose of promoting its sale.

2.12 **Produce** means any agricultural or aquacultural produce that is produced according to the organic agriculture or gathered from nature, and/or handled with post-harvest management.

2.13 **Product** means products from the organic agriculture that have been processed for the use as food or feed.

2.14 **Producer/Farmer** means persons who grow plant, raise aquatic animal and livestock, tending, harvesting, post-harvest handling, and selling produce.

2.15 **Operator** means those in charge of activities related to production, preparation, import and export of produce and/or products with the purpose of trading, or being traders.

2.16 **Production** means on-farm operations including primary packaging and labelling of the product.

2.17 **Preparation** means the operations of slaughtering, dressing, processing, preserving and packaging of produce and/or products including alterations made to the labelling concerning the presentation of the organic production method.

2.18 **Livestock** means any domestic or domesticated animal raised for food or in the production of food. Wild animals obtained from hunting or fishing and aquatic animal are not included.

2.19 **Aquatic anima**l means animals that live in the water, or part of their cycles in the water, or live in flooded area such as fish, shrimp, crabs, horseshoe crabs, shellfish, turtles, frogs, sea turtles, crocodiles, and their eggs, mammals, sea cucumbers, seaweed, including water plants.

2.20 **Organic aquatic animal feed** means aquatic animal feed that is produced in accordance with organic agriculture principles including:

(1) Natural aquatic animal feed means animal and plant which their natural habitat is where aquaculture is practiced. Natural aquatic animal feed can be directly eaten by farmed aquatic animal

(2) Natural raw material means produce from nature which is directly used as aquatic animal feed or raw material for production of aquatic animal feed and does not come from the same water source as aquatic animal is raised.

(3) Processed aquatic animal feed means a single type of natural raw material or processed aquatic animal feed which are produced in accordance with organic agriculture and the Animal Feed Quality Control Act B.E.2525 (A.D.1982)

2.21 **Fertilizer Material** means substances that are comprised of nitrogen, phosphorus, potassium, or other substances that are beneficial for plants and aquatic animal, either as single or mixed substances.

2.22 **Organic Fertilizer** means fertilizers that are made by moistening, chopping, fermenting, grinding, composting, sifting, extracting or other methods and fully decomposed organic material, but not biofertilizers, and chemical fertilizers.

2.23 **Biofertilizer** means fertilizer made by using live microorganisms to enrich and improve soil biological, physical and biochemical condition which also includes microorganism culture starter.

2.24 **Plant Amendment** means substances used to aid growth, increase production, and control quality and other character of crops.

2.25 **Soil Amendment** means materials that improve the chemical, biological, and physical condition of soil to make it suitable for growth and yield of high quality produce.

2.26 **Aquaculture Conditioning Material** means materials that improve chemical, biological, and physical conditions of ponds used for aquaculture to suit the growth of aquatic animal and the yield of high quality produce.

2.27 **Food Additive** means substances which are not normally consumed as food or ingredient of food, whether or not it has nutritive value. The intentional addition to food is for technological purposes in processing, packaging, storage, or transporting which affect the quality, standard, or characteristics of foods. The term includes substances which are not added to food but used with food for the mentioned purposes. The term excludes contaminants or substances added to maintain or improve nutritional quality.

2.28 **Veterinary drug** means any substance applied to any food-producing animal, whether used for therapeutic, prophylactic or diagnostic purposes or for modification of physiological functions or behaviours.

2.29 **Feed Additive** means materials that are added to feed but are not normally used as feed whether or not they have nutritional value, which affect the characteristics of feed or animal products.

2.30 **Ingredient** means raw materials and any substances, including food additives or feed additives, which are used in the manufacture or preparation of food and present in final products possibly in modified forms.

2.31 **Processing Aid** means any substance or material, excluding apparatus or utensils which are not consumed as food or feed ingredients but they are intentionally used in the processing of raw materials, foods, feed or their ingredients and it may result in the unintentional and unavoidable presence of residues or derivatives in the final products.

2.32 **Certification** means the procedure which is performed by certification bodies to provide written or equivalent assurance that the produce/products or the control systems of produce/products are conformed to the requirements of this standard.

2.33 **Certification Body** means a body responsible for inspection and certification whether produce/products are conformed to this standard.

2.34 **Inspection** means the examination of produce/products or systems for control of produce/products, raw materials, processing, and distribution including in-process and finished product testing in order to verify that they conform to the requirements for organic agriculture standard. The examination of the production and processing systems is also included.

3. Principles of Organic Production

Organic agriculture shall be complied with the following principles:

3.1 The production system shall be developed towards an integrated agricultural system with a diversity of plants and animals;

3.2 The production system on the farm shall be developed towards self-sufficient in organic materials and crop nutrients;

3.3 Soil fertility and water quality shall be rehabilitated and preserved by constantly using organic material such as manure, compost, and green manure, and recycling of on-farm resources for maximum benefit;

3.4 The ecological balance in the farm and the sustainability of the ecology as a whole shall be preserved;

3.5 The activities that cause environmental pollution shall be prevented and avoided;

3.6 The post-harvest handlings and processing practices that are natural, conserving energy, and least affected on the environment shall be used;

3.7 The biodiversity of the agricultural system and the surrounding ecology including the preservation of natural habitat of wild plants and animals shall be conserved;

3.8 Organic nature shall be maintained along the whole chain of production, processing, storage and distribution;

3.9 Application of synthetic chemicals shall be avoided throughout the chain of production, processing and storage;

3.10 Produce, products, and ingredients shall not be derived from genetic modification;

3.11 Products or ingredients of products shall not be irradiated.

4 ORGANIC PRODUCTION REQUIREMENTS FOR PLANTS

4.1 Organic production requirements for plants shall be used throughout the entire transition period of at least 12 months before planting for annual crops and 18 months before the first harvesting of organic produce for perennial crops. Transition period shall be started from the time a producer practicing according to this standard and applying for the certification from the certification body.

4.2 In case that there is an evidence indicating the absence of prohibited chemicals longer than 12 months before planting for annual crops and 18 months the first harvesting of organic produce for perennial crops, producer may request shorter transition period from the certification body. However, the time from applying for certification until the produce being certified as organic shall not be less than 6 months.

4.3 Certification body may extend the transition period specified in 4.1 if the information of the land use history shows that chemicals had been used heavily.

4.4 In case that the whole farm is not converted to organic at one time, it may be done progressively. The holding and management system shall be split into units where planting on each unit shall be clearly distinguished. Organic produce shall be clearly separated from the produce from the area using chemicals.

4.5 Areas converted to organic agriculture shall not be converted back to use chemicals.

4.6 Producer shall have measures such as barrier, ridge or planting as buffer zone to avoid contamination through soil, water, or air from adjacent plantation or polluted area. The measures shall be suitable for each contamination risk.

