Quality Certification Services (QCS)

QCS is Certification Body of Florida Certified Organic Growers and Consumers, Inc. (FOG)

QCS EU 834-2007 ORGANIC CERTIFICATION REQUIREMENTS

This document contains the certification standards, policies and procedures for the operation of the QCS International Organic Program offered by Quality Certification Services (QCS).

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01 FORWARD

The QCS EU 834-2007 Certification Requirements contains those EU organic regulations that are in addition to or different than those of the USDA National Organic Program. For more information about the QCS International Program, refer to the QCS Certification Manual.

02 FARM

2.1 Conversion

2.1.1 Starting from the date of application to the QCS EU 834-2007 Certification program, operations shall undergo a period of conversion[1].

a) During the conversion period all EU requirements apply.

b) The conversion period covers the two years before the first organic harvest for annuals and three years for perennials. Exceptions may be granted, if[2]:
   1) The land parcels have been managed under the EU requirements, or in another official program, provided that materials prohibited under the Annexes have not been applied, or

   2) The parcels were natural or agricultural areas that were not treated with prohibited substances under the Annexes.

   3) The conversion period may be reduced to 1 year for pasturage and open air areas used by non-herbivore species. This time may be reduced to 6 months, if the operation can demonstrate that materials prohibited under the Annexes have not been applied to the land concerned.[3]

c) Conversion periods may be defined for certain crops or species as specified in these standards.[4]

2.2 Parallel and Split Production

2.2.1 Split Production (organic and non-organic production)

a) The entire agricultural holding shall be managed in compliance with the EU requirements applicable to organic production.[5]

b) However, a holding may be split up into clearly separated production units or production sites which are not all managed under organic production. The term 'production unit' refers to all assets to be used for a production sector such as production premises, land parcels, pasturages, open air areas, livestock buildings, the premises for the storage of crops, crop

[1] EC No 834/2007 Article 17, paragraph 1
[2] EC No 889/2008 Article 36, paragraph 2 (a) and (b)
[3] EC No 834/2007 Article 17 paragraph 2 & 889/2009 Article 37, paragraph 2
[4] EC No 834/2007 Article 17, paragraph 1 (c)
[5] EC No 834/2007: Article 11

products, livestock products, raw materials and any other input relevant for this specific production sector.[6]

1) In regards to animals, different species shall be involved.

c) In cases where not all units of a holding are used for organic production, the operator shall keep the land, animals, and products used for, or produced by, the organic units separate from those used for, or produced by, the non-organic units and keep adequate records to show the separation.

d) Where an operator runs several production units in the same area, the units for non-organic products, together with storage premises for input products must also be subject to the minimum control requirements.[7]

2.2.2 PARALLEL PRODUCTION

a) Parallel production is the Same product produced organically and non-organically, andis allowed in the case of perennial crops of varieties that are not easily differentiated or seed production, provided the following conditions are met;[8]

1) the production in question forms part of a conversion plan in respect of which the producer gives a firm undertaking and which provides for the beginning of the conversion of the last part of the area concerned to organic production in the shortest possible period which may not in any event exceed a maximum of five years.

2) Appropriate measures have been taken to ensure permanent separation of the products obtained from each unit concerned.

3) The inspection body or authority is notified with the harvest of each of the products at least 48 hours in advance.

4) After completion of the harvest, the producer informs QCS of the exact quantities harvested on the units concerned and of the measures applied to separate the products.

2.3 Seed/Planting Stock

2.3.1 Annuals

a) Only EU organic produced seed and propagating materials shall be used. [9]

b) If EU organically produced seed or propagating materials are unavailable exemptions may be requested if[10]

[6] EC No 889/2008 Article 2, paragraph (f)
[7] EC No 889/2008: Article 66, paragraph 3
[8] EC No 889/2008: Article 40, Paragraph 1 (a).
[9] EC No 834/2007 Article 12, paragraph 1(i)
[10] EC No 889/2008 Article 45

1) QCS Authorization is granted prior to planting, and

2) Seed or vegetable propagating material from an operation in EU organic conversion is available, or

3) For non-organic seed, or seed potatoes, the seed is not commercially or logistically available and has not been treated with materials prohibited under Annex II.

2.3.2 Perennials

a) Perennials must be managed in accordance with the EU requirements for at least two growing seasons before the resulting crops can be sold as organic.[11]

2.4 Soil and Crop Fertility Management

2.4.1 Soil Fertility

a) The fertility and biological activity of the soil shall be maintained and increased by;[12]

1) Multiannual crop rotation including legumes and other green manure crops,

2) The application of livestock manure,

3) The application of organic material, both preferably composted (manure and organic material), from organic production,

4) Multiannual crop rotation including legumes and other green manure crops, and by the application of livestock manure or organic material, both preferably composted, from organic production,

5) The prevention of damage caused by pests, diseases and weeds shall rely primarily on the protection by natural enemies, the choice of species and varieties, crop rotation, cultivation techniques and thermal processes.[13]

2.4.2 Manure

a) Factory farmed sources of dried farmyard manure, dehydrated poultry manure, composted animal excrement, (including poultry manure and composted farmyard manures) and liquid animal excrement are prohibited.[14]

b) The total amount of livestock manure applied on the holding may not exceed 170 kg of nitrogen per year/hectare of agricultural area used. This limit shall only apply to the use of farmyard manure, dried farmyard manure and dehydrated poultry manure, composted animal

[11] EC No 834/2007 Article 12, paragraph 1(i)
[12] EC No 834/2007 Article 12 paragraph 1 (b)
[13] EU No 834/2007 Article 12, paragraph 1 (g)
[14] EC no 889/2008 Annex I

excrements, including poultry manure, composted farmyard manure and liquid animal excrements.[15]

c) Organic production holdings may establish written cooperation agreements exclusively with other holdings and enterprises which comply with the organic production rules, with the intention of spreading surplus manure from organic production. The maximum limit as referred to in paragraph 2 shall be calculated on the basis of all of the organic production units involved in such cooperation.[16]

d) Livestock manure storage locations must be fully described and identified in the organic system plan maps.[17]

2.5 Crop Production Aids

2.5.1 Crop Inputs

All inputs must be reviewed and approved by QCS prior to application. Materials not listed in the applicable Annex are considered prohibited for EU certification.

a) Fertilizers and Soil Conditioners, etc.

For operations seeking certification to both the USDA (NOP) organic regulations and the EU organic standards: Products allowed for use under the QCS EU 834-2007 Certification Requirements may only be used if compliant with both the NOP National List and Annex I. (See Section 10). Not all materials appearing on the Annexes or their usage may be compliant with the NOP National List.

b) Pest, weed and disease control

1) Traps and dispensers, with the exception of pheromone dispensers, shall prevent the substances from coming into contact with the crops and/or being released into the environment. Traps shall be collected after use and safely disposed of.[18]
2) For operations seeking certification to both the USDA (NOP) organic regulations and the EU organic standards: Products allowed for use under the QCS EU 834-2007 Certification Requirements may only be used if compliant with both the NOP National List and Annex II (see Section 10). Not all materials appearing on the Annexes or their usage may be compliant with the NOP National List.

c) Synthetic products allowed for use under a & b above may only be used as long as direct contact with the edible portion of the plants is prevented.[19]

[15] EC No 889/2008: Article 3 paragraph 2
[16] EU No 889/2008 Article 3, paragraoh 3
[17] EC No 889/2008, Article 74, paragraph 1 b.
[18] EC No 889/2008 Article 5, paragraph 2
[19] EC No 834/2007 Article 16 paragraph 2, (c) (ii)

2.6 Post-Harvest Handling

2. 6.1 Storage

a) Storage areas shall be managed in such a way as to ensure identification of lots and to avoid any mixing with or contamination by products and/or substances not in compliance with the QCS EU 834-2007 Certification Requirements. Organic products shall be clearly identifiable at all times.[20]

b) Storage of input products other than those authorized under the EU Regulation is prohibited in the production unit.[21]

2.7 Hydroponics

a) Hydroponic production is prohibited.

2.8 Mushroom Production[22]

a) Substrates may be used if they are composed of the following

1) Farm yard manure and animal excrement from farms certified to the QCS EU 834-2007 Certification Requirements or;

2) From substances listed in Annex I, only if farm yard manure compliant with 2.4.2 is not available. Substances cannot not exceed 25% of the weight of the total components of the substrates. This excludes the covering material and any water added prior to composting;

3) Organic products compliant with QCS EU 834-2007 Certification Requirements;

4) Peat, not chemically treated;

5) Untreated wood; and

6) Mineral products from Annex I, water and soil.

[20] EC No 889/2008: Article 35, paragraph 1
[21] EC No 889/2008: Article 35, paragraph 2
[22] EC 889/2008, Article 6

3.0 PROCESSING

3.1 Ingredients

a) Organic ingredients must be verified equivalent to the QCS EU 834-2007 Certification Requirements by a certifier named to the EU list or certified by a control body.

b) The product shall be produced mainly from ingredients of agricultural origin; in order to determine whether a product is produced mainly from ingredients of agricultural origin, added water and cooking salt shall not be taken into account;[23]

c) Only the following substances can be used in the processing of organic food with the exception of products from the wine sector:[24]

1) Additives, processing aids, flavorings, water, salt, preparations of micro-organisms and enzymes, minerals, trace elements, vitamins, as well as amino acids and other micronutrients in foodstuffs for particular nutritional uses may be used, and only in so far as they have been authorized for use in organic production in accordance with Annex VI and/ or VIII (as appropriate) or as expressly required by provisions of Union law or national law compatible with the law of the European Union. However enzymes to be used as food additives have to be listed in Annex VIII, Section A; [25]
2) Colors for stamping meat and eggshells;
3) Drinking water and salt (with sodium chloride or potassium chloride as basic components) generally used in food processing;
4) Minerals (trace elements included), vitamins, amino acids and micronutrients, provided that:
   i. Their use in food for normal consumption is “directly legally required”, in the meaning of being directly required by provision of Union law or provisions of national law compatible with Union law, with the consequence that the food cannot be placed at all on the market as food for normal consumption if those minerals, vitamins, amino acids or micronutrients are not added; or
   (ii) as food placed on the market as having particular characteristics or effects in relation to health or nutrition or in relation to needs of specific groups of consumers;
   - in products referred to in points (a) and (b) of Article 1(1) of Regulation (EU) No 609/2013 of the European Parliament and of the Council (*), their use is authorized by that Regulation and acts adopted on the basis of Article 11(1) of that Regulation for the products concerned.
   - in products regulated by Commission Directive 2006/125/EC (**), their use is authorized by that Directive, or in products regulated by Commission Directive 2006/141/EC (***), their use is authorized by that Directive.
   (*)Regulation (EU) No 609/2013 of the European Parliament and of the Council of 12 June 2013 on food intended for infants and young children, food for special medical purposes, and total diet replacement for weight control and repealing Council Directive 92/52/EEC, Commission Directives 96/8/EC, 1999/21/EC, 2006/125/EC and

[23] EU No 834/2007 Article 19, paragraph 2 (a)
[24] EU No 834/2007 Article 27, paragraph 1, (f)
[25] EC No 1254/2008 Article 1, 2

2006/141/EC, Directive 2009/39/EC of the European Parliament and of the Council and Commission Regulations (EC) No 41/2009 and (EC) No 953/2009 (OJ L 181, 29.6.2013, p. 35).
(**) Commission Directive 2006/125/EC of 5 December 2006 on processed cereal-based foods and baby foods for infants and young children (OJ L 339, 6.12.2006, p. 16).
(***) Commission Directive 2006/141/EC of 22 December 2006 on infant formulae and follow-on formulae and amending Directive 1999/21/EC (OJ L 401, 30.12.2006, p. 1).';

6) Micro-organisms and enzymes normally used in food processing and substances not marked with an asterisk in the code number column of Annex VIII, Section A shall not be calculated as ingredients of agricultural origin. Yeast and yeast products shall be calculated as ingredients of agricultural origin as of 31 December 2013.

d) Non-organic agricultural ingredients may be used only if they have been authorized for use in organic production by QCS. Such authorization shall only be granted if the ingredient in question is not available as organic and the authorization shall be reviewed annually. Non-organic ingredients allowed under NOP and EU are the following: [26]

i. Edible Spices and Herbs
   1. Lesser Galana (*alpinia officinarum*)

ii. Animal Products –
   1. Aquatic organisms, not originating from aquaculture, and permitted in no-organic foodstuffs preparation
   2. Gelatin
   3. Whey powder 'herasuola'
   4. Casings

iii Miscellaneous
   1. Algae, including seaweed, permitted in non-organic foodstuffs preparation

e) An organic ingredient shall not be present together with the same ingredient in non-organic form or an ingredient in conversion.

f) For operations seeking certification to both the USDA (NOP) organic regulations and the EU organic standards: Products allowed for use under the QCS EU 834-2007 Certification Requirements may only be used if compliant with the NOP National List and Annexes VI, VIII and/or IX (as appropriate, See Section 08). Not all materials appearing in the Annexes or their usage may be compliant with the NOP National List. Materials not listed on these annexes are considered prohibited for EU certification.

3.2 Cleaning and Sanitizing

a) The operator shall take the necessary measures to carry out operations on organic products only after suitable cleaning of the production equipment.[27]

[26] EU No 889/2008 Annex IX
[27] EC No 889/2008: Article 26 paragraph 5 (e)

3.3 Parallel Production

a) Operations are to ensure identification of lots and to avoid mixtures or exchanges with non-organic products. To that end, they shall carry out the operations continuously until the complete run has been dealt with, separated by place or time from similar operations performed on non-organic products.[28]

b) When non-organic products are also prepared or stored in the preparation unit concerned, the operator shall:[29]

1) Carry out the operations continuously until the complete run has been dealt with, separated by place or time from similar operations performed on non-organic products;

2) Store organic products, before and after the operations, separate by place or time from non-organic products;

3) Inform QCS thereof and keep available an updated register of all operations and quantities processed;

4) Take the necessary measures to ensure identification of lots and to avoid mixtures or exchanges with non-organic products;

5) Carry out operations on organic products only after suitable cleaning of the production equipment.

c) Operators may carry out simultaneous collection of organic and non-organic products, only where appropriate measures are taken to prevent any possible mixture or exchange with nonorganic products and to ensure the identification of the organic products. The operator shall keep the information relating to collection days, hours, circuit and date and time of reception of the products available to QCS.[30]

3.4 Storage

a) In cases 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:[31]

1) The organic products shall be kept separate from the other agricultural products and/or foodstuffs.

2) Every measure shall be taken to ensure identification of consignments and to avoid mixtures or exchanges with non-organic products.

[28] EC No 889/2008: Article 26 paragraph 5 (a), (d)
[29] EC No 834/2007 : Article 26, paragraph 5
[30] EC No 889/2008 Article 30
[31] EC No 889/2008: Article 35 paragraph 4

3) Suitable cleaning measures, the effectiveness of which has been checked, have been carried out before the storage of organic products; operators shall record these operations.

3.5 Yeast Production

a) Only organic substrates can be use in the production of yeast. However, up to 5% of non-organic yeast extracts may be used for the production of organic yeast as a source of nitrogen, phosphorus, vitamins and minerals.[32]

b) Substances listed in Annex VIII, Section C (see Section 08) may be used in the production, confection and formulation of yeast.

1) Products allowed for use under QCS EU 834-2007 Certification Requirements may only be used if compliant with both the NOP National List and Annex VIII. Not all materials appearing on this Annex or their usage may be compliant with the NOP National List. Materials not listed on this Annex are considered prohibited for EU certification.
All inputs/materials must be reviewed and approved by QCS prior to use.

2) For processing aids used in yeast production, potato starch and vegetable oils be used only if derived from organic production, given that those processing aids are now available in their organic form in sufficient quantity and quality.[33]

[32] EC 889/2009 Title II, Chapter 6, Section 3a, Article 46a
[33] EC 2016/673

4.0 LIVESTOCK

4.1 Origin of Animals[34]

With regard to the origin of the animals organic livestock shall be born and raised on organic holdings. The livestock shall be identified permanently using techniques adapted to each species, individually in the case of large mammals and individually or by batch in the case of poultry and small mammals.

