

PHILIPPINE NATIONAL STANDARD

PNS/BAFS 07:2016

ORGANIC AGRICULTURE



BUREAU OF AGRICULTURE AND FISHERIES STANDARDS

BPI Compound, Visayas Avenue, Diliman, Quezon City 1101 Philippines

Phone: (632) 456-6552, 455-2856

Telefax: (632) 455-2858, 456-6552, 455-2856

E-mail address: bafpsda@yahoo.com, bafpsorganic@gmail.com

Website: www.bafs.da.gov.ph, www.organic.da.gov.ph

TABLE OF CONTENTS

	Foreword	i
	Acronyms and Abbreviations	ii
1	Scope	--- 1
2	References	--- 1
3	Definition of terms	--- 1
4	Minimum requirements for organic agriculture	
4.1	Minimum requirements for conversion to organic agriculture	--- 5
5	Minimum requirements for crop production	
5.1	Choice of crops and varieties	--- 8
5.2	Crop rotations and soil management practices	--- 9
5.3	Fertilization practices and growth regulators	--- 9
5.4	Commercial production of organic fertilizer	--- 10
5.5	Pest, disease, and weed management	--- 10
5.6	Pollution control and contamination management	--- 10
5.7	Soil and water conservation	--- 11
5.8	Diversity in crop production	--- 11
5.9	Collection on non-cultivated materials and minor forest products	--- 11
6	Minimum requirements for animal production	
6.1	Animal husbandry management	--- 12
6.2	Breeds and breeding	--- 12
6.3	Mutilations and animal identification	--- 13
6.4	Animal nutrition	--- 13
6.5	Feeding of milk to mammals	--- 14
6.6	Breeding animals	--- 14
6.7	Biosecurity	--- 15
6.8	Animal health	--- 15
6.9	Transport and slaughter	--- 16
6.10	Manure management	--- 17
6.11	Free-range areas and housing	--- 17
7	Minimum requirements for organic beekeeping	
7.1	Choice of species	--- 18
7.2	Hive material/design	--- 18
7.3	Location of colonies/apiaries	--- 18
7.4	Mutilations in beekeeping	--- 19
7.5	Supplemental feeding	--- 19
7.6	Bee stock sources	--- 19
7.7	Pest and disease control/disinfection	--- 19
7.8	Harvesting	--- 19
7.9	Apiary conservation and stability	--- 20
7.10	Processing/packaging specific bee products	--- 20
8	Minimum requirements for special products	
8.1	Mushrooms	--- 20
8.2	Herbs	--- 20
9	Minimum requirements for processed organic products	
9.1	Post-harvest operations	--- 21
9.2	Storage, processing, and transportation	--- 21
9.3	Pest control in storage and processing	--- 21
9.4	Ingredients of agricultural origin	--- 22
9.5	Processing aids and other ingredients	--- 22
9.6	Methods of processing	--- 22
9.7	Methods of cleaning	--- 23
9.8	Packaging	--- 23

10	Minimum requirements for labeling and consumer information		
10.1	Labeling	---	24
11	Traceability and recordkeeping	---	24
12	Minimum requirements for inclusion of substances in organic agriculture production systems	---	25
13	Annexes	---	28

FOREWORD

The Philippine National Standard for Organic Agriculture (PNS OA) was originally prepared and adopted in 2003 for the purpose of promoting organic agriculture and enhancing market competitiveness by providing a uniform approach to the requirements on conversion, crop production, livestock, processing, special products, labeling, and consumer information.

In keeping with the developments of the global organic industry, the revision of the PNS OA was started through the creation of a Technical Working Group (TWG) composed of members coming from the government agencies, academe, certification bodies, and private sector. Likewise, public consultative meetings were held in the National Capital Region (NCR), Davao, and Iloilo with the aim of generating comments from the various stakeholders of the organic industry.

The revision of the PNS OA was undertaken in order to achieve equivalence with the ASEAN Standard for Organic Agriculture (ASOA). PNS/BAFS 07:2016 covers several scope, namely: (a) conversion; (b) crop production; (c) animal production; (d) beekeeping; (e) processing; (f) special products; (g) labeling and consumer information; (h) traceability; and (i) requirements for the inclusion of substances for organic production. The different scopes should be treated as one standard on organic agriculture with the various parts complementing each other.

ACRONYMS AND ABBREVIATIONS

BAFS	Bureau of Agriculture and Fisheries Standards
BAI	Bureau of Animal Industry
BPI	Bureau of Plant Industry
BPI-PQS	Bureau of Plant Industry-Plant Quarantine Service
DA	Department of Agriculture
DENR	Department of Environment and Natural Resources
FDA	Food and Drug Administration
GMP	Good Manufacturing Practices
HACCP	Hazard Analysis and Critical Control Points
IFOAM	International Federation of Organic Agriculture Movements
LGU	Local Government Unit
NCBP	National Committee on Biosafety Philippines
NMIS	National Meat Inspection Service
SPS	Sanitary and Phytosanitary

1 Scope

This Standard specifies the minimum requirements for organic agriculture and is divided into the following parts:

Part 1: Conversion to organic agriculture

Part 2: Crop production

Part 3: Livestock

Part 4: Beekeeping

Part 5: Processing

Part 6: Special products

Part 7: Labeling and consumer information

Part 8: Traceability and recordkeeping

Part 9: Requirements for the inclusion of substances for organic production

2 References

The titles of the publications referred to in this Standard are listed on the last page before the Annexes.

3 Definition of terms

3.1 Agricultural product/product of agricultural origin

any product or commodity, raw or processed, that is marketed for human consumption (excluding water, salt, and additives) or animal feed.

3.2 Animal

ruminant (e.g. cattle, buffalo, goat, sheep, and deer) and non-ruminant (e.g. poultry, pigs, ostrich, rabbit, and horse) livestock raised for food purposes.

3.3 Animal production

practices related to any domestic or domesticated, including bovine, ovine, porcine, caprine, equine, poultry, and bees, raised for food or in the production of food. The products of hunting or fishing of wild animals shall not be considered part of this definition.

3.4 Annual crop

crop produced by a plant whose entire life cycle is completed within a single growing season.

3.5 Biodegradable inputs

inputs composed of natural materials capable of being decomposed by bacteria or other biological means and includes compost, green manure, and plant and animal waste.

3.6 Biodiversity

variety of life forms and ecosystem types on Earth. Includes genetic diversity (i.e. diversity within species), species diversity (i.e. the number and variety of species), and ecosystem diversity (total number of ecosystem types).

3.7 Biosecurity

strategic and integrated approach that encompasses the policy and regulatory frameworks (including instruments and activities) that analyse and manage risks in the sectors of food safety, animal life and health, and plant life and health, including associated environmental risk. Biosecurity covers the introduction of plant pests, animal pests and diseases, and zoonoses, the introduction and release of genetically modified organisms (GMOs) and their products, and the introduction and management of invasive alien species and

genotypes. It is a holistic concept of direct relevance to the sustainability of agriculture, food safety, and the protection of the environment, including biodiversity.

3.8 Breeding

selection of plants or animals to produce and/or to further develop desired varieties/strains/breeds.

3.9 Buffer zone

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.

3.10 Certification

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

3.11 Commingling

intentional or unintentional mixing together or the physical contact between organic products and non-organic products which are unpackaged or permeably packaged, which leads to a loss of integrity of the organic product during production, processing, transportation, storage, or handling.

3.12 Compost

any product in solid or liquid form, of plant (except by-products from petroleum industries) or animal origin, that has undergone substantial decomposition that can supply available nutrients to plants with a total Nitrogen (N), Phosphorus (P_2O_5), and Potassium (K_2O) of 2.5 to less than 5 percent. This may be enriched by microbial inoculants and naturally occurring minerals but no chemical or inorganic fertilizer material has been used in the production or added to the finished product to affect the nutrient content. Compost and soil conditioner are used interchangeably in this Standard.

3.13 Contamination

contact of organic crops, animals, land, or products with substance that would compromise the organic integrity.

3.14 Conventional

any material, production, or processing practice that is not certified organic or organic "in-conversion".

3.15 Conversion period (transition period)

time between the start of organic management and certification of the crop or animal production system or site as organic.

3.16 Crop rotation

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

3.17 Disinfecting

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

3.18 Farm unit

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

3.19 Food additive

any substance not normally consumed as a food by itself and not normally used as typical ingredient for the food, whether or not it has nutritive value, the intentional addition of which to food or a technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packaging, transport, or holding of such food results, or may reasonably be expected to result, (directly or indirectly) in it or its by-products becoming a component of or otherwise affecting the characteristics of such foods. The term does not include contaminants or substances added to food for maintaining or improving nutritional qualities.

3.20 Genetically engineered/modified organisms (GEO/GMO's)

organisms made with techniques that alter the molecular or cell biology of an organism by means that are not possible under natural conditions or processes. Genetic engineering includes recombinant DNA, cell fusion, micro- and macro- encapsulation, gene deletion and doubling, introducing a foreign gene, and changing the positions of genes. It shall not include breeding, conjugation, fermentation, hybridization, in-vitro fertilization, and tissue culture.

3.21 Green manure

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

3.22 Habitat

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

3.23 Herb

plant that is not woody and with no persistent parts above ground level.

3.24 High conservation value areas

areas that have been identified as having outstanding and critical importance due to their environmental, cultural, socioeconomic, biodiversity, or landscape values.

3.25 Homeopathic

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

3.26 In-conversion/conversion to organic

labeling term that denotes produce and products of plant that are obtained through production and/or processing in accordance with organic agriculture in conversion period intended to market as food.

3.27 Ingredient

any substance, excluding a food additive, used in the manufacture or preparation of a food and present in the final product.

3.28 Inspection

examination of food or systems for control of food, raw materials, processing, and distribution, including in-process and finished product testing, in order to verify that they conform to requirements. For organic food, inspection includes the examination of the production and processing system.

3.29 Ionizing radiation (irradiation)

technology using high-energy emissions from radio-nucleotides, such as gamma rays, x-rays, or accelerated electrons, capable of altering a product's molecular structure for the purpose of controlling microbial contaminants, pathogens, parasites, and pests in products (generally food), preserving products, or inhibiting physiological processes such as sprouting or ripening. Irradiation does not include low-level radiation sources such as the use of X-rays for foreign body detection.

