



ASEAN STANDARD FOR ORGANIC AGRICULTURE

I. GENERAL REQUIREMENTS / PROVISIONS

1. SCOPE

This standard provides the requirements for plants (including mushroom) production, wild harvest (excluding honey), post-harvest, processing, handling, storage, transport and labelling of organic produce, and processed products for human consumption.

2. DEFINITIONS

Barrier: An obstruction that prevents or hinders the movement of prohibited substances from an adjacent area over it or through it.

Biodegradable inputs: Inputs composed of natural materials capable of being decomposed by bacteria or other biological means and includes – compost, green manures, plant and animal waste.

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

Breeding: Selection of plants or animals (including hybridization) to produce and / or to further develop desired varieties/strains/breeds.

Buffer Zone: A clearly defined and identifiable boundary area bordering an organic production site that is established to limit application of, or contact with, prohibited substances from an adjacent area.

Carcinogens: Any natural or artificial substance that can produce or trigger cancer.

Certification: The procedure by which an operator or a group of operators received 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.

Certification Body: A body which is responsible for verifying that a product sold or labeled as organic has been produced, processed, prepared, handled, and imported according to this guideline.

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

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

Conversion Period/transition period: The time between the start of the organic management and the certification of produce as organic.

In-conversion/transition to organic/conversion to organic: is a labelling 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.

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

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.

Exception: Permission granted to an operator by a certification body to be excluded from the need to comply with restricted requirements of the standards. Exceptions are granted on the basis of clear criteria, with clear justification and for a limited time period only.

Factory Farming: Industrial management systems that are heavily reliant on veterinary and feed inputs not permitted in organic agriculture.

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

Food Additive means any substance not normally consumed as a food by itself and not normally used as a typical ingredient of the food, whether or not it has nutritive value, the intentional addition of which to food for a technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packing packaging, transport or holding of such food results or maybe reasonably 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.

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

Genetic Engineering: Genetic engineering is a set of techniques from molecular biology (such as recombinant DNA) by which the genetic material of plants, animals, microorganisms, cells and other biological units are altered in ways or with results that could not be obtained by methods of natural mating and reproduction or natural recombination. Techniques of genetic modification include, but are not limited to: recombinant DNA, cell fusion, micro and macro injection, encapsulation, gene deletion and doubling. Genetically engineered organisms do not include organisms resulting from techniques such as conjugation, transduction and natural hybridization.

Genetically modified organisms: Genetically engineered/modified organisms, and products thereof, are produced through techniques in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination.

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

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

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

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

Irradiation: Technology using high-energy emissions from radio-nucleotides, capable of altering a product's molecular structure for the purpose of controlling microbial contaminants, pathogens, parasites and pests in products (generally food), preserving products or inhibiting physiological processes such as sprouting or ripening. (Also referred to as ionizing radiation although definitions of this term in technical and legal texts vary.) Irradiation does not include low-level radiation sources such as the use of X rays for foreign body detection.

Isolated Nutrients: Individual and separate forms of nutrients.

Labelling: any written, printed or graphic matter that is present on the label, accompanies the produce/product, or is displayed near the food, including that for the purpose of promoting its sale or disposal.

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

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

Organic Integrity: Adherence to the principles, objectives and standards for organic production.

Organic Quality: Produced according to organic standards.

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

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

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

Plant Genetic Integrity: Maintaining plant varieties to ensure that they remain pure, true to type and not contaminated by other varieties.

Peat: Partially carbonized vegetable matter, usually mosses, found in bogs and used as fertilizer and fuel

Processing: The treatment, transformation of agricultural or wild harvest produce/product.

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.

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

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

Soil Biodiversity: The variety of all living organisms found within the soil system and includes micro-organisms such as bacteria and fungi as well as mega fauna such as earthworms and mites.

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

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

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

Supply Chain: A system of organizations, people, technology, activities, information and resources involved in moving a product or service from a supplier to a customer.

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

Traditional agriculture: An indigenous form of farming based on knowledge generated, preserved and transmitted between generations and may exhibit a high level of understanding of local resources, social and environmental conditions.

Wild Harvest: plant, mushroom resulting from collection and its related activities from a site that is not maintained under cultivation or other agricultural management.

3. OBJECTIVES OF ORGANIC PRODUCTION

The development of ASOA is guided by the following objectives established for organic farming;

1. Employing long-term, sustainable, ecological, systems-based organic management.
2. Assuring long-term, biologically-based soil fertility.
3. Avoiding/minimizing synthetic inputs at all stages of the organic production chain and exposure of people and the environment to persistent, potentially harmful chemicals.
4. Minimizing pollution and degradation of the production/processing unit and surrounding environment from production/processing activities.
5. Excluding certain, unnatural technologies from the system (e.g. products derived from genetic modification, irradiation and other technologies)
6. Avoiding pollution from surrounding environment
7. Maintaining Organic integrity throughout the supply chain.
8. Providing organic identity in the supply chain.