4.7 The fertility and biological activity of the soil shall be maintained or increased as following:

(1) Cultivation of legumes, green manures or deep-rooting plants in an appropriate multi-annual rotation programme;

(2) Incorporation in the soil of organic materials, livestock manure, shall be from holdings producing in accordance with this standard;

(3) For compost activation, appropriate micro-organisms or plant-based preparations may be used;

(4) Biodynamic preparations from stone meal, farmyard manure or plants may also be used for increasing of the fertility and biological activity of the soil;

Note *In case the methods described in 4.7(1) and 4.7(2) cannot provide adequate nutrients to the crop or there are not enough organic substances in accordance with this standard, the substances specified in Appendix A, Table A.1 may be applied.*

4.8 Pests, diseases and weeds shall be controlled by any one, or a combination, of the following measures:

(1) Choice of appropriate species and varieties;

(2) Appropriate rotation programs;

(3) Mechanical cultivation;

(4) Conservation of natural enemies of pests through providing of favourable habitat, such as hedges and nesting sites, ecological buffer zones which maintain the original vegetation to house pest predators;

(5) Maintaining the ecosystems, for example, by making strip to prevent soil erosion, and through the use of crop rotation;

(6) Use of natural enemies including release of predators and parasites;

(7) Use of biodynamic preparations from crushed rock manure or plant materials.

(8) Mulching and mowing;

(9) Weed control by grazing of animals. In case of food crops, microbial contamination from manure to edible part of the plant shall be prevented;

(10) Mechanical controls such as traps, light traps or use of sound to drive away pests.

4.9 In cases of imminent or serious threat to the crop and where the measures identified in Section 4.8 are, or would not be effective, the substances in Appendix A. Table A.3 may be applied.

4.10 Seeds and vegetative reproductive materials shall come from organic agriculture system except when an operator demonstrates that materials meeting the requirements are not available, materials coming from conventional sources may be allowed. The seeds and materials shall have never been treated with chemicals. If the untreated seeds and materials are not available, the chemical treated shall be removed properly before use, in this instance prior acceptance with the certification body or concerned competent authority shall be made.

4.11 Edible plants and parts of plants collected from nature are considered an organic produce provided that:

4.11.1 The produce is from a clearly defined area in the case of wild harvest. The area shall never been used for agriculture or applied with prohibited substances at least 3 years. The harvest is subject to the inspection/certification from certification body;

4.11.2 The collection does not disturb the environment, the ecology or the conservation of the species in the collection area.

5 ORGANIC PRODUCTION REQUIREMENTS FOR AQUACULTURE

5.1 The following requirements for organic aquaculture production are to be used in aquaculture production with the transition period of at least one aquaculture production cycle. The transition period may be varied upon the type of animal and other information such as the record of prior use of the land, as approved by certification body. If the aquaculture production cycle is longer than one year, transition period of one year shall be used.

5.2 Transition period shall be started from the time a producer practicing according to this standard and applying for the certification from the certification body.

5.3 Selection of an area for organic aquaculture production

5.3.1 The producer/ farmer should know the history of land use in order to assess the risk of pesticide residues and other contaminants.

5.3.2 The farm shall be located in the area that has legal land ownership documents.

5.3.3 The water and land environment shall not pose any risk of hazardous substances with pesticides and contaminants.

5.4 Choice of aquatic species

5.4.1 It is prohibited to use species developed through genetic modification or exposed to radiation.

5.4.2 The species to be raised shall come from organic aquaculture production system. At the beginning of organic aquaculture, if the aquatic breeds meeting requirements are not available, the animal coming from conventional sources may be allowed for a certain period of time but those animals shall have never been treated with hormones and acceptance from the certification body or concerned competent authority shall be made. The producers shall have a plan and the timeframe to use the aquatic breeds from organic sources.

5.4.3 The appropriateness of breeds to the condition of water, climate, disease resistance, and the avoidance of causing damage to the biodiversity of the ecological system shall be taken into consideration.

5.5 Planning, managing, and improving of an organic aquaculture farm should follow the following criteria:

5.5.1 There shall be a good system for planning and managing to avoid contamination and causing damage to the environment.

5.5.2 Planning of farm management and aquaculture system may be done by the use of pest and disease resistance breeds, and selecting the suitable season and system of aquaculture. This includes selecting of materials and tools in line with the principles of organic aquaculture in all steps of practice, from preparing pond to harvesting. All steps of aquaculture farm management shall be aimed at the use of organic and natural materials that are free from contamination of prohibited substances according to Section 5.5.3.

5.5.3 A list of prohibited substances in farm management:

(1) Microorganisms and products from microorganisms that have been genetically modified

(2) Natural contaminants such as heavy metals, which have adverse effect on environment and human health

(3) Municipal fertilizer or compost from municipal waste

(4) Synthetic substances used to stimulate growth

5.5.4 Organic substances and inorganic substances allowed to be used in the production system are listed in Appendix A, Table A.2 and Table A.4.

5.6 Organic aquatic animal feed

5.6.1 Organic aquatic animal feed is comprised of natural aquatic animal feed, natural raw material, organic aquatic animal feed produced on-farm, and processed aquatic animal feed

5.6.2 Organic aquatic animal feed shall be managed as followings:

5.6.2.1 Organic aquatic animal shall be fed with natural feed or raw material directly and/or organic aquatic animal feed produced on-farm

5.6.2.2 Natural raw material directly used to feed organic aquatic animal or ingredients used to produce organic aquatic animal feed on farm shall have these following characteristics:

(1) Natural or organic agricultural origin as specified in this standard;

(2) Not being genetically modified or irradiated;

(3) Not being extracted by solvent or chemical (except for the substances allowed to use listed in Appendix A, Table A.5);

(4) Acquiring of natural raw material, catching, harvesting, and collecting shall be in sustainable way and have the least impact on environment;

(5) Selecting abundant material or other non-food material as raw materials to encourage worthwhile use of natural materials;

(6) Waste or by-product from processing shall be derived from organic food process;

(7) Raw material from aquatic animal or part of aquatic animal is prohibited to feed the same type to aquatic animal.;

(8) Raw material from cultivated plants shall be pre-certified as organic. If necessary, raw material from conventional agriculture may be used in an amount of not more than 10% of the raw material from cultivated plants;

(9) If the synthetic substances are necessarily used in feed, only substances in Appendix A, Table A.5 are allowed to use in an amount of not more than 5% of the formula.

5.6.2.3 In case that the feed specified in Section 5.6.2.1 is insufficient, processed aquatic animal feed from outsourcing in accordance with TAS 9000-PART 3, Thai Agricultural Standard of Organic Agriculture Part 3: Organic aquatic animal feed, with an acceptance from the certification body is allowed.