3.30 Isolated nutrients

individual and separate forms of nutrients.

3.31 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 at the point of sale, for the purpose of promoting its sale or disposal.

3.32 Organic agriculture

holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity; emphasizes the use of management practices over the use of off-farm inputs; and utilizes cultural, biological, and mechanical methods as opposed to synthetic materials. Organic agriculture combines tradition, innovation, and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.

3.33 Organic integrity

adherence to the principles, objectives, and standards for organic production.

3.34 Organic produce

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

3.35 Organic product

product that has been produced or processed, and handled in compliance with organic standards.

3.36 Organic management plan

written plan for management of an organic crop, livestock, wild harvesting, processing, handling, or grower group operation which specifies the organic management system used by the operation in order to comply with organic standards and which has been agreed upon by both the operator and the certification agent.

3.37 Parallel production

simultaneous production, processing, or handling of organic and non-organic (including transitional) crops, livestock, and/or other agricultural products of the same or similar (indistinguishable) varieties.

3.38 Perennial

any crop, other than a biennial crop, that can be harvested from the same planting for more than one crop year, or that requires at least one year after planting before harvest.

3.39 Processing aid

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

3.40 Sanitizing

any treatment that is effective in destroying or substantially reducing the number of vegetative cells of microorganisms of public health concern and other undesirable microorganisms.

3.41 Split production

where only part of the farm or processing unit is certified as organic. The remainder of the property can be (a) non-organic, (b) in conversion, or (c) organic but not certified.

3.42 Synthetic

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

3.43 Wild harvest

plants or portions of plants, mushrooms, and honey that are collected or harvested from defined sites which are maintained in a natural state and are not cultivated or otherwise managed.

4 Minimum requirements for organic agriculture**4.1 Minimum requirements for conversion to organic agriculture**

The provisions for conversion to organic agriculture shall meet the following requirements:

4.1.1 Crop and special product conversion requirements

4.1.1.1 The operator must follow and meet the minimum requirements of the Philippine National Standard for Organic Agriculture from the beginning of the conversion period onwards.

4.1.1.2 Inspection must be carried out as a prerequisite for a farm to be certified as organic. The time frame of the conversion period (plan) is set based on the initial recommendations/findings of the inspector.

4.1.1.3 The conversion plan shall at least include:

- field and farm history and present production practices such as crops produced, pest management practices, fertilization practices, and animal husbandry practices;
- production practices that need to be improved during the conversion period (e.g. crop rotation, manure management, soil conversion, water management, animal

- management, pasture development plan, pest management, environmental conditions); and
- a schedule and time limits for the progression of conversion.

4.1.1.4 If there is a presence of parallel/split production in the unit, the responsible farmers have to ensure:

- that a proper demarcation and identification of organically managed lands must be put in place. Land managed organically must be inspected for compliance to organic certification;
- that the organically farmed parts are identifiable and may be inspected for certification;
- that all farm records and accounting are identifiable for both farming systems; and
- those converted areas are not switched back and forth from organic and non-organic management.

4.1.1.5 Length of crop conversion period

Plant products can be certified organic when the full requirements of this Standard have been met:

- for annual crops: at least twelve (12) months before the start of the production cycle;
- for perennials: at least eighteen (18) months of management according to the full standards requirements before the first harvest.

4.1.1.6 The required conversion period may be reduced for the following conditions:

- land which have not been cultivated for the past three (3) years, including lands used as pasture and timberland;
- areas practicing traditional agricultural practices, which fulfill the requirements of this Standard; these areas shall be verified through reliable means and sources. In such cases, inspection shall be carried out at least six (6) months before the first harvest; and
- farms practicing organic agriculture for at least eighteen (18) months; these areas shall be verified through reliable means and sources. In such cases, inspection shall be carried out at least six (6) months before the harvest.

4.1.1.7 No conversion period is required in the case of non-cultivated land. These areas shall not be exposed to prohibited inputs for a minimum of three (3) years.

4.1.1.8 The following are required to be submitted in order to grant reduction of the prescribed conversion period:

- written evidences: An official attestation from government agencies (national or local) on non-application of prohibited inputs for the past two (2) years or research institutions, or a notarized affidavit from two (2) neighbors; and
- proof that the land was cultivated under practices allowed for organic agriculture for the past two (2) years.

4.1.1.9 If a farm is not converted all at once or if certification is withdrawn from a piece of land, the responsible operator should ensure separation through the following:

- a clear boundary between the organic and non-organic units;
- that the same varieties are not produced in parallel production: organic and non-organic;

- that the production records be identifiable for each type of production, allowing the certification body to audit both productions;
- that production areas are not switched back and forth from organic and non-organic management; and
- that areas to be used for the organic production will be included in a conversion plan.

4.1.1.10 Prolonged conversion/transition period

Lands that have been heavily treated with synthetic chemicals shall undergo conversion for a minimum of three (3) years before the start of the production cycle. The competent authority decides whether this rule applies on a specific site and the required test to confirm. In such cases, the farmer should be able to provide results of contaminant analysis, which include, among others, pesticides, heavy metals, and nitrate accumulation.

4.1.1.11 Products may be sold with an indication referring to the conversion to organic farming (in-conversion), when the full requirements of this Standard have been met for at least six (6) months.

4.1.2 Conversion of animal and animal products

If animal products are to be sold as organic products, the animal must be reared according to the minimum requirements set in this Standard for organic production:

4.1.2.1 Bovine/Bubaline (Large Ruminants)

Product	Conversion Period
Beef and Carabeef	Large ruminants like cattle and carabao should be organically reared at least 360 days before slaughter
Veal	Calves to be used for meat product should be organically reared 180 days after weaning
Milk products	Milk from lactating bovine will only be considered as organic after 90 days of organic rearing

4.1.2.2 Sheep and Goats (Small Ruminants)

Product	Conversion Period
Mutton and Chevon	Sheep and goat should be organically reared at least 180 days before slaughter
Milk products	Milk from lactating sheep and goat will only be considered as organic after 90 days of organic rearing

4.1.2.3 Porcine (Pork)

Product	Conversion Period
Pork	Swine should be organically reared at least 120 days before slaughter

4.1.2.4 Poultry/Laying Hens (Broilers and Layers)

Product	Conversion Period
Meat products	Poultry intended for meat products should be organically reared after 21 days from hatching
Eggs	Layers should be organically reared 42 days before laying and throughout the laying period

4.1.2.5 Simultaneous conversion

If there is simultaneous conversion of the farm, including animal, pasture, and/or any land used for animal feed, the required conversion period shall be reduced to 18 months subject to the following conditions:

- the reduced conversion period applies only to the existing animals and their offspring and at the same time, also to the land used for animal feed production and pasture before starting the conversion; and
- the animals are mainly fed with products from the farm.

4.1.3 Conversion requirements for organic beekeeping

4.1.3.1 The conversion period is 12 months for hived bee colonies.

4.1.3.2 Provision of wax for beehives

The wax used for creating honeycombs should be made from organic beeswax. However, in cases where organic beeswax is not available, non-organic beeswax may be used if the beeswax is free from harmful substances.

5 Minimum requirements for crop production

The provisions for organic agriculture for crop production shall meet the following requirements:

5.1 Choice of crops and varieties

5.1.1 Seeds and planting materials shall be of high quality and certified organic, when available.

5.1.2 When certified organic seed and planting materials are not available, non-organic seed and planting materials may be used provided that they have not been treated with pesticides and other inputs not permitted by this Standard.

5.1.3 Seeds and planting materials derived from tissue culture may be used for the production of organic, disease-free planting materials.

5.1.4 Materials allowed for the treatment of seeds include the substances listed in Annex A.

5.1.5 When the use of treated seeds is required by government authorities or phytosanitary regulations necessary to prevent the spread of seed-borne diseases, or when natural disaster like floods, drought, earthquake, pest outbreaks, or other unanticipated circumstances have occurred, causing the destruction of organic seed supply, only then can treated seeds be used.

5.1.6 The use of genetically modified seeds, transgenic plants or planting materials is not allowed.

5.1.7 Plant varieties should be bred to retain natural reproduction methods.

5.2 Crop rotations and soil management practices

5.2.1 Organic production systems are soil-based and should care for the soil and surrounding ecosystems in support of an increased diversity of species, while encouraging nutrient cycling and mitigating soil and nutrient losses.

5.2.2 Tillage and cultivation implements shall be selected and used in a manner that maintains or improves soil physical and biological quality and minimizes erosion.

5.2.3 Organic management does not undertake any actions that create any negative impacts in officially recognized high conservation value and heritage areas, such as forests wildlife protection areas and watershed areas.

5.2.4 Organic management maintains and/or enhances biodiversity on the farm holding, in crop, and, where applicable, non-crop habitats.

5.3 Fertilization practices and growth regulators

5.3.1 The fertility and biological activity of the soil should be maintained or increased, where appropriate, through:

- cultivation of legumes, green manures, or deep-rooting plants in an appropriate multi-annual rotation program;
- incorporation of organic material into the soil, composted or not, from farms which produce in accordance with this Standard; and
- use of by-products from animal production, such as farmyard manure, provided that they come from farms producing in accordance with this Standard.

5.3.2 Fertilizers and soil conditioners of plant, animal, mineral, microbiological, and other origin complying with this Standard, as listed in Annex B, must be the basis of the fertilization program provided that these follow proper composting methods. Any succession/addition/revision from relevant standard setting bodies (BAFS & FDA) shall be adopted and shall be in accordance with the criteria established in Section 12 of this Standard.

5.3.3 When supplementary application of fertilizer is needed, the materials must be certified as organic or comply with the requirements of the PNS for Organic Soil Amendments (PNS/BAFS 183:2016, Revised PNS for Organic Fertilizer).

5.3.4 Runoff diversions or other means must be implemented to prevent contamination of crop production areas.

5.3.5 Application of raw or undecomposed manure is not allowed. Manure should undergo proper decomposition methods.

5.3.6 Organic and mineral (naturally mined) fertilizers and particularly those with high risk for contamination should be applied in such a way that it will have minimum adverse effect on the environment (e.g. on ground and surface water). Mineral fertilizers shall be applied in their original form and shall not be rendered more soluble by chemical treatment.

5.3.7 Storage places of manure and compost sites should be covered or sheltered in order to prevent leaching of nutrients and pollution of water.

