

JONA Organic Standards 2019

Issued on April 1, 2019

Japan Organic & Natural Foods Association

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Note: This “JONA Organic Standards 2019” is a translation of “JONA オーガニック基準 2019” written in Japanese. Please regard the Japanese version as official.

How to read JONA Organic Standards 2019

JONA Organic Standards 2019 presents the standards regarding organic production, processing, handling and others and contains the requirements from JONA's three certification programs.

The following chart shows notations used in the standards. Any part of a sentence in the Standards is categorized in either of the following code.

Notes		Corresponding Programs
Note	Code	
No indication		All programs indicated in sections
Highlighted	aaaaaaaaaaaaaaaa	JONA IFOAM Certification (Not required but occasionally recommended for JAS Organic Certification and JONA Original Certification)
Broken underlines	<u>JONA</u> <u>JONA</u> <u>JONA</u>	JONA Original Certification (Not required for JAS Organic Certification)
Highlighted and Broken Underlines	<u>JONA</u> <u>JONA</u> <u>JONA</u>	JONA IFOAM Certification and JONA Original Certification (Not required for JAS Organic Certification)
Wavy underlines	<u>JONA</u> <u>JONA</u> <u>JONA</u>	JONA-EU certification

§1 Preface

<JAS><JONA IFOAM><JONA Original><JONA EU>

Japan Organic & Natural Foods Association (hereafter JONA) makes these organic standards suited to the natural environment and the dietary customs of Japan, in order to expand healthy, organic agricultural and aquatic product industries and markets; and certifies production processes of organic crops, livestock products, aquatic products, wild plants, and processed foods also distribution process.

The term “certification” applies to both JONA Certification and JAS Organic Certification. “JONA Certification” is limited to use for the certification under this “Organic Standards”, and “JAS Organic Certification” is used for the certification under “Organic JAS”.

JONA inspects and verifies each stage of production, processing, and distribution. Only the operators that their production process was certified by JONA can label certification marks on their products. All applicants must follow *JONA Organic Standard* and *JONA Certification Program* as agreed in the basic contract between the operator and JONA. The operator certified by JONA is responsible to label its organic product as “organic ○○certified by JONA” in accordance with JONA’s instruction. In order to realize those things mentioned above, all members and certified operators must observe and practice *JONA Organic Standards* and *JONA Certification Program* and make efforts to promote organic products. All members and certified operators must not utilize the name of JONA incorrectly or ways may mislead customers and consumers to protect their own interests and JONA’s credibility.

Those policies are important for a healthy growth of organic products industry and the organic market, also to prevent the false of descriptions.

Corrections, additions, or deletions of *JONA Organic Standards* can be proposed by members of JONA. Standards Committee examines and announces on the newsletter a draft of *JONA Organic Standards*, taking into account proposals from members and previous certification decisions. After the announcement, a 30-day period is given for members to question and be answered. Members must submit documented questions on a document to JONA. Then, a 30-day period is taken for evaluation by board members, and the final decision is made at the General Assembly.

New *JONA Organic Standards* come into effect on April 1 of the year when they are adopted in the general assembly. And new Standards need to be implemented basically within 2 year from then. Pre-revised standards will also be in effect for another 2 years.

Therefore, *JONA Organic Standards 2019* come into effect from April 1, 2019 and *JONA Organic Standards 2018* will be valid for two years (until March 31, 2021)

§2 Purpose of Organic Certification

<JAS><JONA IFOAM. ><JONA Original><JONA EU>

The purposes to promote organic certification of the production process of crops, livestock products, aquatic products, wild plants and processed foods are listed below:

- §2-1 In order to maintain and increase productivity, and to protect the natural environment with its ecological system from pollution caused by use of synthetic agricultural chemicals, chemical fertilizers, pharmaceutical products;
- §2-2 With a long term view, to establish local agriculture, food processing and distribution systems that would fully use sustainable resources.
- §2-3 To protect human health from the harmful effects of foods processed chemically, by promoting natural, traditional food processing
- §2-4 In order to make the living environment safe and reliable, establishing an audit trail system which will make it possible to confirm that food products are produced and processed within the process in accordance with *JONA Organic Standards*, and to find out dates, places, people, and methods related to the production and distribution.
- §2-5 To increase the reliability of organic certification by using *JONA Organic Standards* to keep objective certification decision. JONA maintains its position as a third-party certification organization.

JONA holds *JONA Organic Standards* to define what JONA regards as organic to fulfill the purposes above. JONA members and the certified operators equally follow the purposes and contribute through application for certification and promotion activities.

§3 Definitions

<JAS><JONA IFOAM><JONA Original><JONA EU>

JONA Organic Standards make the following definition of terms:

§3-1 About Certification

§3-1-1 JAS Certification:

Evaluation by JONA of the status by JONA Certification Program where the operator to follow Technical Criterion set by Ministry of Agriculture, Forestry and Fishery produces in compliant with Organic Standards and Japan Agricultural Standards (JAS). The certified operator can label Organic JAS marks. Please refer to *JONA Certification Program* for the details.

§3-1-2 JONA Certification:

Evaluation by JONA of the status of the operator who implements *JONA Certification Program* produces according to *JONA Organic Standards*. The certified operator can label JONA IFOAM mark or JONA Original mark, up to the certification program they seek. Please refer to JONA Certification Program for the details. In *JONA Organic Standards* the term “certification” is generally used; “JONA Certification” expresses only “JONA IFOAM Certification” and “JONA Original Certification”.

§3-2 About Agricultural & Aquatic Products

§3-2-1 Organic Risk:

The risks to contamination by prohibited substances and co-mingling with non-organic products in the process of productions of organic food (organic agricultural products, organic processed food, etc) . The certified operator is to have management to minimize the risks.

§3-2-2 Organic Food:

A collective term of organic agricultural products, organic processed foods and so forth.

§3-2-3 Organic Agricultural Products:

1. Agricultural products that meet JAS for Organic Agricultural Products ; JAS marks can be labeled.
2. Agricultural products that meet JAS for Organic Agricultural Products and this Organic Standards. ; JONA IFOAM marks can be labeled.
3. Agricultural products that are not covered by JAS but meet Organic Standards. ; JONA Original Marks can be labeled.

§3-2-4 Organic Processed Foods:

Processed products that meet JAS for Organic Processed Foods. Organic JAS marks can be labeled. Organic Processed Foods include three categories defined: 1. Organic Agricultural Processed Foods, 2. Organic Livestock Processed Foods, 3. Organic Agricultural and Livestock Processed Foods.

§3-2-5 Organic Agricultural Processed Foods:

1. Organic products, whose weight of organic agricultural products in its ingredients (except for water, salt and processing aids) shall be more than 95%. Organic JAS marks can be labeled.
2. Organic products which meet Organic JAS and also meet *JONA Organic Standards*. It can be labeled with JONA IFOAM marks.

§3-2-6 Organic Livestock Processed Foods:

1. Organic products, whose weight of organic livestock products in its ingredients (except for water, salt and processing aids) shall be more than 95%. Organic JAS marks can be labeled

2. Organic products which meet Organic JAS and also meet *JONA Organic Standards*. It can be labeled with JONA IFOAM marks.

§3-2-7 Organic Agricultural and Livestock Processed Foods:

1. Organic processed products other than organic agricultural products and organic livestock products.

Organic JAS marks can be labeled.

2. Organic processed products which meet 1., also meet *JONA Organic Standards*. JONA Original Marks can be labeled.

§3-2-8 Non-JAS Organic Products:

Organic agricultural products and organic processed products that are not covered by Organic JAS; hydroponics, agricultural products from special type of production such as rock wool cultivation, apiculture products, aquaculture and aquatic products from wild collection, and alcoholic beverages (including products made from alcohol). and.

§3-2-9 Organic alcoholic beverages:

National Tax Agency (NTA) possess the jurisdiction over alcoholic beverages, thereby Organic JAS mark cannot be labeled on any alcoholic beverages. NTA implemented the labeling standards for organic alcoholic beverages (notified 26th December 2000). JONA certifies alcoholic beverages processors based on Organic Standards and NTA's labeling standards for organic alcoholic beverages. Either JONA original mark or JONA IFOAM mark can be labeled with, depending on the program raw material suppliers are certified under. Refer to *JONA Certification Program* for the details.

§3-2-10 Organic Livestock Products:

1. Livestock products that meet JAS for Organic Livestock Products. JAS marks can be labeled.

2. Livestock products that meet JAS and Organic Standards. JONA Original Marks can be labeled

§3-2-11 Organic Feed:

1. Feed that meet JAS for Organic Feed. JAS marks can be labeled.

2. Feed that meet JAS and Organic Standards. JONA Original Marks can be labeled

§3-2-12 Organic seed and seedling: Organic seed that meets JONA Organic Standards or organic seeds certified under organic regulations of a country or an area that Japan recognizes as having equivalent organic regulations.

§3-2-13 Collected Aquatic Products:

Fish, shellfish and seaweed collected by capturing and gathering, including seedlings that are released and collected, in closed water areas.

§3-2-14 Aquaculture products:

Fish, shellfish and seaweed cultivated in a controlled environment, including the products caught after seedlings of them were released.

§3-2-15 Wild plants:

Plants grown naturally in a farm or non-agricultural area such as woods and wasteland?

§3-2-16 Farm:

An area of land /water and its environment used for harvesting products of agriculture or animal husbandry or aquaculture.

§3-2-17 Crop Rotation:

Rotation of various kinds of annual crops on the same farm to maintain or improve soil fertility, reduce pests, weeds, and disease problems; and to prevent replant failure. Perennial plants are exempted.

§3-2-18 Fallow Field:

In order to prevent pest and disease problems and replant failure, a field must be left fallow for a certain period of time. The period varies depending on the farm environment and the situation of the crops and should be based on a long-term plan.

§3-2-19 Non-cultivation Field:

Field that was cleared or has not been cultivated or managed for some reason after the start of organic management is confirmed.

§3-2-20 Conversion Period:

The period needed for a transition from conventional production to the production defined in JONA Organic Standard and Organic JAS Standard in the production of crops, animal husbandry, aquaculture, and so forth. The production shall meet with all the requirements of those standards for the duration of the conversion period.

§3-2-21 Greenhouse production with a heating facility:

Greenhouse with a heating system (to increase the room temperature of the greenhouse) uses energies other than solar energy. Energy that was stored by converting solar energy into thermal or chemical energy for heating the greenhouse should be considered as artificial energy.

§3-2-22 Greenhouse production without any heating facility:

Greenhouse with no heating system but solar light to increase the room temperature of the greenhouse.

§3-2-23 The Start of Conversion:

The evaluation of the start of conversion starts at the time of receiving application documents, and the start of conversion is verified by an on-site inspection. The start of conversion could be backdated to the end of harvest of the season where prohibited substance was lastly used if it can be verified by adequate records.

§3-2-24 Buffer Zone:

The zone in organic fields separately controlled by a producer where contamination from the surroundings is possible. See §4-1-3 for detail.

§3-2-25 Split Production:

Production where both only part of production of the farm or processing unit is organic.

§3-2-26 Parallel Production:

Split production where the same variety is produced in the farm or processing unit for organic and non-organic.

§3-3 Materials and Resources

§3-3-1 Agricultural Chemical:

Agricultural Chemical stipulated in the Clause 1-2 -1 and 1-2-1 of Agricultural Chemical Regulations Law issued by MAFF.

§3-3-2 Fertilizers and Soil Conditioners:

Fertilizers stipulated in the Clause 2-1 of Fertilizer Control Law issued by MAFF. Soil conditioners are included in fertilizers.

§3-3-3 Pest/weed Control Material:

Materials such as covering materials (mulches), insect nets, agricultural chemicals and so forth.

§3-3-4 Synthetic Pesticides:

Agricultural chemicals made by chemical method such as synthesis and dissolution

§3-3-5 Chemical Fertilizers:

- Fertilizers made by chemical methods such as synthesis and dissolution
- §3-3-6 **Pharmaceutical Products:**
Pharmaceutical products such as preservatives, pesticides, germicides, those used in the livestock farming, fish raising, and food processing, made by chemical methods such as synthesis and dissolution
- §3-3-7 **Food Additives:**
Additives (including processing aids) stipulated in the Food Sanitation Law. The materials added in food processes. They include antioxidant, thickening agent, color developing agent, coagulating agent, coloring agent, baking powder and so forth.
- §3-3-8 **Processing Aids:**
Materials added in the processing process but not present in the final product. It is not necessary to display these as additives.
- §3-3-9 **Feed Additives:**
Additives such as anti-oxidants, desiccants, stabilizers, thickeners, colorings, and nutritional supplements, produced by the artificial methods such as synthesis and dissolution
- §3-3-10 **Natural Materials:**
Materials existing in the natural environment and derived from living creatures and not made by chemical method, these include materials managed physically, such as by crushing and burning.
- §3-3-11 **Allowed Materials:**
Agricultural chemicals, fertilizers, soil conditioners, pest/weed control materials and food additives listed in annexes of JAS. In case of liquor processing, the material allowed by NTA regulations and so forth. Refer to annexes of JONA Organic Standards in case of JONA IFOAM Certification and JONA Original Certification.
- §3-3-12 **Prohibited Materials:**
Agricultural chemicals, fertilizers, soil conditioners, pest/weed control materials and food additives that are not allowed for use. The material in the annexes used against its proper usage is considered a prohibited material. They may include chemicals if emitted from or eluted from plastics, building materials and so forth.
- §3-3-13 **Organism of Genetically Engineering and its derivatives**
Organism or its derivatives that are acquired in such ways as alternation of DNA or RNA, genetic code carriers, by chemical agents, restricted enzyme, bacteriophage and so forth. Not included are genetic transduction by use of plasmid, breed improvement by hybridization and so forth. Genetic Engineering covers seeds, input materials and chemical agents (vaccine, antibiotic etc) and food additives.
- §3-3-14 **Environmental Hormone:**
Endocrine disturbing chemical. Chemical substance which works just like natural hormone and/or disturbs activities of natural hormone in the ecological systems.
- §3-3-15 **Irradiation:**
Method to eliminate micro-organisms by irradiation. It is prohibited because it may cause serious changes in the protein and nucleic acids.
- §3-3-16 **Municipal Sewage Sludge:**
Sludge that are acquired in agglutination and deposition processes of water quality improvement of municipal sewage and household sewage. Sewage has a high risk to contain heavy metals, surface active agent, environmental hormone, synthetic anti-bacterium chemicals, chemical medicines and etc.
- §3-3-17 **Test Item and its Maximum Allowance:**

Items to be tested and analyzed such as soil, water, crops or facilities and its maximum allowable level. In case of excess of maximum allowance, the applicable fields or products might be requested for cancellation or callback of the products. This is different from an inspection item.

§3-3-18

Nanomaterials:

Substances deliberately designed, engineered and produced by human activity to be in the nanoscale range (approx. 1-300 nm) because of very specific properties or compositions (e.g. shape, surface properties, or chemistry) that result only in that nanoscale. Incidental particles in the nanoscale range created during traditional food processing such as homogenization, milling, churning, and freezing, and naturally occurring particles in the nanoscale range are not intended to be included in this definition.

§3-3-19

Chemical treatments:

Treatment to change chemical structure of substances by chemical methods (except for burning, calcining, melting, dry distilling and saponifying ; hereafter the same) or treatment to add substances which are obtained by chemical treatments (including the case in which final produce does not contain the added substances).

§3-4 Miscellaneous

§3-4-1

Certification Program:

Management systems and procedures by which the applicants and the certified operators should follow, before and after the certification. These procedures include submitting an application, examination of documents by the Certification Committee members and/or inspectors, on-site inspection by inspectors, judgment of the certification, confirmation of conditions of organic practice, approval of the method of display, issuing application and confirmation certificate for transaction, obligation to report sales volume, payment of fees, etc.

§3-4-2

Display of Certification:

Expressions or displays labeled on the products of certified operators. Certified operators can use JONA mark and logo on the products, brochures, publications to display their products are compliance with Organic Standards.

§3-4-3

Labeling of Grading:

Display of JAS certification based on JONA Organic Standards and JONA Certification Program. It is expressed by Organic JAS marks and indication of “organic” and the name of certification body.

§3-4-4

Applicants for Certification:

Applicants who are to apply for the certification by JONA. Membership is not required. The applicants include main applicants and sub-contracted applicants.

§4 Organic Crop Standards

The principle of organic crop production is to build soil with natural circulation ability without using agricultural chemicals or chemical fertilizers, so environmental impact shall be minimized and aim to increase biodiversity.