5.6.2.4 During the production period for organic aquaculture, the feed specified in Section 5.6.2.1-5.6.2.3 is insufficient, certification body may allow processed animal feed with

ingredients not complying with this requirement, but the complied ingredients shall not be less than 60% without chemical and prohibited substances as follows:

(1) Antibiotics, synthesized chemical with the objective to stimulate growth and synthetic appetizer;

(2) Urea;

(3) Pure amino acid;

(4) Substances or produce that have been genetically modified or irradiated;

(5) Synthetic food colorings;

(6) Chemicals or other substances which are prohibited to use in aquatic animal feed by the Animal Feed Quality Control Act B.E.2525 (A.D.1982) and the revised version.

5.6.2.5 When the operator is able to demonstrate to the certification body that there is no feed in complying with Section 5.6.2.1-5.6.2.4 which may be due to natural disaster, human-caused conditions, or unpredicted weather conditions, the certification body may allow the feed in accordance with 5.6.2.1-5.6.2.3 at a quantity of less than 60% during a limited period of time.

5.6.2.6 Vitamins and minerals to be mixed into the feed shall be natural substances. The use of synthetic vitamins and minerals shall be accepted by the certification body or the related competent authority.

5.7 Management plan for aquatic animal health

5.7.1 The aquatic animal shall be stocked at an appropriate rate

5.7.2 Where necessary, use of natural substances and materials listed in Appendix A, Table A.3 is allowed.

5.8 Management after catching/ harvesting

5.8.1 Substances used in the post-harvest handlings such as storage of fresh aquatic animal or for processing shall be substances of natural origin except for the synthetic chemical substances listed in Appendix A, Table A.5.

5.8.2 Tools, equipment and materials used for packaging shall cause no harm to the environment.

5.8.3 Maintain a record system for harvest to allow traceability.

6 PRODUCTION REQUIREMENTS FOR ORGANIC LIVESTOCK

Production requirements of organic produce and products from livestock are explained in the Thai Agriculture Standard on Organic Agriculture Part 2: Organic Livestocks.

6.1 Organic livestock production principles

6.1.1 Production of organic livestock on organic agriculture farm. Livestock shall be part of the farm and managed according to this standard.

6.1.2 The livestock is a major help in maintaining organic agriculture on farm by:

6.1.2.1 Improving and maintaining the soil fertility;

6.1.2.2 Eliminating weed and agricultural waste from farm by using as feed;

6.1.2.3 Enhancing biodiversity and holistic farming system;

6.1.2.4 Diversifying the farm produce.

6.1.3 Livestock production is one of agriculture activities related to land ecology whether physical and biological activity. Herbivores shall have access to pasture for grazing and all other animals shall have access to open-air exercise areas. The certification body may allow an exception, if necessary, such as stage of the animal, weather conditions, or the case of managing the traditional farming systems with limited access to pasture. The producer shall particularly consider about the welfare of the animals.

6.1.4 Stocking densities for livestock shall be appropriate to stock size and rotation of area utilization with concern on soil fertility, too much grazing, surface destruction, sufficient feeding source, nutrients balance, stock health, and environmental impact.

6.1.5 Livestock breeding shall be aimed at natural breeding, minimizing stress, preventing diseases, avoidance the use of chemicals, veterinary drugs including antibiotics, and livestock by-products such as meat and ground bones as raw materials for feedstuff except milk, and maintaining animal health and welfare.

6.2 Organic livestock production requirements

6.2.1 Area used for growing feedstuff or grazing pasture shall be managed as specified in Section 4

6.2.2 Animals used for organic livestock production shall be an offspring of parents raised under the organic production. In case that animal being introduced into the certified farm or area, mammals shall be introduced in as soon as they are weaned and poultry shall be introduced in as soon as they are hatched or less than 3 days old.

6.2.3 Transition period shall be started from the time a producer practicing according to this standard and applying for the certification from the certification body. Conversion period for each livestock species shall be complied with TAS 9000 Part 2, Thai Agricultural Standard on Organic Agriculture Part 2: Organic Livestock.

6.2.4 Requirements on feedstuffs, livestock health management, livestock management, recording, environmental management for production system of organic livestock species shall be complied with TAS 9000 Part 2, Thai Agricultural Standard on Organic Agriculture Part 2: Organic Livestock

7 HANDLINGS, STORAGE, TRANSPORTATION, PROCESSING AND PACKAGING

7.1 The organic integrity of the produce or product shall be maintained throughout all steps in the production and processing chain. This is achieved by the use of techniques appropriate to the ingredients with careful processing methods, limiting the use of food additives and

processing aids. Ionizing radiation shall not be used on organic products for the purpose of pest control, food preservation, elimination of pathogens, or sanitation.

7.2 Organic produce and products during handlings, transportation, processing, or packaging shall be clearly indicated and separated from the non-organic produce or products. There shall be a managing system to prevent the contamination from the substances prohibited to use in organic agriculture.

7.3 Pest management

For pest management and control, the following measures should be used:

7.3.1 Preventative methods, such as disruption and elimination of pest habitat and access to facilities, shall be the primary mean of pest management;

7.3.2 If preventative methods are inadequate, the first choice for pest control should be mechanical/physical and biological methods;

7.3.3 If mechanical/physical and biological methods are inadequate for pest control, pesticide substances appearing in Appendix A, Tables A.3 and A.4 or other substances allowed by the competent authority in accordance with Section 9 of this standard may be used provided that contact with organic products is prevented.

7.3.4 Pests shall be prevented by good manufacturing practices. Pest control measures within storage areas or transport containers may include physical barriers or other treatments such as ultra-sound, ultra-violet light, traps, controlled temperature, controlled atmosphere (carbon dioxide, oxygen, nitrogen), and diatomaceous earth.

7.3.5 Use of pesticides not listed in Appendix A for post harvest or plant and animal disease protection purposes shall not be permitted on products prepared in accordance with this standard and would cause organically produced products to lose their organic integrity.

7.4 Processing and manufacturing

7.4.1 Processing shall be mechanical, physical or biological methods (such as fermentation and smoking) and minimize the use of non-agricultural ingredients and processing aids as listed in Appendix A, Tables A.5 and A.6.

7.4.2 In extraction, only water, ethanol, vegetable or animal oil, vinegar, carbon dioxide, and nitrogen shall be used.

7.4.3 Process shall be managed following the principles and good manufacturing practices in accordance with good hygienic requirements of related standards.

7.5 Packaging

7.5.1 Packaging materials shall be chosen from bio-degradable, recycled or recyclable sources.

7.6 Storage and transport

7.6.1 The organic integrity of the produce or product shall be maintained during storage, transportation and handlings by using of the following precautions:

7.6.1.1 Organic products shall be protected at all times from co-mingling with non-organic products; and

7.6.1.2 Organic products shall be protected at all times from contact with materials and substances prohibited to use in organic farming and handlings.

7.6.2 Where only part of the unit is certified, between the organic produce and/or products and non-organic produce and/or products shall be separately stored, handled and clearly identified.