5.3.8 Fertilizer ingredients, which may have a considerable content of heavy metals and/or other toxic substances, shall not be used.

5.3.9 Growth regulators and dyes

Only products used for regulating growth, quality, and development of plants prepared from plants, animals, and microorganisms are allowed.

5.4 Commercial production of organic fertilizer

Commercial production should follow the minimum requirements of the PNS for Organic Soil Amendments (PNS/BAFS 183:2016).

5.5 Pest, disease, and weed management

5.5.1 Preventive methods such as disruption and elimination of pest habitat and access to facilities shall be the primary mean of pest management.

5.5.2 If preventive methods are inadequate, mechanical/physical and biological methods are preferred.

5.5.3 If mechanical/physical and biological methods are inadequate for pest control, substances listed in Annex A are allowed. Other substances not listed in Annex A may be allowed if these are in accordance with the criteria established in Section 12 of this Standard.

5.5.4 The use of synthetic pesticides (e.g. herbicides, fungicides, insecticides, molluscides, nematicides, rodenticides, etc.) is prohibited.

5.5.5 Products that may be used in the control of pests and diseases are indicated in Annex A.

5.5.6 The release of local and acclimatized predatory insects, such as earwig and *Trichogramma*, and use of microbial pest control agents, such as bacteria (e.g. *Bacillus thuringiensis*), viruses (e.g. baculovirus), and fungi (e.g. *B. bassiana*), are allowed. However, these are subject to appropriate existing phytosanitary regulations and measures, as well as national registration requirements (e.g. NCBP, BPI-PQS). The release of such organisms should be done in such a manner that these do not damage the natural ecosystem, and done if other pest control measures are found ineffective.

5.5.7 Physical methods for pest, disease, and weed management are allowed. Thermic sterilization of soils to combat pest, disease, and weed is restricted in circumstances where a proper rotation or renewal of soil cannot take place.

5.5.8 Farm tools and equipment should be used exclusively in organic farms. In cases that these are not dedicated for organic production, these must be properly cleaned and free of residues from synthetic pesticides.

5.6 Pollution control and contamination management

5.6.1 Buffer zones should be established to minimize contamination from non-organic farms. These may include, but are not limited to, multi-purpose tree species of sufficient density and height, runoff diversions, water filtration ponds and/or diversion systems, and open space.

5.6.2 Products from buffer zones must not be sold as organic.

5.6.3 In cases of reasonable suspicion of pollution, an analysis of the relevant products, crops, and/or soil should be done.

5.6.4 Methods for pollution control and contamination management should follow at least the minimum requirements of Republic Act 9003: The Solid Waste Management Act.

5.7 Soil and water conservation

5.7.1 Relevant measures should be taken to prevent soil erosion and ensure water conservation. Appropriate conservation measures, including management practices such as grass waterways, contour strips, diversion canals, catch/filtration ponds, buffers, wind breaks, mulch, and cover crops to prevent wind and water erosion, must be established. Reasonable water conservation measures must be taken to avoid excessive exploitation and depletion of water resources.

5.7.2 Appropriate measures shall be taken to prevent salinization and desertification.

5.7.3 Land clearing through burning is prohibited, as per Republic Act 8749 or the Clean Air Act of 1999.

5.8 Diversity in crop production

5.8.1 The diversity of crops and cropping systems on organic farms should sustain and promote diversity that is suited to local agro-ecosystem. Crop diversification systems such as crop rotation, intercropping, alley cropping, relay cropping, and multi-story cropping may be used.

5.8.2 Bio-diversified cropping systems are encouraged.

5.9 Collection on non-cultivated materials and minor forest products

5.9.1 The location of harvesting or gathering site shall be clearly identified and the gatherer/operator managing such practices must be familiar with the proper methods of collection and contamination prevention.

5.9.2 Products of non-cultivated materials and minor forest products can only be certified if derived from a clearly defined collecting area not exposed to prohibited substances at least three years prior to the first harvest. These collection areas are subject to regular inspection.

5.9.3 Collected products shall only be certified organic if derived from a stable-growing environment. Harvesting or gathering the product shall not exceed the sustainable yield of the ecosystem or threaten its ecological balance. The collection of plants or parts thereof does not disturb the stability of the natural habitat or the maintenance of the species in the collection area.

5.9.4 Organic wild harvest management excludes systems that harvest officially protected or endangered species or where harvest is prohibited by law.

5.9.5 The collection or harvest area shall be at an appropriate distance from non-organic farming or other sources of pollution and contamination.

5.9.6 The operator who manages the harvesting or gathering of common resource products shall be clearly identified and must be familiar with the defined collecting area.

6 Minimum requirements for animal production

6.1 Animal husbandry management

6.1.1 Management of the environment of the animals shall take into account the behavioral needs of the animals and provide for:

- sufficient free movement, as applicable;
- sufficient fresh air and natural daylight according to the needs of the animals;
- protection against excessive sunlight, temperatures, rain, and wind according to the needs of the animals;
- enough lying and/or resting area according to the needs of the animals. For all animals requiring bedding, natural materials shall be provided;
- free access to fresh water and feeds according to the needs of the animals; and
- access to pasture.

The competent authority may allow exceptions when the animals' physiological state, inclement weather conditions, and topography so permit, or the structure of certain traditional farming systems restrict access to pasture, providing the welfare of the animals can be guaranteed.

6.1.2. Landless animal husbandry systems and/or complete confinement of animal systems (e.g. 'battery-type' cage, single pen) are prohibited.

6.1.3 Herd animals shall not be kept individually, except in cases of the following:

- animals about to give birth or have just given birth should be separated from other animals and should be given the necessary veterinary attention; and
- as part of biosecurity measures, sick, injured, or disabled animals should be separated from healthy animals and should be given the necessary veterinary attention.

6.2 Breeds and breeding

6.2.1 Breeding goals are such that animal diversity should be maintained. Indigenous/native breeds should be preserved and promoted. Breeding activities should take into consideration the following traits:

- a reasonable productivity level even with low external input;
- adaptability to local conditions;
- longevity, temperament, and good health;
- breeds that are able to provide good quality traits and products; and
- ability of animals to give birth with minimal veterinary attention.

6.2.2 The use of artificial insemination techniques are allowed. However, artificial insemination using segregated, separated, or otherwise modified sperm is not allowed.

6.2.3 Breeding techniques that employ any of the activities listed below are not allowed:

- embryo transfer;
- genetic engineering;
- treatments with reproductive hormones; and
- semen sexing.

6.2.4 The use of genetically engineered species or breeds is not allowed.

6.3 Mutilations and animal identification

6.3.1 Mutilations are prohibited. However, the following methods are exceptions in specific cases that these can improve the welfare, health, or hygiene of the animals or for safety reasons:

- castration;
- tail cutting of lambs;
- tail-docking of pigs;
- trimming of beaks;
- de-horning;
- nose and limb ringing, for restraining; and
- cutting of teeth.

These practices should not cause suffering and comply with existing regulatory requirements of the competent authority. Qualified personnel should carry these practices at the most appropriate age and any suffering to the animals is reduced to a minimum.

6.3.2 The following methods of identification of animals are allowed:

- tattooing;
- ear notching;
- ear tagging; and
- wing tagging.

These practices shall not cause suffering and comply with existing regulatory requirements of the competent authority. Qualified personnel should carry these practices at the most appropriate age and any suffering to the animals is reduced to a minimum.

6.3.3 Keeping the animals tethered is prohibited. However, the tethering of animals is allowed if this is necessary for safety or welfare reasons, and that such tethering is for a limited time only.

6.4 Animal nutrition

6.4.1 Giving due consideration to the low availability of organic feed and roughage, the following proportion of feed ration based on the dry matter requirement particular to each animal are allowed:

YEAR	RATIO(%w/w)
Year 1	50% non-organic feed, 50% organic feed
Year 2	30% non-organic feed, 70% organic feed
Year 3	10% non-organic feed, 90% organic feed
Year 4, onwards	100% organic feed

6.4.2 Changes in proportion of the feed ration are allowed in cases of unforeseen severe natural or man-made events and extreme climatic conditions.

6.4.3 For the calculation of feeding rations, feed ingredients produced on the farm unit starting from the first year of integrated organic management may be classified as organic.

This refers only to feed for animals that are being produced within the farm unit. Such feed shall not be sold or otherwise marketed as organic.

6.4.4 In the formulation of organic feed, the following ingredients/raw materials are not allowed:

- synthetic growth promoters or stimulants;
- synthetic appetizers;
- preservatives, except when used as a processing aid;
- artificial coloring agent;
- urea and other synthetic nitrogen compounds;
- slaughter waste and other deceased animal parts;
- droppings, dung, or other manure;
- feed ingredients subjected to solvent extraction (e.g. with petroleum products);
- synthetic and/or chemically isolated amino acids;
- genetically engineered microorganisms or products thereof;
- synthetic antibiotics; and
- synthetic and/or chemically isolated vitamins and minerals.

6.4.5 All animals must have daily access to forage.

6.4.6 The diet shall be offered to the animals in a form allowing them to execute their natural feeding behavior. Forced feeding is prohibited.

6.4.7 Supplementation of vitamins and minerals is allowed for as long as these are obtained from natural sources and there is an established need for supplementation, as determined by a competent authority. However, if naturally sourced vitamins and minerals are not available in sufficient quantity or quality, synthetic sources may be used.

6.4.8 Synthetic chemical preservatives for feeds are not allowed. The following products listed in Annex C Part 1 may be used alternatively. Any succession/addition/revision from relevant standard setting bodies (BAFS & FDA) shall be adopted and shall be in accordance with the criteria established in Section 12 of this Standard.

6.5 Feeding of milk to mammals

6.5.1 Young stock from mammals shall be provided organic milk. These animals shall be weaned only after a minimum time that takes into account the natural behavior of the relevant animal species.

6.5.2 However, in emergencies, the use of milk from non-organic systems and dairy based milk substitutes are allowed, provided these do not contain antibiotics or synthetic additives.

6.6 Breeding animals

6.6.1 Breeding stock may be brought in from non-organic farms with a yearly maximum of 10% of the breeder animals on the farm.

6.6.2 Exceptions can be granted with specific time limits in the following cases:

- unforeseen severe natural or man-made events;
- considerable expansion of the farm; and
- establishment of a new type of animal production on the farm or a new breed is developed.