§4-1 Environmental Requirements for Organic Farm

<JAS><JONA IFOAM><JONA EU>

- §4-1-1 Sustainable organic agriculture must be put into practice on a whole farm or a part of the farm, using recycled organic matters effectively in principle. Under EU-equivalent program, parallel production is not allowed in principle except for the cases defined in §4-1-18.
- §4-1-2 Producers of split production must cleanly separate each of the two kinds of produce and production systems, physically and visually, in whole process from cultivation, to post-harvest handling, to storage, and to transportation.
- §4-1-3 In cases there are organic risks such as contamination from adjoining conventional farms, the operator shall set buffer zones by assessing the risk. The width of the buffer zones depends on the risk of contamination, and operator's risk control. In principle, at least four (4) meter width buffer zone should be set, if there is adjoining conventional farm on the same ground level, however, JONA evaluates the settings of buffer zones case by case, considering the geographical conditions, planting items, and operator's risk control and management.
- §4-1-4 In case of perennial crop production, the conversion period from conventional to organic is required to be a minimum of three (3) years prior to harvest of the certified organic crop. In case of annual, a minimum of two (2) years prior to sowing or planting is required.
- §4-1-5 The products can be labeled with "organic in conversion" if the field do not satisfy §4-1-4 but has past one (1) year since the start of conversion ("Organic in-conversion" cannot be labeled under JONA IFOAM Program.)
- §4-1-6 In case of non-cultivation field where JONA verifies in its evaluation that prohibited material has not been used for the last two (2) years, the conversion period is required to be no less than one (1) year before the first harvest of perennial plants or before sowing or planting of plants other than perennial plants.
For verification of non-cultivation, the operator needs to have records that shows history and obtain supporting evidence such as declaration on non-sue of prohibited substance from other managing person (including a public organization), certification information in the past, and it needs to be verified as compliant and trustable in the JONA's evaluation.
- §4-1-7 There must be no serious sources of environmental contamination around a farm. An incinerating plant, a garbage processing plant, heavy and chemical industries, etc. can be source of environmental contamination. When contamination is suspected, JONA shall require testing of soil, residual agricultural chemical, water and/or so on.
- §4-1-8 Harvested crops must not be irradiated..
- §4-1-9 In case there are risks of contamination from adjoining conventional farm, from aerial application and/or kitchen garden, the operator must prevent the certified organic field from contamination. The operator must collect information and understand about the agricultural chemical used, the timing of aerial application, operators who apply pesticide and other relevant information in order to take action to avoid contamination.
- §4-1-10 It is forbidden to use prohibited materials on the soil and plant. An adequate strategy must be

developed If there are possibilities of contamination from an adjoining farm, from machinery and equipment, irrigation water, and chemical spraying. When contamination is suspected, testing of soil or water and residue testing for agricultural chemicals would be done the method written in §11-5. It is recommended to assess such tests periodically in order to avoid contamination risks.

- §4-1-11 Records and reports regarding to production, management, materials etc must be preserved properly for five (5) years (in case of JAS certification, three (3) years) and must be available for auditing, when requested.
- §4-1-12 To be certified, a farm must be continuously managed with organic agriculture methods. Otherwise, a farm cannot maintain the requirements of the standards and cannot be certified organic. (A farm cannot be rotated between organic and conventional one year after another.)
- §4-1-13 Related plants, facilities, machineries and equipment must not be contaminated by prohibited materials.
- §4-1-14 The operator must supply sufficient information on fertilizers, soil conditioners and pest/weed control materials if they use them. An approval or rejection of use depends on the information, but intentional sabotage of supplying the information results in cancellation of evaluation. The operator shall collect documents about ingredients and production process of an input from a manufacturer and evaluate if it is in line with the substance lists. It is recommended to obtain the documents every year as ingredients and/or production flow may change in some circumstances. The approved input may only be used in so far as the corresponding use is authorized in general agriculture in the country in accordance with the relevant national provisions in conformity with law.
- §4-1-15 The conversion period starts from the date of JONA's on-site inspection after the harvest of the crop where a prohibited material is lastly used. Cultivation managements and field managements need to be properly recorded and, additionally, additional information such as declaration on non-use of prohibited substances, management records, and certification information in the past, needs to be obtained. If JONA verifies it to be accurate and trustable in its evaluation, it can recognize the following time as the beginning of organic management.
- The harvest of the crop where a prohibited material is lastly used.
 - Organic cultivation activity that was planned: Applicable only to activity prior to the first harvest of perennial crop.
- §4-1-16 If mud or muddy stream enters into the certified fields in case of such incidents as natural disasters or accidents, certification status might be altered after contamination is evaluated.
- §4-1-17 Farming materials and tools must be handled with concerning on the environmental impacts. Plastic materials must not be burned on the soil but collected properly.
- §4-1-18 It is recommended to put a sign on the certified field as such. Display shows the name of the farmer and its contacts, the name of certified operator and its contacts, the name of certification body, and the date of the certification. The size of the sign is not restricted but should be large enough to recognize.
- §4-1-19 Under EU equivalent program, where it is necessary in order to ensure that organic production can be initiated or maintained on holdings confronted with climatic, geographical or structural constraints, parallel production is allowed for the production of perennial crops, where varieties cannot be easily differentiated, provided the following conditions are met:
1. the production in question forms part of a conversion plan to organic production in the shortest possible period which may not in any event exceed a maximum of five years;
 2. appropriate measures for separate control have been taken appropriately;
 3. the operator notifies JONA of the harvest of each of the products concerned at least 48 hours

in advance:

4. upon completion of the harvest, the producer informs JONA of the exact quantities harvested on the units concerned and of the measures applied to separate the products;
5. the conversion plan and the control measures have been approved and confirmed each year by JONA

§4-2 Soil and Soil Building

<JAS><JONA IFOAM.><JONA EU>

Soil must be in good condition with well-balanced organisms, minerals and trace elements necessary for plant growth. It is necessary to build soil appropriately for improving productivity of the fields in a long term. It is also important to manage soil building by integration with natural circulation and by not depending too much on fertilizers and so forth.

- §4-2-1 The use of chemical fertilizer destroys the nutritional balance and causes a decrease in nutrition, a decline in the ability to supply nutrition to plants, destruction of aggregate structure, and a delay in the growth of micro-organisms. Excessive use of chemical fertilizer may cause oxidation of soil, contamination of environment, problems for plant growth due to excessive nitrogen and as a result, it may cause destruction of ecosystem of the field. Therefore, chemical fertilizers are prohibited.
- §4-2-2 Use of synthetic chemical materials such as synthetic agricultural chemicals, herbicides and soil conditioners eliminates or decreases micro-organisms, natural enemies and biological diversity. As a result, these materials cause problems for plant growth and inhibit their function of pest and disease control which can be done by their own ecosystem. Therefore, synthetic chemical materials are prohibited. **Chilean nitrate is also prohibited.**
- §4-2-3 Soil in good condition has aggregate structure and many active micro-organisms such as microbes; earthworms; insects; etc. In times of drought, the soil can hold water; and in times of flood, soil must be well drained. Soil should have sufficient nutrients that can supply good growing conditions for all plants.
- §4-2-4 Soil conditioner should not be excessively used for the sake of adjusting soil characters and/or acidity. Excessive usage may cause destruction of nutrients balance of soil, decrease of natural power in soil to supply nutrition, destruction of aggregate structure, destruction of living conditions for micro-organisms and so on. For soil improvement, it is recommended to practice organic method such as using organic compost, crop rotation and green manure, fallow and so on. Biological soil conditioning may include introduction of organisms (not genetically modified only) from outside.
- §4-2-5 Irrigated water should not be used excessively on organic field except paddy field. It will wash out mineral and trace elements from the soil and /or cause contamination to under-ground water. The amount of underground water for use should be in line with a local regulation.
- §4-2-6 The policy should be taken to prevent salinization in the soil. Excessive irrigation, drying of soil in warm house, input of pre-matured compost will cause salinization. Rotation of crop, fallow and/or input of green manure is effective against salinization.
- §4-2-7 Soil should be managed well to protect erosion caused by water flow and/or wind. Planting windbreak trees, covering ridges (foot path or boundary of field) between fields with grasses and/or making ditches alongside of fields are methods to be taken by producers.
- §4-2-8 Fully matured compost contains abundant plant hormones, humus, organic acids, and promoters of plant growth. Proper application of compost can build a healthy soil and control plant growth.

- §4-2-9 The operator should produce fully matured compost with recyclable organic matters and apply them to production units in an appropriate manner. Organic matters, ingredients of fully matured compost and fertilizer should be obtained on farm as much as possible.
- §4-2-10 Organic producer shall set their own targeted goal for organic matters, ingredients of compost and fertilizers from “inside” farm not to depend on those from the outside. The yardstick of organic matters and fertilizers from outside should be less than 50% of all amount applied to the farm (less than 10% in case of rice production, and less than 30% in case of tea production) of the amount of all inputs, including those made inside the farm. The inputs from “inside” farms may include 1. Green manures and inputs that derive from residue from fields under control of the producer, and 2. inputs produced not only in the producer’s neighborhood but in the approximate areas (e.g. in the same prefecture or the same city, town, or village).
- §4-2-11 Manure should be composted and matured for at least ninety (90) days and fully cooled down. Heat generated by composting can eliminate pests and causes of diseases. Usage of manure, which is not fully composted may destroy the ecosystem of the soil and its ability to supply nutrition.
- §4-2-12 In the case that manure is brought in from outside of the farm, explanatory documents, transaction records, records of usage and inventory must be kept. Fertilizers which are not applied and/or inspected at the time of certification should be reported to JONA of those supplier, producers, contents etc.
- §4-2-13 Fertilizers in addition to compost are listed as follows: rice bran, soy bean refuse, rape seed refuse, brewer’s grain and plants such as rice straw, grasses, leaves, and fully fermented barn manure and powders of bone or blood. However, animal excrement, burn manure, refuse of soy bean and rape seed, may contain GMO, GMO derivatives or medicine made by genetic engineering. Also, sewage sludge and fertilizers made from animals such as leather treated by chrome tanning, bone powder or blood powder may contain heavy metal. Users should check its origin and/or method of making those materials.
- §4-2-14 Plants with imbalances of essential micro nutrients which plants need for germination and growth, as well as other micro nutrients and microorganisms have serious effects on human health. It is necessary to make the soil in good condition with micro-nutrients and micro-organisms.
- §4-2-15 When fertilizer or soil conditioners, the standards of the applicable material on the material list must be observed. Its use must be well recorded and managed. Specification of that material together with reasons to use it must be submitted to JONA prior to using it.
- §4-2-16 Not only for fertilization but also to prevent surface soil from erosion, it is recommended to plant green manure and plant crops to cover the soil. It needs to make land-up and/or drain ditch to prevent outflow of the soil from the fields. The origin of seeds and seedlings of green manure and covering plants shall be identified. The seeds and seedlings shall be basically in accordance with §4-6.
- §4-2-17 Over-use of such input as fertilizers shall be restricted as it may cause contamination of underground water, environmental destruction and/or unbalanced of nutrients for crop. In addition, the amount shall be decided according to compositions of fertilizers for use, conditions of soil, characters of crops, standards (i.e. nitrogen limit of conventional production) set by a local government or in a region, and so forth. Total amount of input in nitrogen is restricted by each kind of crops (please refer to §11-1 and §11-5).
- §4-2-18 Human excrement (feces and urine) shall not be used. However, methane fermented digestive liquid (except for composted sludge) as listed in material list is allowed.
- §4-2-19 When enormous amount of soil is put into a field certified as organic, organic management shall have to start again as soil is not able to keep its nature.

§4-2-20 The removal of soil from the farm is prohibited. Incidental removal of soil when harvesting crops is permitted.

§4-2-21 Appropriate preparations of micro-organisms may be used to improve the overall condition of the soil or the availability of nutrients in the soil or in the crops.

§4-3 Planting

<JAS><JONA IFOAM.><JONA EU>

It is recommended to plant the right crops in the right place and rotate crops in order to sustain and increase the productivity of the farm in the long term.

§4-3-1 The damage to the farm caused by repeated cultivation cannot be corrected by putting chemical fertilizer or fumigation or disinfecting, which consequently leads to abandonment of the farm. Therefore, it is highly recommended to prevent replant failure and have crop rotation system for sustaining and improving the potential of the soil to reproduce.

§4-3-2 The crop rotation system can be made using leguminous plants and rice plants and by leaving the field fallow.

§4-3-3 It is not obligatory to annually rotate paddy fields for rice, as repeated cultivation of rice does not cause significant damage.

§4-3-4 Mass cultivation of the same crops causes imbalanced consumption of soil nutrition and may cause diseases and pests specific to the crops. Maintaining high volume of harvest of the same crops from the same field every year leads to conventional agriculture, which heavily relies on agricultural chemicals and chemical manure. Planting of various crops may maintain a natural ecosystem.

§4-3-5 In order to prevent nematode worms and pests, traditional ways of planting can be used, such as mixed planting with leeks (Nira, Negi) etc.

§4-3-6 It is recommended to use allelopathic plants in order to increase the growth of crops and to eliminate pests. Allelopathic plants refer to the plants that help or regulate growth of a specific type of plants. One example is corn cockle that helps wheat plants grow.

§4-3-7 The proper period of fallow should be set to prevent damages caused by continuous cropping and decrease of soil productivity. If the same kind of crop is planted on the same field a longer period of fallow is needed, therefore, crop rotation system including fallow plan should be established.

§4-4 Disease and Pest Control

<JAS><JONA IFOAM.><JONA EU>

In order to prevent diseases and pests, the farm is to be controlled through a combination of organic practices which are based on choosing the right crops, establishing a system of crop rotation, fertilizing in a well-balanced way, and building healthy soil. Pest and weed control must be done in physical, biological, or cultivation methods in principle.

§4-4-1 The varieties that have resistance to diseases should be selected for cultivation.

§4-4-2 It is prohibited to use crops, microorganisms or viruses that are genetically engineered and their derivatives for crop protection.

§4-4-3 It is recommended to use sexual, visual, and physical traps; pesticide lights; and natural enemies, in

order to prevent diseases and pests

§4-4-4 Materials on Material List could be used in case that physical, biological and cultivation methods described in 4-4-1 to -3 are not effective.

§4-4-5 Disease and pest control should be based on cultivation method of such as choosing a right crop, crop rotation, field rotation, fallow. However, sterilization by using transparent sheet (vinyl chloride is prohibited) or mulch and/or cover grass and/or sterilization by hot water or steam may be adopted. In this case, used mulches must be handled in line with §4-1-15. Other ways for sterilization are prohibited. In case of JONA-IFOAM certification, thermal sterilization of soils is prohibited except for the instance of severe disease or pest infestation that cannot be otherwise remedies through measures described in 4-4-1 – 4-4-4.

§4-4-6 Mulching with recycled paper (not added with synthetic substances in its manufacturing process) is allowed as a physical weed control.

§4-5 Weed Control

<JAS><JONA IFOAM.><JONA EU>

Weed grows favorably in such conditions as imbalance of water containment in soil, of sunlight and of soil nutrition and excess of nutrition. Weed should be controlled by improving those conditions, such as crop rotation, soil covering crops, green manure, and fallow fields, etc.

§4-5-1 Weed control should be done by physical, mechanical, and biological methods. Physical methods include hand picking and cultivators and biological methods by ducks, mud snails and carps and etc.

§4-5-2 Use of covering materials for weed control is allowed. Refer to Material List for the details.

§4-5-3 It is prohibited to use a large amount of fossil fuel for weed control.

§4-5-4 It is not allowed to use for weed control any other materials than those regulated in Material List.

§4-6 Seeds (including Bulbs & Rhizomes), Seedlings, Grafting and Root Stock

<JAS><JONA IFOAM><JONA EU><Organic Original (Organic seed only)>

What should be used in principle for organic agriculture are organic seeds, seedlings and so forth, including nursery trees, scions, root stock and a part of plant for reproduction in line with §4-1 through 4-5, 4-7 through 4-10 and JAS Article 4.

§4-6-1 The crops and variety should be selected to suit to local conditions of soil and climate taken into account. It is recommended to prioritize the varieties known as suitable for organic cultivation.

§4-6-2 Seeds and seedlings must not be treated with prohibited materials.

§4-6-3 It is not allowed to use prohibited materials in order to select seeds.

§4-6-4 Seedlings shall be grown on organic fields. The soil where seeds and seedlings are growing should come from the certified fields in principle, fertilizers from Table 1 of Organic JAS Standards, and/or soil that prohibited substance is not applied to for at least two years can be used and seedlings must not be treated with prohibited materials during its nursing period. Seeds of certified organic seedlings must be organic.

§4-6-5 Seeds that are enclosed in agricultural materials made without use of synthetic substances from recycled fibers from cotton linters can be used. However, the agricultural material cannot be used if

they are made from genetically engineered cotton.