8 LABELLING AND CLAIMS

8.1 Organic produce and products shall have the following details on the label and shall be legible, clearly stated, and truthful, or not deceptive.

8.1.1 The name of the produce or product;

8.1.2 The list of ingredients except for a single ingredient produce or product;

8.1.3 Food or feed additives (if any);

8.1.4 Net content and drained weight shall be declared. In the case that the product is packed in a liquid medium, it shall carry a declaration of drained weight of that product;

8.1.5 The name and address of the producer, manufacturer, packer or distributor shall be declared. The registered trademark shall also be declared;

8.1.6 The country of origin of the produce or product which is produced for export;

8.1.7 Date marking shall be declared. This shall consist of the day, the month and/or the year for production; and the day, the month and/or the year of minimum durability (expiration) for consumption. Notwithstanding an indication of date of minimum durability (expiration) shall not be required for fresh fruits and vegetables, potatoes which have not been peeled, cut or similarly treated; wines; beverages containing 10% or more by volume of alcohol; bakers' or pastry-cooks' wares; vinegar; food grade salt; and solid sugars. The month and the year of products may be declared when the shelf life of that products is more than 90 days; and

8.1.8 Storage instructions (if any).

8.2 The labelling or claims of organic produce or products or organic agriculture, or organic can be made only where:

8.2.1 The produce comes from organic agriculture system in accordance with the requirements of this standard;

8.2.2 All the ingredients of the product from agricultural origin are derived from organic production in accordance with the requirements of Sections 3, 4, 5, and 6;

8.2.3 Only the ingredients from non-agricultural origin listed in Appendix A Table A.5 are allowed to be used;

8.2.4 The same ingredients shall not be derived from organic and non-organic origin;

8.2.5 The operator who imports produce or product is subject to regular system inspection as set out in Section 10 of this standard;

8.2.6 Produce or product which has been certified by the certification body shall have the label with name and/or the code number of the certification.

8.3 Products labelled with certification mark as “organic” shall have no less than 95% by weight of all ingredients in final products excluding water and salt. The non-organic ingredients shall not be genetically modified or irradiated or treated with processing aid not being listed in Appendix A, Tables A.5 and A.6.

8.4 The product containing ingredients from organic agriculture less than 95% but no less than 70% by weight of all ingredients in final product excluding water and salt shall not be labelled and claimed as organic product. However, the other phrases such as “product containing ingredients of organic origin” may be used on the label provided that the following criteria shall be followed:

8.4.1 The term “organic” shall be legible on the label. Organic ingredients shall be declared by expressing in the estimated percentage of all ingredients including food additives but excluding salt and water.

8.4.2 The type and the amount of ingredients shall be percentage by weight in descending order.

8.4.3 List of all ingredients on the label shall be same color with identical font style and size.

8.5 When produce or product inspected by certification body is in accordance with organic agriculture requirements specified in this standard and complied with the requirements in Section 8.2, the phrase “Produce or product in transition to organic” may be allowed on the label of the produce or product. However, certification mark which cause misleading as certified organic produce or product shall not be used.

8.6 In relation with the labelling of non-retail containers of produce or product including repacked produce or product for retail sale, the operator shall allow the certification body to access the storage, production and agricultural area as well as the accounting system of agricultural inputs, produce and products and supporting documents for inspection purposes. The operator shall provide the necessary information to the certification body for inspection.

8.7 Organic produce and products certified in accordance with this standard shall be complied with relevant laws.

8.8 The indication of any certification mark of organic produce or product shall be used in accordance with the criteria and rules of the certification body recognized by the Ministry of Agriculture and Cooperatives.

9 REQUIREMENTS ON PERMISSION OF OTHER SUBSTANCES NOT SPECIFIED IN APPENDIX A IN ORGANIC AGRICULTURE PRODUCTION SYSTEM

9.1 To consider using substances other than those specified in Appendix A, the criteria to evaluate these substances are as follows:

9.1.1 They are consistent with principles of organic production as outlined in Section 3;

9.1.2 The use of the substance is necessary/essential for its intended use;

9.1.3 The use and disposal of the substance does not result in, or contribute to, harmful effects on the environment;

9.1.4 Substances shall not have negative impact on human or animal health;

9.1.5 Approved alternatives are not available in sufficient quantity and/or quality.

9.2 The criteria in Section 9.1.1 to Section 9.1.5 are intended to be evaluated as a whole in order to protect the integrity of organic production. In addition, the following criteria are applied in the evaluation process:

9.2.1 If the substances are used for fertilizing or soil conditioning purposes, they shall be essential for obtaining or maintaining the fertility of the soil or to provide specific nutrient requirements of crops, or specific soil conditioning which cannot be satisfied by the practices specified in Section 4 to Section 7, or addition of other substances included in Appendix A, Table A.1. The substances shall come from plant, animal, microbial, or mineral origin that may undergo the following processes such as physical process (e.g., mechanical, thermal), enzymatic and/or microbial process. Their usage for the above purposes shall not have harmful impact on the living organisms of the soil and/or the physical characteristics of the soil;

9.2.2 If the substances are used for controlling plant disease or pest and weed, they should be able to control of a harmful organism or a particular disease for which other biological, physical, or plant breeding alternatives and/or effective management practices are not available; and the substances shall be of plant, animal, microbial, or mineral origin and may undergo the physical (e.g. mechanical, thermal), enzymatic and microbial processes. In addition, synthetic substances such as pheromones may be considered for addition to the lists if the substances in their natural form are not available in sufficient quantities, provided that the conditions for their use do not directly or indirectly result in the residues present in the edible parts of the produce;

9.2.3 If the substances are used as food and/or feed additives or processing aids in preparation or preservation of the food, these substances should come from natural origin and may have undergone mechanical or physical processes (e.g. extraction, precipitation), biological/enzymatic processes and microbial processes (e.g. fermentation). If the mentioned substances from such methods and technologies are insufficient but needed in preparation, the synthetic substances may be considered for inclusion in exceptional circumstances. However, the use shall not cause misunderstanding to consumers concerning the nature of the substance and quality of the food;

9.3 In the evaluation process of substances for inclusion on the lists, all stakeholders should have the opportunity to involve.

9.4 The proposal to add new substances into Appendix A should include the following information/details:

9.4.1 Description of product and the conditions of its envisaged use;

9.4.2 Information demonstrating that the requirements under Section 9.1 are satisfied.

10 INSPECTION AND CERTIFICATION SYSTEMS

10.1 Inspection and certification systems are used to verify the production systems, processing, labelling, and marketing system of organic produce and/or products that produced in accordance with the organic agriculture.

10.2 The inspection and certification bodies can provide organic inspection and certification services on produce and/or products under the accreditation system by the Ministry of Agriculture and Cooperatives.

10.3 The inspection and certification bodies shall ensure that at least the inspection measures and other precautions specified in Appendix B are applied in their systems.