6.6.3 When animals are obtained from farms not complying with this Standard, special attention must be paid to the animal health and biosecurity and quarantine measures, as part of the Good Animal Husbandry Practices (PNS/BAFPS 60:2008).

6.7 Biosecurity

6.7.1 Mandatory biosecurity and quarantine procedures should be well implemented to prevent introduction of disease into the farm and/or to control its spread within the farm.

6.7.2 The farm should have a written protocol of biosecurity measures. Proper warning signage should be provided.

6.7.3 The implementation of biosecurity measures should be continuously monitored to assess the effectiveness of the program.

6.7.4 The farm should have the appropriate and functional lay-out and infrastructure to ensure effective implementation of the biosecurity measures.

6.7.5 Care should be observed that all "brought-in" animals shall have undergone appropriate quarantine measures/treatment.

6.8 Animal health

6.8.1 The farm owner shall take all biosecurity measures to ensure the health and well-being of the animals through preventative animal husbandry practices such as:

- selection of appropriate breeds or strains of animals;
- adoption of Good 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 an animal to stimulate natural immunity and tolerance to diseases;
- provision of good quality feed;
- appropriate stocking densities; and
- grazing rotation and pasture management.

6.8.2 Animal health care should be supervised by a duly licensed veterinarian.

6.8.3 The well-being of the animals is superior in the choice of treatment. However, treatment must not be withheld for economic reasons (for example, if the treatment jeopardizes the organic certification of the animal).

6.8.4 Natural remedies and complementary medical methods have first priority; however, the use of allopathic or chemotherapeutic drugs is allowed when no other justifiable alternatives are available and when preventive measures are not successful as determined by the attending duly licensed veterinarian.

6.8.5 If an animal becomes sick or injured despite preventive measures, the animal shall be treated promptly and adequately. If necessary, in isolation and in suitable housing/s, producers shall not withhold such medication where it will result in the unnecessary suffering of the animal.

6.8.6 The withdrawal period between the last administration of a restricted veterinary drug to an animal under organic management is to be twice the legal withdrawal period provided in the medical insert or, in a case in which this period is not specified, 144 hours (6 days), whichever is longer. Meat, eggs of laying hens, or milk from dairy cattle must not be sold as organic during the drug administration and withdrawal period.

6.8.7 The use of antibiotics for prophylactic/preventive purposes is not allowed; however, vaccinations are allowed for the following cases under the direct supervision of a duly licensed veterinarian:

- when an endemic disease is known or expected to be a problem in the region where the farm is located and where the disease cannot be controlled by other management techniques; or
- when a vaccination is legally required.

6.8.8 The use of the following substances is prohibited:

- all steroids and other synthetic growth promoters or enhancers;
- substances of synthetic origin for production stimulation or suppression of natural growth; and
- hormones for heat and parturition induction, and heat synchronization.

However, such substances may be used in individual animals with reproductive disorders/conditions as prescribed by the attending duly licensed veterinarian.

6.8.9 Treatment records of sick animals shall be kept, clearly identifying the animals concerned, including details of the treatment and its duration, as well as the generic name of the active ingredient(s), indications and contraindications, brand name, withdrawal period, batch number, and manufacturing and expiration date of drugs used.

6.8.10 The farm operator shall keep updated and complete records of animal health programs including disease monitoring, vaccination and de-worming program, and other biosafety measures. Records should be easily accessible.

6.8.11 The farm shall maintain updated records of medicine purchased and administration that should be readily available for verification.

6.8.12 Administration records shall consist of the following Veterinary Drug Order (VDO) accompanied by a Veterinarian-Client-Patient Relationship (VCPR):

- type of drugs or medication used;
- quantity of medicine used;
- date administered;
- identification and number of animals treated;
- withdrawal period; and
- name and license of the administering veterinarian.

6.8.13 On the basis of these records, proper corrections to production practice should be made in order to minimize the need for the application of allopathic medicines.

6.8.14 A maximum of three (3) treatments using allopathic medicines is allowed per animal per year.

6.9 Transport and slaughter

6.9.1 The organic integrity of animals must be maintained throughout the entire process of transport and slaughter. Each animal or group of animals shall be identifiable at each step in the transport and slaughter process.

6.9.2 Animals shall be transported using a licensed transport carrier (DA-AO 8 Series of 2004) and accompanied by a duly licensed animal handler (DA-AO 8 Series of 2004) responsible for the well-being of the animals in accordance with the provisions of the Animal Welfare Act (RA 8485) with appropriate shipping permit.

6.9.3 Animals shall always be handled or restrained in such a way to protect them from fear, stress, pain, and injury. The handling shall be calm and gentle. The use of electric prods and such instruments shall be restricted.

6.9.4 Tools shall be used in a manner that minimizes stress and does not harm the animals. Sticks, canes, or electric prods should not be used to restrain farm animals; however, these may be used for the worker's safety when handling aggressive animals.

6.9.5 Tools, facilities, and equipment shall be functional for efficient and effective animal management. The operators shall acquire the skills and techniques to use the tools properly and appropriately.

6.9.6 The transport of organic animal shall be separated from conventional and shall be well organized and appropriate to the needs of the animals, taking into consideration the following factors:

- stress caused to the animal;
- fitness of the animal;
- process of loading and unloading;
- mixing different groups of animals or animals of different sex;
- the grip of the feet on floors and ramps;
- equipment used;
- extreme temperatures and relative humidity; and
- hunger and thirst.

6.9.7 Appropriate measures such as separate schedule of stocking during pre-slaughter and separate schedule or facility shall be implemented during slaughter to prevent commingling and contamination of organic with conventional animals. Separate slaughterhouse for organic is recommended.

6.10 Manure management

6.10.1 Manure management practices used to maintain any area in which animals are housed, penned, or pastured should be implemented in a manner that:

- minimizes soil and water degradation;
- does not significantly contribute to contamination of water by nitrates;
- optimizes recycling of nutrients; and
- does not include burning or any practice inconsistent with organic practices.

6.10.2 All manure storage and handling facilities, including composting facilities, should be designed, constructed, and operated to prevent contamination of ground and/or surface water.

6.10.3 Manure production rates should be at levels that do not contribute to ground and/or surface water contamination. The competent authority may establish maximum application rates for manure or stocking densities. The timing of application and application methods should not increase the potential for run-off into ponds, rivers, and streams.

6.11 Free range areas and housing

6.11.1 Housing for animals will not be mandatory in areas with appropriate climatic conditions to enable animals to live outdoors.

6.11.2 Animals may be temporarily confined during periods of unfavorable weather, when the health, safety, and well-being of the animal could be jeopardized, or to protect plant, soil, and water quality.

6.11.3 The stocking density in buildings should:

- provide for the comfort and well-being of the animals having regard for the species, breed, and age of the animals;
- take into account the behavioral needs of the animals with respect to the size of the group and the sex of the animals; and
- provide the animals with sufficient space to stand naturally, lie down easily, turn round, groom themselves, and assume all natural postures and movements such as stretching and wing flapping.

6.11.4 Housing, pens, equipment, and utensils should be properly cleaned and disinfected to prevent infection and contamination using the allowed cleaning materials, as listed in Annex C Part 2. Any succession/addition/revision from relevant standard setting bodies (BAFS & FDA) shall be adopted and shall be in accordance with the criteria established in Section 12 of this Standard.

6.11.5 The outdoor stocking density of animals kept on pasture, grassland, or other natural or semi-natural habitats must be kept at an optimum level as to prevent degradation of the soil and over-grazing of vegetation.

7 Minimum requirements for organic beekeeping

7.1 Choice of species

The honey bee species preferred for use in organic beekeeping include Asian Honeybees, *Apis dorsata dorsata*, *Apis dorsata breviligula*, and *Apis cerana*, and Stingless honeybees, *Tetragonula* spp. and *Lepidotrigona* spp. The exotic honeybee species, *Apis mellifera*, may also be considered.

7.2 Hive material/design

The hives shall consist primarily of natural materials and present no risk of contamination to the environment or the bee products. Use of construction materials with potentially toxic effects (e.g. treated lumber) is prohibited.

7.3 Location of colonies/apiaries

7.3.1 Wild and hived colonies should be located in organically managed fields and/or wild natural areas within a three (3) kilometer radius away from fields or other areas where chemical pesticides are used and GMO crops. For stingless bees, 500 meter radius is recommended.

7.3.2 If hives have to be migrated to other sites due to insufficient forage, predation, or habitat disturbance, the location should be recorded showing also the dates of transfer, location, and number of colonies.

7.3.3 Nests of wild or feral colonies of honeybees, *Apis dorsata dorsata* and *Apis dorsata breviligula*, and stingless bees, *Tetragonula* spp. and *Leptotrigona* spp., should be identified prior to harvest.

7.3.4 Only “warm” (yellow colored) light bulbs should be used in the apiary sites and foraging areas.

7.4 Mutilations in beekeeping

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

7.5 Supplemental feeding

Supplemental feeding with honey, pollen, or organic sugar should be done during dearth period or when pollen and nectar are not sufficient. The feed should come from organic sources such as reserves of honey and pollen left during harvesting.

7.6 Bee stock sources

7.6.1 Importation is not allowed for *Apis cerana*, stingless bees, and solitary bee species.

7.6.2 The starter colonies should be sourced from apiaries that are free from pests (mites, hive beetles) and diseases (American Foul Brood, European Foul Brood, Virus diseases, fungal diseases). Importation of *Apis mellifera* queens may be allowed from countries with no known Africanized Honey Bee (AHB) populations and colony collapse disorder (CCD).

7.7 Pest and disease control/disinfection

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

7.7.2 For pest and disease control, the following are allowed:

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

7.7.3 Colonies infected with American Foul Brood should be destroyed through burning. The use of antibiotics is prohibited. For disease and pest control, the following products may be used:

- formic acid;
- lactic acid;
- sucroside; and
- botanicals.

7.7.4 Cleaning and disinfection should be done using heat such as blowtorch / flame torch or hot water, or other mechanical means.

7.8 Harvesting

7.8.1 The use of chemical synthetic repellents is prohibited during extraction of beekeeping products.

7.8.2 The Moisture Content (MC) of ripe honey should be from 21 to 23%.

7.9 Apiary conservation and stability

Twenty percent (20%) of the honey comb or stores should be reserved and not cut. These serve as food reserve of the bees during the dearth period.