4.2 Use of Non-Organic Animals[35]

a) For breeding purposes, non-organically raised animals may be brought onto a holding under specific conditions. Such animals and their products may be deemed organic after compliance with the conversion period.

b) Non-organic animals may be brought onto a holding for breeding purposes, only when organic animals are not available in sufficient number and subject to the conditions provided for in paragraphs b to f.

c) Non-organic young mammals, when a herd or flock is constituted for the first time, shall be reared in accordance with the organic production rules immediately after they are weaned. Moreover, the following restrictions shall apply at the date on which the animals enter the herd:

i. buffalo, calves and foals shall be less than six months old;

ii. lambs and kids shall be less than 60 days old;

iii. piglets shall weigh less than 35 kg.

d) Non-organic adult male and nulliparous female mammals, for the renewal of a herd or flock, shall be reared subsequently in accordance with the organic production rules. Moreover, the number of female mammals is subject to the following restrictions per year:

i. up to a maximum of 10 % of adult equine or bovine, including bubalus and bison species, livestock and 20 % of the adult porcine, ovine and caprine livestock, as female animals;

ii. for units with less than 10 equine or bovine animals, or with less than five porcine, ovine or caprine animals any renewal as mentioned above shall be limited to a maximum of one animal per year.

e) The percentages referred to in paragraph 4 may be increased up to 40 %, subject to prior authorization, in the following special cases:

i. when a major extension to the farm is undertaken;

ii. when a breed is changed;

iii. when a new livestock specialization is initiated;

iv. when breeds are in danger of being lost to farming and in that case, animals of those breeds must not necessarily be nulliparous.

f) Animals existing on the holding at the beginning of the conversion period and their products may be deemed organic after compliance with the conversion period referred to in 6.2.

g) Where organic animals are not available, and with prior authorization.
i. when a flock is constituted for the first time, renewed or reconstituted and organically reared poultry are not available in sufficient numbers, non-organically reared poultry may be brought into an organic poultry production unit, provided that the pullets for the production of eggs and poultry for meat production are less than three days old;

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[34] EC No 834/2007: Article 14 and EC No 889/2008: Article 9
[35] EC No 834/2007: Article 14 and EC No 889/2008: Article 9 & 42

ii. non-organically reared pullets for egg production of not more than 18 weeks may be brought into an organic livestock unit until 31 December 2020, when organically reared pullets are not available and provided that the relevant provisions related to feeding and disease prevention and treatment are complied with.

4.3 Feed

a) Feed for livestock should primarily be from the holding where the animals are kept or from other organic holdings in the same region.[36]

b) In the case of herbivores, at least 60% and in the case of pigs and poultry, at least 20% of the feed shall come from the farm unit itself or in case this is not feasible, be produced in cooperation with other organic farms primarily in the same region.[37]

c) Rearing systems for herbivores are to be based on maximum use of grazing pasturage according to the availability of pastures in the different periods of the year. At least 60% of the dry matter in daily rations of herbivores shall consist of roughage, fresh or dried fodder, or silage. A reduction to 50% for animals in dairy production for a maximum period of three months in early lactation is allowed.[38]

d) Organic livestock shall be managed separately from non-organic livestock. However, grazing of common organic land by organic and non-organic animals is permitted, provided;

1) The grassland is used exclusively used for grazing;[39]

2) Organic and non-organic animals do not graze at the same time;

3) The land has not been treated with prohibited materials in the previous 3 years; and

4) Products from organic livestock grazed on the land cannot be sold as organic unless proper segregation of organic and non-organic animals can be demonstrated.

e) Suckling mammals shall be fed with natural, preferably maternal milk. For the minimum periods for the following species: [40]

1) Bovines (including bubalus and bison) and Equidae – 3 months;

2) Sheep and goats – 45 days; and

3) Pigs – 40 days

[36] EC No 834/2007: Article 14 paragraph d (1)
[37] EC No 889/2008: Article 19 paragraph 1, Revised by 505/2012 Article 1 paragraph 1-2
[38] EC No 889/2008: Article 20 paragraph 2
[39] EC No 834/2007 14 paragraph 1 b v & 889/2008 Article 40 paragraph 1 d
[40] EC No 834/2007: Article 14, paragraph d (vi), & 889/2008 Article 20, paragraph 1

f) Fattening practices shall be reversible at any stage of production. Force- feeding is prohibited.[41]

g) Non-organic feed materials from plant origin, feed materials from animal and mineral origin, feed additives, certain products used in animal nutrition and processing aids shall be used in accordance with these standards. These substances are listed in the Annexes V and VI in Section 08.

1) Products allowed for use under the QCS EU 834-2007 Certification Requirements shall only be used if compliant with both the NOP National List and Annexes V & VI (See Section 08). Not all materials appearing on the Annexes or their usage may be compliant with the NOP National List. Materials not listed in the annex are considered prohibited for EU certification.

All materials must be reviewed and approved by QCS prior to use.

2) Products from sustainable fisheries may be used provided that they are produced or prepared without chemical solvents, their use is restricted to non-herbivores and the use of fish protein hydrolysate is restricted solely to young animals.[42] Use of feedstuffs extracted with synthetic solvents not approved on the National List or the EU Annexes;[43] their use is limited to 1% of the feed ration of a given species, calculated annually as a percentage of the dry matter of feed from agricultural origin. [44]

h) In the event that a USDA NOP Temporary Variance has been granted to an operation: for the use of non-organic protein feed during a feed shortage, the maximum percentage of non-organic protein feed authorized per 12-month period for non-herbivores shall be 5% for the calendar years 2015-2020. The maximum percentage authorized of non-organic protein feed in the daily ration shall be 25% calculated as a percentage of the dry matter. The operation shall keep records of the need for the use of this provision.[45]

4.4 Housing

4.4.1 Mammal Housing

a) Livestock housing shall have smooth, but not slippery floors. At least half of the indoor surface area as specified in Annex III shall be solid, that is, not of slatted or of grid construction.[46]

b) Housing shall be insulated, heated and ventilated in such a way that maintains a healthy level of air circulation, dust level, temperature, relative humidity and gas concentration. The building shall permit plentiful natural ventilation and light.[47]

c) The stocking density in buildings shall provide for the comfort, the well being and the species-specific needs of the animals which, in particular, shall depend on the species, the breed and

[41] EC No 889/2008: Article 20, paragraph 5
[42] EC No 889/2008: Article 22 amended via 505/2012
[43] EC No 889/2008: Article 22 amended via 505/2012
[44] EC No 889/2008: Article 22 amended via 505/2012
[45] EC No 889/2008: Article 43

[46] EC No 889/2008: Article 10, paragraph 1
[47] EC No 889/2008: Article 10, paragraph 1

the age of the animals. It shall also take account of the behavioral needs of the animals, which depend in particular on the size of the group and the animals' sex. The density shall ensure the animals' welfare by providing them with sufficient space to stand naturally, lie down easily, turn round, groom themselves, assume all natural postures and make all natural movements such as stretching and wing flapping.[48]

d) Housing of calves in individual boxes shall be forbidden after the age of one week.[49]

e) Sows shall be kept in groups, except in the last stages of pregnancy and during the suckling period.[50]

f) Piglets shall not be kept on flat decks or in piglet cages.[51]

g) Exercise areas shall permit dunging and rooting by porcine animals. For the purposes of rooting different substrates can be used.[52]

h) Tethering or isolation of livestock shall be prohibited, unless for individual animals for a limited period of time, and in so far as this is justified for safety, welfare or veterinary reasons.

4.4.2 Poultry housing[53]

a) Poultry shall not be kept in cages.

b) Buildings for all poultry shall meet the following conditions:

1) At least one third of the floor area shall be solid, that is, not of slatted or of grid construction, and covered with a litter material such as straw, wood shavings, sand or turf;

2) In poultry houses for laying hens, a sufficiently large part of the floor area available to the hens shall be available for the collection of bird droppings;

3) They shall have perches of a size and number commensurate with the size of the group and of the birds as laid down in Annex III.

4) They shall have exit/entry pop-holes of a size adequate for the birds, and these pop-holes shall have a combined length of at least 4 m per 100 m^2 area of the house available to the birds;

5) Each poultry house shall not contain more than:
(i) 4800 chickens,
(ii) 3000 laying hens,
(iii) 5200 guinea fowl,

[48] EC No 889/2008: Article 10 paragraph 2
[49] EC No 889/2008 Article 11, paragraph 3
[50] EC No 889/2008 Article 11, paragraph 4
[51] EC No 889/2008 Article 11, paragraph 5
[52] EC No 889/2008 Article 11, paragraph 6
[53] EC No 889/2008: Article 12

(iv) 4000 female Muscovy or Peking ducks or 3200 male Muscovy or Peking ducks or other ducks,
(v) 2500 capons, geese or turkeys;

6) The total usable area of poultry houses for meat production on any single unit shall not exceed 1600 m^2;

7) Poultry houses shall be constructed in a manner allowing all birds easy access to open air area.

c) Natural light may be supplemented by artificial means to provide a maximum of 16 hours light per day with a continuous nocturnal rest period without artificial light of at least eight hours.

4.5 Animal Health and Welfare

a) Personnel managing livestock shall possess basic knowledge and skills in regards the health and welfare needs of the animals.[54]

b) Heath Treatments

1) Products allowed for use under the QCS EU 834-2007 Certification Requirements shall only be used if compliant with both the NOP National List and Annexes V & VI (see Section 08). Not all materials appearing on the Annexes or their usage may be compliant with both the NOP National List and Annexes V & VI. Materials not listed on the Annex are considered prohibited for EU certification.

All materials must be reviewed and approved by QCS prior to use

2) Livestock treated with allopathic veterinary medicinal products must undergo the following withdrawal period for products to be labeled or sold as organic:[55]

i) eggs - 14 days

ii) milk - 14 days

iii) meat from poultry and mammals - 56 days

v) meat from fish – 1000 Degree days

3) Phytotherapeutic & homeopathic products, trace elements and products listed in Section 1 of Annex V, Annex VI, Section 3 shall be used in preference to chemically-synthesized allopathic veterinary treatment or antibiotics, provided:[56]

i) that their therapeutic effect is effective for the species of animal, and the condition for which the treatment is intended.

[54] EC No 834/2007 Article 15 (b i)

[55] EU No 834/2007, Article 14 (e ii), 889/2008 Article 76 (e),rev. 354/2014 and Directive 2001/82/EC
[56] EU NO 889/2008 Article 24, paragraph 2, Revised by 505/2012

4) Dairy or Breeder livestock may be treated with paraciticides. However, if the animal(s) in question receives more than three courses of treatments within a 12-month period, or more than one course of treatment if their productive lifecycle is less than one year, the products from livestock cannot be sold as organic and the animal must undergo the following conversion periods:[57]

   i) 6 months for small ruminants and animals for milk production.

   ii) 6 weeks in the case of poultry for egg production.

   Records of documented evidence of the occurrence of such circumstances shall be maintained.

5) Growth promoters and synthetic amino acids are prohibited. This includes antibiotics, coccidiostatics and other artificial aids for growth promotion.[58]

6) The use of hormones or similar substances to control reproduction or for other purposes is prohibited.[59]

7) Operations may employ special measures such as screening and/or imposing quarantine periods when bringing livestock in from non-organic sources, depending on local circumstances.[60]

8) Storage of allopathic veterinary medicine and antibiotics on organic operations is permitted, provided they are prescribed by a veterinarian in conjunction with a treatment, are stored in a supervised location and are documented in livestock health records.[61]

c) Suffering, including mutilations, shall be kept to a minimum during the entire life of the animal up to and including slaughter.[62]

   1) Piglets may be castrated without the application of anesthesia or analgesia during a transition period ending on December 31, 2011.[63]

d) Transport[64]

   1) The use of allopathic tranquilizers during transport is prohibited.

   2) The use of electrical stimulation during loading and unloading is prohibited.

   3) The duration of transport shall be kept at a minimum[65].

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[57] EU No 889/2008 Article 24, paragraph 4 and 889/2008 Article 38, paragraph 1
[58] EU No 889/2008 Article 24, paragraph 4 and 889/2008 Article 38, paragraph 1
[59] EU No 889/2008 Article 23 paragraph 2
[60] EU No 889/2008, Article 23, paragraph 3
[61] EU No 889/2008, Article 35, paragraph 3
[62] EU No 834/2007 Article 14, paragraph 1 b (viii)
[63] EU No 889/2008 Article 95, paragraph 4
[64] EU No 889/2008 Article 18, paragraph 4
[65] EU No 834/2007 Article 14, paragraph 1 b (vii)

e) Slaughter

1) To prevent the use of intensive rearing methods, poultry shall either be reared until they reach a minimum age or else shall come from slow-growing poultry strains. Where slow-growing poultry strains are not used by the operator the following minimum age at slaughter shall be:[66]
   i. 81 days for chickens,
   ii. 150 days for capons,
   iii. 49 days for Peking ducks,
   iv. 70 days for female Muscovy ducks,
   v. 84 days for male Muscovy ducks,
   vi. 92 days for Mallard ducks,
   vii. 94 days for guinea fowl,
   viii. 140 days for male turkeys and roasting geese, and
   ix. 100 days for female turkeys.

[66] EU No 889/2008 Article 12, paragraph 5, a-i

5.0 APICULTURE

a) In the choice of breeds or strains, account shall be taken of the capacity of animals to adapt to local conditions, their vitality and their resistance to disease. For bees, preference shall be given to the use of *Apis mellifera* and their local ecotypes.[67]

b) Particular care should be taken to ensure adequate extraction, processing and storage of beekeeping products. These measures, including the removal of supers and honey extraction, shall be documented.[68]

c) Beekeeping products may only be sold as organic after a one-year conversion.[69]
1) For the renovation of apiaries, 10% per year of the queen bees and swarms may be replaced by non-organic queen bees and swarms in the organic production unit, provided that the queen bees and swarms are placed in hives with combs or comb foundations coming from organic production units. In this case, the conversion period would not apply.[70]

2) During the conversion period, wax shall be replaced with organic wax. Non-organic beeswax may only be used if:[71]

i. organic beeswax is not commerciality available;

i. the beeswax has been proven free of contaminants from prohibited substances; and

ii. the beeswax comes from the cap.

d) Sites

1) Hives and apiary zones shall be clearly identified on maps supplied with the Organic system plan.[72]

2) The siting of the apiaries shall within a radius of 3 km in which nectar and pollen sources consist essentially of organically produced crops and/or spontaneous vegetation and/or crops treated with low environmental impact methods, which cannot affect the organic integrity of the hives. This requirement does not apply where flowering is not taking place, or when hives are dormant.[73]

3) The hives shall be made basically of natural materials presenting no risk of contamination to the environment or the apiculture products.

4) Bees wax for new foundations shall come from organic sources.

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[67] EU No 889/2008 Article 8, paragraph 2
[68] EU No 889/2008 Article 78, paragraph 5 & 6
[69] EU No 889/2008 Article 38, paragraph 3 & Article 44
[70] EU No 889/2008 Article 38, paragraph 4 & Article 9, paragraph 5
[71] EU No 889/2008 Article 44
[72] EU No 889/2008 Article 78, paragraph 4
[73] EU No 889/2008 Article 13, paragraph 3-7

5) Without prejudice to the health standards, only natural products such as propolis, wax and plant oils can be used in the hives.

6) The use of chemical synthetic repellents is prohibited during honey extractions operations.

7) The use of brood combs is prohibited for honey extraction.

8) For the purpose of pollination, an operator may run an organic and non-organic bee keeping units on the same operation, provided the requirements of all the organic production rules are fulfilled, with the exception of the provision for the siting of the apiaries.[74]

e) Feed

1) The feeding of bee colonies shall only be allowed in certain situations provided that:[75]

i. The survival of the hive is endangered due to climate conditions;
ii. Only between the last honey harvest and 15 days before the start of the next nectar/honeydew flow period, and
iii. Feeding shall be with organic honey, organic sugar syrup, or organic sugar.
iv. Documentation shall be maintained for the dates, type and amounts of feed and hives where feeding was done.[76]

2) Hives shall be left at the end of the production season with sufficient reserves of honey and pollen to survive the winter.[77]

f) Health and Welfare

1) Clipping the wings of queen bees is prohibited.[78]

2) For the protection of frames, hives and combs, in particular against harmful organisms, only rodenticides (for use in traps only), and appropriate products listed in Annex II, are allowed with prior approval (see Section 08). [79]

Products allowed for use under the QCS EU 834-2007 Certification Requirements shall only be used if compliant with both the NOP National List and Annexes II and VII. Not all materials appearing on the Annexes or their usage may be compliant with the NOP National List. Materials not listed on the Annex are considered prohibited for EU certification. [80]

All materials must be reviewed and approved by QCS prior to use.

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[74] EU No 889/2008 Article 41
[75] EU No 889/2008 Article 19, paragraph 3 & Article 47 paragraph d
[76] EU No 889/2008 Article 78, paragraph 2
[77] EU No 889/2008 Article 19, paragraph 2
[78] EU No 889.2008 Article, 18, paragraph 3
[79] EU No 889/2008 Article 23, paragraph 4, Article 25, paragraph 1
[80] EU No 889/2008 Article 25

3) Disinfection of apiaries with physical treatments such as steam or direct flame is permitted. For the cleaning and disinfection of frames, hives and rays, it is allowed to use sodium hydroxide[81].

4) Destruction of the male brood is permitted only to isolate the infestation of Varroa destructor.

5) If despite all preventive measures, the colonies become sick or infested, they shall be treated immediately and, if necessary, the colonies can be placed in isolation apiaries.

6) Veterinary medicinal products may be used in organic beekeeping. If medicinal or health treatment products are used, the following must be documented and submitted to QCS prior to the sale of any bee keeping products:[82]

i) Details of the diagnosis;

ii) Name of product uses, active ingredient, and dosage;

iii) Method of treatment administration, duration of treatment and legal withdrawal period (48 hours after last treatment).[83]

Products allowed for use under the QCS EU 834-2007 Certification Requirements shall only be used if compliant with both the NOP National List and these standards. Not all materials appearing on these Standards or their usage may be compliant with the NOP National List.

All materials must be reviewed and approved by QCS prior to use.