- §4-6-6 Seeds made by genetic engineering; and seeds, seedlings, base trees, cuttings, and pollen derived from plants which have been made by genetic engineering are prohibited.
- §4-6-7 If organic seeds, seedling and so forth are hard to obtain, seeds and vegetative propagating materials from a production unit in conversion to organic farming may be used. Where the above is not available, non-organic seeds and vegetative propagating materials that are not grown or treated with prohibited substances may be used.
In case that it is hard to obtain even the conventional seed, seedlings and so forth described above, the following may be used: 1. Seeds that are not grown with persistively effective synthetic fertilizer or agro chemicals in case of seed propagation and 2. in case of vegetative reproduction, the youngest seedlings that could be obtained (except for seeds and seedlings of edible sprouts for its production). The reasons for not being able to obtain organic seeds and seedlings must be reported to JONA. In case of JONA - IFOAM standards, seeds and seedlings treated with prohibited materials shall not be used.
- §4-6-8 The conditions JONA will take into consideration usage of conventional seed and/or seedling are as follows
1. The F-1 variety, which is found only conventional ones.
 2. The operator needs virus free seeds and/or virus free seedlings.
 3. There are clear economic reasons; such as the cost of organic seeds and/or seedlings is three times higher than conventional ones. (Not applicable for JONA IFOAM and EU-equivalent program)
 4. Maintenance and renewal of variety is necessary
- §4-6-9 The efforts shall be made to use by 2018 organic seeds and seedlings for all cases and if organic seeds, seedling and so forth are hard to obtain, to use those (in case of vegetative reproductions, the seedlings at as young stage as possible), except for the cases that treatments is legally required for phytosanitary purposed. It is recommended to report a transition program.
- §4-6-10 The operator should collect seeds in their own certified fields. It is permitted to use one-third purchased (conventional) seeds for each cultivation if it is necessary to renew them because their own seeds could lose characters. In this case, a program of obtaining own seeds must be reported.
- §4-6-11 Crops of the perennial trees can be labeled with organic twelve months after introduction of seedling as in 4-6-6.
- §4-6-12 Organic seeds and organic plant materials indicated in this section shall be propagated under organic management defined in this standard for at least one generation, or, in the case of perennial crops, two growing seasons before being used for certified organic production.
- §4-6-13 All multiplication practices on the farm, except meristem culture, shall be under organic management.
- §4-6-14 ~~The authorization for use of non-organic seed and plant materials shall be granted before the sowing of the crop and only to individual users for one season at a time. The operator must get approval of JONA for use of non-organic seed and plant materials before sowing or planting them.~~
- §4-6-15 ~~The operator must verify documents to check compliance of seeds with §4-6. Under EU-equivalent program, the operator would need to verify organic certificate to the EU regulations when they use organic seeds.~~
- §4-6-16 ~~Legal requirements to sell or distribute organic seeds and seedlings need to be respected.~~
- §4-6-17 ~~Measures to prevent cross contamination with conventional plants need to be implemented in case of nursing organic seeds and seedlings.~~

§4-7 Adjusting Growth and Pollination

<JAS><JONA IFOAM.><JONA Original><JONA EU>

It is necessary to adjust plant growth for a stable supply of agricultural products, and for economic reason like maintaining stability of the market. However, adjustment using chemical products for prioritizing profits must be avoided, because this is dangerous for people who eat the plants, and it increases danger to the environment. To adjust plant growth and pollination, it is recommended to use physical and biological methods.

§4-7-1 In order to control crop growth, it is recommended to use physical methods such as adjusting hours of sunlight, utilizing sensitivity to light and/or sensitivity to magnet fields, and super-sonic wave. It is prohibited to use hormones and chemical products to control growth.

§4-7-2 Natural pollination should be prioritized, but physical methods are allowed. It is desirable to operate manually, or to use bumblebees and honey bees. Use of chemical products in order to pollinate, and not to make fruit infertile or to raise sugar contents higher in fruits are prohibited. Please refer to the materials lists for the details.

§4-8 Harvesting, Storage and Shipment

<JAS><JONA IFOAM.><JONA Original><JONA EU>

It is necessary to establish and follow a system that makes it possible to confirm that no contamination or co-mingling occurs in such process as harvesting, adjustment, cleaning, selection, storage, and shipment.

§4-8-1 Irradiation to crops is prohibited.

§4-8-2 Organic harvesting, storing and transporting processes must be executed visually and physically separated from non-organic processes. Examples of visual distinction are to set such objects as pickets, signs and boards and to differentiate the color of signs and equipment. Examples of physical distinction are to differentiate the time of harvest, processing, or equipment.

§4-8-3 Pest control at a post-harvest facility shall comply with §9-5.

§4-8-4 Machines and equipment must be always maintained to prevent contamination by fuel and oil. The lubricant oil used for tea cutting machine shall be based on edible oil.

§4-8-5 The harvests from the fields for organic certification must be managed not to be contaminated in storing and transporting processes. If contamination by prohibited material is detected, organic marks must be taken off and those products must be treated as non-organic.

§4-8-6 It is preferable to analyze the water for rinsing organic agricultural products after harvesting and to grasp its risk to food safety.

§4-8-7 In case there are changes of production process caused by forecast of harvests, the place of the warehouse, or the party to sell products the operator must make to JONA prior the report prior to changes with its reasons. Depending on the contents, reapplication or inspection may be needed.

§4-8-8 Records for tracing and documents relating to JONA Certification must be kept for at least 5(five) years. (In case of JAS organic certification, the records necessary for grading must be kept no less than 1 year from the shipment of graded organic products)

§4-8-9 When any production by using GM techniques takes place in farms with split production, the farmer shall not be organic.

§4-9 Greenhouses

<JONA IFOAM.><JONA EU>

The use of “heated greenhouse: a greenhouse with heating facilities” is not allowed in principle. “Greenhouse” defined in JONA Organic Standards refer to “unheated greenhouse: a greenhouse without heating facilities”.

§4-9-1 There might be some exceptions for usage of heated greenhouse by consideration of the local climatic conditions. The variety of the crops should be suitable for the local climates, and crops should be managed under the condition fitting in the cycle of nature.

§4-9-2 When to adopt a heated greenhouse, impact from the usage of heating facilities on the environment should be minimized. For the suggested example, heating by ground heat (including spring hot water), heat pumps use temperature gaps between inside and outside of the greenhouse, and heating system by natural energy such as wind power generation.

§4-9-3 Due to the serious challenging, the use of heating facilities is acceptable: when to manage seeds and seedlings in cold districts; when it lacks natural energy to heat the greenhouse. In case of the heating system uses fossil fuels such as a boiler heating, proper measure should be taken to lower burden on environment by lowering the initial and daily temperature.

§4-9-4 When temperature in a greenhouse is controlled, its conditions includes temperature and humidity should be recorded. The environment for crops should be kept as the best.

§4-9-5 Testing of the electric conductivity and analysis of salines in the soil must be done on greenhouse cultivation farms. All records (inspection date and results) should be kept and submitted to JONA when needed.

§4-9-6 Mono-crop cultivation in the greenhouse is not recommended. Crop rotation must be maintained and managed.

§4-9-7 Materials must be chosen which do not impact seriously on the environment. In principle, it is prohibited to use materials that may contain a toxic substance.

§4-9-8 The air of a greenhouse must be ventilated regularly; excesses of dryness and humidity must be prevented; and pests must be controlled.

§4-9-9 Natural sunlight should be used primarily. Artificial light is only allowed for plant propagation and as a complement to sunlight to extend the day length to a maximum of 16 hours.

§4-10 Mushrooms (Those not on compost)

<JAS><JONA IFOAM.><JONA EU>

Mushrooms are cultivated either by using soil or on trees or growing bases (sawdust etc) or are naturally grown. In either case, chemical treatment is prohibited. Standards in this clause apply to mushroom cultivation by using trees or growing bases (sawdust etc). The soil-based mushroom cultivation follows §4 Organic Crop Certification Standards, and the naturally grown mushroom cultivation follow §4-13 Wild Plants. §4-1 through §4-9 apply for mushrooms grown on trees or growing bases.

§4-10-1 Suitable growing bases and cultivation methods must be chosen according to variety.

§4-10-2 The cultivation base and its treatment must be regulated as follows,

- Disinfections of growing bases must be done in physical methods such as using steam. A prohibited material shall not be used.
- Water to give humidity to a cultivation base should not contain chemically produced nutrition.

§4-10-3 Spawns must be selected and treated as follows,

- Spawns should be obtained from the certified organic field if possible.
- Spawns must not be genetically modified.
- Medium culture for spawns shall meet the following conditions. Culture that this refers to the culture one step prior to culture for obtaining fruiting body.
 1. Deriving from organic agricultural, livestock, or fishery products and not treated chemically.
 2. If the culture above is not available, deriving from agricultural, livestock, or fishery products produced without use of a prohibited substance and not treated chemically
 3. If the culture above is not available, deriving from conventional agricultural, livestock or fishery products and not treated chemically.
 4. If spawn cannot be grown on the culture above, yeast extract, malt extract, sugar, glucose, calcium carbonate, and calcium sulfate can be used.

§4-10-4 Materials for mushroom cultivation must be observed as follows.

- The materials originated in woods must be produced from an identified area where prohibited materials has flies in, flown in, or been used for last three (3) years and they must not be treated after collection.
- Other materials that are not from woods must be originated in organic agricultural products, organic processed products, organic feeds or excrements of organic livestock.
- In case of difficulty to obtain the materials mentioned as above for mushroom cultivated in fungal bed, wheat bran and rice bran comply with By-products of food & textile industries of plant, animal and fish origin in Attached Table 1 of Material List for Crop Production

§4-10-5 Pest control must be observed as follows,

- Agricultural chemicals (including specified agricultural chemicals) and drugs are prohibited. In case that crops are in urgent and serious danger, extraordinary agricultural chemicals (vinegar and baking soda) can be used.
- Mechanical controls such as traps, sanitation by manpower or airflow control should be adopted.

§4-10-6 Cultivation base and its facility management must be regulated as follows,

- An outdoor site for cultivating on natural wood should be managed to prevent contamination of prohibited materials.
- If the cultivation base is in outdoor site, the cultivation base should be separated by about four (4) meters from any neighboring that could be a source of contamination. In deciding the buffer zone, geographical conditions such as wind drift and evenness of the land should be taken into consideration. Please refer to §4-1-3.
- If a cultivation site is near to a heavily contaminated area and a risk of contamination is foreseen, environmental research such as analysis of air, soil and water should be executed.
- In case the site is located in the forest, prohibited materials such as pesticide should not have been sprayed there in the last thirty-six (36) months.

§4-10-7 Water used for mushroom cultivation must meet water quality required by Waterworks Law.

§4-10-8 Remaining materials after finishing mushroom cultivation must be composted, recycled, used as fuel or so forth. They shall not be treated in a way that has impact on the environment.

§4-10-9 After harvesting, the crops should be shipped without delay to keep freshness. Any preservative must not be used.

§4-10-10 Propagation of other fungus must be prevented with much care and control.

§4-10-11 In case of JONA-IFOAM and EU certification, substrates may be used, if they are composed only of the following components:

- a) farmyard manure and animal excrements:i) either from holdings producing according to the organic production method: (ii) or referred to in Annex I of EC839/2008, only when the product

referred to in point (i) is not available; and when they do not exceed 25 % of the weight of total components of the substrate, excluding the covering material and any added water, before composting;

- b) products of agricultural origin, other than those referred to in point (a), from holdings producing according to organic production method;
- c) peat not chemically treated;
- d) wood, not treated with chemical products after felling;
- e) mineral products referred to in Annex I, water and soil.

§4-11 Hydroponic Cultivation and sprout production

<JONA Original>(hydroponic), <JAS>(sprout)

Hydroponic cultivation means cultivating agricultural crops using liquid fertilizer (solution includes fertilizer) and growing base except soil (which does not contain manure). It is allowed only for sprouts (Kaiware-daikon, alfalfa, etc.) and special species of Japanese green vegetables (Ooba, Mitsuba, etc.). Hydroponic cultivation is excluded from the scopes of JAS.

Meanwhile, sprout production without use of liquid fertilizer is permitted and in the scope of Organic JAS certification.

- §4-11-1 Green vegetables (spinach, Komatsuna, etc.) and fruit vegetables (tomato, mini-tomato, cucumber, etc.) which are usually grown on soil are not allowed to be cultivated by hydroponics.
- §4-11-2 Cultivation of bean sprouts (including mung beans and soy beans) is prohibited to use liquid fertilizer.
- §4-11-3 For general cultivating conditions, the points shown below must be considered:
 - It is prohibited to use chemicals for promoting sprouts, preserving freshness and/or bleaching, etc.
 - It is prohibited to discharge contaminated water into the environment. Solutions must be used in circulation in principle, and contaminated water must be dealt with in the same facility.
 - In case the facility is used for cultivation, it must follow §4-9.
 - Only small differences must be maintained between the inside and outside environments, by using natural sunlight, ventilation, etc. Artificial light may not be used for sprout cultivation.
- §4-11-4 Seeds for hydroponic cultivation and those for sprout cultivation must follow the points shown below:
 - Seeds and seedlings must not be treated with synthetic agricultural chemicals and other chemical products. In principle, seeds and seedling for hydroponic cultivation should derive from organic production.
 - It is prohibited to use seeds that are contaminated by remarkably dangerous microbes, or suspected of such contamination. It is permitted to use hypochlorous acid water obtained through electrolysis of salt water (limited to those used salt containing no less than 99% of sodium chloride).
 - It is prohibited to use chemical products to keep seeds for a long time. Refrigeration and inert gases are allowed for preservation.
- §4-11-5 Water, culture (for sprout cultivation) fertilizer solution for hydroponics cultivation and sprout cultivation must follow the points shown below:
 - Water must be analyzed and must not exceed the rates stipulated in [the Inspection Index] of JONA, which follows the regulation by the Ministry of Health, Labor and Welfare.
 - It is allowed to use water that conforms to Waterworks Law in principle. However, it is

recommended that water be purified by removing chlorine, etc., as much as possible.

- It is prohibited to add preservatives to water.
- Culture for sprout cultivation must derive from natural products, made without use of genetic engineering, or treated with fertilizer or pest control substances.
- It is prohibited to use in liquid fertilizer pH and/or disinfectant solutions made with chemical products
- It is prohibited to add to the solution synthetic chemicals for activating plant physiology, or growth hormone.
- It is required to report the list of materials used in liquid fertilizer, as well as the methods of production and mixing.
- Ingredients of liquid fertilizer for use must be from materials of Material List. Nothing else is accepted.
- Extracts and decompositions made from natural materials are allowed to use as components of liquid fertilizer and materials for activation. However, it is necessary to clearly report the list of materials used as well as the methods of extraction and/or decomposition.

§4-11-6 Cultivation and its facility must conform to the points shown below:

- Facilities for hydroponic cultivation must be used solely for organic production. Those for sprout cultivation, if use for organic and non-organic cultivation, must prevent prohibited substances from flying in or flowing in.
- Water that contains liquid fertilizer must not be discharged or leak outside directly. In the case that this water is discharged, it must be treated before being discharged in order to prevent contamination of the environment. After purifying the water, the water must be tested, and the results must be reported to JONA.
- It is necessary to confirm that the period of organic operation must be more than ten (10) cycles [one (1) cycle is from planting to harvesting] in accordance with Organic Standards, in order to be certified organic.
- All records related to cultivation, seeds, used water, and shipping must be kept for thirty (30) cycles continuously, and they must be reported to JONA.
- It is allowed to use a natural growing base for hydroponic cultivation, and not to use a base which is treated chemically (disinfecting, adding nutrition, etc.). In case a chemically produced base (urethane, etc.) is used for hydroponic cultivation, the materials and production method must be reported to JONA. JONA will decide about its use.
- Containers and facilities for cultivation must be used semi-permanently and reusable.
- In principle, natural light must be used as the source of lighting. Artificial light can be used only supplementary.

§4-11-7 It is necessary to follow the items shown below in order to do hydroponic cultivation and sprout cultivation:

- A management method must be undertaken to prevent organic risk from the organic seeds.
- It is prohibited to use chemicals or hormones for germination.
- It is necessary to avoid contamination by synthetic chemicals in the process of production. The cultivation program must be submitted to JONA.

§4-11-8 It is necessary to follow the items shown below to disinfect seeds, containers, and facilities. In case the facilities must follow specific rules that are required by public authorities, reports must be submitted to JONA.

- It is recommended to use heat, ultraviolet rays, extracts from natural materials, and decomposed materials as a supplemental method to disinfect containers and facilities.

- It is recommended to use heat, ultraviolet rays, etc. in order to disinfect seeds. It is allowed to use extracts of natural materials and decomposed materials to disinfect seeds only as supplemental methods.
- Ingredients and production method of extracts and decomposed materials from natural materials must be clear, and componential analysis must be done.
- In case a specific method to disinfect must be adopted by a governmental authority, information and usage on the chemical products must be reported to JONA.

§4-11-9

After harvesting, these points must be followed.

- It is recommended to ship the final products without taking too much time in storage to keep freshness and maintain the quality. If stored, they must be kept stored in a dark place or in a cold storage and freezer.
- At the time of harvesting and after harvesting, it is prohibited to use chemical treatments such as bleaching and preservative treatments, etc.
- It is recommended to control growth by controlling light, inert gas, and heat treatment. It is prohibited to use chemical products to control growth.

§4-12 Fruit Production

<JAS><JONA IFOAM.><JONA EU>

In case of fruit production, the following conditions regarding farm environments, soil building, cultivation methods, seeds and seedling, growth adjustment and pollination and so forth are set forth additionally to §4 “Organic Crop Certification Standards.”

§4-12-1

Wider buffer zones in case of fruit production should be set with higher contamination risk taken into account. Please refer to §4-1-3.

§4-12-2

Soil should be maintained soft and mildly acid or neutral by using compost. Calcium carbonate is allowed to improve strong acidity in soil, but the volume of usage is restricted, as heavy use results in hardening of the soil.

§4-12-3

Pruning of a fruit tree must be done during wintertime when growth of the tree stops. Care after pruning should be done physically. When chemicals are used, they must be from Material List.