7.10 Processing/packaging specific to bee products

7.10.1 Processing equipment is thoroughly cleaned with hot water prior to processing.

7.10.2 Surfaces in direct contact with the honey are constructed from sterilized materials.

7.10.3 Honey should be packed in sterilized food grade containers.

8 Minimum requirements for special products

The provisions for organic agriculture shall be applicable for special products and shall meet the following requirements:

8.1 Mushrooms

8.1.1 Substrate materials for the production of mushrooms must be free of pollutants, contaminants (e.g. heavy metals and pesticides), and pathogens.

8.1.2 Chemical pesticides, fungicides, herbicides, or fertilizers must not be used.

8.1.3 Clean and uncontaminated water must be used in the production of mushrooms.

8.2 Herbs

8.2.1 Over-harvesting wild herbs must be avoided to ensure the sustainability of the species concerned.

8.2.2 Only herbs in their prime shall be harvested.

8.2.3 Herbs shall not be dried in direct sunlight to preserve their benefits; neither shall they be dried in locations prone to contamination.

8.2.4 The package shall be labeled with an expiration date or "best by date" depending on the product and process.

9 Minimum requirements for processed organic products

The integrity of the organic product must be maintained throughout the processing phase. This is achieved by the use of techniques appropriate to the specifics of the ingredients with careful processing methods limiting and refining the use of additives and processing aids.

Compliance to the relevant regulatory requirements (i.e. Good Manufacturing Practices) and compliance to relevant regulatory agencies (BAI, BPI, FDA, NMIS, DENR, and LGUs) should be met in conjunction with the requirements of this Standard.

The provisions for organic agriculture for processing shall meet the following requirements:

9.1 Postharvest operations

9.1.1 Organic produce shall neither be mixed nor switched with non-organic produce. Handlers and processors shall not commingle organic products with non-organic products.

9.1.2 Processing and handling of organic and non-organic products must be done separately in time and/or place.

9.1.3 When equipment is not exclusively used for organic products, the equipment should be properly cleaned before processing organic products.

9.1.4 All products shall be adequately identified through the whole process until final labeling.

9.2 Storage, processing, and transportation

9.2.1 Organic and non-organic products shall not be stored and transported together except when physically separated and labeled.

9.2.2 Product integrity should be maintained during any storage and transportation and handling by use of the following precautions:

- a) organic products must be protected at all times from commingling with non-organic products; and
- b) organic products must be protected at all times from contact with materials and substances not permitted for use in organic farming and handling.

9.2.3 Where only part of the unit is certified, other product not covered by these guidelines should be stored and handled separately and both types of products should be clearly identified.

9.2.4 Bulk stores for organic product should be separate from non-organic product stores and clearly labeled to that effect.

9.2.5 Storage areas and transport containers for organic product should be cleaned using methods and materials permitted in organic production. Measures should be taken to prevent possible contamination from any pesticide or other treatment.

9.3 Pest control in storage and processing

For pest management and control, the following measures, in order of preference, should be used:

- a) preventative methods, such as disruption and elimination of habitat and access to facilities by pest organisms, should be the primary methodology of pest management;
- b) if preventative methods are inadequate, the first choice for pest control should be mechanical/physical and biological methods; and
- c) if mechanical/physical and biological methods are inadequate for pest control, substances appearing in Annex A (or other substances allowed for use by a competent authority) may be used provided that they are accepted for use in handling, storage, transportation, or processing facilities by the competent authority and so that contact with organic products is prevented. Any succession/addition/revision from relevant standard setting bodies (BAFS & FDA)

shall be adopted and shall be in accordance with the criteria established in Section 12 of this Standard.

9.4 Ingredients of agricultural origin

9.4.1 In cases where an ingredient of organic agricultural origin is not available in sufficient quantity or quality from origin, non-organic raw materials can be used to the limits set in labeling stated in this Standard. These raw materials shall not be genetically engineered.

9.4.2 The same ingredient in one product shall not be derived from both an organic and non-organic origin.

9.4.3 The use of vitamins and minerals shall be in accordance with Republic Act 8976 "An Act Establishing the Philippine Food Fortification Program and for Other Purposes". Organic processing only uses minerals (including trace elements), vitamins, essential fatty acids, essential amino acids, and other isolated nutrients when their use is legally required or strongly recommended by the competent authority in the food products in which they are incorporated.

9.5 Processing aids and other ingredients

9.5.1 Substances used as processing aids are listed in Annex E. Any succession/addition/revision from relevant standard setting bodies (BAFS & FDA) shall be adopted and shall be in accordance with the criteria established in Section 12 of this Standard.

9.5.2 Only natural ripening agents are allowed, for as long as their application will not deceive consumers of the nature, substance, and quality of the product.

9.5.3 Additives and processing aids shall be used under the following conditions:

- if the purpose is to maintain the nutritional value of a product;
- if the purpose is to enhance the keeping quality or stability of the product;
- if the purpose is to provide the product with an acceptable composition, consistency, and appearance;
- there is no possibility of producing a similar product without the use of the additive or processing aid;
- it is not included in amounts greater than the minimum required to achieve its function;
- it does not in any major way detrimentally affect the environment; and
- it shall not deceive the consumer concerning the nature, substance, and quality of the food.

9.5.4 The use of salt and water must comply with the FDA regulations such as Republic Act No. 8172, PNS for drinking Water, DOH-AO 2007-001, and the FDA Bureau Circular No. 2007-009.

9.5.5 Preparations of microorganisms and enzymes normally used in food processing may be used, except for genetically engineered microorganisms and their products.

9.6 Methods of processing

9.6.1 Techniques used to process organic products shall be biological, physical, and mechanical in nature. Any additive, processing aid, or other material that reacts chemically with organic products or modifies it must appear in Annex E and shall be used in accordance with noted restrictions. Any succession/addition/revision from relevant standard setting bodies

(BAFS & FDA) shall be adopted and shall be in accordance with the criteria established in Section 12 of this Standard.

9.6.2 Filtration equipment shall not contain asbestos or utilize techniques or substances that may contaminate the product. Filtration agents are considered processing aids.

9.6.3 Extraction shall only take place with water, ethanol, oil, CO₂, N₂, or naturally occurring acids or bases provided that they are used in appropriate quantity and process.

9.6.4 The use of ionizing radiation is not allowed for any ingredient or the final product.

9.6.5 Substances and techniques shall not be used such that:

- these reconstitute properties lost by the processing and storage of organic products;
- these conceal negligent processing;
- these may otherwise be misleading as to the true nature of these products; and
- water may be used for re-hydration or reconstitution.

9.7 Methods of cleaning

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

9.7.2 Substances used for cleaning or disinfection of storage, transport, and processing facilities are listed in Annex F. Any succession/addition/revision from relevant standard setting bodies (BAFS & FDA) shall be adopted and shall be in accordance with the criteria established in Section 12 of this Standard.

9.7.3 Operations that use cleaners, sanitizers, and disinfectants on food contact surfaces shall use them in a way that maintains the organic integrity of the food. Unless otherwise noted in the Annex F, the operator is required to perform an intervening event between the use of any cleaners, sanitizers, or disinfectant and the contact of the organic food in that surface. Acceptable intervening events include a hot-water rinse, a sufficient flush of organic product that is not sold as organic product, or adequate time for the substances to volatilize.

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

9.7.5 Handlers and processors shall make a plan and maintain a report of cleaners, disinfectants, and sanitizers used by certified organic handling and processing operations. This report should include a list of the cleaning, disinfecting, and sanitizing agents currently used in certified organic facilities.

9.8 Packaging

9.8.1 Organic products must be not packed in reused bags or containers that have been in direct contact with any substance that would likely compromise the integrity of the product or ingredient placed in those containers, unless reusable bags or containers have been thoroughly cleaned and pose no risk of contamination.

9.8.2 Plastic materials made of plastic and paper should be from virgin materials while packaging materials made of glass shall be sterilized before use. Use of packaging materials from biodegradable, recycled, or recyclable sources is encouraged.

10 Minimum requirements for labeling and consumer information

10.1 Labeling

10.1.1 Labeling fully discloses ingredients in the order of their weight percentages and whether or not they are organic. Furthermore, food ingredient declaration and naming of additives shall be in accordance with the latest FDA Guidelines for food labeling of pre-packaged foods.

As an exemption:

If herbs and/or spices constitute less than 2% of the total weight of the product, they may be listed as “spices” or “herbs”.

10.1.2 Labeling identifies the entity legally responsible for the product and the body that assures conformity to the applicable organic standard.

10.1.3 Claims that processed products are “organic” can be made only if the product contains 95% higher organic ingredients. Claims that processed products are “made with organic ingredients” or similar terms are made only if the product contains 95%-70% organic ingredients. Where less than 70% of the ingredients are of certified organic origin, the indication that an ingredient is organic may appear in the ingredient list. Such product may not be labeled “organic.” These percentages are measured by weight for solids or by volume for liquids- excluding water and salt. The remaining non-organic ingredients from agricultural and non-agricultural sources shall not be genetically modified, irradiated, or treated with processing aids not listed in Annex E.

10.1.4 Labeling clearly distinguishes in-conversion products or similar terms from organic products. Labeling ensures that products labeled as “organic” or “in-conversion”, or an equivalent term (e.g. biologic or ecological), comply with the applicable organic standards.

10.1.5 Products which only consist of certified wild ingredients shall be labeled “wild” or “natural”. A multi-ingredient product containing both certified organic agricultural and certified wild/natural origin may be labeled as organic.

11 Traceability and recordkeeping

11.1 Each separate production site is identified by a name or code. The name or code is placed on the site and recorded on a property map. The site name or code is recorded on all documents and records that refer to the site.

11.2 Operators shall maintain purchase, handling, and processing records, also stock inventory of all materials used for organic production, processing, and handling as well as finished products.

11.3 Documentation and records shall clearly identify the source, movement, use, and inventory of organic from non-organic materials at all stages of production/processing and handling.

11.4 Records, documentation, and accounts shall provide traceability and be made available to the competent authority and certifying bodies for audit trail and trace back verification at any time.

11.5 Abovementioned records (including those related to use of sub-contractors) shall follow a retention period of at least five (5) years.