7) If chemically synthesized allopathic products are used for treatment, treated colonies shall be placed in isolation apiaries. All the wax shall be replaced with wax coming from organic beekeeping. Subsequently, the conversion period of one year will apply to those colonies.[84]

i) The provision above does not apply to the use of formic acid, lactic acid, acetic acid and oxalic acid as well as menthol, thymol, eucalyptol or camphor, which may be used in the treatment of *Varroa destructor* infestations.

g) In the event of the loss of bees due to a health or catastrophic circumstances, QCS may grant a temporary variance allowing for the reconstitution of the apiaries with non-organic bees, provided that organic apiaries are not commercially available.[85]

[81] EU No 889/2008 Article 25, paragraph 1
[82] EU No 889/2008 Article 78, paragraph 3
[83] EU N0 889/2008 Article 25, paragraph 5
[84] EU No 889/2008 Article 25, paragraph 6 & 7
[85] EU No 889/2008 Article 47 (b)

6.0 AQUACULTURE

6.1 Conversion

a) Production systems with direct soil-water contact are allowed provided that a conversion period of one year or one crop cycle, whichever is less, occurs under organic management before production can be certified organic as specified in NOP § 205.202, Land requirements.

b) Production systems with containment vessels of plastic, metal or concrete surfaces are allowed provided that a conversion period of one year or one crop cycle, whichever is less, occurs under organic management before production can be certified organic.

c) The following conversion periods for aquaculture production units shall apply for the following types of aquaculture facilities including the existing aquaculture animals:[86]

1) for facilities that cannot be drained, cleaned and disinfected, a conversion period of 24 months;

2) for facilities that have been drained, or fallowed, a conversion period of 12 months;

3) for facilities that have been drained, cleaned and disinfected, a conversion period of six months;

4) for open water facilities including those farming bivalve mollusks, a three month conversion period.

d) QCS may decide to retroactively allow any previously documented period in which the facilities were not treated or exposed to products not authorized for organic production to count towards the all or part of the conversion period.[87]

6.2 Split and Parallel production

a) The entire agricultural holding shall be managed in compliance with the requirements applicable to organic production.

b) Organic and non-organic production units shall be separated adequately. Such separation measures shall be based on the natural situation, separate water distribution systems, distances, the tidal flow, the upstream and the downstream location of the organic production unit. Locations may be designated as unsuitable for organic aquaculture or seaweed harvesting and may also require a minimum separation distances between organic and non-organic production units.[88]

c. A holding may be split up into clearly separated units or aquaculture production sites which are not all managed under organic production. For aquaculture the same species may be

[86] EU No 889/2008 Article 38 a paragraph 1 (via 710/2009)
[87] EU No 889/2008 Article 38 a paragraph 2 (via 710/2009)
[88] EU No 889/2008 Article 6b(2) (via 710.2009)

involved, provided that there is adequate separation between the production sites. Where not all units of a holding are used for organic production, the operator shall keep the land, animals, and products used for, or produced by, the organic units separate from those used for, or produced by, the non-organic units and keep adequate records to show the separation.[89]

d) Organic animals shall be kept separate from other aquaculture animals.[90]

e) When an operator manages several production units, the units producing non-organic aquaculture animals are subject to the QCS EU 834-2007 Certification Requirements and are prohibited from using GMOs and ionizing radiation[91].

6.3 Origin of aquatic animals

a) Aquatic animal products that are to be sold, labeled, or represented as organic must be from aquatic animals under continuous organic management. Organic aquaculture shall be based on the rearing of young stock originating from organic broodstock and organic holdings. When young stock from organic broodstock or holdings are not available, non-organically produced animals may be brought onto a holding under specific conditions.[92] .

b) The following are prohibited:

1) Aquatic animals or edible aquatic animal products that are removed from an organic operation and subsequently managed on a non-organic operation may be not sold, labeled, or represented as organically produced.

2) Brood stock that has not been under continuous organic management may not be sold, labeled, or represented as organic slaughter stock.

c) QCS may permit hatcheries and nurseries to rear both organic and non-organic juveniles in the same holding provided there is clear physical separation between the units and a separate water distribution system exists. Records must be maintained.[93]

1) In case of grow-out production, QCS may permit organic and non-organic aquaculture animal production units on the same holding provided 6.2.b is complied with and where different production phases and different handling periods of the aquaculture animals are involved.

d) The producer of an organic aquatic animal operation must maintain records sufficient to preserve the identity of all organically managed animals and edible and nonedible animal products produced on the operation. These records, maintained and made available to QCS at all times, and shall include[94]:

[89] EU No 834/2007 Article 11
[90] EU No 834/2007 Article 15 paragraph 1(b-iv)
[91] EU No 889/2008 Article 79d (via 710/2009)
[92]EU No 834/2007 Article 15 paragraph 1(a)
[93] EU No 889/2008 Article 25c (via 710/2009)
[94] EU No 889/2008 Article 79b (via 710/2009)

1) The origin, date of arrival and conversion period of animals arriving at the holding:

2) The number of lots, the age, weight and destination of animals leaving the holding;

3) Records of escapes of fish;

4) For fish, the type and quantity of feed and in the case of carp and related species a documentary record of the use additional feed;

5) Veterinary treatments giving details of the purpose, date of application, method of application, type of product and withdrawal period;

6) Disease prevention measures giving details of fallowing, cleaning and water treatment.

e) Production of triploid aquatic animals from the application of temperature or pressure shock after fertilization and by crossing tetraploids with diploids is prohibited for fish to be sold as organic.[95]

f) Culture of monosex stocks obtained by crossing sex-reversed broodstock or by hybridization is prohibited.. Culture of monosex stocks selected by visual or manual means is prohibited[96].

g) Culture of monosex stocks obtained by direct treatment with steroidal or other hormones (including methyl-testosterone), or by other direct treatment artificial induction methods, is prohibited. [97]

h) Cultivation of genetically modified aquatic animals and plants is prohibited.[98]

i) For breeding purposes or for improving genetic stock and when organic aquaculture animals are not available, wild caught or non-organic aquaculture animals may be brought into a holding.

1) Such animals shall be kept under organic management for at least three months before they may be used for breeding.[99]

2) For on-growing purposes and when organic aquaculture juvenile animals are not available non-organic aquaculture juveniles may be brought into a holding. At least the latter two thirds of the duration of the production cycle shall be managed under organic management.[100]

For on-growing purposes the collection of wild aquaculture juveniles is specifically restricted to the following cases;

[95] EU No 834/2007 Article 15 paragraph 1(c) i
[96] EU No 834/2007 Article 15 paragraph 1(c)
[97] EU No 889/2008 Article 25(i) (via 710/2008)
[98] EU No 834/2007 Article 9
[99] EU No 889/2008 Article 25e Paragraph 1 (via 710/2009)
[100] EU No 889/2008 Article 25e Paragraph 2 (via 710/2009)

i) Natural influx of fish or crustacean larvae and juveniles when filling ponds, containment systems and enclosures;

ii) European glass eel, provided that an approved eel management plan is in place for the location and artificial reproduction of eel remains unsolved.[101]

3) The maximum percentage of non-organic aquaculture juveniles introduced to the farm shall be: 80% by 31 December 2011, 50% by 31 December 2014 and 0% by 31 December 2016.[102] In 2016, the transitional period was postponed one year until there appears to be sufficient quantities of organic juveniles and organic shellfish seed.[103]

j) Mollusk seed sources: Provided that there is no significant damage to the environment and if permitted by local legislation, wild seed from outside the boundaries of the production unit can be used in the case of bivalve shellfish provided it comes from[104]:

1) Settlement beds which are unlikely to survive winter weather or are surplus to requirements, or;

2) Natural settlement of shellfish seed on collectors. Records shall be kept of how, where and when wild seed was collected to allow traceability back to the collection area. However, seed from non-organic bivalve shellfish hatcheries may be introduced to the organic production units with the following maximum percentages: 80% by 31 December 2011, 50% by 31 December 2014 and 0% by 31 December 2015.

3) For the cupped oyster, Crassostrea gigas, preference shall be given to stock which is selectively bred to reduce spawning in the wild.

6.4 Feed for fish, crustaceans and echinoderms-general[105]

a) Feeding regimes shall be designed with the following priorities[106]:
   1) animal health;
   2) high product quality, including nutritional composition which shall ensure high quality of the final edible product:
   3) low environmental impact.

b) The producer of an organic operation must not:

1) Use animal drugs, including hormones, to promote growth, or synthetic amino acids;[107]

2) Provide feed supplements or additives in amounts above those needed for adequate nutrition and health maintenance for the species at its specific stage of life;

[101] EU No 889/2008 Article 25e Paragraph 4 (via 710/2009)
[102] EU No 889/2008 Article 25e Paragraph 3 (via 1358/2013) & EU No. 2016/673
[103] EU No. 2016/673, point 4
[104] EU No 889/2008 Article 25o, Paragraphs 1 & 2 (via 710/2009)
[105] IACB Equivalent European Union Organic Production and Processing Standard for Third Countries
[106] EU No. 884/2007 Article 15(d)
[107] EU No 834/2007 Article 15 (d-iv)

3) Use feed, synthetic feed additives and synthetic feed supplements in violation of the Federal Food, Drug, and Cosmetic Act;[108]

4) Use feedstuffs extracted with synthetic solvents not approved on the National List or the EU Annexes;[109]

5) Use artificial and/or synthetic pigments or artificial coloring agents;

6) Use any genetically modified organism or product thereof as a feed ingredient;[110] or

7) Apply manure that is not composted according to 7 CFR 205.203 to any aquaculture system.

c) Specific rules on feeds for carnivorous aquaculture animals.
   1) Feed for carnivorous aquaculture animals shall be sourced with the following priorities:
      i) organic feed products of aquaculture origin;
      ii) fish meal and fish oil from organic aquaculture trimmings;
      iii) fish meal and fish oil and ingredients of fish origin derived from trimmings of fish already caught for human consumption in sustainable fisheries;
      iv) organic feed materials of plant origin and of animal origin as listed in Annex V and the restriction laid down therein are complied with.
      v) feed products derived from whole fish caught in fisheries certified as sustainable or conservational under a national or regional scheme recognized by the respective country.
      vi) The feed products derived from whole fish caught in fisheries certified as sustainable or conservational under a national or regional scheme recognized by the respective country.
   2) The feed ration may comprise a maximum of 60% organic plant products.
   3) Astaxantin derived primarily from organic sources, such as organic crustacean shells may be used in the feed ration for salmon and trout within the limit of their physiological needs. If organic sources are not available natural sources of astaxanthin (such as Phaffia yeast may be used).
   4) Histidine produced through fermentation may be used in feed ration for salmonid fish when the feed sources listed in 6.4.b.1 do not provide a sufficient amount of histidine to meet the dietary needs of the fish and prevent the formation of cataracts.

d) Specific rules on feeds for certain aquaculture animals

   1) Aquaculture animals referred to in Annex XIIIa shall be fed with naturally available in ponds and lakes.
   2) Where natural feed resources are not available in sufficient quantities as referred to in 6.4.c.1, organic feed of plant origin, preferably grown on the farm itself or seaweed may be used. Operators shall keep documentary evidence of the need to use additional feed.
   3) Where natural feed is supplemented according to 6.4.c.2:
      i. The feed ration of Siamese catfish (Pangasius spp.) may comprise a maximum of 10% fishmeal or fish oil derived from sustainable fisheries.

[108] EU No 889/2008 Article 25m
[109] EU No 889/2008 Article 25m & EU No 834/2007 Article 15(f-i)
[110] EU No 834/2007 Article 9

ii. The feed ration of shrimps and prawns may comprise a maximum of 25% fishmeal and 10% fish oil derived from sustainable fisheries. In order to secure the quantitative dietary needs of shrimps, organic cholesterol may be used to supplement their diets; where organic cholesterol is not available, non-organic cholesterol derived from wool, shellfish or other sources may be used. The possibility of supplementing their diet with cholesterol applies to both the fattening phase and the first stage of their life cycle, in hatcheries and nurseries.

e) Specific rules on feeds for organic juveniles
   1) In the larval rearing of organic juveniles, conventional phytoplankton and zooplankton may be used as feed.

f) Products and Substances as referred to in article 15(1)(d)(iii) of Regulation (EC) No 834/2007
   1) Feed materials of animal and mineral origin may be used in organic aquaculture, only if listed in Annex V.
   2) Feed additives, certain products used in animal nutrition and processing aids may be used if listed in Annex VI and the restrictions laid down therein are complied with.

Products allowed for use under the QCS EU 834-2007 Certification Requirements shall only be used if compliant with both the NOP National List and Annexes V & VI. Not all materials appearing on the Annexes or their usage may be compliant with the NOP National List. Materials not listed in the annex are considered prohibited for EU certification.

6.5 Aquatic animal health care practice standard

a) The producer must establish and maintain preventive aquatic animal health care practices, including:

   1) Selection of species and types of aquatic animal with regard to suitability for site-specific conditions and resistance to prevalent diseases and parasites;[111]

   2) Provision of a feed ration sufficient to meet nutritional requirements, including vitamins, minerals, protein and/or amino acids, fatty acids, energy sources, and fiber;[112]

   3) The maintenance of healthy water rearing conditions including control of potentially toxic metabolic compounds (ammonia and carbon dioxide) within acceptable ranges for the species, appropriate water temperatures, adequate levels of oxygen, and pH, with the prevention of extended excursions to stressful extremes. Efforts to maintain such conditions must be documented by a suitable monitoring and record keeping program for key water quality parameters that affect health. The frequency of such monitoring shall depend on the culture system, site, species, life stage, and environmental characteristics;[113]

[111] EU No 834/2007 Article 15(f-i) , paragraph 1c ii and EU No 889/2008 Article 25d (via 710/2009)
[112] EU No 834/2007 Article 15(f-i)
[113]EU No 889/2008 Article 25s paragraph 4 (via 710/2009) and EU No 834/2007 Article 15 paragraph 1(b-ii)

4) Establishment of a biosecurity and disease prevention plan which includes measures to limit entry of pathogens into the aquaculture production system and operational procedures and sanitation practices to minimize the occurrence, transmission, and severity of disease epizootics. The biosecurity and disease prevention plan shall also include a written agreement for health counseling (proportion to the production unit) with a qualified aquaculture animal health service, who shall visit the operation no less than once a year and once every two years in the case of bivalve shellfish.[114] Biosecurity measures should not be used as an approach to compensate for growing conditions that compromise aquatic animal health from elevated stress and associated immunosupression;[115]

   i) For biological control of ectoparasites preference shall be given to the use of cleaner fish.[116]

5) Provision of conditions which allow for exercise, freedom of movement, and reduction of stress appropriate to the species;

6) Administration of vaccines and other veterinary biologics.

7) Minimal handling of aquaculture animals. Handling shall be undertaken with the greatest care and proper equipment and protocols used to avoid stress and physical damage associated with handling procedures. Broodstock shall be handled in a manner to minimize physical damage and stress and under anesthesia where appropriate. Grading operations shall be kept to a minimum and as required to ensure fish welfare.[117]

8) Properly cleaning and disinfecting holding systems, equipment and utensils using only products listed in Section 8, Annex VII, sections 2.1 and 2.2.[118]
   i) Products allowed for use under The QCS EU 834-2007 Certification Requirements shall only be used if compliant with both the NOP National List and Annexes VII (See Section 08). Not all materials appearing on the Annexes or their usage may be compliant with the NOP National List. Materials not listed in the Annexes are considered prohibited for EU certification.

9) Ultraviolet light and ozone may be used for disease prevention only in hatcheries and nurseries.[119]

10) Fallowing[120]

   i) QCS may determine whether fallowing is necessary and the appropriate duration which shall be applied and documented after each production cycle in open water containment systems at sea. Fallowing is also recommended for other production methods using tanks, fishponds, and cages;

[114] EU No 889/2008 Article 25s paragraph 1 (via 710/2009)
[115] EU No 834/2007 Article 15(f-i) & EU No 889/2008 Article 25s paragraph 4 (via 710/2009)
[116] EU N0 889/2008 Article 25s paragraph 6 (via 710/2009)
[117] EU No 889/2008 Article 25h paragraph 1 (via 710/2009)
[118] EU No 889/2008 Article 25s paragraph (via 710/2009)
[119] EU No 889/2008 Article 25s paragraph 5 (via 710/2009)
[120] EU No 889/2008 Article 25s paragraph 3 (via 710/2009)

ii) It shall not be mandatory for bivalve mollusc cultivation;

iii) During fallowing the cage or other structure used for aquaculture animal production is emptied, disinfected and left empty before being used again.

b) When preventive practices and veterinary biologics are inadequate to prevent sickness, veterinary treatments may be used in the following order of preference:[121]

1) Substances from plants, animals or minerals in a homoeopathic dilution;

2) Plants and their extracts not having anesthetic effects

3) Substances such as: trace elements, metals, natural immunostimulants or authorized probiotics.