§4-12-4

Picking of flowers is allowed in order to control the growth of fruits

§4-12-5

Pollination should be done by insects, winds, water and/or by the hands of man. Chemical treatment is prohibited.

§4-12-6

Wax to make fruits look better is prohibited. When wax is used for preventing dryness, controlling pests and so forth, the material from Material List must be used. The specifications, raw materials, and manufacturers of the products should be presented to JONA.

§4-12-7

Treatment to alter the original character of fruits in order to strengthen market value is prohibited. Examples of this treatment include pouring sugar into fruit, and adding coloring to its surface.

§4-13 Wild Plants

<JAS><JONA IFOAM.><JONA EU>

Wild plants mean plants that grow naturally, without man’s help, in the naturally sustained growing environment. Such plants which can be certified by JONA include ferns such as Warabi(bracken), Zenmai (flowering fern), Takenoko (bamboo shoots), Hukinotou (butterburr sprouts), Katakuri(dogtooth violets), Kuzu(arrowroot),and wild fruits and nuts such as Akebi、Kuri(chestnut),

Tochinomi(horse chestnut),and wild cereal such as Hie(Japanese millet), Awa, Kibi(Chinese millet), and wild grass such as Seri(Japanese parsley), Dokudami(saururaceous),Oobako(Plantain), Kumazasa(leaf of sasa albo-marginate), Kakinoha(persimmon's leaf), and several kinds of plant roots,etc. These are used mostly for traditional food or for traditional drinks. Collection must not make its environment be out of order.

- §4-13-1 The collection area must be clearly defined and isolated from contamination sources, where prohibited materials must not be applied for the last three (3) years. Records by the Bureau of Forestry or Forest Association or Fire Departments will help to prove the fact.
- §4-13-2 There must not be sources of heavy contamination within two hundred (200) meters of the collection area.
- §4-13-3 In case that fire extinguishers have been used, analysis of residue and records of the Fire Department are requested.
- §4-13-4 "Air contamination analysis", "soil analysis", and "water quality analysis" on or around the collection area are requested especially when contamination might be detected. The analysis will be evaluated against the items and standards shown in Organic Standards.
- §4-13-5 Wild plants are expected to sustain growing at the collection area. Excessive collection that will result in extinction of the plants is prohibited.
- §4-13-6 Wild fruits can be certified only when they have been collected every year from the same area. Records of the past collection should be kept.
- §4-13-7 An applicant shall be familiar with the defined collecting or harvesting area. It must estimate production volume of the wild plants in the designated area and then decide how much he/she is planning to collect.
- §4-13-8 An applicant instructs collectors and any local agents (middlemen), the area of collection, the standards and other requirements for certification.
- §4-13-9 An applicant shall contract with any middlemen, who act as initial collection and storage points.
- §4-13-10 The area of production shall be properly identified on appropriate maps, and shall be large and distinct enough to reduce the risk of commingling with non-certified production.

Material List for Crop Production

Fertilizer and Soil Conditioners

The Allowed Materials

The allowed materials must be in line with the current version of Japan Agricultural Standard (JAS) for Organic Plants and Attached Table 1 Fertilizers and soil improvement substances. In case of JONA IFOAM Certification, the following conditions must be satisfied.

1. The use of genetically modified ingredients is prohibited.
2. Mineral fertilizers and trace-elements shall only be used with the reasons for use clear and in a program addressing long-term fertility plan together with green manures, rotations and other allowed materials. They can be used only if justified by appropriate soil and leaf analysis or diagnosed by an independent expert.
3. Materials derived from fermented, dried or baked excrements shall not constitute the main source of nitrogen in the absence of complimentary and additional nitrogen generating practices on farm and shall be approved for use by JONA if the manures derive from intensively farmed livestock.
4. By-products of food and textile industries of agricultural, livestock or fishery origin shall be free of significant contaminants or be composted before bringing onto organic land and confirmed free of significant contaminants.
5. Among the Attached Table 1 of JAS for Organic Plants, the following material are prohibited under JONA IFOAM Program.
 - Basic slag
 - Aluminum calcium phosphate
 - Synthetic vinegar as “vinegar”
 - Lignin sulfonic acid as “Granulating agent and anticaking agent for fertilizer”
 - Slag silicate fertilizer

In case of EU certification, fertilizers, soil conditioners and nutrients must be in line with Annex I of Regulation (EC) No 889/2008.

(Reference)

Attached Table 1 of Japanese Agricultural Standard for Organic Plants

http://www.maff.go.jp/e/policies/standard/jas/specific/attach/pdf/criteria_o-1.pdf

Pesticide, Herbicide and Germicide

The Allowed Materials

The allowed materials must be in line with the current version of Japan Agricultural Standard (JAS) for Organic Plants and Attached Table 2 Substances for Plant Pest and Disease Control (except for those produced by recombinant DNA technology). Under JONA IFOAM Certification, the following conditions must be satisfied. Any formulated input shall have only active ingredients listed in this list. All other ingredients shall not be carcinogens, teratogens, mutagens, or neurotoxins. The operator must have a concern about the environment impact from usage of the active elements and also inert of pesticide, thereby in principle, avoid use of pesticide, herbicide and Germicide.

The materials that are additionally conditioned

- Sulfur/copper wettable powder: Max 6 kg/ha per year (on a rolling average basis)
- Sodium hydrogencarbonate/copper wettable powder: Max 6 kg/ha per year (on a rolling average basis)
- Copper wettable powder: Max 6 kg/ha per year (on a rolling average basis)
- Copper powdered agent: Max 6 kg/ha per year (on a rolling average basis)
- Copper sulfate: Max 6 kg/ha per year (on a rolling average basis)
- Fatty Glyceride emulsion (limited to natural substances)
- Sex pheromone agent (in traps and dispensers only)
- Calcium carbonate wettable powder (limited to natural substances)

The materials that are not allowed

- Wax wettable powder
- Metaldehyde agent
- Synthetic vinegar
- Sodium hydrogencarbonate wettable powder, and sodium bicarbonate
- Sodium hydrogencarbonate/copper wettable powder
- Petroleum oil aerosol
- Petroleum oil emulsion
- Spreader containing paraffin as active agent

Under EU certification, pesticide, herbicide and germicide must be in line with Annex II of Regulation (EC) No 889/2008.

(Reference)

Attached Table 2 of Japanese Agricultural Standard for Organic Plants

http://www.maff.go.jp/e/policies/standard/jas/specific/attach/pdf/criteria_o-1.pdf

The following materials can be used as physical methods. Please note that there are conditions for use for each material. Under JONA IFOAM Certification, no genetically engineering technique of the ingredient is added as a condition.

1. Mulch

- Poly-mulch: It must not be made from the materials that have a risk of dissolving endocrine disruptor. Only the material made from polyethylene, polypropylene or polycarbonate is allowed. Those to which chemicals for herbicide and pesticide control are added are not allowed. It must be collected properly after use.
- Other kinds of mulch: It must be composed from the materials listed in Attached Table 1 of Organic JAS. It must not be made chemically or does not contain any synthetic chemicals.

2. Fleeces, insect netting, greenhouse etc: No synthetic chemicals for weed or pest control must be added. It does not contain a material that has a risk of dissolving endocrine disruptor. Only the material made from polyethylene, polypropylene or polycarbonate is allowed. It must be collected properly after use.

Chemical materials allowed at a facility

The Allowed Materials

The allowed materials must be in line with the current version of Japan Agricultural Standard (JAS) for Organic Plants and Attached Table 4 Chemical agents. However, under JONA-IFOAM certification, capsaicin is limited to those derived from plant, and sodium silicate is excluded.

(Reference)

Attached Table 4 of Japanese Agricultural Standard for Organic Plants

http://www.maff.go.jp/e/policies/standard/jas/specific/attach/pdf/criteria_o-1.pdf

Materials for Adjustment

Allowed materials

The allowed materials must be in line with the current version of Japan Agricultural Standard (JAS) for Organic Plants and Attached Table 5 Substances for Preparation. Under JONA IFOAM Certification, the following materials cannot be used.

- Albumen albumin
- Adjustment goods of resin element
- Potassium aluminum sulphate
- Ozone
- Hypochlorous acid water

(Reference)

Attached Table 5 of Japanese Agricultural Standard for Organic Plants

http://www.maff.go.jp/e/policies/standard/jas/specific/attach/pdf/criteria_o-1.pdf

§5 Reserved for Organic Animal Husbandry Standards

§5-1 Living Conditions

<JAS><JONA Original>

§5-2 Facilities

<JAS><JONA Original>

As much wide open

§5-3 Mutilation

<JAS><JONA Original>

§5-4 Breeds and Breeding

<JAS><JONA Original>

§5-5 Livestock and Poultry

<JAS><JONA Original>

§5-6 Feed (Nutrition)

<JAS><JONA Original>

§5-7 Animal Drugs

<JAS><JONA Original>

§5-8 Transportation and Slaughtering

<JAS><JONA Original>

§5-9 Milk and egg production

<JAS><JONA Original>

§5-10 Organic Agricultural Feed (limited to those prepared or selected only)

<JAS><JONA Original><JONA EU>

In principle, production methods of organic agricultural feed (standards of fields, soil management, seeds and seedlings, pest and weed control and transportation, selection, cleaning, storage, packaging and other processes) are the same with those of §4 Organic Crop Certification Standards. The following standards are added.

§5-10-1 Standards of conversion from conventional to organic agriculture are in line with 4-1-4. In case of forage grasses cultivation, it takes at least two years prior to sawing or plating to convert. Conversion period of forage grasses are in line with 4-1-5.

§5-10-2 The materials for adjustments and so forth must be in line with Attached Table 1 of JAS for Organic Feed..

§5-11 Organic Processed Feed (excluding those prepared or selected only)

<JAS><JONA Original>

Material List of Organic Animal Husbandry

<JAS><JONA Original>

§6 Organic Bee Keeping Standards

<JONA Original>

Apicultural products are the products obtained by keeping bees such as honey, royal jelly, propolis, pollen and beebread and so on. Use of prohibited materials (chemicals such as agricultural chemicals and drugs) is not allowed in bee keeping.

§6-1 General Standards in Bee Keeping Production

§6-1-1 Hives in organic bee keeping must meet the following standards.

- A report to production must be made as required by Bee Keeping Enforcement Law.
- A hive for the sixth (6th) month to one (1) year since the beginning of organic production (after cleaning and collecting honey from conventional production) can be considered as “organic in conversion” and that after one (1) year is “organic” (this is also the case when a new hive is swarmed from conventional)
- Oriental bees (Aphis Cerana) and hives collected in the wild life are regarded as organic after three (3rd) month of collection.
- The hive swarmed from an hive of organic production is regarded as organic since the day of swarming

§6-1-2 Organic hives must sustain its organic production over time. Conventional and organic productions must not take place one after another due to infeasibility of separation.

§6-1-3 It is allowed to use bases and combs in the hive. However, only beeswax in line with this Organic Standards must be used for bases and combs. If those are not available, those not in line with Organic Standards may be used. Bases, combs, and hives must be natural without chemical treatment or irradiation treatment.

§6-1-4 Honey area must be distant at least four (4) km from any critical contamination risk of a prohibited pesticide. The surrounding of honey area should be ideally natural forest and fields (including orchards) without history of application of prohibited pesticides. For reckoning non-contamination, the followings should be done beforehand.

- In case of natural forest, to investigate varieties of wild flowers, blossoming period, application of extinguishant and prohibited pesticides with help from District Forest Office (it is recommended to obtain objective records)
- In case of fields, to investigate type of pesticides with help from neighboring farms and farmer’s co-operative or patrolling.

§6-1-5 Use of artificial feed is prohibited for honey production. For the sake of avoiding starvation and sustaining organic production, minimum supply of artificial feed is allowed in the following cases. In case of supplying artificial feed, the “cleaner bee” must be taken before collection.

- When honey area to use is not available due to a sudden accident, etc..
- When it is difficult to maintain hives, in such times as winter seasons and between seasons, a honey area without supplying artificial feed.

§6-1-6 The artificial feed must be the following(s) that are made in line with Organic Standards.

- Simple sugar
- Honey
- Starch syrup

If it is very difficult to obtain the feeds made in line with Organic Standards, they could be substituted by those without prohibited materials such as synthetic additives.

- §6-1-7 Protein can be supplied only by such materials as powdered soy beans and pollen made in line with Organic Standards. However, when it is difficult to obtain the above-mentioned feed made in line with Organic Standards, they could be substituted by those without prohibited materials such as synthetic materials.
- §6-1-8 A hive must be sited in an area without critical contamination by prohibited materials.
- §6-1-9 Cleaning and cleansing of machines for harvesting must be done only with warm water. If the same machines are used for conventional and organic productions, cleaning must be done without residue left prior to organic production.
- §6-1-10 The base of the nest box must be especially cleaned in controlling sanitation.
- §6-1-11 It is prohibited to make chemical treatment on boxes for sanitation control or pest and disease control. Basically, it is prohibited to use such chemicals as antibiotics.
- §6-1-12 The following cases are not applied to §6-1-11. The operator must report before the following cases actually take place. When drugs such as antibiotics (limited to registered animal drugs) are used, the products must not be shipped for a certain period set by JONA. The period of stoppage of shipment, decided by JONA, is estimated twice as long as drug holidays set for conventional bee production.
- Antibiotics (Mirosamicin) can be used for maggot disease. However, an attention must be paid not to mix antibiotic with products.
 - It is allowed to clean the nest box with invert cleaning agent to prevent chalkbrood disease. After use of invert cleaning agent, the nest box must be cleaned sufficiently with water and dried.
 - It is allowed to use a sheet coated with miticide (Fluvalinate and Amitraz) to prevent BAROA disease. Moreover, it is prohibited to use spreading agents or smoking agents.
- §6-1-13 The variety of bees which are resistant to disease must be chosen.
- §6-1-14 A hive must be sited in a sanitary area or place.
- §6-1-15 It is prohibited to cut wings of queen bees.
- §6-1-17 Renewal of queen bees is allowed only when it is necessary for health of a hive.

§6-2 Processing (including packaging)

- §6-2-1 It is allowed in harvesting to fumigate with smoke from hemp cloth and so forth or spray mist for cooling down bees. Meanwhile, it is prohibited to use smoking agents for cooling down bees or sterilizing with organic acid. In addition, it is not allowed to intentionally destroy bees at harvest.
- §6-2-2 Removal of beehive plates should be carried out in a physical method such as heating and cutting with a knife.
- §6-2-3 While harvests must be collected in each bee field, processing such as mixture of organic honey shall be done in a stage of filling or packaging.
- §6-2-4 A sample of the final products must be kept after filling. JONA may request an analysis on pollen to identify honey place.
- §6-2-5 Reusable glass containers must be used in principle for filling. Plastic containers should be chosen from among those which do not dissolve environmental endocrine disrupter.
- §6-2-6 The physical methods such as separation and concentration in properly heated water, the use of a centrifugal or filtering tool should be used in refining and concentrating honey.
- §6-2-7 The use of organic solvent (hexane) is prohibited in refining propolis.
- §6-2-8 Honey products must be stored and managed in the following methods.
- Bee wax must be stored dry.
 - Propolis and royal jelly must be stored frozen.
 - Honey containing more than twenty-one (21) percent moisture must be collected or stored in a

final package or a bulk tank.

- Organic honey may be kept for two (2) years..

§6-2-9 It is prohibited to use emulsifier for prevention of sediment and solidification of honey.

§6-2-10 The container must suit storage for food.

§7 Organic Aquatic Products Standards

<JONA Original>

JONA Organic Standards are aimed at sustainable aquatic resources and permanent production. Therefore, organic aquatic production shall utilize biological chains in farms and collection area (closed) and take methods to minimize an environmental impact by avoiding use of synthetic feed, feed additives and drugs.

§7-1 General Environmental Conditions

The operators need to care for their organic production not to cause major depletion of aquatic resources, contamination of water areas, and so forth. Moreover, it is recommended to maintain aquatic resources and engage in environmental activities that lead to sustainable production. Places for organic aquatic production, regardless of farming or collecting, shall be chosen based on a full environmental and contamination study that are prescribed in these standards.

§7-1-1 Water areas for cultivation and collection must be mapped clearly.

§7-1-2 Location of cultivation farms and collecting areas shall be kept from and clearly separated from contamination sources (radioactive substances, chemical substances, heavy metal bacterial, and so forth). The estimated distances for separation are as following.

- more than 20 km distance (in a straight line) from a nuclear establishment.
- more than 10 km distance (in a straight line) from a big industrial complex.
- more than 3 km distance (in a straight line) from city drainage.
- more than 3 km distance (in a straight line) from industrial drainage.
- more than 3 km distance (in a straight line) from port facilities where large ships arrive.
- more than 500 m distance from conventional aquaculture.

§7-1-3 Analysis of heavy metals, residual antibacterial substances and contaminating chemicals shall be carried out in cultural areas by a sampling of water, mud and aquatic products. Refer to Items and Maximum Allowance of Organic Standards in evaluating contamination.

§7-1-4 Quality of water must be in line with the most current version of “Water Quality for Aquatic Production” from Japan Fisheries Resource Conservation Association. The materials to improve water quality must be from those listed in Attached Table 1.