12 Minimum requirements for inclusion of substances in Annexes A, B, C, E, and F in Organic Agriculture Production Systems

12.1 At least the following criteria should be used for the purposes of amending the permitted substance lists referred to in the Annexes A, B, C, E, and F. Any proposals for the inclusion in Annex C of new substances must meet the following general criteria:

- they are consistent with principles of organic production as outlined in this Standard;
- use of the substance is necessary/essential for its intended use;
- manufacture, use, and disposal of the substance does not result in, or contribute to, harmful effects on the environment;
- they have the lowest negative impact on human or animal health and quality of life; and
- approved alternatives are not available in sufficient quantity and/or quality.

12.2 The above criteria are intended to be evaluated as a whole in order to protect the integrity of organic production. In addition, the following criteria should be applied in the evaluation process:

- a) if they are used for fertilization, soil conditioning purposes:
 - they are essential for obtaining or maintaining the fertility of the soil or to fulfill specific nutrition requirements of crops, or specific soil conditioning and rotation purposes which cannot be satisfied by the practices included in Annex A, or other products included in Annex B;
 - the ingredients will be of plant, animal, microbial, or mineral origin and may undergo the following processes: physical (e.g. mechanical, thermal), enzymatic, microbial (e.g. composting, fermentation); only when the above processes have been exhausted, chemical processes may be considered and only for the extraction of carriers and binders;
 - their use does not have a harmful impact on the balance of the soil ecosystem or the physical characteristics of the soil, or water and air quality; and
 - their use may be restricted to specific conditions, specific regions, or specific commodities.
- b) if they are used for the purpose of plant disease or pest and weed control:
 - they should be essential for the control of a harmful organism or a particular disease for which other biological, physical, or plant breeding alternatives and/or effective management practices are not available;
 - their use should take into account the potential harmful impact on the environment, the ecology (in particular non-target organisms), and the health of consumers, livestock, and bees;
 - substances should be of plant, animal, microbial, or mineral origin and may undergo the following processes: physical (e.g. mechanical, thermal), enzymatic, microbial (e.g. composting, digestion);

- however, if they are products used in exceptional circumstances, in traps and dispensers such as pheromones which are chemically synthesized, they will be considered for addition to lists if the products are not available in sufficient quantities in their natural form, provided that the conditions for their use do not directly or indirectly result in the presence of residues of the product in the edible parts; and
 - their use may be restricted to specific conditions, specific regions, or specific commodities.
- c) if they are used as additives or processing aids in the preparation or preservation of the food:
- these substances are used only if it has been shown that, without having to recourse to them, it is impossible to:
 - a. produce or preserve the food, in the case of additives, or
 - b. produce the food, in the case of processing aids, in the absence of other available technology that satisfies these guidelines; these substances are found in nature and may have undergone mechanical/physical process (e.g. extraction, precipitation), biological/enzymatic processes, and microbial processes (e.g. fermentation)
 - or, if these substances mentioned above are not available from such methods and technologies in sufficient quantities, then those substances that have been chemically synthesized may be considered for inclusion in exceptional circumstances;
 - their use maintains the authenticity of the product;
 - the consumer will not be deceived concerning the nature, substance, and quality of the food; and
 - the additives and processing aids do not detract from the overall quality of the product.

References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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ANNEXES

Annex A: List of Permitted Crop Protectants, Growth Regulators, and Seed Treatments for the Production of Organic Food

Substances Description, Compositional Requirements	Conditions for Use
I. CROP PROTECTANTS	
Chitin nematicides	
Coffee grounds	
Corn gluten meal	
Natural acids (e.g. vinegar)	
Preparations/products from Neem (<i>Azadirachta spp.</i>)	
Fermented product from <i>Aspergillus</i>	
Plant and animal oils	
Natural farming preparations (plant extracts) such as Fishtail palm extracts	
Plant based repellents such as fermented plant juice, marigold.	
Preparations of <i>Chrysanthemum cinerariaefolium</i> .	The addition of synthetic Piperonyl butoxide to <i>Chrysanthemum</i> preparation is prohibited
Preparations from <i>Quassia amara</i>	
Preparations of Rotenone from <i>Derris elliptica</i> , <i>Lonchocarpus</i> , <i>Thephrosia spp.</i>)	The substance should be used in such a way as to prevent its flowing into waterways.
Preparations from <i>Ryania speciosa</i>	Need recognized by the certification body or authority.
Spinosad	Use only where measures are taken to minimize the risk to parasitoids and to minimize the risk of development of resistance. Need prescription and application rates recognized by competent authority
Sabadilla	
Tobacco tea (pure nicotine is prohibited)	Need to be recognized by the competent authority
Chloride of lime	
Copper salts (e.g. sulfate, hydroxide, oxychloride, octanoate, cuprous oxide, Bordeaux mixture and Burgundy mixture)	Need, prescription and application rates recognized by certification body or authority. As a fungicide on condition that the substance is used in such a way as to minimize copper accumulation in the soil. Restricted to a maximum application of 6 kg/ha per year
Diatomaceous earth	Need to be recognized by the competent authority
Light mineral oils (paraffin)	Need to be recognized by the competent authority
Lime sulfur (Calcium polysulfide)	
Sodium bicarbonate	
Calcium hydroxide (hydrated lime)	For foliar application only
Potassium bicarbonate	
Potassium permanganate	Need to be recognized by the competent

	authority
Iron phosphates	Need to be recognized by the competent authority
Calcium Oxide (Quicklime)	
Sulfur (in elemental form)	Other forms need to be recognized by the competent authority
Fungal preparations (e.g. <i>Metarhizium anisopliae</i> , <i>Trichoderma harzianum</i> , <i>Beauveria bassiana</i>)	
Bacterial preparations (e.g. <i>Bacillus thuringiensis</i> , spinosad)	
Release of parasites (e.g. <i>Trichogramma sp.</i>), predators (e.g. ladybird beetle, earwig and lacewing) and sterilized insects	
Viral preparations (e.g. <i>granulosis virus</i> , Nuclear Polyhedrosis Virus (NPV), etc.)	
Potassium soap (soft soap)	
Rodenticides	Should come from natural origin.
Sulfur dioxide	
Thermal controls	
Traditional preparations (of non-synthesized chemical nature) based on natural products	
Physical methods (e.g. chromatic traps, mechanical traps)	
Mineral oils	Need to be recognized by the competent authority.
Mulches (including plastic mulch), nets	
Pheromones and attractants	Use in traps and dispensers only
Preparations on the basis of metaldehyde containing a repellent to higher animal species	As far as applied in traps.
II. GROWTH REGULATORS	
Algal preparations	As far as obtained by: (i) physical processes (ii) extraction with water or potassium hydroxide solutions, (iii) fermentation.
Animal preparations and oils e.g. fish extracts	
Beeswax	
Dairy products (e.g. milk, casein)	
Seaweed, seaweed meal, seaweed extracts	Subject to BFAR regulations
Gelatine	
Lecithin	
Extract from mushroom (Shiitake fungus)	
Propolis	
Ethylene	For degreening of citrus for fruit fly prevention and as a flowering agent for pineapples. As sprouting inhibitor for potatoes and onions: Need recognized by the competent authority for sprout inhibition of stored potatoes and onions where varieties that have long dormancy

	<p>characteristics are not available, or these varieties are not suited to local growing conditions.</p> <p>Must be used in a manner that minimizes exposure to operators and workers for ripening of kiwifruit, bananas, and other tropical fruit.</p>
Potassium hydrogen carbonate	
III. SEED TREATMENTS	
Wood ash	
Clay (e.g. bentonite, perlite, vermiculite, zeolite)	
Silicates (e.g. sodium silicates, quartz)	
Carbon dioxide and nitrogen gas	
Ethyl alcohol	
IV. GROWTH REGULATOR AND SEED TREATMENT	
Mineral powders (stone meal)	
V. CROP PROTECTANT AND SEED TREATMENT	
Sterilized insect males to be used transferred under crop protectant category	
Sea-salt and salty water	
VI. CROP PROTECTANT, GROWTH REGULATOR AND SEED TREATMENT	
Herbal and biodynamic preparations	
Soda	
Sterilized insect males	
Homeopathic and Ayurvedic preparations	

Annex B: List of Allowed Fertilizers and Soil Conditioners

Substances Description, Compositional Requirements	Conditions for Use
i. Plant and Animal Origin	
Animal manure (including dried), slurry, urine, compost	The use of factory farm manure is only permitted if it undergoes full decomposition (e.g. composting/fermentation) and needs recognition from the competent authority. However, the use of pig and poultry (raised in battery cages) manure shall be subjected to the competent authority's regulation.
Guano	Rate of extraction is subject to DENR regulations
Blood meal, bone, and other meal brought in from other sources and without preservatives	Origin of materials should be disease-free
Hoof and horn meal, feather meal, fish and fish products, wool, fur, hair, dairy products	
Biodegradable processing by-products, plant or animal origin, e.g. by-products of food, feed, oilseed, brewery, distillery, sugar press mud/mud press or textile processing	By-products should not come from GM sources (Not treated with synthetic additives) Without synthetic additives and residues
By-products from oil, palm, coconut and cocoa (including empty fruit bunch, coir, husks, - palm oil mill effluent (pome), cocoa peat and empty cocoa pods	
Crop residues (straw, peanut hulls, etc.)	
Mulches from sugar cane trash, straw, etc.	
Green manure and green leaf manure	
Azolla	
Wood, bark, sawdust, wood shavings, wood ash, wood charcoal, wood/bamboo vinegar	Should not be treated by synthetic chemical
Calcium lignosulfate	Recognized by the competent authority
Seaweed and seaweed products and by-products, algae	Subject to BFAR regulations
Peat	Excluding synthetic additives; permitted for seed, potting module composts. Not permitted as a soil conditioner.
Plant preparations and extracts	
Compost made from ingredients listed in this appendix, spent mushroom waste, humus from worms and insects and vermiculture substrate	
Kitchen waste	
Segregated biodegradable market waste	Has undergone proper segregation, and does not contain hazardous materials
Naturally occurring biological organisms e.g. worms	
ii. Mineral Origin	
Basic slag	Recognized by the competent authority
Calcareous and magnesium amendments	Recognized by the competent authority

