40707 Daily Road, De Luz, CA 92028 USA

Ms. Cheri Courtney
Director, Accreditation and International Activities Division
National Organic Program
November 21, 2014

Dear Ms. Courtney,

The decision made on OASIS Rootcubes/Horticubes deeply affects the ability of hydroponic growers to keep their operations in production. Hydroponic growers spend years balancing systems that use minimal inputs and provide the nutrients necessary for plant growth. OASIS Rootcubes/Horticubes are a totally inert plastic in this system, a seed container that provides support. It is the "plastic pot" of a hydroponic system. OASIS Rootcubes/Horticubes are not "rockwool" as claimed by CCOF. They are composed of plastic, a synthetic, as are many "tools" used by soil based farmers- seed trays, seedling pots, irrigation pipes, hoses, sprinklers… All of which are compliant and none of these are reviewed for compliance as a crop input.

Organic hydroponic agriculture is a "hot topic" that has many vocal opponents and some of the most innovative growers. Both Secretary of Agriculture Tom Vilsak and NOP Deputy Administrator Miles McEvoy visited A Bee's organic hydroponic growers, many using OASIS Rootcubes/Horticubes. One of the growers was excited to hear Mr. McEvoy comment that the NOP would likely be establishing, in the very near future, a "hydroponic taskforce" to evaluate these growing practices and processes as they apply to organic certification.

Our growers are telling us they will need at least one year to transition from using Rootcubes/Horticubes to another material for the following reasons:

1. They need to identify and test new materials through 4 growing seasons: fall, winter, spring & summer
2. They need to retool automation equipment that is currently designed for Rootcubes/Horticubes

Comments from a grower: "We grow year-round. The most significant challenge is to identify and test new materials that can be used as an alternative to Rootcubes/Horticubes. Crops perform differently during the seasons and will likely require different material combinations during specific times of the year. Not having the opportunity to properly test materials during each growing season will pose a serious threat to our farm, as we are reliant on a healthy propagation system for year-round growing. We have already begun conducting new material testing – it is clear that further testing is needed to achieve uniform results.
Lastly, we will require significant capital to retool our automation equipment for a material change. For example, we have contacted two suppliers who can potentially offer such equipment and the earliest lead time that we can get is about 6 months to have equipment installed and the cost will be about $100K – we would then still have to test the new materials."

Because this decision appears to have been made quite hastily, and out of context, treating Rootcubes/Horticubes as a growing medium containing synthetics rather than a container composed of a synthetic (plastic), A Bee Organic is requesting a complete copy of the review of OASIS Rootcubes/Horticubes performed by the NOP. As one of our growers eloquently wrote: "I believe that the review of Rootcube and Horticube materials should be deferred for a review that evaluates hydroponics as a whole. These materials should, at least for the time being, continue to be allowed because by definition, they are part of the inert plastic irrigation system – which is allowed by NOP rules."

Respectfully,
(b) (6) [redacted]

Sarah E. J. Costin
Co-Owner and Certification Specialist, A Bee Organic

Cc: Ro Elgas; Miles McEvoy

## Schurkamp, Lynnea - AMS

**From:** OMIC-OCD (Yoshida) <ocd@omicnet.com>
**Sent:** Tuesday, March 01, 2016 9:01 PM
**To:** McElroy, Bridget - AMS
**Subject:** Answer from Overseas Merchandise Inspection Co., Ltd.(OMIC)
**Attachments:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems.eml.msg

Dear Ms. Bridget Mcleroy

We are answering to your question by the attached e-mail that we donot certify certify hydroponic, aeroponic or aquaponics operations.

Overseas Merchandise Inspection Co., Ltd. (OMIC) Hisashi Yoshida

## Schurkamp, Lynnea - AMS

**From:** Michelle Menken <michelle.menken@mncia.org>
**Sent:** Wednesday, March 23, 2016 4:19 PM
**To:** McElroy, Bridget - AMS
**Subject:** aquaponic/hydroponic
**Attachments:** image003.png; image004.png

Hello Bridget,

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards? Yes

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify? We have two certified operations- one aquaponics and one hydroponic.

In what state or country (if international) are the certified operations located (list)? Both are in Minnesota.