APPENDIX A

PERMITTED SUBSTANCES FOR THE PRODUCTION OF ORGANIC AGRICULTURE

A.1 PRECAUTIONS

A.1.1 Any substances used in an organic system for soil fertilization and conditioning the aquaculture pond, pest and disease control, maintaining healthiness of livestock and aquatic animal, maintaining quality of products or preparation, preservation and storage of food product shall be complied with the national and trading partners' regulations.

A.1.2 Conditions for the use of certain substances contained in the following lists may be specified by the certification body or competent authority, e.g. quantity and frequency of use with specific purpose.

A.1.3 Substances including permitted substances required for primary production shall be used with care and according to the scientific principles in order to prevent misuse that may alter the ecosystem of the land or farm.

A.1.4 The lists in Tables A.1 to A.7 are permitted substances for the production of organic agriculture. The addition or removal from the list may be done subject to an acceptance from certification body in accordance with the requirements specified in Section 9 of this standard.

Table A.1 Agricultural inputs to be used as fertilizers and soil conditioners

(Section 4)

Substances	Details/ specific conditions
1. Farmyard and poultry manure	- If not from organic sources, substances need to be recognized by certification body or competent authority - Factory farming sources (application of large amount of chemicals or veterinary drugs and battery cages) are not permitted. - Manure shall not be used in contact with food crop in the way that may risk the microbiological contamination to the edible parts of the plant
2. Composted animal excrements, including poultry	
3. Manure and composted farmyard manure	
4. Dried farmyard manure and dehydrated poultry manure	
5. Slurry or urine	- If not from organic sources, substances need to be recognized by certification body or competent authority. They should be fermented and/or appropriately diluted. Factory farming sources are not permitted.
6. Natural fertilizers (fish fertilizer, bird guano, bat guano)	- Substances need to be recognized by certification body or competent authority
7. Rice straw	- Substances need to be recognized by certification body or competent authority
8. Compost from mushroom substrate	- Substances need to be recognized by certification body or competent authority. The initial composition of the substrate must be limited to the products on this list.
9. Compost of organic materials from household refuse	- Substances need to be recognized by certification body or competent authority
10. Compost from plant residues	-
11. Processed animal products from slaughterhouses and fish industries	Substances shall not be treated with synthetic chemicals and need to be recognized by certification body or competent authority
12. By-products of food and textile industries	Substances shall not be treated with synthetic additives and need to be recognized by certification body or competent authority
13. Seaweed and seaweed products	- Substances need to be recognized by certification body or competent authority
14. Sawdust, bark, and wood waste	- Substances need to be recognized by certification body or competent authority
15. Wood ash	- Substances need to be recognized by certification body or competent authority

Table A.1 Agricultural inputs to be used as fertilizers and soil conditioners (cont.)

Substances	Details/ specific conditions
16. Natural phosphate rock	- Substances need to be recognized by certification body or competent authority - Cadmium must not exceed 90mg/kg P_2O_5
17. Basic Slag	- Substances need to be recognized by certification body or competent authority
18. Rock potash and mined mineral salts (e.g. kainite, sylvinite)	- Substances shall have less than 60% chlorine
19. Sulphate of potash (e.g. patenkali)	- Substances shall be obtained by physical procedures but not enriched by chemical processes to increase its solubility - Substances need to be recognized by certification body or competent authority
20. Calcium carbonate of natural origin (e.g. chalk, marl, limestone, phosphate chalk)	-
21. Magnesium Rock	-
22. Calcareous magnesium rock	-
23. Epsom Salt (magnesium sulphate)	-
24. Gypsum (calcium sulphate)	-
25. Stillage and stillage extract	- Ammonium stillage excluded
26. Sodium Chloride	- Only rock salt
27. Aluminum calcium phosphate	- Cadmium not exceed 90mg/kg of P_2O_5
28. Trace elements (e.g. boron, copper, manganese, molybdenum, zinc)	- Substances need to be recognized by certification body or competent authority
29. Sulphur	- Substances need to be recognized by certification body or competent authority
30. Stone meal	-
31. Clay (e.g. bentonite, perlite, zeolite)	-
32. Naturally occurring biological organisms (e.g. worms)	-
33. Vermiculite	-
34. Peat	- Excluding synthetic additives permitted for seed, potting module composts - Other use as recognized by certification body or competent authority
35. Humus from earthworms and insects	-
36. Zeolites	-

Table A.1 Agricultural inputs to be used as fertilizers and soil conditioners (cont.)

Substances	Details/ specific conditions
37. Wood charcoal	-
38. Chloride of lime	- Substances need to be recognized by certification body or competent authority
39. By-products of the sugar industry	- Substances need to be recognized by certification body or competent authority
40. By-products of industries processing ingredients from organic agriculture	- Substances need to be recognized by certification body or competent authority
41. By-products from oil palm, coconut, and cocoa	- Substances need to be recognized by certification body or competent authority

Table A.2 Agricultural inputs used for fertilizers and conditioners of aquaculture pond

(Section 5)

Substances	Details/ specific conditions
1. Lists of permitted organic substances	
1.1 Organic fertilizer made from organic materials; compost of crop residues, straw, sawdust, bark, wood waste, and other agricultural by-products	- If substances are not from organic sources, they need to be recognized by certification body or competent authority. Inorganic substances added to provide plant nutrients such as phosphate rock shall be permitted substances.
1.2 Manure	- If substances are not from organic sources, they need to be recognized by certification body or competent authority
1.3 Green manure, fresh crop residues and residual material of organic nature used in the farm	- If substances are not from organic sources, they need to be recognized by certification body or competent authority
1.4 Leftover products from slaughterhouses and industries such as sugar factories, tapioca factories, and fish sauce factories	- Synthetic substances shall not be added and they need to be recognized by certification body or competent authority
1.5 Growth control substances for aquatic organisms, those free from synthetic substances	- If substances are not from organic sources, they need to be recognized by certification body or competent authority
1.6 Bacteria, molds, and enzymes	- If substances are not from organic sources, they need to be recognized by certification body or competent authority
2. Lists of permitted inorganic substances	
2.1 Phosphate rock	-
2.2 Ground limestone (In calcite or dolomite form, it is prohibited to use baked dolomite)	-

Table A.2 Agricultural inputs used for fertilizers and conditioners of aquaculture pond

Substances	Details/ specific conditions
2.3 Calcium silicate	-
2.4 Sodium silicate	-
2.5 Magnesium sulfate	-
2.6 Clay minerals such as smectite, kaolinite, chlorite, etc	-
2.7 Perlite, zeolite, and bentonite	-
2.8 Rock potash, mined, potassium salt with less than 60% chloride	-
2.9 Calcium from seaweed	-
2.10 Seashells	-
2.11 Potassium sulphate produced by physical processes	-
2.12 Rock salt	-
2.13 Oxygen	-

Table A.3 Substances for plant pest and disease control

(Section 4)