§7-1-5 Management program shall be directed at avoiding contamination from cultural areas to surrounding areas by preventing discharge of leftovers of feed, vaccine and cultural products.

§7-1-6 Leftover of feed, residue of aquatic products, drained water, sewage and so forth must not cause contamination of water or environments.

§7-1-7 The operator shall periodically monitor drainage from aquaculture ponds and tanks. They shall collect unnecessary nutrition by physical and biological methods.

§ 7-2 Breeds and Breeding

For maintaining aquatic resources and a long-term productivity, the breeds must be raised in aquacultures and their varieties are chosen not to seriously impact wild varieties.

§7-2-1 The operator may be able to use breeds collected from the wild if organic breeds cannot be used for propagation or genetic diversity. However, they shall have been managed in organic methods at least for 3 months prior to use as breeds for organic production.

..... In addition, the operator can use young larvae (larvae and juveniles) that naturally flow into aquaculture sites and glass eels in a permitted quota amount. The operator may use a legally allowed sustainable amount of young larvae, excluding those of glass eels, if they are collected from traditional and extensive aquaculture sites without artificial feeding in swamps and so forth.

§7-2-2 The operator need to report sources of breeds

§7-2-3 Collections and cultivation of breeds (including young fishes) must be managed properly.

§7-2-4 In case of collecting natural breeds, a periodical investigation of aquatic resource must be carried out.

§7-2-5 Extracting ovum and spermatozoon shall be made from fish at full maturity in a natural or artificial manner. It must be done without suffering.

§7-2-6 Ovulation inducer, sperm ejection inducer and/or accelerator and/or maturing hormone and/or genetically engineering techniques (including dip or tetra-ploid technology) are prohibited to use.

§7-2-7 Mixing spermatozoon with ovum is the only one artificial insemination method permitted to get breeds. Only wet method and dry method are permitted.

§7-2-8 Breeds must be done only mating. Any fertility hormones, chemicals and genetically engineering shall not be used in breeding for any reasons.

§7-2-9 When incubator is used, irradiation of ultra violet, radiant, infrared rays, and addition of disinfectants, hydrogen sulfide, synthetic detergent are prohibited. It shall be managed without contamination of heavy metal and chemicals.

§7-2-10 At the stage of hatching, natural birth is the most preferable. Such technique as shaking or vibrating should not be used as it gives bad influence on birth.

§7-2-11 Types and volume of feed should be selected to suit to growing stage of breeds. At the initial stage of breeding, living organisms are recommendable.

§7-2-12 Simultaneous production of breeds in organic and non-organic methods of breeds at hatcheries and breeding sites is possible if they are clearly separated/

§ 7-3 Method of Cultivation

..... Method of cultivation shall focus on maintenance of aquatic environment and protection from pollution and contamination of surrounding environment.

§7-3-1 If organic aquaculture and non-organic aquaculture is produced at the same production unit, they must be clearly separated and their production stages shall be different.

§7-3-2 Most suitable cultivation method of aquatic products for a species of fish should be chosen: aquafarming, feeding, fattening, stocking, collection and so forth

§7-3-3 Aquaculture management of water areas, water temperature, and nutrient shall be cared to meet natural behavior of each fish.

§7-3-4 Enough space should be kept for free behavior of fish and give fish biological order.

- Freshwater Salmonidae (brown trout and rainbow trout (*Oncorhynchus mykiss*): 25kg/m³, Atlantic salmon: 20kg/m³, others 15kg/m³)
- Seawater Salmonidae: 10kg/m³
- Paralichthyidae: 25kg/m³
- Other seawater fishes: 15kg/m³
- Serranid, Mugilidae, and Anguillidae cultivated in such conditions as swamps in brackish water: 4kg/m³ (Note: At least 50% of ponds shall be covered by plants)
- Freshwater sturgeon: 30kg/m³
- Freshwater Cyprinidae and Siluridae should be 1500kg/ha per year (Nitrogen from organic

fertilizer in compliance with Attached Table 1 of Organic Crop Standards used in ponds shall not exceed 20kg/ha/year. In addition, there needs to be buffer zones utilizing natural vegetation when conventional production is neighbored)

- Peneidae and freshwater shrimp (post larva at application of seeds shall be within 22/m². At harvest 240g/m²)
- Milkfish, tilapia: 20kg/m³

§7-3-5 Production in closed cycling facilities, except for hatchery and seedling production facilities, is not permitted.

§7-3-6 Adjusting artificial light and water current are permitted only in the case they are appropriate for natural behavior of fish. Artificial heating and cooling of water is permitted only at hatcheries and seedling production facilities. However, water and hot water that spring in the nature can be used. Water quality has to be controlled by monitoring incoming and outgoing water at facilities with free flow water. Artificial adjustments must be done with care to ecosystem and environments of water.

§7-3-7 When the natural day length is artificially prolonged, the day length limit is 16 hours per day at the maximum.

§7-3-8 More than 5% of water side of aquaculture ponds and facilities shall remain in natural conditions.

§7-3-9 Benthic freshwater fish shall be raised in as natural conditions as possible. Moreover, the bottom shall be in natural conditions in case of Cyprinidae.

§7-3-10 Aquaculture facilities shall be set with current, depth, and water exchange rate taken into account to minimize environmental impact on the neighboring area as much as possible. Facilities like fish reserves shall be installed, maintained and controlled properly to neighboring environment.

§7-3-11 Facilities, equipment and machines used for culture shall be clean and be clearly separated to prevent contamination by prohibited materials and co-mingling with conventional products.

§7-3-12 Algae, shellfish, and so forth from equipment and facilities in aquaculture and wild collection areas shall be removed in physical methods. However, fishnet antifouling agents, ship bottom coating, and so forth shall be allowed.

- Those of the lowest environmental impact such as fishnet antifouling agents, ship bottom coating, and so forth in silicon shall be chosen,
- SDS shall be obtained and submitted to JONA for approval.

Fishnet antifouling agents and ship bottom coating containing organic tin is prohibited.

§7-3-13 The best method must be chosen to collect or harvest only the products aimed at.

§7-3-14 Acceptable methods of collecting and harvesting are, in case of aquafarming, catching in a net and fishing with wire and rod. In case of collecting natural fish, traditional methods of fishing such as chase and enclose method, fishing with rod and line, fixed net, long line net, octopus trap, weir fish pound, shell trap should be used. Harvesting seaweed shall be done by hand but use of silicon is prohibited. The size of meshes of a net should be selected so as not to catch other fish.

§7-3-15 Slaughtering, freezing, taking to pieces, releasing in a fish preserve, bleeding and so forth should be carried out immediately after collecting catch.

§7-3-16 Among those unnecessarily collected living organisms should be released and the dead should be utilized as aqua feeds or as organic fertilizer.

§7-3-17 Development of technique for breeding and producing species of fish which is now not cultured and only naturally born and grown is important for maintaining long term productivity. It is desirable for aquatic producers to draw up a research and development program.

§7-3-18 Aquaproducts collected in the certified organic areas such as carp, Funa(Carassius cuvieri), Tanishi, or river smail(Cipangopaludina chinensis malleata), Dojyou(Cobitidae) can be applied for

certification. However, methods of collecting and other management records are to be submitted.

§7-3-19 Aeration may be used only for animal welfare and health. Its power source shall be limited to renewable energy. Use of aeration shall be recorded.

§7-3-20 Oxygen can be used only when serious damage to animal health is expected and at transportation in the following conditions.

- Unexpected change of temperature, down of air pressure, or contamination
- Irregular amount control such as sampling and thinning
- Animals cannot maintain their lives

§7-3-21 Conversion period of an aquaculture facility to organic shall be as follows.

- Facilities that cannot be washed and cleaned: 24 months.
- Facilities that are not used since cleaning: 12 months
- Cleaned facilities: 6 months
- Bivalve aquaculture water and open water: 3 months

§ 7-4 Disease Control

Disease treatment (including sanitation control) of aqua products should be carried out in a way that avoid use of drugs in principle.

§7-4-1 Decease control must be made in such manner as selection of production process (variety, density, feeding, separate treatment of ill fish and so forth) and physical methods (current, temperature, light, shadow, cleaning bodies, soaking in salt or fresh water and so forth) and biological methods (vaccination, natural enemy and so forth) and some of those above combined methods.

§7-4-2 Only aquatic vaccine set by Art. 83 of Pharmaceutical Affairs Act can be used. Anesthetics are approved by Art. 83 of Pharmaceutical Affairs Act.

§7-4-3 In case that urgent measures must be taken to protect aquatic products from danger and the measure said in the standard above is not effective, the drugs listed in Attached Table 2 and anthelmintic, disinfectant, vitamins and so forth (aquatic drugs) can be used. Nonetheless, they can be used up to twice a year unless they are ordered by the governments and so forth. They can be used once a year for animals of life cycle of less than 1 year. (In addition, anthelmintic can be used once a year or twice in 18 months.)

§7-4-4 Genetically engineered vaccines or chemicals are not allowed.

§7-4-5 The following shall be clearly stated in case of use of drugs: which school is treated, reasons of usage and amount of usage

§7-4-6 JONA will set up and withhold suspension period of shipment as organic according to drugs used, quantity and duration. The length of this suspension period depends on quality of drugs. The suspension period will be a longer period between 2 times of the period set by the regulations and 48 hours in principle.

§7-4-7 Animals that aquatic drugs or drugs listed in Table 2 applied to are clearly separated and shall be reported to JONA prior to shipment.

§7-4-8 Proper measures to prevent a natural enemy should be taken.

§7-4-9 A program of sampling test should be established to watch parasites and other diseases at each cultural stage. In the case of irregular behavior of the organisms or on the occurrence of something abnormal in the vicinity, analysis of water quality and sampling test should be made immediately. It is important to make good use of the result of analysis for preventing diseases.

§7-4-10 Equipment, machinery, and so forth for production shall be properly cleaned and sanitized. Only the

substance from Attached Table 1 may be used.

§7-4-11 A fallow period shall be set after aquaculture production is over on seas, lakes, or marshes. It is recommended to set a fallow period in aquaculture on pond or tanks. It is not necessary in case of bivalve production. In a fallow period, equipment, machinery, and so forth shall be properly cleaned, sanitized, and so.

§7-4-7 Feed residue, dead animals, excrement, and so forth shall be removed, if necessary, not to worsen aquaculture environment and facility environment.

§ 7-5 Feed

Use of additives to feed for aquaculture production is avoided as much as possible. Moreover, feed should be in principle organic and derivable from environmentally sustainable and in line with nutrition needs of animal and of low impact on environment.

§7-5-1 Feed for carnivorous fish and crustaceans are prioritized in the following order.

1. Organic feed that derives from organic aquaculture
2. By-products such as fish powder and fish oil that derive from organic aquaculture
3. By-products such as fish powder and fish oil that derive from aquatic products collected in a sustainable manner for human consumption (excluding those added with synthetic substances, irradiated, or genetically engineered).
4. Feed that derives from organic livestock
5. Aquatic products from fisheries recognized as sustainable by governments and so forth

§7-5-2 Ingredients that derive from organic plant shall be lower than 60% of whole feeds in weight.

§7-5-3 Among feed additives (prescribed in Article 2-3 of the Act on Safety Assurance and Quality Improvement of Feeds), amino acid, vitamin, minerals, and enzyme and attenuated vaccines for promoting effective use of nutrition, excluding those irradiated or genetically engineered, can be used if they derive from natural substances or natural substances without chemical treatment. Meanwhile, if those feed additives are difficult to obtain, similar ones to those feed additives can be used with permission from JONA.

§7-5-4 In case of production of Cyprinidae, Siluridae, milkfish, tilapia, penaeid shrimp, and freshwater shrimp, feeds generated spontaneously in aquaculture sites shall be utilized. However, feed resources generated spontaneously are not sufficient, feeds of plant origin that are cultivated in the aquaculture site may be used with permission from JONA.

§7-5-5 Larvae (larvae and juveniles) may be fed with non-organic plant plankton and/or animal plankton.

§7-5-6 Producers shall have a clear plan of what measures to be taken not to contaminate surrounding environment by feeds used. Investigation of growth condition of organisms in the sea and regular disposal of sludge should be carried out to control residue of not-consumed feed and to decide appropriate quantity of feed.

§7-5-7 Periodical analysis of sludge and water quality, and sampling of aquacultural products should be made for the examination of residual organisms and residual drugs.

§ 7-6 Special rules for crustaceans

This clause prescribes production standards of crustaceans (penaeid shrimp and other freshwater shrimps).

- §7-6-1 It is not permitted to destroy mangrove for pond construction.
- §7-6-2 The conversion period shall be whichever is shorter, 6 months or shrimps life expectancy.
- §7-6-3 More than a half of parent shrimps are raised for longer than 3 years and the rest can be free from parasites and from sustainable fishery sites.
- §7-6-4 If crustaceans cannot be raised properly only with 7-5-4, fish powder and/or fish oil can be used for up to 25 % and 10% of whole feeds respectively (However, either shall derive from sustainable fisheries). In addition, organic cholesterol can be used to meet nutrition needs of penaeid shrimp or other freshwater shrimps. If organic cholesterol is not available, non-organic cholesterol that derives from non-organic wool, crustaceans, or other resources.

§ 7-7 **Special rules for mollusc**

- This clause prescribes production standards of aquaculture mollusk (Bivalvia, Gastropoda). Mollusk (Bivalvia, Gastropoda) can be raised in production site of organic aquaculture of fish and/or seaweed.
- §7-7-1 Organic bivalve shall be raised in the areas clearly separated, if necessary, with net, cages, and so forth.
- §7-7-2 Nets and other equipment used to keep predators away in aquaculture sites of bivalve shall not do no harm to water birds and so forth.
- §7-7-3 Aquaculture density shall not influence non-organic shellfish in aquaculture water areas. Moreover, aquaculture density shall be adjusted by such methods as sorting and thinning for health of aquaculture bivalve and quality maintenance.
- §7-7-4 Biofouling shall be removed physically and, if necessary, returned to a distant water area.
- §7-7-5 Aquaculture methods include long-line suspending, raft suspending, bottom of water cage, tray, lamp-shaped cage, and so forth. One rope from rafts per 1 m² shall be suspended and its length shall be less than 20m.
- §7-7-6 On-site inspection shall be carried out prior to or during the peak period of shipment.

§ 7-8 **Special rules for seaweed**

- This clause prescribes production standards of seaweed collection and seaweed aquaculture. Organic production of plant plankton and microalgae as feed for organic aquatic animals shall comply with this clause.
- §7-8-1 In case of collection, collection volume shall not seriously influence collection area by taking into account collection methods, collection size, life history, resource, and so forth. Resources shall be estimated before collection.
- §7-8-2 If non-organic collection is done in the same area, the following documents as evidence for sustainable collection shall be kept for care for the total collection amount.
- Collection record of each collection area after identification of collection area
 - Collection amount estimate for each collection season
 - Sources of contamination that influence collection areas
 - Sustainable annual collection amount for each collection area
- §7-8-3 Conversion period of collection area to organic is 6 months.
- §7-8-4 In case of aquaculture in natural environments, nutrition shall be provided only from the nature and obtained from organic aquaculture sites (including combined culture with organic aquatic animals).

- §7-8-5 In case of culture in facilities on land, only substances of mineral origin in Attached Table 1 of organic crop standards may be used. However, outgoing water need to be proved to contain the same level of nutrition with incoming water or less nutrition.
- §7-8-6 It is not permitted to control pests by chemical substances for such methods as acid treatment.
- §7-8-7 In case of culture, cultivation density shall not influence surrounding environments.
- §7-8-8 Ropes and other equipment shall be reused or recycled.
- §7-8-9 Conversion period to organic aquaculture shall be whichever is longer, 6 months or a complete production cycle.
- §7-8-10 Production equipment, facilities, and so forth shall be cleaned physically with biofouling removed physically. If necessary, biofouling shall be returned to a distant area.
- §7-8-11 Equipment and facilities shall be cleaned physically. If physical cleaning is not cleaned sufficiently, substances from Attached Table 1 can be used.
- §7-8-12 Drying machine shall have structure for flame to directly reach the harvest.
- §7-8-13 If the production exceeds 20 tons per year, environmental assessment report shall be reported to JONA for measuring impacts of production on the surroundings.
- §7-8-14 A sustainable collection/production plan that reflects collection area and culturing area shall be drafted annually and environmental impact such as emission of nutrition substances to the surroundings.
- §7-8-15 A management plan shall be drafted to use renewable energy as a priority and diminish wastes by recycling materials proactively. In using surplus heat, it shall come from renewable energy.

§ 7-9 Initial Processing, Transportation and Storage

Initial processing, transportation and storage of organic aquatic products must not rely on chemicals.