What crops do these certified operations produce (list)? Here are the crop lists off the two certificates:

**100% Organic Production**
Products: Aquaponic production of Arugula; Basil; Chard; Cilantro; Kale; Lettuce; Mint; Pak choi; Parsley; Rosemary; Spinach; Tatsoi; Thyme; and Watercress

**100% Organic Production**
Processes: Growing in hydroponic system and packaging
Products: Arugula; Basil; Bay leaves; Chervil; Chives; Cilantro; Dill; Lavender; Lemongrass; Marjoram; Mint; Oregano; Parsley; Sage; Savory; Sorrel; Tarragon; Thyme; Thyme (lemon); and Watercress

Yours truly,

Michelle Menken
Organic Program
Minnesota Crop Improvement Association/MCIA
1-855-213-4461
612-625-3123 (direct)

Government of Canada
Gouvernement du Canada

Canadian General Standards Board
Office des normes générales du Canada

CAN/CGSB-32.310-2015

Supersedes CAN/CGSB-32.310-2006

# National Standard of Canada

# Organic production systems

## General principles and management standards

Canadian General Standards Board CGSB

Standards Council of Canada
Conseil canadien des normes

Canada

Experience and excellence
Expérience et excellence
CGSB ONGC

The CANADIAN GENERAL STANDARDS BOARD (CGSB), under whose auspices this standard has been developed, is a government agency within Public Services and Procurement Canada. CGSB is engaged in the production of voluntary standards in a wide range of subject areas through the media of standards committees and the consensus process. The standards committees are composed of representatives of relevant interests including producers, consumers and other users, retailers, governments, educational institutions, technical, professional and trade societies, and research and testing organizations. Any given standard is developed on the consensus of views expressed by such representatives.

CGSB has been accredited by the Standards Council of Canada as a national standards-development organization. The standards that it develops and offers as National Standards of Canada conform to the criteria and procedures established for this purpose by the Standards Council of Canada. In addition to standards it publishes as National Standards of Canada, CGSB produces standards to meet particular needs, in response to requests from a variety of sources in both the public and private sectors. Both CGSB standards and CGSB national standards are developed in conformance with the policies described in the CGSB Policy and Procedures Manual for the Development and Maintenance of Standards.

CGSB standards are subject to review and revision to ensure that they keep abreast of technological progress. CGSB will initiate the review of this standard within five years of the date of publication. Suggestions for their improvement, which are always welcome, should be brought to the notice of the standards committees concerned. Changes to standards are issued either as separate amendment sheets or in new editions of standards.

An up-to-date listing of CGSB standards, including details on latest issues and amendments, and ordering instructions, is found in the CGSB Catalogue at our Web site — www.tpsgc-pwgsc.gc.ca/ongc-cgsb/index-eng html along with more information about CGSB products and services.

Although the intended primary application of this standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

The testing and evaluation of a product against this standard may require the use of materials and/or equipment that could be hazardous. This document does not purport to address all the safety aspects associated with its use. Anyone using this standard has the responsibility to consult the appropriate authorities and to establish appropriate health and safety practices in conjunction with any applicable regulatory requirements prior to its use. CGSB neither assumes nor accepts any responsibility for any injury or damage that may occur during or as the result of tests, wherever performed.

Attention is drawn to the possibility that some of the elements of this Canadian standard may be the subject of patent rights. CGSB shall not be held responsible for identifying any or all such patent rights. Users of this standard are expressly advised that determination of the validity of any such patent rights is entirely their own responsibility.

**Language**
In this Standard, "shall" states a mandatory requirement, "should" expresses a recommendation and "may" is used to express an option or that which is permissible within the limits of this Standard. Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material. Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

Further information on CGSB and its services and standards may be obtained from:

The Manager
Standards Division
Canadian General Standards Board
Gatineau, Canada
K1A 1G6

A National Standard of Canada is a standard developed by an SCC-accredited Standards Development Organization (SDO), and approved by the Standards Council of Canada (SCC), in accordance with SCC's: *Requirements and Guidance-Accreditation for Standards Development Organizations, and Requirements and Guidance-Approval of National Standards of Canada Designation*. More information on National Standard requirements can be found at www.scc.ca.

An SCC-approved standard reflects the consensus of a number of experts whose collective interests provide, to the greatest practicable extent, a balance of representation of affected stakeholders. National Standards of Canada are intended to make a significant and timely contribution to the Canadian interest.

SCC is a Crown corporation within the portfolio of Industry Canada. With the goal of enhancing Canada's economic competitiveness and social well-being, SCC leads and facilitates the development and use of national and international standards. SCC also coordinates Canadian participation in standards development, and identifies strategies to advance Canadian standardization efforts. Accreditation services are provided by SCC to various customers, including product certifiers, testing laboratories, and standards development organizations. A list of SCC programs and accredited bodies is publicly available at www.scc.ca.

Users should always obtain the latest edition of a National Standard of Canada from the standards development organization responsible for its publication, as these documents are subject to periodic review.