Substances	Details/ specific conditions
1. Plant and Animal	
1.1 Preparations on basis of pyrethrins extracted from *Chrysanthemum cinerariaefolium*	- Substances need to be recognized by certification body or competent authority
1.2 Preparations of rotenone or active substance from *Derris elliptica, Lonchocarpus, Thephrosia spp.*	- Substances need to be recognized by certification body or competent authority
1.3 Preparations of *Quassia amara*	- Substances need to be recognized by certification body or competent authority
1.4 Preparations of *Ryania speciosa*	- Substances need to be recognized by certification body or competent authority
1.5 Preparation/products of Neem or Azadirachtin from *Azaditachta spp.*	- Substances need to be recognized by certification body or competent authority
1.6 Propolis	- Substances need to be recognized by certification body or competent authority
1.7 Plant and animal oils	-
1.8 Seaweed, seaweed meal, seaweed extracts, sea salts and salty water	- Not chemically treated
1.9 Gelatin	-
1.10 Lecithin	- Substances need to be recognized by certification body or competent authority
1.11 Casein	-
1.12 Natural acids (e.g. vinegar)	- Substances need to be recognized by certification body or competent authority

Table A.3 Substances for plant pest and disease control (cont.)

Substances	Details/ specific conditions
1.13 Fermented product from Aspergillus	-
1.14 Extract from mushroom (shiitake fungus)	-
1.15 Extract from Chlorella	-
1.16 Natural plant preparations, excluding tobacco	- Substances need to be recognized by certification body or competent authority
1.17 Tobacco tea (except pure nicotine)	- Substances need to be recognized by certification body or competent authority
1.18 Tea seed meal	- Substances need to be recognized by certification body or competent authority
1.19 Wood vinegar	- Substances need to be recognized by certification body or competent authority
2. Mineral	
2.1 Inorganic copper compounds (Bordeaux mixture, copper hydroxide, copper oxychloride)	- Substances need to be recognized by certification body or competent authority
2.2 Burgundy mixture	- Substances need to be recognized by certification body or competent authority
2.3 Copper salts	- Substances need to be recognized by certification body or competent authority
2.4 Sulphur	- Substances need to be recognized by certification body or competent authority
2.5 Mineral powders (stone meal, silicates)	-
2.6 Diatomaceous earth	- Substances need to be recognized by certification body or competent authority
2.7 Silicates, clay (bentonite)	-
2.8 Sodium silicate	-
2.9 Sodium bicarbonate	-
2.10 Potassium permanganate	- Substances need to be recognized by certification body or competent authority
2.11 Paraffin oil	- Substances need to be recognized by certification body or competent authority
3. Microorganisms used for biological pest controls	
3.1 Microorganism (bacteria, viruses, fungi) e.g. *Bacillus thuringiensis*, Granulosis virus, etc,	- Substances need to be recognized by certification body or competent authority
4. Others	
4.1 Carbon dioxide and nitrogen	- Substances need to be recognized by certification body or competent authority
4.2 Potassium soap (soft soap)	-
4.3 Ethyl alcohol	- Substances need to be recognized by certification body or competent authority
4.4 Homeopathic and Ayurvedic preparations	-

Table A.3 Substances for plant pest and disease control (cont.)

Substances	Details/ specific conditions
4.5 Herbal and biodynamic preparations	-
4.6 Sterilized insect males	- Substances need to be recognized by certification body or competent authority
5. Traps	
5.1 Pheromone preparations	-
5.2 Preparations on the basis of metaldehyde applied in traps	- Substances need to be recognized by certification body or competent authority

Table A.4 Substances for pest and disease control for aquaculture

(Section 5)

Substances	Details/ specific conditions
1. Tea meal	-
2. Rotenone	-
3. Potassium permanganate	- only allowed in the hatching stage with an advice from fishery biologist or veterinarian
4. Hydrogen peroxide	
5. Povidone iodine	
6. Benzalkonium chloride	

Table A.5 Ingredients of non-agricultural origin

(Section 7)

INS[1/]	Substances	Details/ specific conditions
(1) Food additives, including carriers for plant products		
170	Calcium carbonates	-
220	Sulfur dioxide	- For wine products
270	Lactic acid	-For fermented vegetable products
290	Carbon dioxide	-
296	Malic acid	-
300	Ascorbic acid	- If not available in natural form
306	Tocopherols, mixed natural concentrates	-
322	Lecithin	- Obtained without the use of bleaches and organic solvents

Table A.5 Ingredients of non-agricultural origin (cont.)

[1/] INS = International Numbering System

INS[1/]	Substances	Details/ specific conditions
(1) Food additives, including carriers for plant products		
330	Citric acid	-For fruit and vegetable products
335	Sodium tartrate	-For cakes, desserts and confectionery
336	Potassium tartrate	-For cereal, cakes, desserts and confectionery
400	Alginic acid	-
401	Sodium alginate	-
402	Potassium alginate	-
406	Agar	-
407	Carrageenan	-
410	Locust bean gum	-
412	Guar gum	-
413	Tragacanth gum	-
414	Gum arabic	- For milk, fat, and confectionary products
415	Xantan gum	- For fat products, fruit and vegetables, cakes, biscuits, and salads
416	Karaya gum	-
440	Pectins	-
500	Sodium carbonates (unmodified)	- For cakes, biscuits, and confectionary
501	Potassium carbonates	- For cereals, cakes, biscuits, desserts and confectionery
503	Ammonium carbonates	-
504	Magnesium carbonates	-
508	Potassium chloride	- For frozen fruit and vegetables, fruit and vegetables in hermetically sealed packages, vegetable sauces, tomato sauce and mustard
511	Magnesium chloride	- For soybean products
516	Calcium sulphate	- For cakes, biscuits, soybean products, baker's yeast
524	Sodium hydroxide	- For cereal products
938	Argon	-
941	Nitrogen	-
948	Oxygen	-

[1/] INS = International Numbering System

Table A.5 Ingredients of non-agricultural origin (cont.)

INS[1/]	Substances	Details/ specific conditions
(2) Substances used for processed seafood products		
170	Calcium carbonate	-
181	Tannic acid	-
220	Sulfur Dioxide	-
260	Acetic acid	-
270	Lactic acid	-
296	Malic acid	-
300 301,303	Ascorbic acid, Sodium ascorbate, Potassium ascorbate (sodium and potassium salts)	-
304	Tartaric acid and salts	-
338	Phosphoric acid	-
330	Citric acid and salts	-
516	Calcium sulfate	-
500	Sodium carbonate	-
503	Ammonium carbonate	-
504	Magnesium carbonate	-
508	Potassium chloride	-
509	Calcium chloride	-
511	Magnesium chloride	-
526	Calcium hydroxide	-
	Sodium hydroxide	-
	Potassium hydroxide	-
	Carbon dioxide	-
	Argon	-
	Nitrogen	-
	Oxygen	-
	Hydrogen peroxide	-
	Gelatin	-
	Casein	-
	Aluminum- free leavening agent	-

[1/] INS = International Numbering System

Table A.5 Ingredients of non-agricultural origin (cont.)