- §7-9-1 The first processing of aquaproducts should be restricted to that in a fishing boat, in a harbor and aqua market: freezing, slaughter, cutting, bleeding, icing, packing, boiling (for seaweed), further boiling (for seaweed), drying (for seaweed), salting, smoking, powdering or mixing.
- §7-9-2 Facilities of first processing, transportation and storage shall be in an organic environment without contamination from the vicinity.
- §7-9-3 Irradiation for pest and disease control, sanitation and so forth is prohibited.
- §7-9-4 Chemical and processing materials used for sanitation and quality improving must be from Attached Table 1 and 4.
- §7-9-5 Gas filling is allowed for the preservation of freshness and for stunning fish.
- §7-9-6 It is preferable that aquaproducts be stored in a state of first processing. Transportation and storage of aquatic animals without pasteurization or freeze should be done at a low temperature or with ice with hygienic care.
- §7-9-7 During transportation of fish alive, its medium should minimize stress to fish. Use of equipment for the preservation of oxygen contents is recommended.
- §7-9-8 In first processing, transportation and storage, clear separation must be made to prevent contamination by prohibited materials and co-mingling with non-organic products.
- §7-9-9 Containers used for transportation and storage should be recyclable and minimize adverse effect on the environment as little as possible. It is recommended to use the container exclusively for organic production
- §7-9-10 Transportation medium and storage facilities cleaned with drugs (if legally required) should be thoroughly rinsed and assured if there is no residual of drugs used. JONA may define withholding

period of shipment as organic according to drugs used, quantity and duration of its usage. The length of this period depends mainly on type of drug.

Material List of Aquatic Products

Attached Table 1

Chemicals used for water quality improvement and sanitation control of facilities

Chemicals	Criteria
Slaked lime	Used only for water quality improvement and sterilization of facilities
Sodium hypochlorite	Used only for water quality improvement and sterilization of equipment
Calcium hypochlorite	Used only for water quality improvement and sterilization of facilities and equipment
Neutral detergent	Used only for cleaning facilities and equipment
Ozone	Used only for cleaning facilities and equipment
Calcium hydroxide	Used only for cleaning facilities and equipment
Calcium oxide	Used only for cleaning facilities and equipment
Sodium hydroxide	Used only for cleaning facilities and equipment
Alcohol	Used only for cleaning facilities and equipment
Seeds of Theaceae	Used only for shrimp production facilities
Hypochlorous acid water (limited only to those made by electrolysis of hydrochloric acid or sodium chlorite water solution)	Used only for cleaning facilities and equipment

Attached Table 2

Drugs used for pest and disease control

Drug	Criteria will be notified is necessary
Dolomite	For PH adjustment (limited to shrimp culture)
Calcium carbonate	For PH adjustment
Sodium chloride	
Povidone - iodine	Drugs for aquaculture

Attached Table 3

Processing materials

Processing material	Criteria will be notified is necessary
Calcium carbonate	
Calcium hydroxide	
Carbon dioxide	
Nitrogen	
Ethanol	
Casein	
Gelatin	

<u>Active carbon</u>	
<u>Talc</u>	
<u>Bentonite</u>	
<u>China clay</u>	
<u>Diatomaceous earth</u>	
<u>Perlite</u>	
<u>L-tartaric acid</u>	
<u>DL-sodium tartrate</u>	
<u>Citric acid</u>	
<u>Processing substances derived from microorganisms</u>	
<u>Enzyme</u>	
<u>Vegetable fat and oil</u>	
<u>Processing products of resin component</u>	
<u>Ozone</u>	<u>Only for cleaning bivalve</u>
<u>Other processing substances</u>	<u>Necessary for initial processing such as cleaning, collecting, transporting, handling, smoking, cutting, crushing, removing organs, letting out blood, and freezing aquatic products and derivable from natural substances or natural substances not added with synthetic substances.</u>

§8 Organic Microalgae Standards

<JONA Original Standard>

This section applies to microalgae (chlorella, spirulina etc) cultivated in an artificial cultivation facilities (made from concrete, glass fiber and etc).

The principle of organic cultivation of microalgae is to avoid use of chemically synthesized substances and apply a cultivation method that reduces as little environmental impact as possible.

In addition, the principle of processing is to preserve characteristics of organic microalgae and apply physical or biological processing methods only.

§8-1 Cultivation standards

§8-1-1 Seeds are in principle organic microalgae cultivated according to 8-1-2 to 8-1-6.

§8-1-2 Seeds must not be treated with a prohibited substance that is a substance not allowed in 8-1-4.

§8-1-3 Seeds must not be or derive from genetically modified organism.

§8-1-4 Culture or culture fluid must be made from either or combination of the following materials. Even if it is, excessive use of materials only for better production shall be avoided.

1. Materials of plant, livestock, or aquatic product origin must be made from organic materials of plant, livestock, or aquatic origin in line with JONA Organic Standards or product made without synthetic process from organic materials of plant, livestock, or aquatic origin.

However, if either is not available, they can be substituted by materials of plant, livestock, or aquatic origin that are conventional or going through synthetic process.

2. Materials listed in Attached Table 1 (fertilizer and soil conditioner) of “JAS Standards of Organic Plant” can be used. Products from fermented organic matter shall be treated for pathogens.

3. Reasons must be stated if it is difficult to get material allowed in 1 or 2 above. If JONA regards them as justified, it would grant use. In such a case, JONA shall request a transitional plant to convert to materials allowed in 1 or 2 above. The substituted materials must not include nitrogen-source chemically synthesized (ammonium sulfate, urea, etc) and from Chilean nitrate (sodium nitrate etc).

4. Water must be potable.

§8-1-5 Equipment and facilities for production must be cleaned before use for organic production. Information on usage, SDS and etc must be presented to JONA if cleaning or disinfection agents are used. They must be rinsed throughout if a cleaning or sanitizing agent is used.

§8-1-6 There must not be a major source of contamination to the environment plant in case of production outside. The source could be waste incineration plant, industrial waste, heavy metal industry, air spray, and etc. Much attention shall be paid to pesticide used to control pests in trees. JONA may conduct an environmental assessment or a lab analysis if there is risk from a detected source of contamination.

§8-1-7 Use of cultivation equipment made from genetically engineered substance should be avoided. Use of materials which are known as containing endocrine disturbing chemical shall be avoided likewise.

§8-2 Post-cultivation standards

§8-2-1 Manufacturing or processing must be only by physical or biological methods, excluding those using genetically engineering methods.

- §8-2-2 Cleaning or dehydration of crops should be only by physical methods. If filtration techniques are applied, techniques or substances that may negatively affect the product, such as asbestos, is prohibited.
- §8-2-3 Use of additive is not allowed in processing organic microalgae.
- §8-2-4 Water to add to the product must be potable.
- §8-2-5 Irradiation for sterilization of the products is prohibited.
- §8-2-6 In the case that the same equipment is used for processing organic foods and conventional foods, equipment must be cleaned well enough to prevent contamination by and co-mingling with conventional production. When a cleaning or sanitizing agent is used, information on the agent (usage, SDS, etc) must be presented. Equipment must be rinsed throughout if a cleaning or sanitizing agent is used.
- §8-2-7 Measures not to co-mingle with non-organic ingredients or products must be taken at every step of processing from storage of ingredients, preparation of processing, transportation, processing, and storage of final products.
- §8-2-8 Measures must be taken to avoid contamination if a boiler additive is added and boiler steam comes in direct contact with food materials during processing.
- §8-2-9 Good management of sanitation control shall be required throughout processing.
- §8-2-10 Good management of processing flow must be maintained, from receiving of raw materials, processing, and inventory, to shipment. Lot control and quantity control including loss during processing must be well performed.
- §8-2-11 Use of processing equipment and packaging materials made from genetically engineered substance should be avoided. Use of materials which are known as containing endocrine disturbing chemical shall be avoided likewise.
- §8-2-12 §9 Organic processing standards applies for standards of pest control, packaging materials, and audit trail and recording keeping.

§8-3 Miscellaneous

- §8-3-1 Labeling of products must comply with related regulations and industry standards.
- §8-3-2 Wastewater or drainage water shall be treated not to become a source of contamination to water or environment. It needs to comply with related regulations which is clear from periodical analysis.

§9 Food Processing Standards

<JAS><JONA IFOAM><JONA Original><JONA EU>

Organic food processing must maintain organic quality of organic agricultural products by preventing contamination risk and avoid use of food additives (including processing aids). Most attention must be paid to minimize environmental impacts, in such a way as treating properly drained water and smoke, waste and so forth that are generated from food processing. Sanitation must be cared most as well.

§9-1 General Requirements

At an organic processing facility with equipment, the possibility of contamination of raw materials, additives, processing aids, equipment and co-mingling with conventional foods must be avoided.

§9-1-1 All primary ingredients and secondary ingredients must be certified by JONA. It is permitted to use ingredients certified by another certification organization and approved by JONA.

§9-1-2 When both organic food and conventional food are produced by using the same equipment and machinery, a processor must separate its operation under strict control, and must wash and clean the processing equipment and machinery before processing organic food.

§9-1-3 Measures must be taken in every step of the processing physically and visually to protect from contamination and co-mingling of other raw materials or products and to guarantee that non-organic products are not sold as organic. The direct use or application of a prohibited method or material renders that product no longer organic.

§9-1-4 Good management of processing flow must be maintained, from receiving of raw materials, processing, and inventory, to shipment. Lot control and quantity control including loss during processing must be well performed.

§9-1-5 It is prohibited to use genetically-modified (or -engineered) organisms for raw materials, additives, processing (i.e. processing methods utilizing microorganism and enzyme), and pest control agents. In addition, use of equipment, packages, and so on made from genetically modified substance should be avoided. Prohibited organisms include agricultural products, enzymes, vitamins, oils, chemicals, paper and others produced by genetic engineering technology.

§9-1-6 Use of materials which are known as containing endocrine disturbing chemical shall be avoided as much as possible no matter how it is used as ingredients, additives, and/or processing and/or packing materials.

§9-1-7 The operator should take measures to return nutrients, organic matter and other resources effectively.

§9-1-8 Intentional use of nanotechnology is prohibited in organic food processing. This applies to raw materials, packages, the material of the surface contacting with products, and all other materials used in processing.

§9-1-9 Substances and techniques that reconstitute properties that are lost in the processing and storage of organic food, that correct the results of negligence in the processing of these products or that otherwise may be misleading as to the true nature of these products shall not be used.

§9-1-10 Processors shall establish and update appropriate procedures based on a systematic identification of critical processing steps and respect the principles of good manufacturing practices.

§9-2 Raw Materials

§9-2-1 The ratio of organic ingredients within the whole product must be more than ninety-five (95) percent. For JONA IFOAM Certification, primary and secondary ingredients of a whole product must be produced in line with JONA Organic Standards (including standards for JONA IFOAM Certification) or by an operator certified under IFOAM-Accredited Program.

§9-2-2 In case of EU certification, at least 95% of a whole product must be organic ingredients that meet the followings.

1. Being certified under IFOAM-Accredited Program and/or
2. Being certified to regulatory certification recognized as equivalent by EU. (It must meet the criteria of equivalency) and/or
3. Being certified to certification program that is recognized by EU. (It must meet the criteria of recognition) and/or
4. Having an import authorization from a Member State of EU as an interim measure of EU organic regulations.

When an operator uses ingredients from 2 to 4, they shall obtain a certificate of inspection or an equivalent certificate from the certification body of the ingredient supplier. Especially, in case of 4, there shall be an agreement between the certification body and JONA on organic ingredients

§9-2-3 In case of JONA Original Certification for organic liquor, organic ingredients must be certified Organic JAS ingredients, organic liquor certified under regulatory certification recognized as equivalent by Japan, and/or organic liquor certified according to JONA Original Certification.

§9-2-4 In case of the products contains organic processed products as its organic ingredient, the additives (set in §9-4) and non-organic raw materials within the organic ingredient cannot not be counted as organic ingredients. If the weights of non-organic materials and additives (set in §9-4) within organic processed products as ingredients are uncertain, 95% of whole weight of the organic processed products can be counted as organic ingredient.

§9-2-5 Non-organic ingredients in Material List of Food Processing may be used as non-organic ingredients under the following conditions:

1. The operator has notified to JONA all the requisite evidence showing that the ingredient concerned is not produced in sufficient quantity in the country in accordance with the organic production rules or cannot be imported from other countries;
2. JONA has authorized the use after having verified that the operator has undertaken the necessary contacts with suppliers to ensure himself of the unavailability of the ingredients concerned with the required quality requirements.

JONA will evaluate availability of those listed ingredients in an organic form periodically and may withdraw the authorization when the supplies are available.

§9-2-6 Agricultural products, animal products, aquatic products, liquor and processed foods that are excluded from the scope of Organic JAS certification must be counted as non-organic ingredients. In case of JONA IFOAM Certification, products other than organic agricultural products and organic agricultural processed products should be counted as non-organic ingredients.

§9-2-7 Water used as an ingredient of organic processed food must be drinkable. Water treated with chemical method must not be used.

§9-2-8 Salt that meets national standards can be used. Salt added with flavoring substances, food additives, and mineral (except for natural mineral obtained from sea water or rock salt) cannot be used.

§9-2-9 The display of organic ingredients within the finished product must be done in line with regulatory requirements of labeling.

- §9-2-10 The raw materials such as fresh products must be calculated as they are. Water, salt and processing aids added in processing are out of calculation. Additives and processing aids are regulated in 9-4.
- §9-2-11 Organic raw materials and conventional raw materials of the same kind cannot be used to make a single kind of processed food. Mixing of those two different qualities is not allowed for organic products.
- §9-2-12 Raw materials cannot be subject to prohibited materials during transportation and storage. Control should be taken to avoid risk of contamination.
- §9-2-13 All raw materials with organic logos must be visually and physically controlled and stored not to co-mingle with others.
- §9-2-14 Minerals (including trace elements), vitamins, and similar isolated ingredients shall not be used unless their use becomes legally required or if severe dietary or nutritional need can be demonstrated.
- §9-2-15 Non-organic raw materials must not contain nanomaterials.

§9-3 Processing

Processing methods depend upon the characteristics of each individual food. Basically, it must be biological and physical methods.

- §9-3-1 Processing must be carried out under good management which observes the General Requirement of §9-1.
- §9-3-2 Organic processing technology is based on biological and physical methods which apply fermentation, heat, pressure, crushing, and/or mixing. These physical and/or mechanical processes are basically allowed. If filtration techniques are applied, asbestos and other substances that may negatively affect the product and human health is prohibited.
- §9-3-3 Chips and so forth used for smoking must not be chemically treated.
- §9-3-4 Extraction of components by water, ethanol and/or oil is permitted. If any question arises, JONA requests analysis of water quality, ethanol and/or oil components. The ethanol and the oils must not possibly derive from the genetically engineered ingredients. Solvents used to extract organic products shall be either organically produced or food grade substances. The oil used for extraction is limited to plant and animal oil.
- §9-3-5 An organic processor should adapt technology to avoid usage of food additives and processing aids.
- §9-3-6 In the case that the same equipment is used for processing organic foods and conventional foods, the equipment must be cleaned well enough to prevent contamination by and co-mingling with conventional production. The operator shall have procedures to check effectiveness of cleaning. When detergent is used on the surface that direct contact with organic food, it has to be removed before organic processing. Water or ethanol may be used with a removal event. What must be reported are purpose of use, the name of its manufacturer, usage, ingredients and Material Safety Data Sheets (SDS). In case where operators handle both non-organic products and organic products and the latter are stored in storage facilities in which also other agricultural products or foodstuffs are stored suitable cleaning measures, the effectiveness of which has been checked, have been carried out before the storage of organic products.
- §9-3-7 An applicant's own quality standard of water, sanitation standard for processing, standard for labeling, standard for waste-water, and other general standards for processed foods must be higher than those regulated by the domestic law.
- §9-3-8 Sound sanitation control must be maintained through the whole processing.
- §9-3-9 Irradiation of raw materials and / or final products is prohibited even for sterilization or insecticide.

§9-3-10 The operator must take preventative measures for contamination from the use of boiler additives (purifiers or water conditioner), when boiler steam comes in direct contact with food materials during processing.

§9-3-11 It is prohibited to use container bins or packaging materials with synthetic material applied, including sterilizer, preservatives, and fumigation agents.

§9-4 Additives and Processing Aids

Food additives and processing aids should be avoided to the best of ability in organic processing. In case they are used for inevitable reasons, those listed in Organic JAS regulation and JONA Standards can be used in minimum quantity.

§9-4-1 An applicant who wishes to use additives and/or processing aids should be very careful about use. The details must refer to Material List.

§9-4-2 An applicant must report the purpose of its use, processing chart, volume of usage and SDS should be presented to JONA when s/he uses additives or processing aids.

§9-4-3 It is prohibited to use additives and processing aids made from GMO's.

§9-4-4 Name (use) of additives must be indicated in the label in line with domestic laws.

§9-5 Pest Control

Structural or physical pest control is the bottom line to exclude pests and to prevent contamination by chemicals and to minimize impacts on environment.

§9-5-1 The priority of pest control is structural and physical methods. Structural modification of facilities and removal of food residue prevent pest from entering or emerge.

§9-5-2 The following physical methods could be taken.

- Physical trap (adhesive, mechanical and so forth)
- Sound or supersonic
- Inducing light
- Ultraviolet
- Temperature control

§9-5-3 In case that methods in §9-5-1 are not effective, the materials listed in Attached Table 2 of "JAS of Organic Agricultural Products Processed Foods" and food and food additives (including those processed using these as ingredients and except for the purpose of pest control for plants) can be used in processing and handling of organic food. When these materials are used for pest control at processing facilities, machinery, raw material and finishes product warehouses and so forth, the following conditions must be met. In case of risk of contamination, a result of residue sample test must be reported to JONA.