Limestone, marl, maerl, chalk, sugar beet lime	Recognized by the competent authority
Calcium chloride solution	Only from natural sources/origin
Chloride of lime	Only from natural sources/origin
Gypsum (calcium sulphate)	Only from natural sources/origin
Magnesium rock, kieserite and Epsom salt (magnesium sulfate)	Only from natural sources/origin
Rock potash, mined potassium salts (e.g. kainite, sylvinite)	Less than 60% chlorine
Sulphate of potash (e.g. patenkali)	Obtained by physical procedures but not enriched by chemical processes to increase its solution
Sulfur	Allowed if from natural source
Sedimentary rocks (limestone, dolomite, rock phosphate)	Cadmium should not exceed 90mg/kg P ₂ O ₅ May contain elevated levels of trace elements. Detailed chemical analysis is necessary. Their widespread extraction can also deplete the natural deposits and may cause negative environmental impact. Rate of extraction is subject to DENR regulations.
Pulverized rock, stone meal	May contain elevated levels of trace elements. Detailed chemical analysis is necessary. Their widespread extraction can also deplete the natural deposits and may cause negative environmental impact. Rate of extraction is subject to DENR regulations.
Clay (e.g. bentonite, perlite, vermiculite, zeolite)	
Sodium chloride	Only mined salt
Trace elements (e.g. boron, copper, iron, manganese, molybdenum, zinc)	Need recognized by the competent authority
Stillage and stillage extract	Ammonium stillage excluded
Aluminum calcium phosphate	Cadmium should not exceed 90mg/kg P ₂ O ₅
iii. Microbiological	
Biodegradable processing by-products of microbial origin, e.g. by-products of brewery or distillery processing	
Microbial preparations (i.e. <i>Trichoderma</i> , <i>Rhizobia</i> , <i>Mychorrizae</i> , others) of non-GMO origin	
iv. others	
Biodynamic and Agnihotra preparations	

Annex C: Substances and Materials for Animal Production**Part 1: Allowed Livestock Feed ingredients**

1) Feedstuffs of plant origin from non-organic sources, such as but not limited to, can only be used, if they are produced or prepared without the use of chemical solvents or chemical treatment:

1.1. Cereals, grains, their products and by-products. The following substances are included in this category:

Oats as grains, flakes, middling, hulls and bran; barley as grains, protein and middling; rice as grains, rice broken, bran, and germ expeller; millet as grains; rye as grains, middling, feed and bran; sorghum as grains; wheat as grains, middling, bran, gluten feed, gluten and germ; spelt as grains; triticale as grains; maize as grains, bran, middling, bran, germ expeller and gluten; malt culms; brewers' grains.

1.2. Oil seeds, oil fruits, their products and by-products. The following substances are included in this category:

Rape seed, expeller, and hulls; soya bean as bean, toasted, expeller and hulls; sunflower seed as seed and expeller; cotton as seed and seed expeller; linseed as seed and expeller; sesame seed as seed and expeller; palm kernels as expeller; turnip rape seed as expeller and hulls; pumpkin seed as expeller; olive pulp (from physical extraction of olives).

1.3. Legume seeds, their product and by-products. The following substances, but not limited to, are included in this category:

Chick peas as seeds; ervil as seeds; chickling vetch as seeds submitted to an appropriate heat treatment; peas as seeds, middling, and bran; broad beans as seeds, middling and bran; horse beans as seeds, vetches as seeds and lupin as seeds. (Mungbean, peanut, and other native legumes)

1.4. Tuber roots, their products and by-products. The following substances, but not limited to, are included in this category:

Sugar beet pulp, dried beet, potato, sweet potato as tuber, manioc as roots, potato pulp (by-product of the extraction of potato starch), potato starch, potato protein and tapioca.

1.5. Other seeds and fruits, their products and by-products. The following substances, but not limited to, are included in this category:

Carob pods, citrus pulp, apple pomace, tomato pulp, and grape pulp.

1.6. Forages and roughages. The following substances, but not limited to, are included in this category:

Lucerne, lucerne meal, clover, clover meal, grass (obtained from forage plants), grass meal, hay, silage, straw of cereals, and root vegetables for foraging.

1.7. Other plants, their products and by-products. The following substances, but not limited to, are included in this category:

Molasses as a binding agent in compound feeding stuffs, seaweed meal (obtained by drying and crushing seaweed and washed to reduce iodine content), powders and extracts of plants, plant protein extracts (solely provided to young animals), spices and herbs.

2) Feedstuffs of mineral origin trace elements, vitamins, or provitamins, such as but not limited to, can only be used if they are of natural origin. In case of shortage of these substances, or in exceptional circumstances, chemically well-defined analogic substances may be used:

2.1. Feedstuffs of mineral origin, and trace elements:

2.1.1. Sodium:

- unrefined sea salt
- coarse rock salt
- sodium sulphate
- sodium carbonate
- sodium bicarbonate
- sodium chloride

2.1.2. Calcium:

- lithotamnion and maerl
- shells of aquatic animals (including cuttlefish bones)
- calcium carbonate
- calcium lactate
- calcium gluconate

2.1.3. Phosphorus:

- bone dicalcium phosphate precipitate
- defluorinated dicalcium phosphate
- defluorinated monocalcium phosphate

2.1.4. Magnesium:

- anhydrous magnesia
- magnesium sulphate
- magnesium chloride
- magnesium carbonate

2.1.5. Sulphur:

- sodium sulphate

2.1.6. Iron:

- ferrous (II) carbonate
- ferrous (II) sulphate monohydrate
- ferric (III) oxide

2.1.7. Iodine:

- calcium iodate, anhydrous
- calcium iodate, hexahydrate
- potassium iodide

2.1.8. Cobalt:

- cobaltous (II) sulphate monohydrate and/or heptahydrate
- basic cobaltous (II) carbonate, monohydrate

2.1.9. Copper:

- copper (II) oxide
- basic copper (II) carbonate, monohydrate
- copper (II) sulphate, pentahydrate

2.1.10. Manganese:

- manganese (II) carbonate
- manganese oxide and manganic oxide
- manganese (II) sulfate, mono- and/or tetrahydrate

2.1.11. Zinc:

- zinc carbonate
- zinc oxide
- zinc sulphate mono- and/or hepta-hydrate

2.1.12. Molybdenum:

- ammonium molybdate
- sodium molybdate

2.1.13. Selenium:

- sodium selenate
- sodium selenite

2.2. Vitamins, provitamins, and chemically well-defined substances having a similar effect. The following substances are included in this category:

2.2.1. Vitamins:

- Preferably derived from raw materials occurring naturally in feeding stuffs
- Synthetic vitamins identical to natural vitamins only for non-ruminant animals

3) Feedstuffs of animal origin, with the exception of milk and milk products, fish, other marine animals, and products derived therefore should generally not be used or, as provided by national legislation. In any case, the feeding of mammalian material to ruminants is not permitted with the exception of milk and milk products:

3.1. Feed materials from animal origin

3.1.1. Milk and milk products. The following substances are included in the category:

- raw milks
- milk powder
- skimmed milk
- skimmed-milk powder
- buttermilk
- buttermilk powder
- whey
- whey powder
- whey powder low in sugar
- whey protein powder (extracted by physical treatment)
- casein powder
- lactose powder

3.1.2. Fish, other marine animals, their products and by-products. The following substances are included in the category:

- fish

Organic Agriculture

- fish oil
 - cod-liver oil not refined
 - fish molluscan or crustacean autolysates, hydrolysate and proteolysates obtained by an enzyme action, whether or not in soluble form, solely provided to young animals
 - fish meal
- 4) Synthetic nitrogen or non-protein nitrogen compounds shall not be used.
- 5) Binders, anti-caking agents, emulsifiers, stabilizers, thickeners, surfactants, coagulants: only natural sources, such as but not limited to, are allowed:
- E 551b Colloidal silica
 - E 551c Kieselgur
 - E 553 Sepiolite
 - E 558 Bentonite
 - E 559 Kaolinitic clays
 - E 561 Vermiculite
 - E 599 Perlite
- 6) Antioxidants: only natural sources are allowed.
- 7) Preservatives: only natural acids are allowed.
- 8) Colouring agents (including pigments), flavours, and appetite stimulants: only natural sources are allowed.
- 9) Probiotics, enzymes and micro-organisms are allowed.
- 10) Antibiotics, coccidiostatics, medicinal substances, growth promoters or any other substance intended to stimulate growth or production shall not be used in animal feeding. Silage additives and processing aids may not be derived from genetically engineered/modified organisms or products thereof, and may be comprised of only:
1. sea salt;
 2. coarse rock salt;
 3. yeasts;
 4. enzymes;
 5. whey;
 6. sugar; or sugar products such as molasses;
 7. honey;
 8. lactic, acetic, formic and propionic bacteria, or their natural acid product when the weather conditions do not allow for adequate fermentation, and with approval of the competent authority

Part 2: Allowed cleaning / disinfection agents for animal housing buildings

Acetic acid
Alkali carbonates
Citric acid
Cleaning and disinfection agents for teats and milking facilities
Ethanol
Honey
Hydrogen peroxide
Isopropanol
Lactic acid
Lime
Milk of lime
Natural essences of plants
Nitric acid (dairy equipment)
Oxalic acid
Peracetic acid
Plant oils
Potassium hydroxide
Potassium soap
Propolis
Quicklime
Sodium carbonate
Sodium hydroxide
Sodium hypochlorite (household bleach)
Sodium soap
Water and steam

Part 3: Veterinary Medicines

Restricted Medications

Restricted veterinary medicines are defined as those whose use involves a withholding period which is double of the medical insert or 24 hours, whichever is longer and of which record keeping is required.

Unrestricted Medicines

- Herbs are generally permitted.
- Homeopathic and anthroposophic medication from natural sources is also permitted, as is acupuncture.
- Salves, tinctures, and colored antiseptics from natural sources are permitted.
- Mineral Preparations
 - Calcium borogluconate
 - Calcium gluconate
 - Calcium chloride
 - Calcium phosphate
 - Ca/ Mg mixes
 - Natural iron preparation, such as nettle
- Purgatives
 - Herbs such as mustard leaves
 - Castor oil
- Forage additives
 - Linseed
- Vitamins
 - All non-synthetic
- Anti-diarrhea medications
 - Medical charcoal
 - Oak bark and / or chalk
- Electrolytes
 - All, such as Ringer's solution, physiological NaCl (0.9% saline solution), etc.