4) A producer may administer synthetic medications: Provided, that, such medications are allowed under NOP § 205.603.
   i) Parasiticides allowed under NOP § 205.603 may be used on brood stock, but none that are to be sold, labeled, or represented as organically produced. However, the use of parasite treatments shall be limited to twice per year or once per year where the production cycle is less than 18 months.[122]

   ii) The treatments have been mandated in relation to the protection of human and animal health imposed on the basis of EU Community legislation.[123]

5) The use of allopathic treatments is limited to two courses of treatment per year, with the exception of vaccinations and compulsory eradication schemes. However, in the cases of a production cycle of less than a year a limit of one allopathic treatment applies. If the mentioned limits for allopathic treatments are exceeded the concerned aquaculture animals cannot be sold as organic products.[124]

6) The storage of allopathic veterinary medicinal products and antibiotics is permitted on holdings provided that they have been prescribed by a veterinarian in connection with treatment, that they are stored in a supervised location and that they are entered in the aquaculture production records.[125]

c) The producer of organic aquaculture products must not:

1) Sell, label, or represent as organic any aquatic animal or edible product derived from any aquatic animal treated with antibiotics, any substance that contains a synthetic substance not allowed under NOP §205.603, or any substance that contains a nonsynthetic substance prohibited in NOP §205.604.

2) Administer any type of animal medication, other than USDA approved or

[121] EU No 889/2008 Article 25t paragraph 1 (via 710/2009)
[122] EU No 889/2008 Article 25t paragraph 3(via 710/2009)
[123] EU No 834/2007 Article 15(f-iv)
[124] EU No 889/2008 Article 25t paragraph 2 (via 710/2009)
[125] EU No 889/2008 Article 35 paragraph 3 (via 710/2009)

licensed vaccines, in the absence of illness;[126]

3) Administer hormones for growth promotion;

4) Administer synthetic parasiticides;

5) Administer animal drugs in violation of the U.S. Food and Drug Administration regulations, and vaccines in violation of US Department of Agriculture regulations; or

6) Withhold medical treatment from a sick animal in an effort to preserve its organic status. All appropriate medications must be used to restore an animal to health when methods acceptable to organic production fail. Aquatic animals treated with a prohibited substance must be clearly identified and shall not be sold, labeled, or represented as organically produced. Facilities containing aquatic animals during medical treatment are not required to undergo conversion periods specified Section 6.1.[127]

d) Personnel keeping animals shall possess the necessary basic knowledge and skills as regards the health and the welfare needs of the animals.[128]

6.6 Aquatic animal living conditions

a) The producer of an organic aquatic animal operation must establish and maintain aquatic animal living conditions which accommodate the health and natural behavior of animals, including:[129]

1) An environment operated within the tolerance limits characteristic of the aquatic animal and stage of development by monitoring and maintaining water qualities appropriate for the production system and species including temperature, pH, salinity, photoperiod, dissolved oxygen, ammonia, and nitrite concentrations, without sudden changes or prolonged exposure to extremes;[130]

i) Aeration is permitted under the condition that mechanical aerators are preferably powered by renewable energy sources and are documented as such.[131]

ii) Artificial heating or cooling of water shall only be permitted in hatcheries and nurseries. Natural borehole water may be used to heat or cool water at all stages of production.[132]

2) Containment that allows the animals:
i) freedom of movement and opportunity to exercise within the culture system; and
ii) minimal potential for injury.

3) For freshwater fish, the bottom type shall be as close as possible to natural conditions;[133]

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[126] EU No. 834/2007 Article 15(f-iii)
[127] EU No. 889/2008 Article 25t, paragraph 4 & 5 (via 710/2009)
[128] EU No. 834/2007 Article 15, paragraph 1 (b-i)
[129] EU No 834/2007 Article 15 paragraph 1(c) iii
[130] EU No 889/2008 Article 25f paragraph 1 (via 710/2009)
[131] EU No 889/2008 Article 25h Paragraph 3 (via 710/2009)
[132] EU No 889/2008 Article 25g Paragraph 4 (via 710/2009)
[133] EU No 889/2008 Article 25f Paragraph 1d (via 710/2009)

4) For carp, the bottom shall be natural earth[134]

b) Artificial light may be used as long as:[135]

1) For prolonging natural day-length it shall not exceed a maximum that respects the ethological needs, geographical conditions and general health of farmed animals, this maximum shall not exceed 16 hours per day, except for reproductive purposes; and

2) Abrupt changes in light intensity shall be avoided at the changeover time by the use of dimmable lights or background lighting.

c) The use of oxygen is only permitted for uses linked to animal health requirements and critical periods of production or transport. Documentary evidence shall be maintained for these limited situations;[136]

1) Exceptional cases of temperature rise or drop in atmospheric pressure or accidental pollution,

2) Occasional stock management procedures such as sampling and sorting, or

3) In order to assure the survival of the farm stock.

d) The culture system must be managed to minimize the risk of losses of cultured stock and stress to cultured aquatic animals caused by predators. Organic aquaculture facilities must develop an integrated predator deterrence plan that identifies potential predators, appropriate deterrence methods, how predator behavior will be modified by application of deterrence methods, contingencies for failure of the plan to achieve objectives, and documentation of control methods and effects. Examples of such control measures include site selection, physical barriers, repellents, and legal predator deterrence methods. Lethal measures may be taken only when predators threaten human safety or are necessary for predator welfare (e.g. birds are entangled and injured) and must include appropriate documentation. Lethal measures must be in compliance with local laws and the laws of the United States.[137]

e) Non-organic aquatic animals may be used in aquaculture production systems for controlling pests, such as weeds, snails, and algae. Triploid animals may be employed provided that the animals are legal to culture, are not labeled organic, and are readily separated at harvest from the aquatic animals under organic management.

f) Transport

1) Transport shall ensure that the welfare of animals is maintained.[138]

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[134] EU No 889/2008 Article 25f Paragraph 1e (via 710/2009)
[135] EU No 889/2008 Article 25h Paragraph 2 (via 710/2009)
[136] EU No 889/2008 Article 25h paragraph 4 (via 710/2009)
[137] EU No 889/2008 Article 25 (b) and (f) paragraphs 4 & 5 (via 710/2009) & Article 25n, Paragraphs 1-3,
[138] EU No 834/2007 Article 15(b-v)

2) Live fish shall be transported in suitable tanks with clean water which meets their physiological needs in terms of temperature and dissolved oxygen. Before transport of organic fish and fish products, tanks shall be thoroughly cleaned, disinfected and rinsed. Precautions shall be taken to reduce stress. During transport, the density shall not reach a level which is detrimental to the species. Records shall be maintained to document compliance for these activities.[139]

g) Slaughter

1) Suffering of the animals up to and including the time of slaughtering shall be kept to a minimum.[140]

2) Slaughter techniques shall render fish immediately unconscious and insensible to pain. Differences in harvesting sizes, species, and production sites must be taken into account when considering optimal slaughtering methods.[141]

6.7 Aquaculture facilities

6.7.1 Management Plans.

a) Aquaculture operations must complete an organic system plan which includes:

1) A full description of the installations on land an at sea

2) A nutrient management plan that evaluates the technical and economic feasibility of options appropriate for the culture system to recover solid and dissolved waste nutrients in other plant and animal crops. Options may include using settled solids as a soil amendment, suspended solids to grow filter-feeding aquatic animals, and dissolved nutrients as a nutrient source for terrestrial crops, aquatic plants, or crops grown hydroponically.[142]

3) An environmental assessment proportionate to the production unit shall be required for all new operations applying for organic production and producing more than 20 tons of aquaculture products per year to ascertain the conditions of the production unit and its immediate environment and likely effects of its operation. The operator shall provide the environmental assessment to QCS. The content of the environmental assessment shall be based on Council Directive 2011/92/EU Annex IV6.8. If the unit has already been subject to an equivalent assessment, then its use shall be permitted for this purpose.[143]

4) As part of the sustainable management plan, aquaculture and seaweed operations shall;
   i. Detail the environmental effects of the operation
   ii. Describe results of environmental monitoring

[139] EU No 889/2008 Article 32a (via 710/2009)
[140] EU No 834/2007 Article 15(b vi)
[141] EU No 889/2008 25h paragraph 5 (via 710/2009)
[142] EU No 889/2008 Article 6b paragraph 4 (via 710/2009)
[143] EU No 889/2008 Article 6b paragraph 3 (via 710/2009)

iii. Outline measures to be taken to minimize negative impacts on the surrounding aquatic and terrestrial environments (including nutrient discharge per production cycle or per year)
iv. Monitoring and repair of technical equipment
v. develop a waste reduction schedule.

This plan shall by preference, where possible, incorporate use of renewable energy sources and materials recycling.[144]

6.7.2 Facility Placement

a) Location of organic aquaculture facilities shall take into consideration the maintenance of the aquatic environment and surrounding aquatic and terrestrial ecosystem.[145]

b) Water sources for aquaculture facilities must be carefully selected and managed to avoid potential environmental contaminants that can harm human health. Water Management plans must comply with Commission Regulation (EC) No 710/2009, paragraph (4). The sites must not be subject to contamination by products or substances not authorized for organic production, or pollutants that would compromise the organic nature of the products.

1) In the case of bivalve mollusks and other species that feed on natural plankton, they shall be grown in waters which meet the criteria for Class A or Class B areas as defined in Annex II of Regulation (EC) No 854/2004; and the growing areas shall be of high ecological quality as defined by Directive 2000/60/EC and, pending its implementation of a quality equivalent to designated waters under Directive 2006/113/EC.[146]

c) Facility boundaries shall be clearly identified.[147]

d) Organic aquaculture facilities shall be at appropriate distances from potential contamination sources including pesticide drift and other possible contaminants from conventional aquaculture.[148]

e) Pond berms and tank tops shall be at sufficient elevations to prevent contamination from the environment during floods.[149]

6.7.3 Environmental Considerations

a) Potentially adverse environmental impacts from aquaculture production must be minimized. The rate of effluent discharge must not exceed the natural assimilative capacity of an area within 25 meters of the site boundary nor contribute significantly to environmental degradation

[144] EU No 889/2008 Article 6b paragraph 4 & 5 (via 710/2009)
[145] EU No 834/2007 Article 5(n)
[146] EU No 834/2007 Article 15(e-ii, iii)
[147] EU No 889/2008 Article 25n, paragraphs 1-3
[148] EU 889/2008 Article 25 (g) paragraph 3 and Article 6b paragraph 1 (via 710/2009)
[149] [149] EU No 834/2007 Article 5(n)

beyond 25 meters of the site boundary. For the purpose of this paragraph, "site" is the area licensed or leased by government authorities, or other parties, for the aquaculture facility.[150]

b) Facilities should not significantly impact freshwater quality or supply and should not salinize or otherwise contaminate soils.[151]

c) Effluent discharges must comply with all local, state and national water quality laws and regulations, and include treatment when necessary.

d) Cultured organisms that are species-distinct or genetically-distinct populations from native organisms in adjacent aquatic environments must be managed with appropriate security measures (mechanical, physical, and biological barriers) to eliminate to the extent practical escapes due to predators, adverse weather conditions (including floods), or facility damage. The facilities must include preventative measures against possible escapes into the natural environment of the aquatic animals in production, including during local floods. A containment management plan must describe measures to prevent escape, procedures to detect and document escapes should they occur, and actions to be undertaken in the event of escape.[152]

e) Rearing units on land shall meet the following conditions:[153]

1) Flow-through systems shall be possible to monitor and the flow rate and water quality of both inflowing and out-flowing water shall be controlled;

5) At least five percent of the perimeter ("land water interface") area shall have natural vegetation.

f) Open water net-pens and enclosures are permitted where water depth, current velocities and direction, stocking densities, and other factors act to adequately disperse metabolic products in order to minimize accumulation of discharged solids on the bottom sediments under the net pens. However, water currents should not be excessive to cause the fish to expend excessive energy to swim and to be unable to consume food.

g) An organic conversion period of at least one year, or one crop cycle, whichever is less, shall be required.

h) Chemical treatment of biofouling organisms on nets is not allowed. Biofouling organisms shall be removed by physical means or by hand and where appropriate returned to the sea away from shellfish farms. Shellfish may be treated once during the production cycle with a lime solution to control competing fouling organisms.[154]

i) Monitoring shall be employed to ensure that the natural assimilative capacity at the site is not overburdened.

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[150] EU no 834/2007 Article 15 paragraph 1(b-iii)
[151] EU No 834/2007 Article 5(n)
[152] EU No 889/2008 Article 25f paragraph 4 &5 (via 710/2009)
[153] EU No 889/2008, Article 25g paragraph 2 (via 710/2009)
[154] EU No 889/2008 Article 25 Paragraph 2p (via 710/2009)

j) Cleaning and disinfection products for ponds, cages, buildings and installations shall only be used if allowed by the NOP and Annex VII.[155]

k) Facility managers shall take all practicable measures to prevent transmission of diseases and parasites between cultured and wild aquatic animals.[156]

l) Use of multiple species of aquatic plants and animals to recycle nutrients must be included in every management plan.[157]

m) Recirculating systems are permitted if the system supports the health, growth, and well-being of the species, including:[158]

1) Minimization of disease organisms being introduced vertically through eggs or otherwise from parents, from water inflows, from feeds, from vectors including birds, and humans, or other sources;[159]

2) Frequent testing to provide for the maintenance of healthy water conditions that meet the natural requirements of the species with respect to control of potentially toxic metabolic compounds (ammonia, carbon dioxide, etc.), optimum temperatures, adequate levels of metabolic inputs (oxygen and feed), and pH, all within acceptable ranges depending upon the species, with the prevention of excursions to stressful extremes, and with sufficient dewatering and rewatering to prevent accumulation of toxic compounds.

3) Minimization of other health compromising stresses;

4) Stocking density levels that take into consideration animal health and overall well-being, including the natural schooling characteristics of the species. See Annex XIIIa for species-specific stocking densities;

i) Mollusk production shall use a stocking density not in excess of that used for non-organic shellfish in the locality. Sorting, thinning and stocking density adjustments shall be made according to the biomass and to ensure animal welfare and high product quality.[160]

ii) Closed recirculation systems are prohibited with the exception of hatcheries and nurseries for the production of species used for organic feed organisms.[161]

5) The provision of adequate backup life support systems to provide appropriate maintenance of water quality and dissolved oxygen levels in the event that primary life support systems fail. The management plan for adequate backup life support systems must meet the minimum production systems per the QCS EU 834-2007 Certification Requirements, Annex XIIIa Stocking Density for Aquaculture Production.

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[155] EU No 834/2007 Article 14(g)
[156] EU No 834/2007 Article 15(f-i)
[157] EU No 834/2007 Article 5(n)
[158] EU No 889/2008 Article 25f paragraph 2 (via 710/2009)
[159] EU No 889/2008 Article 25 (g) paragraph 3 (via 710/2009)
[160] EU No 889/2008 Article 25p paragraph 1 (via 710/2009)
[161] EU No. 889/2008 Article 25 (g) 1 (via 710/2009)

6.7.4 Species Specific Cultivation Practices

a) Cultivation on mussel ropes and other methods listed in Section 8, Annex III may be eligible for organic production.[162]

b) Bottom cultivation of mollusks is only permitted where no significant environmental impact is caused at the collection and growing sites. The evidence of minimal environmental impact shall be supported by a survey and report on the exploited area to be provided by the operator to the control body or control authority. The report shall be added as a separate chapter to the organic system plan.[163]

c) Oysters
Cultivation in bags on trestles is permitted. These or other structures in which the oysters are contained shall be set out so as to avoid the formation of a total barrier along the shoreline. Stock shall be positioned carefully on the beds in relation to tidal flow to optimize production. Production shall meet the criteria listed in Section 8, Annex XIII.[164]

6.8 Seaweed Production

For the purposes of this Chapter 'seaweed' includes multi-cellular marine algae, phytoplankton and micro-algae.

6.8.1 Conversion

a) The conversion period for a seaweed harvesting site shall be six months.

b) The conversion period for a seaweed cultivation unit shall be the longer of six months or one full production cycle.

6.8.2 Suitability of aquatic medium and sustainable management plan

a) Operations shall be situated in locations that are not subject to contamination by products or substances not authorized for organic production, or pollutants that would compromise the organic nature of the products.

b) Organic and non-organic production units shall be separated adequately. Such separation measures shall be based on the natural situation, separate water distribution systems, distances, the tidal flow, the upstream and the downstream location of the organic production unit.

c) An environmental assessment proportionate to the production unit shall be required for all new operations applying for organic production and producing more than 20 tonnes of aquaculture products per year to ascertain the conditions of the production unit and its immediate environment and likely effects of its operation. The operator shall provide the environmental assessment to the

[162] EU No. 889/2008 Article 25(q) paragraph 1 (via 710/2009)
[163] EU No. 889/2008 Article 25(q) paragraph 2 (via 710/2009)
[164] EU No. 889/2008 Article 25(r) (via 710/2009)

control body or control authority. The content of the environmental assessment shall be based on Annex IV to Council Directive 85/337/EEC (7). If the unit has already been subject to an equivalent assessment, then its use shall be permitted for this purpose.

d) The operator shall provide a sustainable management plan proportionate to the production unit for aquaculture and seaweed harvesting.