- When the materials are disperse or sprayed, the facilities possibly in touch with them must be cleansed. Organic production can start after removal of the materials.
- When the materials are placed, they must not be in contact with raw material, products and facilities.
- When the materials are registered, they must be used only in the registered methods.

§9-5-4 In case that the materials of Attached Table 2, etc. are not effective, other material can be used only when organic food is not processed or handled. Appropriate preventive measures for the material

must be taken with the followings taken into account with information (usage, amount, residual efficacy and so forth) about the material.

When the materials are planned to be used, all the input materials and organic products must be removed from the facilities.

- When the materials are dispersed, facilities and machineries which are going in contact with organic raw materials and products must be cleansed after seventy-two (72) hours. Organic operation can begin after removal of the materials used from the facilities.
- When the materials are sprayed, facilities in contact with raw materials and products must be cleansed after one hundred and twenty (120) hours. Organic product can begin after removal of the materials.
- When the materials are placed, they must be removed before organic production begins. It is prohibited to use rodenticide.
- Fumigation with ethylene oxide, methyl bromide, aluminum phosphide or other substance not contained in the list of Allowed chemicals used at facility is prohibited.

§9-5-5 The information of the material, if used according to §9-5-3 or §5-4 must be clearly reported to JONA about its SDS, place of application, period of use, the purpose of use and responsible person.

§9-5-6 Organic food must be clearly, visually and physically distinguished in whole processes for prevention of contamination.

§9-6 Packaging Materials

In using packaging materials, there should be no danger of contaminating finished products. Also, materials that cause environmental pollution should be avoided.

§9-6-1 Packaging materials shall be made from those materials from which chemical substances and/or metals do not dissolve into, or mingle or contaminate the processed foods.

§9-6-2 Packaging materials should be selected from those materials which are safe and good for foods.

§9-6-3 SDS of packaging materials, samples, if needed, and their specification must be reported to JONA on application.

§9-6-4 Excessive package must be avoided for protection of the environment.

§9-6-5 It is desirable to use recyclable materials for packaging.

§9-6-6 When packaging materials such as cardboard or hemp sacks are reused, they should be used exclusively for organic products.

§9-6-7 Any printing or labeling inks and adhesives should be non-toxic, and should not come in contact with the products.

§9-7 Audit Trail and Record Keeping

It is essential for organic food processor to observe an audit trail program and record keeping at every step: from certification of raw materials, shipment, transportation, receipt, storage, processing, packaging, inventory of finished products, and warehousing until shipment; and also record keeping of sanitation, pest management and inventory control.

§9-7-1 Chain of custody in whole organic processes must be able to be verified by records. Such system enables to identify what are used as raw materials and additives, how products are stored and so forth.

- §9-7-2 Chain of custody, mentioned in §9-7-1, can be done in such manner as applying lot numbers.
- §9-7-3 When organic and conventional processing take place at the same facilities and machinery, separation of the both productions must be documented and managed.
- §9-7-4 Any change of raw materials, processing facilities, processing method, trucking company, warehouse and buyers must be reported without fail to JONA in advance; and also reasons for the change are to be reported. JONA will judge whether re-application and/or re-inspection are/is necessary or not.
- §9-7-5 Records for tracing and documents relating to JONA Certification must be kept for at least 5(five) years. (In case of JAS organic certification, the records necessary for grading must be kept no less than 1 year from the shipment of graded organic products)

Material List of Food Processing

Additives and Processing Aids used for Organic Food Processing

Allowed materials

The allowed materials must be in line with the current version of JAS for Organic Processed Foods and Attached Table 1 Additives. In case of JONA IFOAM Certification, there are the materials with additional conditions and the prohibited materials. See “Additives and processing aids for organic liquor production” for the allowed materials for organic liquor.

Materials with additional conditions (The additional conditions are indicated in parenthesis)

- Ammonium carbonate and ammonium hydrogen carbonate (only for cereal products, confectionery, cakes and biscuits)
- Calcium hydroxide (food additive for maize tortilla flour, processing aid for sugar and Konyaku[alimentary yam paste])
- Gelatin (limited to be used for fruits and vegetable products)
- Bentonite (only for fruit and vegetable products)
- Diatomaceous earth (Limited to be used for soy sauce, sweeteners, wine)
- Magnesium chloride (Limited to soy bean products)
- Silicon dioxide (Limited to processing of fruits and vegetables)
- Calcium Sulphate (Limited to be used for the confectionary, the processed beans products, or bread yeast.)
- Pectin (limited to unmodified)

Prohibited materials

- Food additives and processing aids to be used for livestock processed products (odium citrate, Sodium L-ascorbate, Sodium hypochlorite, Fumaric acid, Monosodium fumarate)
- DL- malic acid
- Tannin
- Potassium hydroxide
- L- tartaric acid
- Karaya gum
- Casein
- Hypochlorous acid water
- Ozone

(Reference) Japanese Agricultural Standard for Organic Processed Foods Attached Table 1

http://www.maff.go.jp/e/policies/standard/jas/specific/attach/pdf/criteria_o-7.pdf

In case of EU certification, additives and processing must be in line with Annex VIII of Regulation (EC) No 889/2008.

Additives and processing aids for organic liquor production

Allowed materials

The allowed materials are in line with the current version of Labeling Standards of Organic Liquor (National Tax Agency, Notice No. 7) and Attached Table 1 Additives. In case of JONA IFOAM Certification, there are the

materials with additional conditions and the prohibited materials.

Materials with additional conditions (The additional conditions are indicated in parenthesis)

- Tartaric acid (only for wine)
- Sulfur dioxide (only for wine)

Prohibited materials

- Malic acid (Note: Not found in IFOAM Basic Standards, Appendix 4)
- Ammonium carbonate (Note: Limited to cake and biscuit in IFOAM Basic Standards, Appendix 4)
- Magnesium chloride (Note: Limited to soy bean products in IFOAM Basic Standards, Appendix 4)
- DL-Potassium hydrogen tartrate (Note: Not found in IFOAM Basic Standards, Appendix 4)
- L-potassium hydrogen tartrate (Note: Not found in IFOAM Basic Standards, Appendix 4)
- L-sodium ascorbate (Note: Not found in IFOAM Basic Standards, Appendix 4)
- Calcium dihydrogenphosphate (Note: Limited to baking powder of grain powder in IFOAM Basic Standards, Appendix 4)
- Calcium sulfate (Note: Limited to soy bean products in IFOAM Basic Standards, Appendix 4)
- Arabian gum (Note: Limited to milk products, confectionery, eggs and so forth in IFOAM Basic Standards, Appendix 4)
- Bentonite (Note: Limited to fruit and vegetable products in IFOAM Basic Standards, Appendix 4)
- Wood ash (Note: Not found in IFOAM Basic Standards, Appendix 4)
- Yeast cell wall (Note: Not found in IFOAM Basic Standards, Appendix 4)

Attached Table 1 of Labeling Standards of Organic alcohol
<https://www.nta.go.jp/taxes/sake/hyoji/yuki/kokuji001226/03.htm>

Allowed chemicals used at a facility

Allowed materials

The allowed materials must be in line with the current version of JAS for Organic Processed Foods and Attached Table 2 Chemical Agents. However, under JONA-IFOAM certification, capsaicin is limited to those derived from plant, and sodium silicate is excluded.

(Reference) Japanese Agricultural Standard for Organic Processed Foods Attached Table 2
http://www.maff.go.jp/e/policies/standard/jas/specific/attach/pdf/criteria_o-7.pdf

Non-organic ingredients allowed for use (Only for JONA EU program)

Name	Criteria
Livestock products	
Food processed from livestock products	
Aquatic products	
Products processed from aquatic products	

<u>Products that is derivative from microorganism</u>	
<u>Other non-organic agricultural/aquatic/livestock product</u>	<u>It shall meet either of the following conditions.</u> 1. <u>The amount of organic ingredient is not available.</u> 2. <u>The same quality of organic ingredients are not available.</u>

**§10 Reserved for Organic Cosmetic Standards under JONA
Original Certification**

**§11 Reserved for Organic Restaurant Standards under JONA
Original Certification**

§12 Warehousing/Transportation and Trading Standards

<JAS><JONA IFOAM><JONA Original><JONA EU>

Those who are engaged in warehousing, transportation, and trading of organic products must observe the standards in order to maintain the organic integrity. In handling agricultural products, animal and marine products, and processed foods with JONA certification marks, it is essential to keep a clear separation of organic products from non-organic products, and to keep control of organic products so that they do not become contaminated by chemicals. Section 9 applies to not only contracted but own warehousing, transportation and so forth.

§12-1 Object of Certification

A farmer's own warehouse and a processor's own warehouse as well as their own trucking systems are evaluated to the corresponding standards.

It is necessary to obtain Warehousing/Transportation Certification and Distributor Certification in the following cases. In addition, it is recommended to apply for JONA Original Certification.

§12-1-1 It is necessary to obtain Distributor Certification when an applicant is specialized in retailing and/or wholesaling organic foods with JONA organic marks but does not engage in any processing activities (including simple activities such as repacking and cutting). In addition, it is recommended to apply for JONA Original Certification.

§12-1-2 It is necessary to apply for Distributor Certification if an applicant does not engage in production, processing and warehousing but have ownership of organic food. In addition, it is recommended to apply for JONA Original Certification.

§12-1-3 The retail stores owned by the farmer or the plant do not necessarily apply for Distributor Certification. In addition, it is recommended to apply for JONA Original Certification.

§12-1-4 It is necessary to apply for Warehousing/Transportation Certification when an applicant is specialized in warehousing but does not engage in processing (including simple activities such as repacking and cutting). In addition, it is recommended to apply for JONA Original Certification.

§12-1-5 It is necessary to apply for Warehousing/Transportation Certification when an applicant is specialized in transporting and wishes for certification of transportation means (including trucks). In addition, it is recommended to apply for JONA Original Certification.

§12-1-6 It is not necessary for end-use retailers to get certified when they do not break packages. If they break packages or clean the products, they need to apply as sub-divider.

§12-1-7 The Distributor must apply for certification if they want to distribute products with JONA IFOAM Certification Mark or JONA Original Mark.

§12-1-8 When manufacturing is entrusted by the non-certified importers or distributors, the name of the manufacturer, besides those of the importers or distributors, shall be indicated on the package.

§12-2 General Requirements for Handling

Management system is required to avoid co-mingling organic products with non-organic products, and contamination by chemicals.

§12-2-1 Structural and physical pest management must be carried at the places where organic products are stored, transported and sold. Pesticides and rodenticides should not be used. In case that structural and physical management are not effective, proper management in line with 9-5-3 and 9-5-4 must be carried out to prevent contamination.

- §12-2-2 Organic products should be handled separately in time or space from non-certified products; and clear signs should be put on the products.
- §12-2-3 Direct contact of certified products with non-certified products must be avoided.
- §12-2-4 Certified products should not be stored, transported or sold at or close to a heavily polluted place. When contamination by air is suspected, chemical residue analysis may be required.
- §12-2-5 Organic products must be handled very carefully. When water drips or breakage are found at the time of storage, transportation or handling, products suspected of contamination cannot be sold as organic until they are found not contaminated.
- ~~§ 12-2-6 In case of EU certification, operators shall ensure that organic products are transported to other units only in appropriate packaging, containers or vehicles closed in such a manner that substitution of the content cannot be achieved without manipulation or damage of the seal and provided with a label stating, without prejudice to any other indications required by law: a) the name and address of the operator and, where different, of the owner or seller of the product, and b) the name and/or the code number of the control body and c) lot number.~~
- ~~§ 12-2-7 In case of EU certification, the closing of packaging, containers or vehicles mentioned § 12-2-6 shall not be required where: a) transportation is direct between an operator and another operator who are both subject to the organic control system, and b) the products are accompanied by a document giving the information required under 12-2-6, and c) both the expediting and the receiving operators shall keep documentary records of such transport operations available for the control body or control authority of such transport operations.~~

§12-3 Storage and Transportation

Places of storage and vehicles for transportation (trucks, ships, etc.) should be cleaned, sanitized, and sterilized by a method suitable for organic products. Fumigation and chemical treatment are prohibited.

- §12-3-1 Physical methods (traps, ultraviolet beams, light devices, etc.) can be used against insects and small animals.
- §12-3-2 JONA may requests “Affidavit as per fumigation” and/or “Affidavit as per cleaning vehicle” in some cases. It is preferable that an applicant should submit them to JONA as record of non-contamination.
- §12-3-3 The following special methods of storage and transportation are permitted:
- Refrigerated storage
 - Cooling by ice made from drinking water
 - Freezing
 - Temperature controlled storage
 - Storage with carbon dioxide gas, nitrogen gas and hydrogen gas.
- §12-3-4 A protection program against contamination caused by tools (such as pallets) and machinery (such as forklifts) is required.
- §12-3-5 When organic products are inevitably fumigated or treated by chemicals due to Health Center’s order, the treated products cannot be regarded as organic anymore. Those must be treated as conventional products.
- §12-3-6 The party owning the products in transportation shall be responsible for maintaining organic integrity in the transport, unless transportation operations are certified in their own capacity.

§12-4 Audit Trail and Record Keeping

Separation control system has been established and executed in whole process of receiving products, warehousing, storage, shipping, transporting, inventory, and so forth. It should observe this clause.

- §12-4-1 All records taken in receipt, transportation, shipment, and inventory must enable audit trail to be complete. Organic products must be controlled until they reach the buyer.
- §12-4-2 Lot number control must be maintained from receipt to shipment to make the audit trail successful.
- §12-4-3 In the case that organic products and non-certified products are handled at the same warehouse or by the same vehicle, separation control must be strictly observed and documented. Spatial, time wise and visual separation is necessary.
- §12-4-4 Records of JONA certified products should be kept for at least five (5) years.

§13 Labeling, Report and Prohibited Acts

<JAS><JONA IFOAM><JONA Original><JONA EU>

Organic products must be labeled properly to present right information to consumers.

JONA thinks that maintaining organic integrity must be done not only by producer, processor, sub-divider and importer but also distributor and middleman. It is necessary for distributor and middleman, who do not engage in production, processing and sub-diving, to obtain JONA Distributor certification in principle.

§13-1 General Principles of Labeling

§13-1-1 There are three types of certification marks of JONA 1. JAS-JONA Mark, 2. JONA IFOAM Certification Mark and 3. JONA Original Mark.

2. JAS-JONA Mark

An operator certified by JONA under JAS attaches JAS-JONA marks on their products produced in line with Organic JAS and JONA Organic Standards (excluding requirements solely from IFOAM). “Organic” and “Organic in-Conversion” must be used by indicating so separately.

3. JONA IFOAM Certification Mark

An operator certified by JONA under IFOAM-Accredited Program attaches JONA IFOAM Certification Mark on the products produced in line with JONA Organic Standards. The mark cannot be used together with “Organic in Conversion” indication. The labels of products with JONA-IFOAM Certification mark must identify the person or company legally responsible for the product

4. JONA Original Mark

An operator certified by JONA under JONA Original Program attaches JONA Original Marks on the products produced in line with JONA Organic Standards (excluding requirements solely from IFOAM). “Organic” and “Organic in-Conversion” must be used by indicating separately.

§13-1-2 The products produced in line with JONA EU standards of this standards by certified operators can be labelled as organic in accordance with the labelling requirements of EU organic regulations. The details of the labelling requirements under EU organic regulations are described in “Labelling Guide for Exporting Organic Foods”.

Labeling of Organic Produce (including Organic Agricultural Products)

§13-1-3 Organic primary products, including organic agricultural products, designated by JAS Regulations, must be labeled in line with Article 5 of Organic JAS and be labeled with Organic JAS mark.

§13-1-4 With 11-1-2 satisfied, organic primary products, including organic agricultural products, can be labeled with JONA IFOAM Certification Mark as well as JAS-JONA Mark if certified under IFOAM-Accredited Program. The mark of JONA IFOAM Mark cannot be used with “Organic in Conversion” indication.

§13-1-5 Primary products not designated by JAS Regulations can be labeled with JONA Original Mark (but cannot be labeled as organic).

Labeling of Organic Processed Food (including liquor)

§13-1-6 Organic processed food designated by JAS Regulations must be labeled in line with Article 5 of Organic JAS and must be labeled with Organic JAS Mark.

- §13-1-7 Organic processed products certified under IFOAM-Accredited can be labeled with JONA IFOAM Certification Mark. JONA IFOAM Certification Mark cannot be used with “Organic in Conversion” indication. In the labelling of products with JONA-IFOAM Certification mark, it shall be apparent which ingredients are of origin certified under IFOAM-Accredited program and which are not. All additives shall be listed with their full name. All additives shall be given with their full name.
- §13-1-8 Organic processed food (including liquor) not appointed by JAS regulations can be labeled with JONA Original Mark.
- §13-1-9 If more than seventy (70) and less than ninety-five (95) percent of the ingredients are with JONA certification marks, “made with JONA-certified ingredients” can be indicated when inspected and certified by JONA.
- §13-1-10 When the brand owner is not certified as a distributor (even if producer or processor of the products are certified), indication, name and logo marks of JONA are not allowed (except for Organic JAS mark if the distributor has the production contract with the said operator).