II. CROP PRODUCTION MANAGEMENT REQUIREMENTS

1. Conversion/ transition

Objectives

Conversion to organic production requires a period of time in which healthy soils, sustainable ecosystems are established and contaminants reduced before it can achieve certified organic status.

Requirements

There shall be a period of at least 12 months organic management for annuals and 18 months for perennials that meets all the requirements of these standards before the resulting product can be considered organic. The conversion period can be extended based on the identification and evaluation of relevant issues and risks.

An exemption to this requirement that is reduction of conversion period may be approved by a competent authority/certification body, where there is a verifiable evidence of no use of non-permitted inputs or activities.

The start of the conversion period shall be calculated from the date of the documented start of organic management or the filing of application for certification from a Certification Body (CB).

2. Maintenance of organic management

Objective:

Organic production systems require a commitment to the use of organic production practices.

Requirement

Organic management does not rely upon switching back and forth between organic and conventional management. Exceptions to this may only be made in cases where compelling reasons to cease organic management on the certified organic land are present and in these cases conversion requirements apply.

3. Split production and parallel production

Objective

The integrity of an organic farm unit is not compromised by the activities and management of non-organic operations undertaken on the same farm.

Requirements

Organic management completely and clearly separates the non-organic and organic parts and products of holdings with split or parallel production, e.g. through physical barriers; management practices such as the production of different varieties or the timing of harvest; storage of inputs and products.

4. Avoiding Contamination

Objectives

Organic management strictly limits the use of synthetic inputs at all stages of the organic production/supply chain and exposure of people and the environment to persistent, potentially harmful chemicals. It minimizes pollution and degradation of the production/processing unit and surrounding environment from production/processing activities. It also excludes certain unproven, unnatural and harmful technologies from the system.

Requirements

Organic management takes precautionary measures to avoid contamination that could affect the organic integrity of the supply chain. Precautionary measures may include barriers/buffer zones in production. Specific distances of the buffer zones/plants depend upon the risk of contamination to be addressed and agro-climatic conditions of the locality.

Measures must be taken to prevent contamination in the use of equipment including cleaning and cleaning records.

Organic management actively addresses risks of contamination. Where there is reasonable suspicion of contamination, efforts shall be made to identify and address the source of contamination.

Appropriate analysis should be done when high risks of use or contamination of prohibited materials is identified to confirm the organic integrity.

Organic management systems do not use all materials and/or the products produced from genetically modified organisms (GMO) in all stages of organic production and processing. Having identified wastes and pollutants, a plan should be developed and implemented to avoid or reduce wastage and pollution by recycling the waste. Non-recyclable wastes such as batteries, foils, plastics and others shall be properly disposed to avoid contaminating the organic farm.

5. Land, soil fertility and water management

Objectives

Organic production systems conserve and improve the soil, maintain both ground and surface water quality and use water efficiently and responsibly. Risks of environmental pollution are identified and minimised.

Soil fertility management nourishes plants primarily through the soil ecosystem and achieves nutrient balance.

Requirements

Land clearing and preparation by burning vegetation is prohibited except where it is part of an established and well managed traditional management practice e.g. slash and burn shifting cultivation where it is to be restricted to a minimum.

Organic crop production systems employ measures to prevent land degradation, such as erosion, salinisation and other related risks to soil loss and degradation.

Organic crop production systems conserve or improve soil physical, chemical and biological properties including; organic matter, fertility and soil biodiversity.

Organic crop production systems enhance soil primarily by employing cultural management practices, incorporating manures and other biodegradable inputs, and/ or by nitrogen fixation from plants.

Soil fertility management employs measures to recycle organic materials within the production system where possible such as green manuring and composting.

Organic soil fertility management uses only naturally occurring mineral fertilizers and only as a supplement to biologically-based fertility methods such as green manures and compost.

Organic soil fertility management uses only crop fertility substances that are listed in [Appendix 1](#).

Organic soil fertility management does not use:

- Synthetic fertilizers;
- Fertilizers made soluble by chemical methods, e.g. superphosphates.

Organic soil fertility management does not use human excrement on food crops.

Organic management uses water resources to meet farm production requirements to optimise water use and prevent wastage.

Organic management prevents pollution of the environment and preserves the quality of land and water.

6. Choice of crops and varieties

Objectives

Appropriate crops and varieties are grown to suit local conditions (growing condition and market). The organic integrity of crops is maintained in production

Requirements

Operators are encouraged to preserve the genetic integrity of varieties and traditional ecotypes. Use of locally sourced or native varieties is encouraged while the use of GMO varieties is prohibited.

Organic crop production uses seed and planting materials that come from organic agriculture systems unless such seed and materials are unavailable. The use of quality seeds and planting materials is encouraged.