The plan shall be updated annually and shall detail the environmental effects of the operation, the environmental monitoring to be undertaken, and list measures to be taken to minimize negative impacts on the surrounding aquatic and terrestrial environments, including, where applicable, nutrient discharge into the environment per production cycle or per annum. The plan shall record the surveillance and repair of technical equipment.

e) Aquaculture and seaweed business operators shall by preference use renewable energy sources and re-cycle materials and shall draw up as part of the sustainable management plan a waste reduction schedule to be put in place at the commencement of operations. Where possible, the use of residual heat shall be limited to energy from renewable sources.

f) For seaweed harvesting a once-off biomass estimate shall be undertaken at the outset.

6.8.3 Sustainable harvesting of wild seaweed

a) Documentary accounts shall be maintained in the unit or premises and shall enable the operator to identify and the control authority or control body to verify that the harvesters have supplied only wild seaweed produced in accordance with Regulation (EC) No 834/2007.

b) Harvesting shall be carried out in such a way that the amounts harvested do not cause a significant impact on the state of the aquatic environment. Measures shall be taken to ensure that seaweed can regenerate, such as harvest technique, minimum sizes, ages, reproductive cycles or size of remaining seaweed.

c) If seaweed is harvested from a shared or common harvest area, documentary evidence shall be available that the total harvest complies with this Regulation.

d) With respect to 6.8.7 b(2) and (3), these records must provide evidence of sustainable management and of no long-term impact on the harvesting areas.

6.8.4 Seaweed Cultivation

a) Seaweed culture at sea shall only utilize nutrients naturally occurring in the environment, or from organic aquaculture animal production, preferably located nearby as part of a polyculture system.

b) In facilities on land where external nutrient sources are used the nutrient levels in the effluent water shall be verifiably the same, or lower, than the inflowing water. Only nutrients of plant or mineral origin and as listed in Annex I may be used.

c) Culture density or operational intensity shall be recorded and shall maintain the integrity of the aquatic environment by ensuring that the maximum quantity of seaweed which can be supported without negative effects on the environment is not exceeded.

d) Ropes and other equipment used for growing seaweed shall be re-used or recycled where possible.

6.8.5 Antifouling measures and cleaning of production

a) Bio-fouling organisms shall be removed only by physical means or by hand and where appropriate returned to the sea at a distance from the farm.

b) Cleaning of equipment and facilities shall be carried out by physical or mechanical measures. Where this is not satisfactory only substances as listed in Annex VII, Section 2 may be used.

6.8.6 Specific control requirements for seaweed

a) When the control system applying specifically to seaweed is first implemented, the full description of the site shall include:

1) a full description of the installations on land and at sea;

2) the environmental assessment as outlined in 6.8.2c where applicable;

3) the sustainable management plan as outlined in 6.8.2d, where applicable;

4) for wild seaweed a full description and a map of shore and sea collection areas and land areas where post collection activities take place shall be drawn up.

6.8.7 Seaweed Production Records

a) Seaweed production records shall be compiled in the form of a register by the operator and kept available for the control authorities or control bodies at all times at the premises of the holding. It shall provide at least the following information:

1) list of species, date and quantity harvested;

2) date of application, type and amount of fertilizer used.

b) For collection of wild seaweeds the register shall also contain:

1) history of harvesting activity for each species in named beds;

2) harvest estimate (volumes) per season;

3) sources of possible pollution for harvest beds;

4) sustainable annual yield for each bed.

6.9 Catastrophic Circumstances for Livestock [165]

The control body may authorize on a temporary basis:

a. In the case of high mortality of animals caused by health or catastrophic circumstances, the renewal or reconstitution of the herd or flock with non-organic animals, when organically reared animals are not available and provided that respective conversion periods are applied to the non-organic animals;

b. In the case of high mortality of aquaculture animals caused by: natural disasters, adverse climatic events, sudden water quality and quantity changes for which the operator is not responsible, diseases in aquaculture, failure or destruction of production facilities for which the operator is not responsible, the renewal or reconstitution of the aquaculture stock with non-organic aquaculture animals, when organically reared animals are not available and provided that at least the latter two thirds of the duration of the production cycle are managed under organic management.

Upon approval by QCS, the operators shall keep documentary evidence of the use of the above exceptions.

7.0 LABELING

7.1 General Labeling

a) The terms listed in the Annex X, their derivatives and/or diminutives such as 'bio' and 'eco' alone or combined may be used throughout the EU community. A product will bear terms in labeling, advertising material or commercial documents, related to its ingredients or feed materials in order to suggest to the purchaser that the product its ingredients or feed materials have been obtained from EU certified sources.[166]

b) The terms listed in the Annex X, shall not be used in any labeling, advertising and commercial documents of or related to any products that do not meet the QCS EU 834-2007 Certification Requirements.

c) Percentage claims[167]

1) Products may be labeled as "100% organic" if the product complies with Sections 7.2 or if processed product is comprised entirely of organic ingredients and processes.

2) Products may be labeled as "organic" if the product is compliant with 7.3.

3 Products comprised of less than 95% organic ingredients from plant or animal origin may be labeled according to 7.3.1 and 7.3.2. However, the NOP allowed, "Made with Organic" statement is not allowed.

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[165] EU No. 2016/673, point 7
[166] EC No 834/2007: Article 23, paragraph 1
[167] Questions & Answers 1- Version 1 – Status 30.03.2010
(http://ec.europa.eu/agriculture/organic/files/eu-policy/logo/FAQ_logo_en.pdf)

d) EU Organic Logo

1) The EU Organic Logo as specified in Annex X, may be used on products labeled as 95% organic as specified under 7.3.a.1, provided that:

i. The logo is accompanied by QCS's Control Authority code from Annex X Section B; and

ii. The statement "non-EU agriculture" appears in the same visual field as the logo.

2) The EU Organic Logo cannot appear on the following products;

i. Products of hunting and fishing of wild animals, cosmetic or textiles;

ii. Products that are in conversion; or

iii. Products with less than 95% organic ingredients.

7.2 Labeling of live or unprocessed products

a) In the labeling and advertising of live or unprocessed agricultural products, terms referring to the organic production method may be used only where all the ingredients of that product have also been produced in accordance with the requirements laid down in this Regulation.

7.3 Labeling of processed products, ingredients and feed materials

a) Processed food may be labeled as organic only:[168]

1) In the sales description, provided that:

i) the processed food complies with Section 3.0 Processing Standards;

ii) its ingredients of agricultural origin are at least 95 % by weight organic;

b) Only in the list of ingredients, provided that the food complies with Section 3.1.

c) In the list of ingredients and in the same visual field as the sales description, provided that:
1) The main ingredient is a product of hunting or fishing;

2) It contains other ingredients of agricultural origin that are all organic;

3) The food complies with Section 3.1.

d) The list of ingredients shall indicate which ingredients are organic.

[168] EC No 834/2007, Article 23, paragraph 4

e) In the case where points b & c apply, references to "organic" may only appear in relation to the organic ingredients. The list of ingredients shall indicate the total percentage of organic ingredients in proportion to total quantity of the ingredients of agricultural origin. The total percentage shall appear in the same color, size and stale of lettering as the other ingredients on the list.

8.0 NONCOMPLIANCES AND SANCTIONS FOR INFRINGEMENTS AND IRREGULARITIES

8.1 Measures in case of suspicion of infringements and irregularities

8.1.1. Where an operator considers or suspects that a product, which he has produced, prepared, imported or that he has received from another operator, is not in compliance with organic production rules, the operator shall initiate procedures either to withdraw from this product any reference to the organic production method or separate and identify the product. The operator may only put it into processing or packaging or on the market without indication referring to the organic production method. In case of such doubt, the operator shall immediately inform QCS. QCS may prohibit the operator from marketing the product with indications referring to the organic production method, until it is satisfied, by the information received from the operator or from other sources, that the doubt has been eliminated.

8.1.2. Where QCS has a substantiated suspicion that an operator intends to market a product that was not produced in compliance with organic production rules but bears a reference to the organic production method: QCS may temporarily suspend the operator from placing the product on the market for a time period. During the time frame QCS will investigate the operator through desk audit, unannounced control visit, residue sampling, and/or review of information available from the operator as applicable. QCS will temporarily suspend the operator from marketing the product as organic for 90 days or until the investigation is complete, whichever occurs first. QCS shall, before making a decision, allow the operator to comment. This decision shall be supplemented by the obligation to withdraw this product from any reference to the organic production method if QCS determines that the product does not fulfill the requirements of organic production. However, if the suspicion is not confirmed within the said time period, the decision of temporary suspension shall be cancelled not later than the expiry of that time period. The operator shall cooperate fully with QCS in resolving the investigation.

8.2 Noncompliances and Sanctions against infringements and irregularities

Where an irregularity and/or infringement is found as regards compliance with requirements of EU organic rules, QCS shall apply following sanctions to the operator proportionately to the relevance of the requirement that has been violated, and the nature and particular circumstances of the irregularity and infringement.

8.2.1 Irregularity and/or infringement not affecting organic status and integrity of a product

1) QCS will issue a Notice of Noncompliance. Operators must take and report corrective actions with supporting documentation to QCS for approval within a time period (30 days). Operators may request extension of time to respond for a valid for reason beyond their control (e.g. emergency medical situation, natural disaster). It is QCS discretion to extend the deadline.

2) QCS may choose to conduct additional inspection/sampling at the operator's expenses to verify the corrective action is in place and effective.

8.2.2 Irregularity and/or infringement affecting organic status of a product

1) QCS may immediately inform competent authorities and/or EU Member States and the EU Commission of the infringement or irregularity affecting the organic status of a product.
2) QCS will issue a Notice of Noncompliance and Stop Sale. QCS will require the operator to suspend reference to the term Organic in labelling and advertising of the entire lot or production run affected by the irregularity and/or infringement, and to inform in writing the buyers of the product to remove the indication referred to the organic production. The operator will have the opportunity to comment on the cause of the irregularity/infringement. QCS may propose suspension of certification if the infringement/irregularity is not correctible.

8.1.3 Sanctions Catalog

Description of Sanctions		
Sanction	**Description**	**Timeframe**
Noncompliance	Identifies confirmed nonconformity/ nonconformities that is/are correctible. May be combined with Proposed Suspension, Temporary Suspension, Downgrade, or Denial of Certification.	1 month to correct or rebut.
Temporary Block	Temporarily blocks a product or a specific lot of product from being marketed as organic when there is a suspected infringement or irregularity to allow QCS to conduct investigation. In accordance with Article 91 of (EC) No. 889/2008, the operation may not represent the affected product as organic while QCS investigates the suspected infringement or irregularity to determine if a noncompliance occurred and notice needs to be issued.	The operator has one month to provide comment and evidence supporting compliance with organic production rules. The temporary block will be cancelled no later than 90 days from issue date if QCS does not confirm an irregularity with organic production rules. Irregularities/infringement identified by QCS during investigation will lead to applicable additional sanction(s).
Noncompliance and Downgrade to Non-organic Status	Specifies that a product, specific lot, or product produced at a specific location (facility or farm) may not be represented as organic because it was not produced in accordance with EU organic production requirements.	1 month to request mediation or file an appeal before downgrade to non-organic status is permanent.
Temporary Suspension	Temporarily suspends the issuance of transaction certificates. Issued when a certified operation fails to pay an invoice after a noncompliance has been issued, or does not permit QCS to conduct an inspection.	1 month to pay fee or undergo inspection, as applicable. Followed by suspension
Proposed Suspension	Notifies a certified operation of a confirmed irregularity/infringement that is not correctible, or that a noncompliance has not been corrected	1 month to appeal or request mediation. Followed by suspension of certification if

	by the deadline. May be combined with a Noncompliance.	operation does not successfully appeal or mediate to a settlement agreement.
Suspension	Suspends the certified operation's organic certification. Operation may not represent products as organic. Operation must correct all noncompliances, reapply for certification, and undergo inspection before certification is granted.	Varies, based on violation. See Application of Sanctions (below)
Denial	Notifies the applicant for certification of a confirmed irregularity/infringement that is not correctible, or that a noncompliance has not been corrected by the deadline. May be combined with a Noncompliance.	30 days to appeal or request mediation. Denial is effective 30 days from issue date of notice if operation does not successfully appeal or mediate to a settlement agreement. Applicant may reapply for certification at any time with documented evidence that all noncompliances leading to the denial are corrected. If denial was based on the use of non-authorized substances, the operation must undergo conversion to EU organic production as described in Section 2.1 of the QCS EU 834-2007 Certification Requirements before organic certification can be obtained.
Cancellation	Cancels an operation organic certification. Operation may not represent products as organic after certificate is cancelled.	Operation may reapply for certification at any time.

Quality Certification Services (QCS)
5700 SW 34th Street, Suite 349, Gainesville FL 32608
phone 352.377.0133 / fax 352.377.8363
www.qcsinfo.org

Application of Sanctions	
Irregularity / Infringement	**Sanctions**
Suspected Irregularity/Infringement	Certified operation: Temporary Block preventing the marketing of affected products as organic while QCS investigates to determine if the operation violated organic production rules. May be applicable to a particular lot or the entire operation, as specified in the Notice.
Application of prohibited substance to land or crop	Suspension of land where non-authorized substance(s) was applied. Suspension for to be effective for 2 years after the last use of non-authorized substance(s) for annual crops and 3 years after the last use of non-authorized substances for perennial crops. Affected land must undergo conversion to EU organic production as described in Section 2.1 of the QCS EU 834-2007 Certification Requirements before the crop can be represented as organic.
Positive residues of: a) any substance not authorized in organic production; b) the presence of any permitted substance above EU established Maximum Residue Limit (MRL) for the product; or c) the presence of a permitted substance above 0.01 ppm on products with no established MRL.	Certified operation: Noncompliance & Downgrade to Non-Organic Status. Product or specific lot of product may not be sold as organic. May be issued at the same time as a Notice of Noncompliance & Proposed Suspension. Applicant for certification: Combined Notice of Noncompliance and Denial of Certification.
Absence of records	Notice of Noncompliance. Submission of corrective action shall be followed by additional inspection at the operator's expense. Failure to comply will result in applicable sactions (Temporary Suspension, Proposed Suspension, or Denial of Certification).
Not allowing QCS to conduct inspections or access records	Certified operations: Notice of Noncompliance and Temporary Suspension during which the operation cannot sell, label or otherwise represent products as organic and QCS will not issue transaction certificates. Refer to EU 834 Article 30.1 and Article 30.2. Applicant for certification: Notice of Noncompliance.
Failure to pay fees	Certified operation: Noncompliance followed by Temporary Suspension. May lead to suspension of certification. Applicant for certification: Noncompliance. May lead to denial of certification.

Failure to renew by certification expiration date	Cancellation of certification
Willful (Knowing) Violation	Certified operation: Proposed Suspension followed by Suspension. Applicant for certification: Denial of Certification

9.0 Cancellation and Reduction/Expansion of Scope of Certification

9.1 Cancellation of certificate by QCS

QCS may choose to cancel the certificate should the producer breach the contract terms such as failure to renew, when there are no technical irregularities or infringements to compliance. In such case, QCS shall issue a Notice of Noncompliance followed by or combined with a Temporary Suspension. If renewal application is not submitted within 30 days, QCS will issue a Notice of Cancellation of Certification and:

1) Request the operator to return the certificate;
2) Request shipping record of organic products up to the date of cancellation;
3) Request report of disposal of any products remaining in inventory bearing the EU logo and/or reference to Equivalent EU organic certification;
4) Delete the operator from public list of certified operations;
5) Notify the operator to cease using EU logo and advertisement relating to Equivalent EU Organic certification.

9.2 Cancellation by Request of Operators

If cancellation of certification is requested by operator, QCS shall

1) Request the operator to return the certificate;
2) Request shipping record of organic products up to the date of cancellation;
3) Request report of disposal of any products remaining in inventory bearing the EU logo and/or reference to Equivalent EU organic certification;
4) Delete the operator from public list of certified operations;
5) Notify the operator to cease using EU logo and advertisement relating to Equivalent EU Organic certification;
6) An operator may not initiate cancellation of certification if QCS has issued sanctions.

9.3 Reduction or Expansion of Scope of certification:

If scope of certification is reduced / expanded, QCS shall

1) Request the operator to submit the report of change;
2) Conduct on-site inspection if necessary to verify compliance of updated organic system plan;
3) Correct the certificate;
4) Revise the information made public.

10.0 ANNEXES

ANNEX I
Fertilizers, soil improvers and nutrients

All materials must be reviewed and approved by QCS prior to use. The conditions for use of these products must comply with the active substances set out in the Annex to Commission of Implementation Regulation (EU) No. 540/2011 (Not from GMO origin for farming in general.

For operations seeking certification to both the USDA (NOP) organic regulations and the EU organic standards: Not all materials appearing on this list or their usage may be compliant with the NOP National List. Products may only be used if compliant with the NOP National List and this Annex.