The responsibility for approving standards as NSCs rests with:

Standards Council of Canada
55 Metcalfe Street, Suite 600
Ottawa, Ontario K1P 6L5, CANADA

**NATIONAL STANDARD OF CANADA** **CAN/CGSB-32.310-2015**

Supersedes CAN/CGSB-32.310-2006

# Organic Production Systems
# General principles and management standards

CETTE NORME NATIONALE DU CANADA EST DISPONIBLE EN VERSIONS FRANÇAISE ET ANGLAISE.

ICS 67.140/67.120.30

Published November 2015 by the
**Canadian General Standards Board**
Gatineau, Canada K1A 1G6

## CANADIAN GENERAL STANDARDS BOARD

# Committee on Organic Agriculture

***(Voting membership at date of approval)***

**Chair (Voting)**

| | |
|---|---|
| Martin, H. | Independent Consultant (General interest) |

**General interest category**

| | |
|---|---|
| Boudreau, N. | Organic Federation of Canada |
| Eisen, R. | Organic Farming Institute of British Columbia |
| Gibson, J. | Organic Food Council of Manitoba |
| Hamilton, R. | Organic Alberta |
| Hammermeister, A. | Organic Agriculture Centre of Canada, Dalhousie University |
| Jones, S. | Atlantic Canadian Organic Regional Network |
| Kremen, A. | Independent Consultant |
| Labelle, F. | Valacta |
| Reimer, P. | Manitoba Organic Alliance |
| Rioux, A. | Table Filière Biologique du Québec |
| Street, B. | British Columbia Society for the Prevention of Cruelty to Animals Certification Division |
| Taylor, A. | Saskatchewan Organic Directorate |
| Zettel, T. | Organic Council of Ontario |

**Producer category**

| | |
|---|---|
| Blackman, S. | Canadian Produce Marketing Association |
| Bostock, M. | Ecological Farmers Association of Ontario |
| Bouchard, G. | La Fédération d'agriculture biologique du Québec |
| Duval, J. | Club du CDA |
| Dyck, M. | Conseil canadien de l'horticulture |
| Edwards, L. | British Columbia Organic Tree Fruit Association |
| Falck, D. | Small Scale Food Producers Association |
| Holmes, M. | Organic Trade Association in Canada |
| Kelly, J. | Prince Edward Island Certified Organic Producers Coop |
| Lampron, P. | Dairy Farmers of Canada |
| Lefebvre, S. | Egg Farmers of Canada |
| Macey, A. | Canadian Organic Growers |
| Preater, R. | Canadian Seed Growers' Association |
| Rundle, T. | Pacific Organic Seafood Association |
| St-Onge, A. | Fédération des producteurs acéricoles du Québec |

**Regulator category**

| | |
|---|---|
| Dubé, B. | Canadian Food Inspection Agency |
| Smith, S. | British Columbia Ministry of Agriculture and Lands |
| Telford, L. | Manitoba Agriculture, Food and Rural Initiatives |
| Turgeon, N. | Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec |

**User category**

| | |
|---|---|
| Casey, S. | Retail Council of Canada |
| Hillard, J. | Consumers Interest Alliance |
| Kehler, C. | Canadian Herb, Spice and Natural Health Products Coalition |
| Kneen, C. | Food Secure Canada |
| Neilsen, E. | Consumer Council of Canada |
| Monaghan, K. | International Organic Inspectors Association |

**Secretary (non-member)**

| | |
|---|---|
| Schuessler, M. | Canadian General Standards Board |

*Acknowledgment is made for the translation of this National Standard of Canada by the Translation Bureau of Public Services and Procurement Canada.*

# Contents

Page

# Introduction

## I. Description

Organic production is a holistic system designed to optimize the productivity and fitness of diverse communities within the agro-ecosystem, including soil organisms, plants, livestock and people. The principal goal of organic production is to develop operations that are sustainable and harmonious with the environment.

CAN/CGSB-32.310, *Organic Production Systems – General Principles and Management Standards*, describes the principles and management standard of organic production systems.

CAN/CGSB-32.311*, Organic Production Systems – Permitted Substances Lists*, provides lists of substances that are allowed for use in organic production systems.

As is the case for all products sold in Canada, organic inputs—such as, but not limited to, fertilizers, feed supplements, pesticides, soil amendments, veterinary treatments, processing additives or aids, sanitizing and cleaning material—and products derived from organic agriculture, such as, but not limited to, feed and food, should comply with all applicable regulatory requirements.