INS[1/]	Substances	Details/ specific conditions
(3) Substances used for processed livestock and bee products		
170	Calcium carbonates	- For milk products. Not as a coloring agent
270	Lactic acid	- For sausage casings
290	Carbon dioxide	-
322	Lecithin	- Obtained without the use of bleaches or organic solvents. Milk products and milk based infant formula, fat products and mayonnaise
406	Agar	-
407	Carrageenan	- For milk products
410	Locust bean gum	- For milk products, meat products
412	Guar gum	- For milk products, meat in hermetically sealed package, egg products
413	Tragacanth gum	-
440	Unmodified pectin	- For milk products
509	Calcium chloride	- For milk products, meat products
938	Argon	-
941	Nitrogen	-
948	Oxygen	-

[1/] INS = International Numbering System

Table A.5 Ingredients of non-agricultural origin (cont.)

INS[1/]	Substances	Details/ specific conditions
(4) Substances used in processed food products		
	1. Flavorings	- Substances and products labelled as natural flavouring or natural flavouring preparations shall be used in accordance with national legislation - Substances are allowed where necessary and in accordance with the laws concerning food products
	2. Drinking water	-
	3. Salts	- Salts with sodium chloride or potassium chloride as basic components which is generally used in food processing - Substances are allowed where necessary and in accordance with the laws concerning food products
	4. Preparations from microorganisms and enzymes	- Any preparations of microorganisms and enzymes can be used in food processing with the exception of genetically modified/engineered microorganisms or enzymes derived from genetic engineering - Substances are allowed where necessary and in accordance with the laws concerning food products
	5. Minerals including trace elements,	- Vitamins, fatty acids and essential amino acids, and other nitrogen compounds - Substances are allowed where necessary and in accordance with the laws concerning food products

Table A.6 Processing aids which may be used for the preparation of products of agricultural origin

(Section 7)

INS[1/]	Substances	Details/ specific conditions
(1) Substances used for plant products		
	Calcium chloride	- Coagulation agent
	Calcium carbonate	-
	Calcium hydroxide	-
	Calcium sulphate	- Coagulation agent
	Magnesium chloride or nigari	- Coagulation agent
	Potassium carbonate	- Use in drying of grape
	Carbon dioxide	-
	Nitrogen	-
	Ethylene	- Stimulating flowering - Regulating the ripening of fruit
	Ethanol	- Solvent
	Tannic acid	- Filter aid
	Egg white albumin	-
	Casein	-

[1/] INS = International Numbering System

	Gelatine	-
	Isinglass	-

Table A.6 Processing aids which may be used for the preparation of products of agricultural origin (cont.)

INS[1/]	Substances	Details/ specific conditions
(1) Substances used for plant products		
	Vegetable oils	- Lubricant or releasing agent
	Silicon Dioxide	- Gel or colloidal solution
	Activated Carbon	-
	Talc	-
	Bentonite clay	-
	Kaolin	-
	Diatomaceous earth	-
	Perlite	-
	Hazelnut shells	-
	Beeswax	- Lubricant
	Sulphuric acid	- pH adjustment of extraction water in sugar production
	Sodium hydroxide	- pH adjustment in sugar production
	Tartaric acid and salts	-
	Sodium carbonate	- Sugar production
	Preparations of bark components	-
	Potassium hydroxide	- pH adjustment in sugar production
	Citric acid	- pH adjustment in sugar production
(2) Substances used for processed livestock and bee products		
170i	Calcium carbonate	-
509	Calcium chloride	Firming, coagulating agent in cheese making
559	Kaolin	Extraction of propolis
270	Lactic acid	Coagulating agent for milk products and pH regulation in cheese making
(2) Substances used for processed livestock and bee products		
500i	Sodium carbonate	Neutralizing substance for milk products
(3) Other processing aids		
	Preparations of microorganisms and enzymes	Any preparations of microorganisms and enzymes can be used as processing aids in food processing, with the exception of genetically modified microorganisms or enzymes derived from genetic engineering

Table 5 Cleaning agents

(Section 7)

Substances	Specific conditions
Jawel water	- Substances need to be recognized by certification body or government authority
Biodegradable detergents	- Substances need to be recognized by certification body or government authority
Vegetable and fruit vinegar	- Substances need to be recognized by certification body or government authority
Sodium bicarbonate	- Substances need to be recognized by certification body or government authority
Hydrogen peroxide	- Substances need to be recognized by certification body or government authority
Iodine	- Substances need to be recognized by certification body or government authority
Potassium permanganate solution	- Substances need to be recognized by certification body or government authority
Alkali water	- Substances need to be recognized by certification body or government authority
Caustic potash	- Substances need to be recognized by certification body or government authority
Limestone	- Substances need to be recognized by certification body or government authority
Bleach (no more than 10%)	- Substances need to be recognized by certification body or government authority
Phosphoric acid	- Substances need to be recognized by certification body or government authority

APPENDIX B

MINIMUM INSPECTION REQUIREMENTS AND PRECAUTIONARY MEASURES UNDER THE INSPECTION AND CERTIFICATION SYSTEM

B.1 INSPECTION MEASURES

Inspection measures are necessary across the whole of the food chain to verify product labelled according to Section 8 of this standard. The certification body should establish policies and procedures in accordance with this standard.

B.2 ACCESSIBILITY TO DOCUMENTATION

Accessibility to all written and/or documentary records and to the establishment by the inspection body is essential. The operator under an inspection should also give an access to the competent or designated authority and provide any necessary information for third party audit purposes.

B.3 PRODUCTION UNITS

B.3.1 Production according to this standard should take place in a unit where the land parcels, production areas, farm buildings and storage facilities for crop and livestock are clearly separate from those of any other unit which does not produce according to these guidelines; preparation and/or packaging workshops may form part of the unit, where its activity is limited to preparation and packaging of its own agricultural produce.

B.3.2 When the inspection arrangements are first implemented, the operator and the certification body or authority should draw up and sign a document which includes:

B.3.2.1 A full description of the unit and/or collection areas, showing the storage and production premises and land parcels and, where applicable, premises where certain preparation and/or packaging operations take place;

B.3.2.2 In the case of collection of wild plants, the guarantees should be given by certification body where appropriate so that the producer can ensure that the provisions of Section 4 to Section 7 are satisfied;

B.3.2.3 The appropriate measures to be taken at the level of production unit to ensure compliance with this standard;

B.3.2.4 The date of the last application on the land parcels and/or collection areas concerned of products the use of which is not compatible with Section 4 of this standard;

B.3.2.5 Operational activities undertaken by the operator in accordance with Sections 3 and Section 8 of this standard to accept, in event of infringements, implementation of the measures as referred to in this standard.