Note:

A:authorization under Regulation (EEC) º 2092/91, maintained pursuant to Article 16 paragraph 3 c) of Regulation (EC) n º 834/2007

B:authorization under Regulation (EC) n º 834/2007

Authorization	Name Compound products or products containing only the substances listed below:	Description, compositional requirements, conditions for use
A	Manure	Product comprising a mixture of animal excrements and vegetable matter (animal bedding). Factory farming origin forbidden
A	Dried manure and dehydrated poultry manure	Factory farming origin forbidden
A	Composted animal excrements, including poultry manure and composted manure	Factory farming origin forbidden
A	Liquid animal excrements	Use after controlled fermentation and / or appropriate dilution Factory farming origin forbidden
B	Composted or fermented mixture of household waste	Product obtained from household waste sorted at source, subjected to composting or anaerobic fermentation for the production of biogas Only vegetable and animal household waste

		Must be produced in a closed and controlled collection system. Maximum concentrations in mg/kg of dry matter: cadmium: 0.7; copper: 70; nickel: 25; lead: 45; zinc: 200; mercury: 0.4; chromium (total): 70; chromium (VI): not detectable
A	Peat	Use limited to horticulture (market gardening, floriculture, arboriculture, nursery)
A	Mushroom compost	The initial composition of the substrate shall be limited to products of this annex.
A	Worm (worm) and insect dejections	
A	Guano	
A	Composted or fermented mixture of vegetable matter	Product obtained from mixtures of vegetable matter, subjected to composting or anaerobic fermentation for the production of biogas
B	Biogas digest containing animal by-products co-digested with material of plant or animal origin listed in this Annex	Animal by-products (including wild animal byproducts) in Category 3 and the gut contents of Category 2 [categories 2 and 3 as defined by Regulation (EC) n º 1069 / 2009 of the European Parliament and of the Council (1)] must not be from factory farming origin. The processes must conform to the provisions with omission Regulation (EU) No 142/2011 (2) . May not be applied on the edible parts of the crop.
B	Products or by-products of animal origin mentioned below: Blood meal Hoof meal Horn meal Bone meal or degelatinised bone meal Fish meal Meat meal Feather, hair and “chiquette” meal Wool Fur (1) Hair Dairy products Hydrolyzed proteins (2)	(1)Maximum content of chromium (VI) dry matter, in mg / kg: not detectable (2)May not be applied on the edible parts of the crop

A	Products and by-products of plant origin for fertilizers	For example: oilseed cake meal, cocoa husks, malt culms
B	Hydrolyzed protein of plant origin	
A	Seaweeds and seaweed products	Obtained directly by: i) physical processes, including dehydration, freezing and grinding; ii) extraction with water or aqueaous acid and/or alkaline solution; iii) fermentation.
A	Sawdust and wood shavings	Wood not chemically treated after felling
A	Composted bark	Wood not chemically treated after felling
A	Wood ash	From wood not chemically treated after felling
A	Soft ground natural phosphate	Product defined in point 7 of Annex IA.2 to Regulation (EC) No 2003/2003 of the European Parliament and of the Council (3) relating to fertilizers. Cadmium content less than or equal to 90 mg/kg P205
A	Aluminocalcium phosphate	Product defined in point 6 of Annex IA.2 to Regulation (EC) No 2003/2003. Cadmium content less than or equal to 90 mg / kg P205 Use limited to basic soils (pH> 7.5)
A	Basic slag	Products defined in point 1 of Annex IA.2 to Regulation (EC) No 2003/2003
A	Crude salt of potash or kainite	Products defined in point 1 of Annex IA.3 to Regulation (EC) No 2003/2003
A	Potassium sulphate; may contain magnesium salt	Product obtained from crude potassium salt by a physical extraction process, may also contain magnesium salts
A	Stillage (vinasse) and stillage (vinasse) extract	Ammonium stillage excluded
A	Calcium carbonate, for instance: chalk, marl,	Only of natural origin

	ground calcium rock, Breton ameliorant (maërl), phosphatic chalk	
B	Mollusc waste	Only from sustainable fisheries, as defined in Article 4(1)(7) of Regulation (EU) No 1380/2013 or organic aquaculture
B	Egg shells	Factory farming origin forbidden.
A	Calcium and magnesium carbonate	Only of natural origin For example: magnesian chalk, ground magnesian, limestone
A	Magnesium sulphate (kieserite)	Only of natural origin
A	Calcium chloride solution	Foliar treatment of apple trees, after evidence of calcium deficiency
A	Calcium sulphate (gypsum)	Products as specified in point 1 of Anne ID to Regulation (EC) No 2003/2003 Only of natural origin
A, B	Industrial lime from sugar production	By-product of making sugar from sugar beet and sugar cane
A	Industrial lime vacuum salt production	By-product of vacuum production from brine found in mountains
A	Elemental sulfur	Product defined in Annex ID.3 to Regulation (EC) No 2003/2003
A	Trace elements	Inorganic micronutrients listed in Part E of Annex I to Regulation (EC) No 2003/2003
A	Sodium chloride	
A	Stone meal and clays	
B	Leonardite (raw organic sediments rich in humic acids)	Only if obtained as a by-product of mining activities
B	Humic and fulvic acids	Only if obtained by inorganic salts/solutions excluding ammonium salts; or obtained from drinking water purification

B	Xylite	Only if obtained as a by-product of mining activities (e.g. by-product of lignite mining).
B	Chitin (polysaccharide obtained from the shell of crustaceans)	Only if obtained from sustainable fisheries, as defined in Article 4(1)(7) of Regulation (EU) No 1380/2013 or organic aquaculture.
B	Organic rich sediments from freshwater bodies formed unde exclusion of oxygen (e.g. sapropel)	Only organic sediments that are by-products freshwater body management or extracted from old freshwater areas When applicable, extraction should be done in a way to minimize the impact on the aquatic system Only sediments derived from sources free of contamination by pesticides, persistent organic pollutants and petrol like substances Maximum concentrations in mg/kg of dry matter: cadmium: 0.7; copper: 70; nickel: 25; lead: 45; zinc: 200; mercury: 0.4; chromium (total): 70; chromium (VI): undetectable
B	Biochar – pyrolysis product made from a wide variety of organic materials of plant origin and applied as a soil conditioner	Only from plant materials, untreated or treated with products included in Annex II. Maximum value of 4 mg polycyclic aromatic hydro-carbons (PAHs) per Kg dry matter (DM). This value shall be reviewed every second year, taking into account the risk of accumulation du to multiple applications

"

(1) Regulation (EC) n º 1069/2009 of the European Parliament and of the Council of 21 October 2009 laying down health rules concerning animal by-products and derived products not intended for human consumption and repealing Regulation (EC) n º 1774/2002 (Regulation on animal by-products) (OJ L 300, 14.11.2009, p.1).
(2) Regulation (EU) No º 142/2011 of the Commission of 25 February 2011 implementing Regulation (EC) n º 1069/2009 of the European Parliament and of the Council laying down health rules concerning animal by-products and derived products not intended for human consumption and implementing Council Directive 97/78 / EC as regards certain samples and articles exempted from border veterinary checks under that Directive (OJ L 54, 26.2.2011, p. 1).
(3) OJ L 304, 21.11.2003, p. 1 .
(4) Regulation (EC) n º 2371/2002 of 20 December 2002 on the conservation and sustainable exploitation of fisheries resources under the common fisheries policy (OJ L 358, 31.12.2002, 59).

ANNEX II

Pesticides – Plant Protection Products

All materials must be reviewed and approved by QCS prior to use. The conditions for use of these products must comply with the active substances set out in the Annex to Commission of Implementation Regulation (EU) No. 540/2011 (Not from GMO origin) for farming in general[169].

[169] EC No 2016/673, 10 & 11

For operations seeking certification to both the USDA (NOP) organic regulations and the EU organic standards: Not all materials appearing on this list or their usage may be compliant with the NOP National List. Products may only be used if compliant with the NOP National List and this Annex.

All substances listed in this Annex should minium respect the conditions of use set out in Annex to Implementing Regulation (EU) No º 540/2011 ([1]) .Des more restrictive conditions for use in the context of organic production, are indicated in the second column of each table.

1. Substances of plant or animal origin

Denomination	Description, compositional requirements, conditions for use
Allium sativum (garlic extract)	
Azadirachtin extracted from *Azadirachta indica* (Neem or Neem)	
Beeswax	Only as pruning agent/wound protectant
COS-OGA	
Hydrolyzed proteins excluding gelatin	
Laminarine	Kelp shall either be grown organically in accordance with Article *6d* or harvested in accordance with the principle of sustainable management in accordance with Article *6c* .
Maltodextrin	
Pheromones	Only for traps and dispensers.
Plant oils	All uses except herbicide
Pyrethrins	Only from plant origin
Quassia extract from *Quassia amara*	Only as an insecticide, repellent
Olfactory repellents of animal or vegetable origin / sheep fat	Only on the inedible parts of crops and in cases where they are not ingested by goats or sheep
Salix spp. *cortex* (a.k.a. willow bark)	
Terpenes (eugenol, geraniol and thymol)	

2. Basic substances

Basic substances based on food (including : Lecithins, sucrose, fructose, vinegar, whey, chitosan hydrochloride (1)	Only those basic substances as defined by Article 23 of Regulation (EC) No 1107/2009 (2) which are food as defined in Article 2 of Regulation (EC) No 178/2002 and have plant or animal origin Substances not t be used as herbicides
(1) Obtained from sustainable fisheries or organic aquaculture. (2) Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market (OJ L. 309, 24.11.209, p.1).	

3. Microorganisms or substances produced by microorganisms

Denomination	Description, compositional requirements, conditions for use
Microorganisms	Not from GMOs
Spinosad	
Cerevisane (Cell walls of Saccharomyces cerevisiae strain LAS117)	

4. Substances other than those mentioned in points 1, 2 and 3

Denomination	Description, compositional requirements, conditions for use
Aluminum silicate (kaolin)	
Calcium hydroxide	When used as a fungicide, only on fruit trees, including nurseries, to control *Nectria galligena*
Carbonic anhydride	
Copper compounds in the form of copper hydroxide, copper oxychloride, cuprous oxide, Bordeaux mixture and tribasic copper sulphate	
Diammonium phosphate	Only as a attractant in traps

Ethylene	
Fatty acids	All uses permitted except as a herbicide
Ferric phosphate [iron (III) orthophosphate]	Preparations to be dispersed on the surface between cultivated plants
Hydrogen peroxide	
Kieselgur (diatomaceous earth)	
Lime sulfur (calcium polysulfide)	
Paraffin oil	
Potassium and sodium hydrogen carbonate (a.k.a. potassium/sodium bicarbonate “Baking Soda”)	
Pyrethroids (only deltamethrin or lambda-cyhalothrin)	Only in traps with specific attractants; only against *Bactrocera oleae* and *Ceratitis capitate* Wied
Quartz sand	
Sodium chloride	All uses authorized, except herbicide
Sulfur	

([1]) Implementing Regulation (EU) No º 540/2011 of 25 May 2011 implementing Regulation (EC) n º 1107/2009 of the European Parliament and of the Council as regards the list of active substances approved (OJ L 153, 11.6.2011, p.1).
([2]) From sustainable fisheries or organic aquaculture
([3]) Regulation (EC) n º 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing on the market of plant protection products (OJ L 309, 24.11.2009, p. 1).

ANNEX III[170]

Minimum surface areas indoors and outdoors and other characteristics of housing in the different species and types of production.

1. Bovines, equidae, ovine, caprine and porcine

	Indoors area (net area available to animals)		Outdoors area (exercise area, excluding pasturage)
	Live weight minimum (kg)	m^2 / head	m^2 / head
Breeding and fattening bovine and equidae	up to 100	1,5	1,1
	up to 200	2,5	1,9
	up to 350	4,0	3
	over 350	5 with a minimum of 1 m^2 100 kg	3,7 with a minimum of 0,75 m^2/100 kg
Dairy cows		6	4,5
Bulls for breeding		10	30
Sheep and goats		1,5 sheep/goat	2,5
		0,35 lamb/kid	0,5
Farrowing sows with piglets up to 40 days		7,5 sow	2,5
Fattening pigs	up to 50	0,8	0,6
	up to 85	1,1	0,8
	up to 110	1,5	1,2
Piglets	over 40 days and up to 30 kg	0,6	0,4
Brood pigs		2,5 female	1,9
		6 male If pens are used for natural service: 10 m^2/boar	8,0

[170] EC No 889/2008, Annex III

2. Poultry

	Indoors area (net area available to animals)			**Outdoors area (m^2 of area available in rotation / head)**
	No animals / m^2	**cm perch / animal**	**nest**	
Laying hens	*6*	*18*	7 laying hens per nest or in case of common nest 120 cm^2/bird	4, provided that the limit of 170 kg of N/ha/year is not exceeded
Fattening poultry (in fixed housing	10 with a maximum of 21 kg liveweight/ m^2	20 (for guinea Fowl only)		4 broilers and guinea fowl 4,5 ducks 10 turkey 15 geese In all the species mentioned above the limit of 170 kg of N/ha/year is not exceeded
Fattening poultry in mobile housing	16 (1) in mobile poultry houses with a maximum of 30 kg liveweight/ m^2			2,5, provided that the limit of 170 kg of N/ha/year is not exceeded
(1) Only in the case of mobile houses not exceeding 150 m^2 floor space.				

ANNEX IV[171]

Maximum number of animals per hectare

Class or species	Maximum number of animals per ha equivalent to 170 kg N/ha/year
Equines over six months old	**2**
Calves for fattening	**5**
Other bovine animals less than one year old	**5**
Male bovine animals from one to less than two years old	**3,3**
Female bovine animals from one to less than two years old	**3,3**
Male bovine animals two years old or over	**2**
Breeding heifers	**2,5**
Heifers for fattening	**2,5**
Dairy cows	**2**
Cull dairy cows	**2**
Other cows	**2,5**
Female breeding rabbits	**100**
Ewes	**13,3**
Goats	**13,3**
Piglets	**74**
Breeding sows	**6,5**
Pigs for fattening	**14**
Other pigs	**14**
Table chickens	**580**
Laying hens	**230**

[171] EU No 889/2008 Annex IV

ANNEX V[172]
Feed materials

All materials must be reviewed and approved by QCS prior to use. The conditions for use of these products must comply with the active substances set out in the Annex to Commission of Implementation Regulation (EU) No. 540/2011 (Not from GMO origin for farming in general.

For operations seeking certification to both the USDA (NOP) organic regulations and the EU organic standards: Not all materials appearing on this list or their usage may be compliant with the NOP National List. Products may only be used if compliant with the NOP National List and this Annex.

1. FEED MATERIALS OF MINERAL ORGIN

A	Calcerous marine shells	
A	Maerl	
A	Lithotamn	
A	Calcium gluconate	
A	Calcium carbonate	
A	Deflurinated monocalciumphosphate	
A	Defluornated dicalciumphosphate	
A	Magnesium oxide (anhydrous magnesia)	
A	Magnesium sulphate	
A	Magnesium chloride	
A	Magnesium carbonate	
A	Calcium magnesium phosphate	
A	Magnesium phosphate	
A	Monsodium phosphate	
A	Calcium sodium phosphate	
A	Sodium chloride	
A	Sodium bicarbonate	
A	Sodium carbonate	
A	Sodium sulphate	
A	Potassium chloride	

2. OTHER FEED MATERIALS

Fermentation (by-) products from microorganisms the cells of which have been inactivated or killed:

A	Saccharomyces cerevisiae	
A	Sacchromyces carlsbergiensis	

[172] EU No 889/2008 Annex V

ANNEX VI[173]

Feed additives and certain substances used as in animal nutrition

All materials must be reviewed and approved by QCS prior to use. The conditions for use of these products must comply with the active substances set out in the Annex to Commission of Implementation Regulation (EU) No. 540/2011 (Not from GMO origin for farming in general.

For operations seeking certification to both the USDA (NOP) organic regulations and the EU organic standards: Not all materials appearing on this list or their usage may be compliant with the NOP National List. Products may only be used if compliant with the NOP National List and this Annex.

1. TECHNOLOGICAL ADDITIVES[174]

Additives listed must have been approved under Regulation (EC) No 1831/2003 of the European Parliament and of the Council (1) on additives for use in animal nutrition

(a) Preservatives

ID Numbers or functional groups		Substance	Descriptions, Conditions for use
	E 200	Sorbic Acid	
	E 236	Formic acid	
	E 237	Sodium formate	
	E 260	Ascetic Acid	
	E 270	Lactic acid	
	E 280	Propionic Acid	
	E 303	Citric Acid	

(b) Antioxidants

ID Numbers or functional groups		Substance	Descriptions, Conditions for use
	1b306(i)	Tocopherol extracts from vegetable oils	
	1b306(ii)	Tocopherol-rich extracts from vegetables oils (delta rich)	

(c) Emulsifiers, stabilizers, thickeners and gelling agents

ID Numbers or functional groups		Substance	Descriptions, Conditions for use
	1c322	Lecithins	Only if derived from organic raw material Use restricted to aquaculture animal feed.