§13-2 Obligation to Report to JONA

Members and certified operators of JONA have an obligation to report in various stages such as sales, processing and handling. Name, marks and certificates of JONA must not be used without a consent from JONA no matter they are used by members or not.

- §13-2-1 Members and certified operators should go through label evaluation of the products with JONA’s names on them before they sell the products. They must be careful not to let their clients or affiliates use the name and marks of JONA without consent.
- §13-2-2 Members and certified operators of JONA are expected to report to JONA as soon as possible if they find JONA’s mark and/or name and Organic JAS mark are being used in a wrong manner.
- §13-2-3 Whenever members want to introduce JONA, JONA’s mark, and/or JONA’s Organic Standard in their company brochures, pamphlets, or catalogues of merchandise, they must report to JONA with the proposed contents
- §13-2-4 JONA verifies or evaluates labeling or expressions of Organic JAS mark and JONA names and/or marks, but it is not responsible for evaluation of labeling in regard to other regulations.

§13-3 Prohibited Acts

- §13-3-1 Members and certified operators of JONA should not make bad use of being a member of JONA. Their expression should not mislead customers or make a false impression on them.
- §13-3-2 Members and certified operators must not violate JAS Regulations, Food Sanitation Law and other applicable rules. They must not make a false report or attestations, conduct any un-certified activities, and violate Basic Contract with JONA and JONA Certification Program.
- §13-3-3 Members and certified operators should not utilize JONA’s certificate in order to sell products other than the certified products.
- §13-3-4 When members and certified operators do not observe the Standards of §11-3, Dispute Settlement Policy (described in IV-4 of JONA Organic Certification Program) will apply to them immediately (In case that they are certified under JAS by JONA, the incident will be reported to the applicable government agency). If social responsibility is greatly concerned, JONA may expel and/or award damages to the violator.
- §13-3-5 Members should not impair the credibility of organic certification and JONA’s integrity by

misleading terms and descriptions of products, or by deceptive sales activities.

§14 Appendix

Biodiversity, Social Justice, Certification Organization,

Assessment of Materials & Analysis of Materials

§14-1 Biodiversity

<JAS><JONA IFOAM><JONA Original>

Organic agriculture must utilize ecological function of the nature at most and minimize adverse effect on its surrounding environment. Farms and facilities for organic agriculture and organic agricultural processing foods should not destroy and / or contaminate its surrounding environment. Organic operators should pay much attention to keep biodiversity and maintain landscape in order that organic agriculture can contribute to richness of natural environment.

§14-1-1 Members and certified operators of JONA should do best to maintain environment at or around its production sites and facilities.

§14-1-2 Following measures should be cared to maintain natural environment.

- Not to clear or develop land, forest and / or wet land without environmental assessment. Clearing or destruction of High Conservation Value Areas is prohibited. Farming areas installed on land that has been obtained by clearing of High Conservation Value Areas in the preceding 5 years shall not be compliant with JONA-IFOAM standard.
- To utilize its original land shape and to choose species of plant which is suited to its soil, climate and environment of the land.
- To protect and maintain trees and the woods.
- To dispose industrial wastes or waste water from production facilities by a proper method, which should not become source of contamination.
- To prevent erosion and minimize loss of topsoil by making ditches, ridges and / or keeping windbreak, (shelter belt) trees and cover-grasses, minimal tillage, contour plowing and crop selection.
- To minimize use and kinds of inputs
- Land preparation by burning vegetation shall be restricted to the exceptional cases where burning is used to suppress the spread of disease, to stimulate seed germination, to remove intractable residues, and so on..
- Not to deplete nor excessively exploit water resources, seeking to preserve water quality and where possible recycle rainwater and monitor water extraction.

§14-1-3 Following measure should be considered to contribute regional ecology.

- Production units are mutually influenced by mountains, forests and so on in the region.
- Production units are mutually influenced by swamps, lakes and so on in the region.
- There is rich environment such as ridges, trees, fallow and water around vicinity of organic agricultural site.
- There is more than 10% of agricultural field which is larger than 10% acre reserved for un-cultivated natural environment.
- Organic fields should be kept under the conditions where any living species (plant, animal) can be protected.

§14-2 Social Justice

<JONA IFOAM><JONA Original>

Organic operators shall observe social justice and social rights and shall not commit an unfair labor practice.

§14-2-1 If members and certified operators of JONA would repeatedly force laborers especially children work too much from the social standard or treat the labors against social standards, certification and/or membership should be cancelled.

§14-2-2 Members must observe the following conditions

- To employ at the level of wage and other employment conditions which legally comply with the conditions of their own area.
- To bear the legally required percentage of social security fund set by the state and local governments.
- Not to discriminate employees by nationality, education, sex, family history and religion etc.
- Not to employ aliens visiting the country for training, at unreasonably low wages.
- To manage the operation with concern about claims and opinions from employee of the working conditions and environment.
- To provide additional concern for the working condition for juvenile workers; such as not to assign unsafe tasks, supervised by adults, and/or employment must be permitted by their legal guardian. Also, chance of education must be given. Labor should not be destruction for juvenile's mental, social and physical growth.
- Not to interfere with the right of employees, suppliers, farmers and contractors to organize and bargain collectively.
- Not to use forced or involuntary labor or apply any pressure such as retaining part of the workers' wages, property or documents.
- To have a disciplinary procedure with a system of warning before any suspension or dismissal and to give full details of reasons for dismissal to dismissed workers
- To grant the right to take at least one day off after six consecutive days of work, not to require workers to work more than the contracted hours and the national or regional legislation and to remunerate overtime work in the form of supplementary payments or time off in lieu.
- Not to require an employee to work who is ill or requiring medical attention and not to sanction an employee for the sole fact of missing work due to illness.
- To provide written terms and conditions of employment to both permanent and temporary employees, in a language and presentation understandable to employees and to respect those terms and conditions. The terms and conditions specify at least:
 - Wages;
 - Frequency and method of payment;
 - location, type and hours of work;
 - recognition of workers' freedom of association;
 - disciplinary procedure;
 - health and safety procedure;
 - eligibility and terms of overtime, holiday pay, sickness benefit and other benefits such as maternity and paternity leave;
 - workers' right to terminate employment
 - In cases that workers are hired for periods of less than 6 days or emergency labor is needed to address unpredictable problems, oral mutual agreements on the terms and conditions are

needed.

- Operators with more than 10 employees must have a written employment policy and maintain records to demonstrate full compliance with the requirements of §13-2 of this standard.

§14-2-3 Operators must build and maintain appropriate working conditions in and around facilities which can prioritize safety first for workers.

§14-2-4 The following points should be taken care of.

- To set up enough light and warning for workers to avoid risks in and around facilities and processing plants.
- To decrease burden of workers by taking good measures against noise, powder dust caused by processing, air circulation and excessive fluctuation of temperature.
- To make counter-measure against exposure of chemicals or radiation for workers safety.
- To educate and train workers about safety.
- To ensure adequate access to potable water
- To provide residential employees with habitable housing and access to potable water; to sanitary and cooking facilities and to basic medical care. In case of residential employees with their families on the operation, to enable access to basic medical care for family members and to school for children.

§14-2-5 Operators shall not violate indigenous land rights.

§14-3 Evaluation of other certification organizations

<JAS><JONA IFOAM>

A geographical scope of certification by JONA is the whole world. JONA considers it important to have a mutually recognized relationship with many organizations such as certification organizations for the sake of environmental conservation, food safety and good certification. JONA will cooperate with, communicate with and establish trust from other certification

§14-3-1 JONA evaluates a foreign certification body, when JONA accepts an application for JAS certification from an operator that already certified as organic operator by the foreign certification body.

§14-3-2 In order for JONA to evaluate under JAS regulations the foreign producers, processors and sub-dividers that have been already certified by a different certification organization, there must be a general agreement made between the applicable organization and JONA regarding procedures of exchanging inspection information, confidentiality, mutual communication, supply of information about the operation, fee, exemption from liability, dispute solution and so forth. The details are set in “General Agreement of Inspection and Certification of Organic Foods”.

§14-3-3 A general agreement must be made between the certification organization and JONA with an approval from both parties. The general agreement is set for substituting inspections of producer, processor and sub-divider by JONA to the certification organization. Therefore, the agreement must ensure all information on inspection and certification to be given to JONA.

§14-3-4 When JONA evaluates a foreign operator under Organic JAS, JONA first makes the general agreement, evaluate inspection information and any information necessary for certification from the applicable certification organization and decides on certification. The following describes procedures to do so.

- JONA first verifies that the certification organization in question meets at least one of the following qualifications.
 1. IFOAM-Accredited

- 2. ISO 17065 – Accredited
- 3. Accredited by the government of the country

- In case of 1, JONA will suggest the organization to make a general agreement based on Multilateral Agreement (MLA).
- In case of 2 and 3, JONA will obtain such documents as standards and certification program In this case, an applicable applicant will submit those documents. It could be written in English or Chinese.
- JONA will evaluate whether the certification organization is capable in accordance with Organic Standards, Certification Program, Organic JAS and Technical Criteria of JAS.
- Evaluation of the certification organization also takes account of audit of the organization by a third party, certification experience and so forth.
- JONA will receive from the certification organization in agreement such information regarding the applicant as inspection report, conditions, certification decision, audit report and so forth.
- A certification decision by JONA will be informed to the certification body and the applicant.

§14-3-5 JONA chooses the certification organization to cooperate with or to make an agreement with in line with the following standards.

- IFOAM-Accredited
- ISO 17065-Accredited
- Accredited by the local government as a certification body
- The contents of such documents as standards and certification program are equivalent to JONA Organic Standards, Certification Program, Organic JAS and Technical Criteria of JAS.
- Their certification activities are audited by IFOAM, ISO agencies and local governments.
- Having experience of at least 5 years and having certified more than 100 operators certification organization
- Having a contractual relationship with a certification organization that JONA is in agreement with (for making a three-party agreement)
- Having an internal level of education and qualification of contracted inspectors that the certification organization has (ISO9001 evaluator, completion of IFOAM and IOIA inspector training course)

§14-3-6 The applicant and JONA must keep documents and records for at least three (3) years.

§14-3-7 JONA publicize names of certification organizations on their newsletter and at the General Assembly. JONA members must inform their contractors of the information about general agreements.

§14-3-8 With regard to IFOAM-accredited program mentioned in 9-2-1 of this Standard, the status of accreditation of the certification body for the program is confirmed by checking the certification database on the website of IOAS for those accredited by IOAS or contacting and obtaining a copy of accreditation certificate for those accredited by accreditation bodies other than IOAS.

§14-4 Assessment of Materials

<JAS><JONA IFOAM><JONA Original><JONA EU>

JONA has the following standards to revise the materials listed in §4 through §8 of Organic Standards. The materials already listed have already been evaluated for JONA certification and JAS certification by JONA.

JONA will announce to JONA members any changes in the materials evaluated by Standard

Committee.

Within 30 days from the announcement, JONA member can send to JONA an appeal or a question regarding materials in question. Appeals and questions will be dealt in line with amendment procedure of materials.

§14-4-1

The newly added materials shall meet the following general requirements.

- They must not contradict principles set in §4 through §8 of Organic Standards.
- In case of the products designated by JAS, they must comply with Article 4 and Attached Tables of Organic JAS
- It is absolutely necessary to use them for applicable purposes.
- Production, use and dispose of them must not damage or induce to damage the environment.
- Their impact on human and animal health is as little negative as possible.
- The other allowed material shall not substitute them in terms of quality and quantity.

§14-4-2

JONA can verify an individual product is in line with the material list. A manufacturer of the product can apply for the verification. The product whose compliance has been verified is called “Input with Content Verification”. If the applicant and the certified operator uses these inputs, they waive submission of materials on the input. Procedures of application are described in Certification Program.

§14-5 Analysis of Samples

<JAS><JONA IFOAM><JONA Original><JONA EU>

§14-5-1

JONA may request a sample analysis of various kinds in line with Certification Program in the following cases. The details of items/materials and detective levels must be followed in those set in the chart below.

- Chemical residue analysis shall be conducted when soils or facilities are possibly contaminated or when chemicals stay.
- Agricultural chemical residue analysis shall be conducted when soils are possibly contaminated by agricultural chemicals
- Water quality test shall be conducted when underground water and natural water (except for rain water) is used or when water quality is improved.
- Genetically modified product analysis shall be conducted when the crop on the farm is of the same variety of GM crop.
- Component analysis and heavy metal analysis shall be conducted when natural minerals are used in production.
- Heavy metal analysis is conducted in a closed water of marine production.
- Chemical residue analysis shall be conducted when fumigation and chemicals are possibly a source of contamination in transportation and warehousing.
- Electric conduction and saline analysis shall be conducted in case of greenhouse production to see how much salt is accumulated and to prevent damage from nitrate salt.
- Saline analysis of drained water shall be conducted in case of hydroponics production
- Air analysis, soil analysis and water quality analysis of wild collection area shall be conducted.

§14-5-2

JONA carries out analysis of chemical residues and GMO/GMO derivative from among products taken in the following cases.

- The provision of the information on the detection of prohibited substances such as chemicals and GMO was provided, which is limited to the case where the sufficient objective evidence was presented.

- P.P.M.D. group is organized with more than thirty (30) farmers
- P.P.M.D., processor, and/or repacker who produce, process, or handle and grade a lot of items
- P.P.M.D. who also produces conventional crop (especially in parallel production)
- Processor, Repacker and Importer who frequently purchase ingredients.
- An operator who was questioned about their operations in the past
- Warehouse or Transportation operator who frequently receives and ships out the products
- P.P.M.D. (Producer and Processor) who produce or process the products in which people hold a keen interest
- Operation where non-compliances were found at previous inspection
- Operation who received complaints
- JONA evaluates the risk of the operators certified under JONA-IFOAM, COR and EU equivalent program based on the indicators listed as above and carries out analysis for the operator who has a high risk.
- JONA conducts analysis for 3% of the total certified operators and 5% of operators certified under EU-equivalent program (selected by JONA). Farmers group over 30 members/ the production process controller mixes plural products at the shipment.
- Producer/ processor/ packer who is grading various products.
- Products and facilities of producers/ processors carrying out parallel production and processing.
- Products and facilities of processors/ importers who buy raw materials frequently.
- Products and facilities of warehouse men / transporters who use warehouses frequently.
- Organic foods which draw public attention.
- Certified products produced by 3% of certified operators of JONA (3% of the certified operators are selected by JONA)

§14-5-3 JONA sets the items and methods of analysis. Chemical residue allowed level is 10% of the level set in Article 11 Paragraph 3 of Food Sanitation Law. For other analysis, the allowed level is 10% of the levels set by relevant regulations. Residue level allowance applies only when the applicant has never used the materials and when contamination takes place. Basically, those materials should be detected and, if detected, products in question shall be dealt as disqualified products.

§14-5-4 The acceptable result of GM analysis is “not detected”.

§14-5-5 The above-mentioned inspection items are regulated by the standard of Food Sanitation Committee, Food Sanitation Law, Pesticide Control Law, and Fertilizer Control Law.

§14-5-6 For selecting which agricultural chemicals are analyzed, it is better to take in consideration the data supplied by the Agricultural Center and/or the Extension Center in the producing district.

§14-5-7 Inspection items on each product are decided by the Standard Committee.

§14-5-8 Samples for analysis of pesticide residue should be taken by a competent person approved by JONA in principle.

Measures

§14-5-9 In case a chemical substance or heavy metal exceeding the allowable level is detected by the analysis of pesticide residues, JONA will take following measures.

- To order suspension of shipment of the organic products concerned from which samples have been taken.
- To order withdrawal of the products concerned.
- To order investigation of the production facility, soil, environment etc of the products concerned to find out the cause of residues.
- To order correction of defects in the case the cause is found.

- To order suspension of shipment of the products concerned as organic until the cause is found.
- In case the cause is specified and corrected, JONA will accept an application. When the application is approved after site-inspection and other due course, JONA gives permission to the operator to sell the newly certified organic products.
- In case the cause is not cleared up, withdrawal of certification of JONA must be carried out and reported to the applicable agency.

§14-5-10 The outcome of analysis of residues is made open to the operator from whom samples of the materials are taken.

Input Volume

§14-5-11 Production Process Management Director must remind that the certified organic field shall not be a cause of environmental pollution due to excess of nitrogen input and/or destruction of soil fertility. The maximum amount of nitrogen in fertilizer shall be set in accordance with the related rules of the local government. In case of the items listed below, whichever lower amount either the local regulation or the amount shown below should be set as a maximum.

The total amount is as follows:

Name of Agricultural products	Total amount of nitrogen input
Rice	8 kg / 10 a. per cycle
Tea	60 kg / 10 a. per year
Lettuce	20kg / 10 a. per cycle
Cabbage	25kg / 10 a. per cycle
Cucumber	30kg / 10 a. per cycle

- The amounts above are set for the time being and will be revised, changed, or added.

-end-