## II. General principles of organic production

Organic Agriculture is based on the following general principles[1,2]:

Principle of health – Organic agriculture should sustain and enhance the health of soil, plants, animals, humans and the planet as one and indivisible.

Principle of ecology – Organic agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them.

Principle of fairness – Organic agriculture should build on relationships that ensure fairness with regard to the common environment and life opportunities.

Principle of care – Organic agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment.

## III. Organic practices

Neither this standard[3] nor organic products produced in accordance with this standard represent specific claims about the healthiness, safety and nutrition of such organic products.

Management methods are carefully selected in order to restore and then sustain ecological stability within the operation and the surrounding environment. Soil fertility is maintained and enhanced by promoting optimal biological activity within the soil and conservation of soil resources. Weeds, pests and diseases are managed using biological and mechanical control methods, and cultural practices that include minimized tillage. Crop selection and rotation are important for managing nutrient cycling, recycling of plant and animal residues, water management, augmentation of beneficial insects to encourage a balanced predator–prey relationship, the promotion of biological diversity and ecologically-based pest management.

---

[1] From http://www.ifoam.org/en/organic-landmarks/principles-organic-agriculture.

[2] For the historical organic principles (from 2006 edition), refer to Annex B.

[3] References throughout this document to “this standard” refer to CAN/CGSB-32.310, *Organic Production Systems — General Principles and Management Standards*.

Under a system of organic production, livestock are provided with living conditions and space allowances appropriate to their behavioural requirements and organically produced feed. These practices strive to minimize stress, promote good health and prevent disease.

Organic products are produced and processed under a system that strives to preserve the integrity of the principles in this standard.

Organic practices and this standard cannot assure that organic products are entirely free of residues of substances prohibited by this standard and of other contaminants, since exposure to such compounds from the atmosphere, soil, ground water and other sources may be beyond the control of the operator. The practices permitted by this standard are designed to ensure the least possible residues at the lowest possible levels.

In the development of the standard, it was recognized that differences between Canada's agricultural regions require varying practices to meet production needs.

This standard is intended for certification and regulation to prevent deceptive practices in the marketplace. The certification process assesses operational compliance. Certification is granted to compliant product.

## IV. Notes and examples in this standard

In this standard, notes and examples are used for giving additional information intended to assist the understanding or use of the document and are not a normative part of the standard.

# Organic production systems
## General principles and management standards

## 1 Scope

**1.1** This standard applies to the following organic products:

a) Unprocessed plants and plant products, livestock and livestock products, to the extent that the principles of production and specific verification rules for them are described in the standard;

b) Processed agricultural crop and livestock products intended for human consumption or use and derived from the items mentioned in 1.1 a);

c) Livestock feed;

d) Processed agricultural crop and livestock products intended for animal consumption or use and derived from the items mentioned in 1.1 a).

**1.2** Organic products referenced in this standard are derived from a production system that:

a) seeks to nurture ecosystems through its management practices in order to achieve sustainable productivity; and

b) provides weed, pest and disease control through enhancement of biodiversity, recycling of plant and animal residues, crop selection and rotation, water management, tillage and cultivation.

### 1.3 Units of measure

Quantities and dimensions in this standard are given in metric units with yard/pound equivalents, mostly obtained through soft conversion, given in parentheses. The metric units shall be regarded as being official in the event of dispute or unforeseen difficulty arising from the conversion.

### 1.4 Prohibited substances, materials or techniques in organic production and preparation

If producing or preparing organic products, the following substances, materials or techniques are prohibited since they are incompatible with the general principles of organic production:

a) all products of and materials from genetic engineering (GE), as defined in this standard, and as specified in 4.1.3, 5.1.2 and 6.2.1 of CAN/CGSB-32.311;

b) all products, materials or processes intentionally using nanotechnology, as defined in this standard, with the following exceptions:

   1) naturally occurring nano-sized particles or those produced incidentally through processes such as grinding flour;

   2) contact surfaces, such as equipment, work surfaces, or packaging, where transference of nano-sized particles to organic crops, livestock or products is unintended and unlikely to occur;

c) irradiation, as defined in this standard, for the treatment of organic products and inputs used in the production of organic products, except as specified in CAN/CGSB-32.311;

d) soil amendments, such as fertilizer or composted plant and animal material, that contain a substance not listed in CAN/CGSB-32.311;

e) sewage sludge;

f) synthetic crop production aids and materials, except as specified in CAN/CGSB-32.311;

g) synthetic growth regulators;

h) cloned livestock and its descendants;

i) synthetic allopathic veterinary drugs, including antibiotics and parasiticides, except as permitted by this standard;

j) synthetic substances used in organic product preparation, such as ingredients, food additives and processing aids, including sulphates, nitrates and nitrites, except as specified in CAN/CGSB-32.311;

k) equipment, harvest and storage containers, storage facilities and packaging materials treated with synthetic fungicides, preservatives, fumigants and pesticides;

l) substances that are not listed in CAN/CGSB-32.311, except as permitted in this standard.