(d) Binders, anti-caking agents and coagulants

[173] EU No 889/2008 Annex VI
[174] As amended by EU No 505/2012. Annex VI

ID Numbers or functional groups		Substance	Descriptions, Conditions for use
	E 412	Guar gum	
	E 535	Sodium ferrocyanide	Maximum dose rate of 20 mg/kg NaCl calculated as ferocyanide anion
	E 551b	Colloidal silica	
	E 551c	Kieselgur (diatomaceous earth, purified)	
	1m558i	Bentonite	
	E 559	Kaolinitic clays, free of asbestos	
	E 560	Natrual mixtures of stearites and chlorite	
	E 561	Vermiculite	
	E 562	Sepiolite	
	E 566	Natrolite- Phonolite	
	1g568	Clinoptilolite of sedimentary origin, [All species]’]	
	E 599	Perlite	

(e) Silage Additives

ID Numbers or functional groups	Substance	Descriptions, Conditions for use
1k	Enzymes, micro-organisms	Use restricted to production of silage when weather conditions do not allow for adequate fermentation. The use of formic, propionic acid and their sodium salts in the production of silage shall only be permitted when weather conditions do not allow for adequate fermentation
1k236	Formic acid	
1k237	Sodium formate	
1k280	Propionic acid	
1k281	Sodium propionate	

2. SENSORY ADDITIVES

ID Numbers or functional groups		Substance	Descriptions, Conditions for use
	2b	Flavouring compounds	Only extracts from agricultural products
		Castanea sativa Mill.: Chestnut extract	

3. NUTRITIONAL ADDITIVES

(a) Vitamins, pro-vitamins and chemically well-defined substances having similar effect

ID Numbers or functional groups	Substance	Descriptions, Conditions for use
3a	Vitamins and provitamins	Derived from agricultural products. If derived synthetically, only those identical to vitamins derived from agricultural products may be used

		monogastric animals and aquaculture animals If derived synthetically, only vitamins A, D and E identical to vitamins derived from agricultural products may be used for ruminants, the use is subject to prior authorization of the Member states based on the assessment of the possibility for organic ruminants to obtain the necessary quantity of the said vitamins through their feed rations.
3a920	Betain anhydrous	Only for mogastric animals Only from natural origin and when available from organic origin

(b) Compounds of trace elements

	ID Numbers	Substance	Descriptions, Conditions for use
	E1 Iron		
	3b101	Iron(II) carbonate (siderite)	
	3b103	Iron(II) sulfate monohydrate	
	3b104	Iron(II) sulfate heptahydrate	
	3b201	Potassium iodide	
	3b202	Calciumn iodate, anhydrous	
	3b203	Coated granulated calcium iodate anhydrous	
	3b301	Cobalt (II) acetate tetrahydrate	
	3b302	-Cobalt (II) carbonate	
	3b303	Cobalt (II) carbonate hydroxide (2:3) monohydrate	
	3b304	Coated granulated cobalt(II) carbonate hydroxide (2:3) monohydrate	
	3b305	Cobalt(II) sulphate heptahydrate	
	3b404	Copper(II) oxide	
	3b40	Copper(II) sulfate pentahydrate	
	3b409	Dicopper chloride trihydroxide (TBCC)	
	3b502	Manganese(II) oxide	

	3b503	Manganese sulfate, monohydrate	
	3b603	Zinc oxide	
	3b604	Zinc sulfate heptahydrate	
	3b605	Zinc sulfate monohydrate	
	3b609	Zinc chloride hydroxide monohydrate (TBZC)	
	3b701	Sodium molybdate dihydrate	
	3b801	Sodium selenite	
	3b810, 3b811, 3b812, 3b813 and 3b817	Selenized yeast inactivated	

4. ZOOTECHNICAL ADDITIVES

ID Numbers	Substance	Descriptions, Conditions for use
4a, 4b, 4c and 4d	Enzymes and microorganism in the category of "Zootechnical additive"	

ANNEX VII[175]

Cleaning and disinfection of buildings and installations for livestock

All materials must be reviewed and approved by QCS prior to use. The conditions for use of these products must comply with the active substances set out in the Annex to Commission of Implementation Regulation (EU) No. 540/2011 (Not from GMO origin for farming in general.)

For operations seeking certification to both the USDA (NOP) organic regulations and the EU organic standards: Not all materials appearing on this list or their usage may be compliant with the NOP National List. Products may only be used if compliant with the NOP National List and this Annex.
D) authorized by EU No 889/2008 Annex VII As amended by (EC) No 710/2009

1. Products for cleaning and disinfection of buildings and installations for livestock production referred to in Article 23(4)

Authorization	Name	Description, compositional requirements, conditions for use
D	Potassium and sodium soap	
D	Water and Steam	
D	Milk of Lime	
D	Lime	
D	Quick Lime	
D	Sodium Hypochlorite	(e.g. as liquid bleach)
D	Caustic Soda	
D	Caustic potash	
D	Hydrogen peroxide	
D	Natural essences of plants	
D	Citric, peracetic acid, formic, lactic, oxalic and acetic acid	
D	Alcohol	
D	Nitric acid	Dairy equipment
D	Phosporic acid	Dairy equipment
D	Formaldehyde	

[175] EU No 889/2008 Annex VII As amended by (EC) No 710/2009

D	Cleaning and disinfection products for teats and milking facilities	
D	Sodium carbonate	

2. Products for cleaning and disinfection for aquaculture animals and seaweed production are referred to in Articles 6e(2), 25s(2) and 29a. See also 2.2 of this manual.

2.1. Substances for cleaning and disinfection of equipment and facilities, in the absence of aquaculture animals are the following:

Authorization	Name	Description, compositional requirements, conditions for use
D	Ozone	
D	Sodium chloride	
D	Sodium hypochlorite	
D	Calcium hypochlorite	
D	Caustic soda	
D	Alcohol	
D	Hydrogen peroxide	
D	Organic acids (acetic acid, lactic acid, citric acid)	
D	Humic acid	
D	Peroxyacetic acids	
D	Iodophores	
D	Copper sulphate	only until 31 December 2015
D	Potassium permanganate	
D	Peracetic and peroctanoic acids	
D	Tea seed cake made of natural camelia seed	use restricted to shrimp production

2.2. Limited list of substances for use in the presence of aquaculture animals:

— Limestone (calcium carbonate) for pH control

— Dolomite for pH correction (use restricted to shrimp production)'

--- Sodium Hydroxide (for the cleaning and disinfection of frames, hives and reays)

Authorization	Name	Description, compositional requirements, conditions for use
D	Limestone (calcium carbonate)	for pH control
D	Dolomite	for pH correction (use restricted to shrimp production)'

ANNEX VIII[176]
Certain products and substances for use in production of processed organic food, yeast and yeast products referred to in Article 27(1)(a) and Article 27a(a)

All materials must be reviewed and approved by QCS prior to use. The conditions for use of these products must comply with the active substances set out in the Annex to Commission of Implementation Regulation (EU) No. 540/2011 (Not from GMO origin for farming in general.)

For operations seeking certification to both the USDA (NOP) organic regulations and the EU organic standards: Not all materials appearing on this list or their usage may be compliant with the NOP National List. Products may only be used if compliant with the NOP National List and this Annex.

SECTION A — FOOD ADDITIVES, INCLUDING CARRIERS
For the purpose of the calculation referred to in Section 7.0 Labeling, food additives marked with an asterisk in the column of the code number, shall be calculated as ingredients of agricultural origin.

Code	Name	Preparation of foodstuffs of		Specific conditions and restrictions in addition to Regulation (EC) No 1333/2008
		plant origin	animal origin	
E 153	Vegetable carbon		X	Ashy goat cheese Morbier cheese
E 160b*	Annatto, Bixin, Norbixin		X	Red Leicester cheese Double Gloucester cheese Cheddar Mimolette cheese
E 170	Calcium carbonate	X	X	Shall not be used for coloring or calcium enrichment of product
E 220	Sulphur dioxide	X	X (only for mead)	In fruit wines (wine made from fruits other than grapes, including cider and perry) and mead with and without added sugar): 100 mg/l (Maximum levels available from all sources, expressed as SO_2 in mg/l)
E 223	Sodium metabisulfite		X	Crustaceans
E 224	Potassium metabisulphite	X	X (only for mead)	In fruit wines (wine made from fruits other than grapes, including cider and perry) and mead with and without added

[176] EU No 889/2008 Annex VIII

				sugar): 100 mg/l (Maximum levels available from all sources, expressed as SO_2 in mg/l)
E 250	Sodium nitrite		X	For meat products. May only be used if it has been demonstrated to the satisfaction of the competent authority that no technological alternative, giving the same guarantees and/or allowing to maintain the specific features of the product, is available. Not in combination with E252. Indicative ingoing amount expressed as $NaNO_2$: 50 mg/kg
E 252	Potassium nitrate		X	For meat products. May only be used if it has been demonstrated to the satisfaction of the competent authority that no technological alternative, giving the same guarantees and/or allowing to maintain the specific features of the product, is available. Not in combination with E250. Indicative ingoing amount expressed as $NaNO_2$: 50 mg/kg
E 270	Lactic acid	X	X	
E 290	Carbon dioxide	X	X	
E 296	Malic acid	X		
E 300	Ascorbic acid	X	X	With regard to foodstuffs of animal origin: Meat products
E 301	Sodium ascorbate		X	With regard to foodstuffs of animal origin: Meat products in connection with nitrates and nitrites
E 306*	Tocopherol-rich Extract	X	X	Anti-oxidant
E 322*	Lecithins	X	X	With regard to foodstuffs of animal origin: Milk products. Only when derived from organic production. Applicable as of 1 January 2022. Until that date, only when derived from organic raw material
E 325	Sodium lactate		X	Milk-based and meat products
E 330	Citric acid	X	X	
E 331	Sodium citrate	X	X	
E 333	Calcium citrates	X		
E 334	Tartaric acid (L(+)–)	X	X (Only for mead)	With regard to foodstuffs of animal origin: Mead.
E 335	Sodium tartrates	X		
E 336	Potassium tartrates	X		
E 341 (i)	Monocalcium phosphate	X		Raising agent for self-raising flour

E 392*	Extracts of rosemary	X	X	Only when derived from organic production
E 400	Alginic acid	X	X	With regard to foodstuffs of animal origin: milk-based products
E 401	Sodium alginate	X	X	With regard to foodstuffs of animal origin: milk-based products
E 402	Potassium alginate	X	X	With regard to foodstuffs of animal origin: milk-based products
E 406	Agar	X	X	With regard to foodstuffs of animal origin: milk-based products and meat products
E 407	Carrageenan	X	X	With regard to foodstuffs of animal origin: milk-based products
E 410*	Locust bean gum	X	X	Only when derived from organic production. Applicable as of 1 January 2022.
E 412*	Guar gum	X	X	Only when derived from organic production. Applicable as of 1 January 2022.
E 414*	Arabic gum	X	X	Only when derived from organic production. Applicable as of 1 January 2022.
E 415	Xanthan gum	X	X	
E 417	Tara gum powder	X	X	Thickener Only when derived from organic production. Applicable as of 1 January 2022.
E 418	Gellan Gum	X	X	High-acyl form only Only when derived from organic production. Applicable as of 1 January 2022.
E 422	Glycerol	X		Only from plant origin Only when derived from organic production. Applicable as of 1 January 2022. For plant extracts, flavorings, humectant in gel capsules and as a surface coating of tablets
E 440 (i)*	Pectin	X	X	With regard to foodstuffs of animal origin: milk-based products
E 464	Hydroxypropyl methyl cellulose	X	X	Encapsulation material for capsules
E 500	Sodium carbonate	X	X	
E 501	Potassium carbonates	X		
E 503	Ammonium carbonates	X		
E 504	Magnesium carbonates	X		
E 509	Calcium chloride		X	Milk coagulation
E 516	Calcium sulphate	X		Carrier

E 524	Sodium hydroxide	X		Surface treatment of 'Laugengebäck' and regulation of acidity in organic flavorings.
E 551	Silicon dioxide	X	X	For herbs and spices in dried powdered form, flavorings and propolis.
E 553b	Talc	X	X	With regard to foodstuffs of animal origin: surface treatment of sausages
E 901	Beeswax	X		As a glazing agent for confectionary only. Beeswax from organic production
E 903	Carnauba wax	X		As a glazing agent for confectionary As a mitigating maethod for mandatory extreme cold treatment of fruit as a quarantine measure against harmful organisms (Commission Implementing Directive EU) 2017/1279(1) Only when derived from organic production. Applicable as of 1 January 2022. Until that date, only when derived from organic raw material.
E 938	Argon	X	X	
E 939	Helium	X	X	
E 941	Nitrogen	X	X	
E 948	Oxygen	X	X	
E 968	Erythritol	X	X	Only when derived from organic production without using ion exchange technology
(1) Commission Implementing Directive (EU) 20171279 of 14 July 2017 amending Annexes I to V to Council Directive 2000/29/EC on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community (OJ L. 184, 15.7.2017, p. 33).				

SECTION B — PROCESSING AIDS AND OTHER PRODUCTS, WHICH MAY BE USED FOR PROCESSING OF INGREDIENTS OF AGRICULTURAL ORIGIN FROM ORGANIC PRODUCTION

Name	**Preparation of foodstuffs of plant origin**	**Preparation of foodstuffs of animal origin**	**Specific conditions**
Water	X	X	Drinking water within the meaning of Council Directive 98/83/EC
Calcium chloride	X		Coagulation agent
Calcium carbonate	X		
Calcium hydroxide	X		
Calcium sulfate	X		Coagulation agent
Magnesium chloride (or nigari)	X		Coagulation agent
Potassium carbonate	X		With regard to foodstuffs of plant origin: drying of grapes
Sodium carbonate	X	X	
Lactic acid		X	With regard to foodstuffs of animal origin: for the regulation of the pH of the brine bath in cheese production

L(+)lactic acid from fermentation	X		With regard to foodstuffs of plant origin: for the preparation of plant protein extracts
Citric acid	X	X	
Sodium hydroxide	X		With regard to foodstuffs of plant origin: for sugar(s) production; for oil production excluding olive oil production; for the preparation of plant protein extracts
Sulfuric acid	X	X	Gelatin production Sugar(s) production
Hop extract	X		With regard to foodstuffs of plant origin: only for antimicrobial purposes in production of sugar. When available from organic production
Pine rosin extract	X		With regard to foodstuffs of plant origin: only for antimicrobial purposes in production of sugar. When available from organic production
Hydrochloric acid		X	With regard to foodstuffs of animal origin: gelatin production; for the regulation of the pH of the brine bath in the processing of Gouda-, Edam and Maasdammer cheeses, Boerenkaas, Friese and Leidse Nagelkaas
Ammonium hydroxide		X	With regard to foodstuffs of animal origin: gelatin production
Hydrogen peroxide		X	With regard to foodstuffs of animal origin: gelatin production
Carbon dioxide	X	X	
Nitrogen	X	X	
Ethanol	X	X	Solvent
Tannic acid	X		Filtration aid
Egg white albumen	X		
Casein	X		
Gelatin	X		
Isinglass	X		
Vegetable oils	X	X	Greasing, releasing or antifoaming agent. Only when derived from organic production
Silicon dioxide gel or colloidal solution	X		
Activated carbon	X		
Talc	X		In compliance with the specific purity criteria for food additive E 553b
Bentonite	X	X	With regard to foodstuffs of animal origin: as a sticking agent for mead

Celluose	X	X	With regard to foodstuffs of animal origin: gelatin production
Diatomaceous earth	X	X	With regard to foodstuffs of animal origin: gelatin production
Perlite	X	X	With regard to foodstuffs of animal origin: gelatin production
Hazelnut shells	X		
Rice meal	X		
Beeswax	X		Releasing agent Beeswax from organic beekeeping
Carnauba wax	X		Releasing agent. Only when derived from organic production. Applicable as of 1 January 2022. Until that date, only when derived from organic raw material.
Acetic Acid/Vinegar		X	Only when derived from organic production. For fish processing, only from biotechnological source, except if produced by or from GMO.
Thiamin Hydrochloride	X	X	Only for use in processing of fruit wines, including cider and perry and mead.
Diammonium phosphate	X	X	Only for use in processing of fruit wines, including cider and perry and mead.
Wood fiber	X	X	The source of timber should be restricted to certified, sustainability harvested wood. Wood used must not contain toxic components (post-harvest treatment, naturally occurring toxins or toxins from micro-organisms)

SECTION C: PROCESSING AIDS FOR THE PRODUTION OF YEAST AND YEAST PRODUCTS

Name	Primary yeast	Yeast Confections/ Formulations	Specific Conditions
Calcium chloride	X		
Carbon dioxide	X	X	
Citric acid	X		For the regulation of pH in yeast production
Lactic acid	X		For the regulation of pH in yeast production
Nitrogen	X	X	
Oxygen	X	X	
Potato Starch	X	X	For filtering. Only when derived from organic production

Name	Primary yeast	Yeast Confections/ Formulations	Specific Conditions
Sodium carbonate	X	X	For the regulation of the pH
Vegetable oils	X	X	Greasing, releasing, or Anti-foaming agent. Only when derived from organic production.