Annex D: Maximum allowed stocking densities for animal production**Table D.1 Maximum allowed stocking densities for livestock**

Animal Type	Indoor space, m² per head	Outdoor space, animal unit (au) per hectare (ha)
*Cattle (Brahman) 200-350 kg		
Native pasture		0.5-1
Legumes + native grass		1.5-2
Improved grass and legumes		2-3
*Sheep and Goats 25-30 kg		
**Ewe / Doe	1.50	
**Ram / Buck	2.00	
**Fattener	1.00	
*Native pasture		5-10
*Legumes + native grass		15-20
*Improved grass and legumes		20-30
***Swine		
Farrowing sow and piglets	7.5 per sow	2.5 per sow
Piglets over 40 days up to 30 kg	0.6	0.4
Brood pigs		
*Female	2.5	1.9
*Male	10	8
Fattening pigs (kg)		
*up to 50 kg	0.8	0.6
*up to 85 kg	1.2	0.8
*up to 110 kg	1.3	1

Table D.2 Maximum stocking densities for poultry

	Indoor Floor Space	Outdoor runs	Perch Space
Broilers	0.09 m ² /bird ^a	0.09 m ² /bird	
Pullets	0.09 m ² /bird ^a	0.09 m ² /bird	
Layers	0.17 m ² /bird ^a	0.17 m ² /bird	0.15 m per bird ^b
Turkey/Large birds	36.62 kg/ m ²	0.37 m ² / bird	0.41 m per bird ^b

NOTE: ^a Canadian Standards^b Humane Farm Animal Care

*Maximum indoor density		
Layer	6 birds/m ²	4 layers/m ²
Meat poultry	10 birds/m ²	4 meat/m ²

* European Union, UK Standard, Canadian Standard

Annex E: List of Permitted Additives, Processing Aids for the Production of Organic Food

Additive / Processing Aid	Application / Conditions
Calcium carbonate	
Tannin	Wine
Tannic acid	Wine, Filtration aids
Sulphur dioxide	Wine
Potassium metabisulphite	Wine
Lactic acid	Fruit/Vegetable Concentrated fruit/vegetable juice & fermented vegetable products
Carbon dioxide	
Malic Acid (DL-)	
Ascorbic acid	Fruit/ Vegetable
Tocopherols	Mixed natural concentrates
Lecithin	Obtained without use of bleaches and organic solvents
Citric acid	Not more than 1 gram/liter. Produced by microbial fermentation of carbohydrate substances
Calcium citrates	
Tartaric acid	Wine
Sodium tartrate	Cake/biscuit/confectionery
Potassium tartrate	Cereal/cake/biscuit/confectionery
Potassium sodium tartrate	
Calcium phosphate [monobasic; dibasic; tribasic]	Cereal, For raising flour only
Ammonium phosphate	Wine, Restricted to 0.3 gm/l
Alginic acid	
Sodium alginate	
Potassium alginate	
Agar	
Carrageenan	
Locust bean gum	
Guar gum	
Tragacanth gum	IFOAM accredited programme
Arabic gum	Confectionery
Xanthan gum	Fruit/ Vegetable/ Cake/ Biscuit
Karaya Gum	
Gellan gum	
Glycerol	Obtained from plant origin; used as a carrier for plant extracts
Gelatin	
Pectins	For jam production (non-amidated) / unmodified
Sodium carbonates	Cake/Biscuit/Confectionery [Sugar]
Potassium carbonate	Cereal/ Cake/ Biscuit/ Confectionery. [Fruit/Vegetable/ Wine]
Ammonium carbonates	Cereal/ Cake/ Biscuit/ Confectionery. Used as leavening agent.
Magnesium carbonates	Cereal/ Cake/ Biscuit/ Confectionery
Potassium chloride	Only for frozen and canned fruit and vegetable,

Organic Agriculture

	ketchup and mustard
Calcium chloride	Soybean/ Fruit/ Vegetable
Magnesium chloride	Derived from sea water, for soybean products
Sulphuric acid	Sugar, pH adjustment of water
Calcium sulphate	From mined source, coagulating agent For soybean products, confectionery and in bakers' yeast
Ammonium sulphate	Wine, restricted to 0.3 mg/l
Sodium hydroxide	For sugar processing and for the surface treatment
Calcium hydroxide	
Silicon dioxide (silica)	Fruit/ Vegetable/ Wine
Talc	
Bentonite	Fruit/ Vegetable
Glucono delta-lactone	Production by oxidation of D-glucose with bromine water is prohibited. *for verification
Beeswax	
Carnauba wax	
Argon	
Nitrogen	
Oxygen	
Activated carbon / Charcoal	Only from vegetative sources. For use only as filtering aid.
Asbestos free filter materials	
Attapulgate	Processing aid for plant and animal oils
Casein	Wine
Cellulose	Use in regenerative casings, as anti-caking agent (non-chlorine bleached) and filtering aid
Diatomaceous earth	Sweetener/Wine. Food filtering aid only
Egg white lysozyme/ albumin	
Preparations of Enzyme [Rennet; Catalase; Lipase; Pancreatin; Pepsin; Trypsin]	Must be from natural sources (<i>edible, nontoxic plants, nonpathogenic fungi or nonpathogenic bacteria</i>) and not produced from GMOs. [animal derived]
Ethanol	Use as Solvent
Ethylene	Fruit Used as ripening agent. Only non-synthetic source is allowed.
Ferrous sulfate	For iron enrichment or fortification of foods when required by regulation.
Food coloring (Natural sources)	<i>E.g. green from pandan leaf, red from hibiscus, yellow from turmeric</i>
Glycerides (mono and di)	For use only in drum frying of food
Isinglass	Wine
Kaolin	
Nut shells	
Magnesium stearate	
Magnesium sulfate	
Micro-organisms	Must not be from GMOs, Food grade
Natural flavor	
Minerals (including trace elements), vitamins, essential fatty and amino acids, and other	Only approved in so far as their use is legally required in the food products in which they

Organic Agriculture

nitrogen compounds.	are incorporated. According to regulatory requirements.
Nutrients vitamins and minerals	According to regulatory requirements
Perlite	Only as filter aid in food processing
pH adjusters [e.g. citric acid, sodium bicarbonate, or vinegar]	Must be from natural sources
Potassium hydroxide	pH adjustment
Potassium iodide	For iodine supplementation according to regulatory requirements
Preparations of bark	Only for sugar
Salt	
Sodium acid pyrophosphate	From clean sources without contamination
Vegetable oils	Only as leavening agent
Vegetable oils	
Wood resin	
Yeast	Must be organic for human consumption. Non-organic may be used if organic is unavailable. Growth on petrochemical substrate and sulfate waste liquor is prohibited. For smoked yeast, nonsynthetic smoke flavoring process must be documented.
Ammonium carbonates	Only for cereal products, confectionery, cakes & biscuits
L-malic acid	
Magnesium carbonates	
Monocalcium phosphate	Only for "raising flour"
Potassium tartrate	
Sodium tartrate	
Potassium citrates	
Sodium citrates	
Sodium carbonates	

Annex F: List of Permitted Equipment Cleansers and Disinfectants that may Come into Direct Contact with Food for the Production of Organic Food

Substances that can come in contact with food	Application / Conditions
Acetic acid	Cleaning agent
Alcohol, ethyl (ethanol)	Disinfection
Alcohol, isopropyl (isopropanol)	Disinfection
Calcium hydroxide (slaked lime)	
Calcium oxide (quicklime)	Cleaning agent
Chloride of lime (calcium oxychloride, calcium chloride, and calcium hydroxide)	
Citric acid	
Cyclohexylamine (BWA)	Use only as boiler water additive for packing sterilization
Diethylaminoethanol (BWA)	Use only as boiler water additive for packing sterilization
Formic acid	Disinfection
Hydrogen peroxide	Disinfection
Lactic acid	
Natural essences of plants	
Octadecylamine (BWA)	Use only as boiler water additive for packing sterilization
Oxalic acid	
Ozone	
Peracetic acid	Use as sanitizer on food contact surfaces. Use according to FDA limitations.
Phosphoric acid	For dairy production equipment only Cleaning agent
Plant extracts	
Sodium carbonate	
Calcium hypochlorite	According to regulatory requirements
Chlorine dioxide	According to regulatory requirements
Potassium soap	According to regulatory requirements
Sodium hydroxide (caustic soda)	According to regulatory requirements
Sodium hypochlorite (liquid bleach)	According to regulatory requirements
Sodium soap	According to regulatory requirements

Republic of the Philippines
Department of Agriculture
Bureau of Agriculture and Fisheries Standards

Technical Working Group on the Development of the Revised Philippine National Standards for Organic Agriculture

Chairperson:

Karen Kristine A. Roscom
DA-BAFS

Organic Agriculture Industry Members

Ms. Leilani Ramona Limpin Organic Certification Center of the Philippines (OCCP)	Mr. Patrick Belisario Organic Producers Traders Association (OPTA)
Ms. Zara Dela Paz Organic Certification Center of the Philippines (OCCP)	

Government and Regulatory Agencies

Ms. Ma. Theresa Cerbolles Food and Drug Administration (FDA)	Ms. Julieta Lansangan Fertilizer and Pesticide Authority (FPA)
Ms. Emily Victorio Bureau of Animal Industry (BAI)	Ms. Fe Bien Garcia Bureau of Animal Industry (BAI)
Mr. Santiago Palizada Bureau of Plant Industry (BPI)	Ms. Grace Docuyan Bureau of Plant Industry (BPI)
Ms. Asther Paglinawan Bureau of Plant Industry (BPI)	

Academe

Dr. Rodel Maghirang University of the Philippines Los Baños	Dr. Jose Balaoing Benguet State University
Dr. Gina Pangga University of the Philippines Los Baños	Dr. Blesilda Calub University of the Philippines Los Baños
Dr. Cleofas Cervancia University of the Philippines Los Baños	

Organic Agriculture Practitioners

Mr. Guillermo Saret Jr. Saret Organic Farmville	Mr. Alexander Parducho Leoni Agri Corporation
Mr. Andry Lim Tribal Mission Foundation Inc.	Mr. Reginald Coronel Kahariam Realty and Farms

Secretariat

Bureau of Agriculture and Fisheries Standards

Ms. Lara Vivas-Navarro
Mr. Jonathan Paz
Ms. Farlash D. Pancho
Ms. Francesca Louise P. Garcia