Organic crop production systems use untreated seeds and planting materials whenever available. If treated, they are treated only with substances that are listed in Appendix 2 unless treatment with other substances is required or unless seed and planting material not treated with these other substances is unavailable. In these situations any prohibited chemical treatment shall be removed from the seeds or planting materials before use. Exemptions are limited in time or subject to review.

7. Ecosystem Management and Diversity in crop production

Objectives

All farming systems ensure the long-term management and resilience of an organic farm holding by respecting, maintaining, improving and completing ecological cycles and the quality of ecosystems and the landscape

The selection of crop and varieties is based on an understanding of their adaptation to local conditions, pests and diseases and the broader ecological relationships present in healthy farming systems.

Requirements

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

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

Organic crop production includes the use of diverse plantings as an integral part of the farm management system. For perennial crops, this includes the use of plant-based ground cover. For annual crops, this includes the use of crop rotation practices, cover crops (green manures), integrated crop management, intercropping or other diverse plant production with comparable achievements.

Organic crop production systems produce terrestrial crops in soil-based system

8. Pest, disease, weed and growth management

Objective

Crop production management systems promote and sustain the health of crops while maintaining productivity and the integrity of the agro-ecosystem.

Requirements

Organic crop production management employs interrelated positive processes and mechanisms for the management of pests, diseases, and weeds. These include but are not limited to site and crop adapted fertility management and soil tillage, crop cultural practices, choice of appropriate varieties, enhancement of functional biodiversity e.g. planting host plants for beneficial organisms, mulching to control weeds. In case additional measures are required, thermal controls and the use of crop protectants and growth regulators are permitted.

Organic crop production uses only substances for pest/disease/growth management that are listed in Appendix 2.

III - WILD HARVEST

Objectives

The harvesting of products from wild or common land areas is undertaken sustainably, does not use prohibited inputs or practices and ensures products are not contaminated.

Requirements

Organic wild harvest management ensures that harvesting does not exceed the sustainable yield of the harvested species or otherwise threaten the local ecosystem.

Organic operators harvest products only from within the boundaries of the clearly defined wild harvest area. The area have not been used for agriculture or applied with prohibited substances at least 3 years.

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

Wild harvest areas are at an appropriate distance from conventional farming, pollution and other potential sources of contamination.

IV. POST-HARVEST, HANDLING, STORAGE, TRANSPORT, PROCESSING AND PACKAGING

1. Post Harvest Management

Objective

Post harvest management maintains the organic integrity of organic produce.

Requirements

Post harvest management takes measures to prevent contamination and co-mingling of organic produce with non-organic produce, for example in the threshing, peeling, cleaning, cooling, cutting, drying and on-farm packing of produce.

2. Processing and Handling

2.1 General

Objectives

Processing and handling management systems maintain the organic integrity of organic products.

Requirements

Organic processing management takes measures to prevent contamination of co-mingling of organic products with non-organic products in processing, handling, and packaging.

Process should be managed following the principles of good hygienic practices or good manufacturing practices.

2.2 Ingredients

Objectives

Organic processed products are made from organic ingredients

Requirements

Organic processing uses only ingredients from organic agriculture except for when they are not available and subject to the labelling requirements in Section VI. The same ingredient in a product shall not be derived from both an organic and a non-organic source.

Organic processing uses only food additives if they are listed in Appendix 3.

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.

2.3 Processing Methods

Objectives

Organic food is processed by biological, mechanical or physical processing techniques.

Requirements

For food production, organic processing uses only processing methods that are biological, mechanical and physical in nature such as hulling, milling, fermentation, grinding, pressing and dehydration

Organic processing uses only processing aids, other substances that modify organic products and solvents used for extraction if they are listed in Appendix 3.

Organic processing does not use irradiation (ionizing radiation) techniques.

Filtration equipment shall not contain asbestos, or utilize techniques or substances that may contaminate the product. Filtration agents and adjuvants are considered processing aids and therefore must appear in Appendix 3

2.4 Packaging

Objectives

Packaging and storage/transportation containers do not contaminate the organic product they contain.

Requirements

The packaging, storage and transportation containers used for organic products do not contaminate the organic product. For example – packaging materials or storage containers that contain a synthetic fungicide, preservative or fumigant are prohibited as is the use of reused bags or containers that have been in contact with any substance likely to compromise the organic integrity of a product or ingredient placed in those containers.

Use of packaging materials from bio-degradable, recycled or recyclable sources is encouraged.

2.5 Pest Control

Objectives

During processing, storage and handling – organic products are protected from pests without compromising the organic integrity of the product.