ANNEX VIIIa

Products and substances authorized for use or addition in organic products of the wine sector

Type of treatment in accordance with Annex I A to Regulation (EC) No 606/2009	Name of products or substances	Specific conditions, restrictions within the limits and conditions set out in Regulation (EC) No 1234/2007 and Regulation (EC) No 606/2009
Point 1: Use for aeration or oxygenation	— Air — Gaseous oxygen	
Point 3: Centrifuging and filtration	— Perlite — Cellulose — Diatomeceous earth	Use only as an inert filtering agent
Point 4: Use in order to create an inert atmosphere and to handle the product shielded from the air	— Nitrogen — Carbon dioxide — Argon	
Points 5, 15 and 21: Use	— Yeasts (1), yeast cell walls	
Point 6: Use	— Di-ammonium phosphate — Thiamine hydrochloride — Yeast autolysates	
Point 7: Use	— Sulphur dioxide — Potassium bisulphite or potassium metabi-sulphite	(a) The maximum sulphur dioxide content shall not exceed 100 milligrams per litre for red wines as referred to in point 1(a) of Part A of Annex I B to Regulation (EC) No 606/ 2009 and with a residual sugar level lower than 2 grams per litre;

		(b)The maximum sulphur dioxide content shall not exceed 150 milligrams per litre for white and rosé wines as referred to in point 1(b) of Part A of Annex I B to Regulation (EC) No 606/2009 and with a residual sugar level lower than 2 grams per litre; (c)For all other wines, the maximum sulphur dioxide content applied in accordance with Annex I B to Regulation (EC) No 606/2009 on 1 August 2010, shall be reduced by 30 milligrams per litre.
Point 9: Use	—Charcoal for oenological use	
Point 10: Clarification	—Edible gelatine (2) —Plant proteins from wheat or peas (2) — Isinglass (2) —Egg white albumin (2) — Tannins (2) —Potato proteins (2) —Yeast protein extracts (2) — Casein —Chitosan derived from *Aspergillus niger* —Potassium caseinate — Silicon dioxide — Bentonite —Pectolytic enzymes	
Point 12: Use for acidification purposes	— Lactic acid —L(+)Tartaric acid	
Point 13: Use for deacidification purposes	—L(+)Tartaric acid —Calcium carbonate —Neutral potassium tartrate —Potassium bicarbonate	
Point 14: Addition	—Aleppo pine resin	
Point 17: Use	— Lactic bacteria	

Point 19: Addition	— L-Ascorbic acid	
Point 22: Use for bubbling	— Nitrogen	
Point 23: Addition	— Carbon dioxide	
Point 24: Addition for wine stabilisation purposes	— Citric acid	
Point 25: Addition	— Tannins (2)	
Point 27: Addition	—Meta-tartaric acid	
Point 28: Use	—Acacia gum (2) (= gum arabic)	
Point 30: Use	—Potassium bitartrate	
Point 31: Use	— Cupric citrate	
Point 35: Use	—Yeast mannoproteins	
Point 38: Use	— Oak chips	
Point 39: Use	—Potassium alginate	
Point 44: Use	—Chitosan derived from *Aspergillus niger*	
Point 51: Use	—Inactivated yeast	

(1) For the individual yeast strains : if available, derived from organic raw material.

(2) Derived from organic raw materials if available.

ANNEX X[177]

A. Organic Logo of the EU

1. The Organic logo of the EU shall comply with the model below:

2. The reference colour in Pantone is Green Pantone No 376 and Green (50 % Cyan + 100 % Yellow), when a four-colour process is used.

3. The Organic logo of the EU can also be used in black and white as shown, only where it is not practicable to apply it in colour:

4. If the background colour of the packaging or label is dark, the symbols may be used in negative format, using the background colour of the packaging or label.

5. If a symbol is used in colour on a coloured background, which makes it difficult to see, a delimiting outer line around the symbol can be used to improve contrast with the background colours.

[177] EU No 271/2010

6. In certain specific situations where there are indications in a single colour on the packaging, the Organic logo of the EU may be used in the same colour.

7. The Organic logo of the EU must have a height of at least 9 mm and a width of at least 13,5 mm; the proportion ratio height/width shall always be 1:1,5. Exceptionally the minimum size may be reduced to a height of 6 mm for very small packages.

8. The Organic logo of the EU may be associated with graphical or textual elements referring to organic farming, under the condition that they do not modify or change the nature of the Organic logo of the EU, nor any of the indications the 1 number or place of origin. When associated to national or private logos using a green colour different from the reference colour mentioned in point 2, the Organic logo of the EU may be used in that non-reference colour.

9. The use of the Organic logo of the EU shall be in accordance with the rules accompanying its registration as Organic Farming Collective Mark in the Benelux Office for Intellectual Property and in the Community and International Trademark Registers. EN 31.3.2010 Official Journal of the European Union L 84/21

B. Code numbers referred to in Section 7.1

The code number for products imported into the European Union from operations certified by Florida Certified Organic Growers and Consumers, Inc. (FOG) dba Quality Certification Services (QCS) are specified in EU 1235/2008 and its amendments, including those listed below. Additional details and an up to date list on code numbers can be found on the European Commission's organic farming website Code Numbers of Control Bodies and Control Authorities.

Country	Code
Bahamas	BS-BIO-144
Bolivia	BO-BIO-144
Canada	CA-ORG-018
Chile	CL-BIO-144
China	CN-BIO-144
Colombia	CO-BIO-144
Costa Rica	CR-BIO-144
Dominican Republic	DO-BIO-144
Ecuador	EC-BIO-144
El Salvador	SV-BIO-144
Guatemala	GT-BIO-144
Honduras	HN-BIO-144
Indonesia	ID-BIO-144
Jamaica	JM-BIO-144
Laos	LA-BIO-144
Malaysia	MY-BIO-144
Mexico	MX-BIO-144
Nicaragua	NI-BIO-144
Peru	PE-BIO-144
Philippines	PH-BIO-144
South Africa	ZA-BIO-144

Taiwan	TW-BIO-144
Turkey	TR-BIO-144
United States	US-ORG-051
Vietnam	VN-BIO-144

Quality Certification Services (QCS)
5700 SW 34th Street, Suite 349, Gainesville FL 32608
phone 352.377.0133 / fax 352.377.8363
www.qcsinfo.org

ANNEX XIIIa
Stocking density for Aquaculture production

Aquatic Species	Production System	Maximum stocking density
Salmonids in fresh water: Brown trout *(Salmo trutta)* Rainbow trout *(Oncorhynchus mykiss)* American brook trout *(Salvelinus fontinalis)* Salmon *(Salmo salar)* Charr *(Salvelinus alpinus)* Grayling *(Thymallus thymallus)* American lake trout (or grey trout) *(Salvelinus namaycush)* Huchen *(Hucho hucho)*	Ongrowing farm systems must be fed from open systems. The flow rate must ensure a minimum of 60% oxygen saturation for stock and must ensure their comfort and the elimination of farming effluent.	Salmonid species not listed below 15 kg/m^3 Salmon 20 kg/m^3 Brown trout and Rainbow trout 25 kg/m^3 Arctic charr 20 kg/m^3
Salmonids in sea water: **Salmon *(Salmo salar)*,** **Brown trout *(Salmo trutta)*** **Rainbow trout *(Oncorhynchus mykiss)***		10 kg/m^3 in net pens
Organic production of cod *(Gadus morhua)* and other Gadidae**:** **S**ea bass *(Dicentrarchus labrax)*, **S**ea bream *(Sparus aurata)*, **M**eagre *(Argyrosomus regius)*, **T**urbot *(Psetta maxima [= Scopthalmus maximux])*, **Red P**orgy *(Pagrus pagrus [= Sparus pagrus])*, **Red D**rum *(Sciaenops ocellatus)* and other Sparidae, and spinefeet (*Siganus* spp.)	In open water containment systems (net pens/cages) with minimum sea current speed to provide optimum fish welfare or in open systems on land.	For fish other than turbot: 15 kg/m^3 For turbot: 25 kg/m^2
Organic production of sea bass, sea bream, meagre, mullets *(Liza, Mugil)* and eel (*Anguilla spp.*) in earth ponds of tidal areas and costal lagoons **Containment system Traditional salt pans transformed into aquaculture production units and similar earth ponds in tidal areas**	There shall be adequate renewal of water to ensure the welfare of the species, At least 50% of the dikes must have plant cover Wetland based depuration ponds required	4 kg/m^3
Sturgeon in fresh water: ***Acipenser* family**	Water flow in each rearing unit shall be sufficient to ensure animal welfare	30 kg/m^3

	Effluent water to be of equivalent quality to incoming water	
Fish in inland waters: Carp family *(Cyprinidae)*, and **O**ther associated species in the context of polyculture, including perch, pike, catfish, coregonids, sturgeon.	In fishponds which shall periodically be fully drained and in lakes. Lakes must be devoted exclusively to organic production, including the growing of crops on dry areas. The fishery capture area must be equipped with a clean water inlet and of a size to provide optimal comfort for the fish. The fish must be stored in clean water after harvest. Organic and mineral fertilisation of the ponds and lakes shall be carried out in compliance with Annex I with a maximum application of 20 kg Nitrogen/ha. Treatments involving synthetic chemicals for the control of hydrophytes and plant coverage present in production waters are prohibited. Areas of natural vegetation shall be maintained around inland water units as a buffer zone for external land areas not involved in the farming operation in accordance with the rules of organic aquaculture. For grow-out "polyculture" shall be used on condition that the criteria laid down in the present specifications for the other species of lakes fish are duly adhered to.	**Farming yield** The total production of species is limited to 1500 kg of fish per hectare per year.
Molluscs and echinoderms:	Long-lines, rafts, bottom culture, net bags, cages, trays, lantern nets, bouchot poles and other containment systems. For mussel cultivation on rafts the number of drop-ropes shall not exceed one per square meter of surface area. The maximum drop-rope length shall not exceed 20 metres. Thinning-out of drop-ropes shall not take place during the production cycle, however sub-division of drop ropes shall be	

	permitted without increasing stocking density at the outset.	
Tropical fresh water fish: Milkfish *(Chanos chanos)*, Tilapi[178]a (*Oreochromis* spp.), Siamese Catfish (*Pangasius* spp.):	Ponds and net cages	Pangasius: 10 kg/m ^{3} Oreochromis: 20 kg/ m ^{3}
Other aquaculture animal species		none

Penaeid shrimps and freshwater prawns (*Macrobrachium* spp.

Establishment of production unit/s	Location to be in sterile clay areas to minimize environmental impact of pond construction. Ponds to be built with the natural pre-existing clay. Mangrove destruction is not permitted.
Conversion time	Six months per pond, corresponding to the normal lifespan of a farmed shrimp.
Broodstock origin	A minimum of half the broodstock shall be domesticated after three years operating The remainder is to be pathogen free wild broodstock originating from sustainable fisheries. A compulsory screening to be implemented on the first and second generation prior to introducing to the farm.
Eyestalk ablation	Is prohibited
Maximum on farm stocking densities and production limits	Seeding: maximum 22 post larvae/m ^{2} Maximum instantaneous biomass: 240 g/ m ^{2}

[178] Source: COMMISSION REGULATION (EU) No 710/2009, Annex XIII(a)

11.0 DEFINITIONS[179]

Terms defined. (Please refer to 7 CFR 205.2 for additional definitions)

Aquaculture. The propagation and rearing of aquatic animals and plants.

Aquaculture facility. Any land, structure, or other appurtenance used for aquaculture.
Such term includes, but is not limited to, any laboratory, hatchery, rearing pond, tank, raceway, net pen, cage, raft, longline, geographically defined seafloor, or other structure or defined boundary used in aquaculture.

Aquaculture product. Any product of aquaculture, including but not limited to whole alive or dead aquatic animals, gutted fish, fillets and other forms of raw or processed meat, eggs for human consumption, eggs for reproduction, skin and other animal parts, and alive, fresh and dehydrated aquatic plants, either whole or processed. By-products from aquatic animals grown in aquaculture, such as, fish meal and oil, silage, and hydrolyzed offal, are included.

Aquatic animal. Any finfish, mollusc, crustacean, or other aquatic invertebrate grown in fresh, brackish or saltwater, except amphibians, reptiles, birds and mammals.

Aquatic animal brood stock. Sexually mature aquatic animals used to produce progeny that may be incorporated into an organic aquaculture production system.

Aquatic plant. Any plant grown in an aquaculture facility, including microscopic or macroscopic algae, and excluding vascular plants such as watercress, rice, water hyacinth, and hydroponic crops.

Aquaculture production system. A process for growing aquatic animals and plants in an aquaculture facility.

Bivalve molluscs. Molluscan shellfish including oysters, clams, mussels and scallops, but not including gastropods and cephalopods.

Conversion. The transition from non organic to organic farming within a given period of time, during which the provisions concerning the organic production have been applied;

Control File. All the information and documents transmitted, for the purposes of the control system to certification or accreditation bodies by an operator subject to Regulation (EC) No 834/2007. This includes relevant information and documents relating to that operator or the activities of that operator held by certification or accreditation bodies, with the exception of information or documents that have no bearing on the operation of the control system

Finfish. Aquatic vertebrate animals not including mammals, birds, amphibians and reptiles.

First consignee. The natural or legal person to whom the imported consignment is delivered and who will receive it for further preparation and/or marketing.

Fish meal. The dried ground tissue of undecomposed whole fish or fish cuttings, either or both, with or without the extraction of part of the oil.

Fish oil. The oil from rendering whole fish, fish cuttings, or cannery waste.

Holding. All the production units operated under a single management for the purpose of producing agricultural products.

Hydroponic production. The method of growing plants with their roots in a mineral nutrient solution only or in an inert medium, such as perlite, gravel or mineral wool to which a nutrient solution is added;

Importer. The natural or legal person within the community who presents a consignment for release for free circulation into the Community, either in person, or through a representative.

In-conversion feedingstuffs. Fedingstuffs produced during the conversion period to organic production, with the exclusion of those harvested in the 12 months following the beginning of the conversion as referred to in Article 17(1)(a) of Regulation (EC) No 834/2007.

Livestock. Any cattle, sheep, goat, swine, poultry, equine animals, or aquatic animals used for food or in the production of food, fiber, feed, or other agricultural-based consumer products;

[179] No 2016/673 & No 834/2008

wild or domesticated game; or other nonplant life.

Metabolic products of aquatic animals. Solid and dissolved compounds released by aquatic animals during growth in an aquaculture production system.

Monosex stocks. Populations of aquatic animals of one sex obtained by artificially induced or natural processes, or by manual selection.

Non- organic. Not coming from or not related to a production in accordance to Regulation (EC) No. 834/2007 and this standard. This includes products that may be certified to other organic standards, such as NOP or the Canadian Organic Program.

Production Unit: All assets to be used for a production sector such as production premises, land parcels, pasturages, open air areas, livestock buildings, the premises for the storage of crops, crop products, livestock products, raw materials and any other input relevant for this specific production sector;

Persistent, Bioaccumulative Toxin (PBT). Chemicals that resist breakdown and are persistent in the environment, bioaccumulate in food chains through consumption or uptake, and are a hazard to human health or wildlife. Level 1 PBTs identified by EPA include aldrin/dieldrin, benzo(a)pyrene, chlordane, DDT and its metabolites. 6 hexachlorobenzene, alkyl-lead, mercury and its compounds, mirex, octachlorostyrene, PCBs, dioxins and furans, and toxaphene. Other candidate PBTs include brominated flame retardants and other halogenated organic compounds. A term related to PBT is POP (persistent organic pollutant) and, for the purposes of these standards, the terms are interchangeable.

Preserving. Means any action, different from farming or harvesting that is carried out on products, but does not qualify as processing.

Processing. Any action referred to in production unit meaning all assets to be used for a production sector such as production premises, land parcels, pasturages, open air areas, livestock buildings, the premises for the storage of crops, crop products, livestock products, raw materials and any other input relevant for this specific production sector.

Persistent, bioaccumulative, and toxic (PBT) chemicals. 6 hexachlorobenzene, alkyl-lead, mercury and its compounds, mirex, octachlorostyrene, PCBs, dioxins and furans, and toxaphene. Other candidate PBTs include brominated flame retardants and other halogenated organic compounds. A term related to PBT is POP (persistent organic pollutant) and, for the purposes of these standards, the terms are interchangeable.

Polyploid. Aquatic animals with more than two sets of homologous chromosomes. Most aquatic animals are naturally diploid (2n). Triploid aquatic animals are typically sterile (non-reproductive) and tend to grow faster than diploid aquatic animals.

Shellfish. Aquatic invertebrate animals including molluscs and crustaceans.

Silage (fish). A mixture of solids and liquids obtained by the breakdown of fish tissue using natural enzymes with or without addition of acids or bases to control spoilage and to enhance enzyme activity.

Triploid. Aquatic animals with three sets (3n) of chromosomes. Most aquatic animals are naturally diploid (2n). Triploid aquatic animals are typically sterile (non-reproductive) and tend to grow faster than diploid aquatic animals.

Warm water finfish. Finfish with optimum temperatures for growth between 25 and 30 C. Examples include catfish, tilapia, and paddlefish.

Wild fish. Any species of fish or shellfish, raw or processed, harvested from wild sources used for food or in animal feeds, including feeds for aquatic animals.

Veterinary medicinal products. Products as defined in Article 1(2) of Directive 2001/82/EC of the European Parliament and of the Council ([7]) concerning the Community code relating to veterinary medicinal products.

Veterinary treatment. All courses of a CURATIVE OR PREVENTIVE TREATMENT AGAINST ONE OCCURRENCE OF A SPECIFIC DISEASE.