B.3.3 Each year, before the date indicated by the certification body or authority, the operator should notify the official or officially recognized certification body or authority of its schedule of production of crop products and livestock, giving a breakdown by land parcel/herd, flock or hive.

B.3.4 The operator shall maintain a record and documented accounting system of production inputs, produce, and/or products that allow the certification body to trace back to the source, type, quantity of all raw materials purchased, and the use of those materials. In addition, the operator should keep documentation from the receivers of all produce and/or products sold. This should be done as a daily account showing the quantity sold directly to consumers. If the operator has a processing unit, the accounting system shall include the information listed in Section B.4.2 of this Appendix.

B.3.5 All livestock shall be identified individually or, in the case of small mammals or poultry, by herd or flock or in the case of bees by hive. Written and/or documentary accounts should be kept to enable tracking of livestock and bee colonies within the system at all times and to provide adequate traceback for audit purpose. The operator should maintain detailed and up-to-date records of:

B.3.5.1 Breeding and/or source of livestock;

B.3.5.2 Registration of any purchases;

B.3.5.3 The health plan to be used in the prevention and management of disease, injury and reproductive problems;

B.3.5.4 Treatments and medicines administered for any purpose, including quarantine periods and identification of treated animals or hives;

B.3.5.5 Feed provided and the source of the feedstuffs;

B.3.5.6 Stock movements within the unit and hive movements within designated forage areas as identified on maps;

B.3.5.7 Transportation, slaughter and/or sales;

B.3.5.8 Extraction, processing and storing of all bee products

B.3.6 Storage of input substances, other than those prohibited by this standard

B.3.7 The certification body should ensure that a full physical inspection is undertaken, at least once a year, of the unit. Samples for testing of products not listed in this standard may be taken where their use is suspected. An inspection report should be drawn up after each visit. Additional occasional unannounced visits should also be undertaken according to need or at random.

B.3.8 The operator shall allow the certification body or authority, for inspection purposes, access to the storage and production premises and to the parcels of land, as well as to the accounts of produce and/or products and relevant supporting documents. The operator should also provide the inspection body with any information deemed necessary for the purposes of the inspection.

B.3.9 Organic produce and/or products which are not in their packaging for the end user should be transported in a manner which should prevent contamination or substitution of the content with substances or product not compatible with this standard and the following information shall be specified:

B.3.9.1 The name and address of the person responsible for the production or preparation of the product;

B.3.9.2 The name of the product; and

B.3.9.3 Information stating that the produce or product is of organic status.

B.3.10 In case that an operator operates several production units in the same area, including parallel crop, all units shall be subject to the thorough inspection. Similar plants indistinguishable by visual inspection should not be produced as organic and non-organic together.

B.3.10.1 If derogations are allowed by the certification body or competent authority, the authority shall specify the types of production and circumstances for which derogations are granted and the supplementary inspection requirements, such as additional documentary requirements and assessment of an operation's ability.

B.3.11 In organic livestock production, all livestock on one and the same production unit shall be reared in accordance with the rules laid down in this standard. However, livestock not reared in accordance with this standard may be present on the organic holding provided that they are separated clearly from livestock produced in accordance with this standard. The competent authority can prescribe more restrictive measures, such as different species.

B.3.12 The competent authority may allow livestock reared in accordance with the provisions of this standard to be grazed in other land provided that:

B.3.12.1 The land has not been treated with substances other than those allowed in accordance with Section 4 of this standard, for at least three years;

B.3.12.2 The animals reared in accordance with the provisions of this standard and the other animals are clearly segregated.

B.3.13 For livestock production, the competent authority should ensure, that the inspections related to all stages of production and preparation up to the sale to the consumer ensure, as far as technically possible, the traceability of livestock and livestock products from the livestock production unit through processing and any other preparation until final packaging and/or labelling.

B.4. PREPARATION AND PACKAGING UNITS

B.4.1 The producer and/or operator should provide the following information:

B.4.1.1 A full description of the unit, showing the facilities used for the, preparation, packaging and storage of agricultural products before and after the operations concerning them;

B.4.1.2 All practical measures to be taken at the level of the unit to ensure compliance this standard;

B.4.1.3 The description and the measures concerned should be signed by the person responsible for production and the certification body;

B.4.1.4 The report should include detail of actions undertaken by the operator to perform the operations in such a way as to comply with Section 3 to Section 7 of this standard, the corrective action taken for acceptable and unacceptable major non-conformance or non-conformance that cannot be improved by corrective action to comply with this standard. This report shall be countersigned by both parties.

B.4.2 Written accounts should be kept enabling the certification body or authority to trace the following:

B.4.2.1 The origin, nature and quantities of organic produce and/or products that have been sent to the unit;

B.4.2.2 The nature, quantities and consignees of organic produce and/or products which have been sent from the unit;

B.4.2.3 Other information such as the origin, nature and quantities of ingredients, additives and processing aids delivered to the unit and the composition of products, which is required by the certification body or authority for the purposes of proper inspection of the operations.

B.4.3 In case that non-organic produce and products are brought-in for processing, packaging or storage in the related unit:

B.4.3.1 The unit should have separated areas within the premises for the storage of organic produce or products before and after the operations;

B.4.3.2 Operations should be continuously carried out until completion and ensure that there is a separation by place or time from non-organic produce and product operations;

B.4.3.3 If such operations are not carried out frequently, they should be announced in advance, with a deadline agreed by the certification body or authority;

B.4.3.4 Measure should be taken to ensure identification of lots and to avoid co-mingling with products not obtained in accordance with the requirements of this standard.

B.4.4 The certification body or competent authority should ensure a full physical inspection, at least once a year, of the unit. Samples for testing of products not listed in these guidelines may be taken where their use is suspected. An inspection report shall be drawn up after each visit countersigned by the person responsible for the unit inspected. Occasionally, additional unannounced visits should also be undertaken as needed or at random.

B.4.5 The operator should provide the certification body or competent authority, for inspection purposes, access to the unit and to written accounts and relevant supporting documents. This includes other documentation and information necessary for the inspection purposes.

B.4.6 The requirements in respect to transport as provided in Section B.3.8 of this Appendix shall be followed.

B.4.7 In case of receiving organic produce or products, the operator shall have the following items checked:

B.4.7.1 The container, package or box is in a sealed condition (if required);

B.4.7.2 Documentation as described in Section B.3.8 of this Appendix. The result of this verification shall be explicitly mentioned in the accounts specified in Section 4 to Section 7 of this standard. When there is any doubt that the product cannot be verified according to the production system provided for in Section 10 Inspection and Certification System of this standard, the produce and products shall not be claimed as organic.

APPENDIX C

UNITS

The units and symbols used in this standard and the units of SI (International System of Units or *Le Système International d'Unités*) recognized to be used are as follows:

Item	Unit	Symbol
Mass	Milligram	mg
	Kilogram	kg