Organic processing management systems control pests according to hierarchy of practices starting with prevention, and then physical, mechanical, biological methods and substances that are in Appendix 3. Pest control examples include the use of physical barriers, sound, ultrasound light and UV-light traps (including pheromone traps), temperature control, controlled atmosphere and diatomaceous earth. Where these practices are not effective, and other substances are used, they do not come into contact with the organic product

2.6 Cleaning, Disinfecting and Sanitizing of Food Processing Facilities

Objectives

Cleaning, disinfecting and sanitizing of food processing facilities do not contaminate organic products.

Requirements

Organic management employs only those systems for cleaning and disinfecting surfaces, machinery and processing facilities that prevent contamination of the organic product.

Disinfecting and sanitizing substances that may come into contact with organic products are water and substances that are listed in Appendix 4. In cases where these substances are ineffective and others must be used, these other substances must not come into contact with any organic products.

3. Storage and transport

Objectives

Organic integrity of produce/product is maintained during storage and transport.

Requirements

Measures to prevent contamination with prohibited substances or co-mingling with non-organic produce/product, including clear identification, shall be taken during storage and transport.

V. LABELLING AND CLAIMS

Objectives

Labelling clearly identifies organic produce and products and provides relevant information for consumers to make conscious choices and avoid misleading them.

Requirements

1. Labelling fully discloses ingredients in the order of their weight percentages and whether or not they are organic. 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”.
2. Labelling identifies the entity legally responsible for the product and the body that assures conformity to the applicable organic standard.
3. Claims that processed products are “organic” are made only if the product contains at least 95% organic ingredients (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 Appendix 3.
4. Claims that processed products are “made with organic ingredients” or similar terms are made only if the product contains at least 70% organic ingredients (by weight for solids or by volume for liquids - excluding water and salt).
5. Labelling does not make “organic” or “made with organic ingredients” or similar terms, or make any organic certification claims on products with less than 70% organic ingredients (by weight for solids or by volume for liquids- excluding water and salt), although “organic” may be used to characterize ingredients on the list of ingredients.)
6. Labelling clearly distinguishes in-conversion products or similar terms from organic products. Labelling ensure that products labeled as “organic” or “in-conversion”, or an equivalent term (e.g. biologic or ecological, transition to organic, conversion to organic), comply with the applicable organic standards.

VI. TRACEABILITY AND RECORD KEEPING

Objectives

Record keeping ensures traceability of organic integrity throughout the whole organic operation by following the production data (e.g. raw material data, production input) and quantity of every step of the supply chain, including sales. It must be transparent and enable easy retrieval of information.

Requirements

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
2. Operators shall maintain purchase, handling and processing records, also stock inventory of all material used for organic production, processing and handling as well as finished products.
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.
4. Records, documentation and accounts shall provide traceability and be made available to the inspector for audit trail and trace back verification at any time.
5. Abovementioned records (including those related to use of sub-contractors) shall follow a retention schedule of at least 5 years

VII. REQUIREMENTS ON THE PERMISSION OF OTHER SUBSTANCES NOT SPECIFIED IN THE APPENDIX 1-4

Objective

Use of substances are in accordance with the objectives of this standard

Requirements

1. To consider using substances other than those specified in Appendices 1-4, the criteria to evaluate these substances are as follows:
 - 1.1 They are consistent with Objectives of Organic Production;
 - 1.2 The use of the substance is necessary/essential for its intended use;
 - 1.3 The use and disposal of the substance does not result in, or contribute to, harmful effects on the environment;
 - 1.4 Substances shall not have negative impact on human or animal health;
 - 1.5 Approved alternatives are not available in sufficient quantity and/or quality.
2. The criteria in Section 1.1 to Section 1.5 are intended to be evaluated as a whole in order to protect the integrity of organic production. In addition, the following criteria are applied in the evaluation process:
 - 2.1 If the substances are used for fertilizing or soil conditioning purposes, they shall be essential for obtaining or maintaining the fertility of the soil or to provide specific nutrient requirements of crops, or specific soil conditioning which cannot be satisfied by the practices specified in Section II to Section IV, or addition of other substances included in Annex... The substances shall come from plant, animal, microbial, or mineral origin that may undergo the following processes such as physical process (e.g., mechanical, thermal), enzymatic and/or microbial process. Their usage for the above purposes shall not have harmful impact on the living organisms of the soil and/or the physical characteristics of the soil;

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

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

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

4. The proposal to add new substances into Appendices 1-4 should include the following information/details:

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

4.2 Information demonstrating that the requirements under Section 1 are satisfied.

Appendices

Appendix 1 – List of Permitted Fertilizers and Soil Conditioners for the Production of Organic Food

Appendix 2: List of Permitted Crop Protectants, Growth Regulators and Seed Treatments for the Production of Organic Food

Appendix 3: List of Permitted Additives, Processing Aids for the Production of Organic Food

Appendix 4: List of Permitted Equipment Cleansers And Disinfectants That May Come Into Direct Contact With Food for the Production of Organic Food