## 2 Normative references

The following normative documents contain provisions that, through reference in this text, constitute provisions of this National Standard of Canada. The referenced documents may be obtained from the sources noted below.

NOTE The addresses provided below were valid at the date of publication of this standard.

An undated reference is to the latest edition or revision of the reference or document in question, unless otherwise specified by the authority applying this standard. A dated reference is to the specified revision or edition of the reference or document in question.

### 2.1 Canadian General Standards Board (CGSB)

CAN/CGSB-32.311 – *Organic production systems – Permitted substances lists.*

#### 2.1.1 Source

The above may be obtained from the Canadian General Standards Board, Sales Centre, Gatineau, Canada K1A 1G6. Telephone 819-956-0425 or 1-800-665-2472. Fax 819-956-5740. E-mail ncr.cgsb-ongc@tpsgc-pwgsc.gc.ca. Web site www.tpsgc-pwgsc.gc.ca/ongc-cgsb/index-eng.html.

### 2.2 Health Canada

*Food and Drug Regulations* (C.R.C., c. 870).

#### 2.2.1 Source

The above may be obtained from Health Canada at www.hc-sc.gc.ca or from Justice Laws Website at http://laws-lois.justice.gc.ca.

### 2.3 Canadian Food Inspection Agency (CFIA)

*Health of Animals Act* (1990, c.21)

*Health of Animals Regulations* (C.R.C., c. 296)

*Safe Food for Canadians Act* (S.C, 2012, c. 24).

#### 2.3.1 Source

The above may be obtained from CFIA at http://www.inspection.gc.ca/ or from Justice Laws Website at http://laws-lois.justice.gc.ca.

### 2.4 International Federation of Organic Movements (IFOAM)

*Principles of Organic Agriculture.*

#### 2.4.1 Source

The above may be obtained from the IFOAM Web site at http://www.ifoam.bio/en/organic-landmarks/principles-organic-agriculture.

### 2.5 National Farm Animal Care Council (NFACC)

*Code of Practice for the Care and Handling of Dairy Cattle*

*Code of Practice for the Care and Handling of Beef Cattle*

*Code of Practice for the Care and Handling of Pigs*

*Code of Practice for the Care and Handling of Farm Animals: Transportation.*

#### 2.5.1 Source

The above may be obtained from the NFACC Web site at https://www.nfacc.ca/codes-of-practice.

## 3 Terms and definitions

For the purposes of this National Standard of Canada, the following terms and definitions apply.

**3.1**
**aeroponics (aéroponie)**
soil-free cultivation method whereby plants are suspended with their roots exposed to the air.

**3.2**
**agriculture product (produit agricole)**
an animal, a plant, an animal or a plant product, or a product, including any food or drink wholly or partly derived from an animal or a plant.

**3.3**
**agro-ecosystem (agro-écosystème)**
system consisting of the form, function, interaction and equilibrium of the biotic and abiotic elements present within the environment of a given agricultural operation.

**3.4**
**allopathic (allopathique)**
use of allopathy.

**3.5**
**allopathy (allopathie)**
method of treating disease with substances that produce a reaction or effects different from those caused by the disease itself.

**3.6**
**annual seeding (semis annuel)**
young plant grown from seed that will complete its life cycle or produce a yield and be able to be harvested within the same crop year or season in which it was planted.

**3.7**
**antibiotic (antibiotique)**
various substances that contain any quantity of any chemical substance produced by a micro-organism, like penicillin, and that are used to inhibit or destroy the growth of micro-organisms to prevent or treat disease.

**3.8**
**apiculture (apiculture)**
management and production of honeybees, queens and their products. Examples are honey, beeswax, pollen, royal jelly, propolis and bee venom.

**3.9**
**biobased (biosourcé)**
substance that is derived from a plant, animal or microbial source.

**3.10**
**biodegradable (biodégradable)**
capable of microbial decomposition within 24 months in soil (with the exception of plant biomass), one month in aerated water, two months in anaerobic water, with minimal impact on the environment.

**3.11**
**buffer zone (zone tampon)**
clearly defined and identifiable boundary area that separates an organic production unit from adjacent non-organic areas.

**3.12**
**cloned animals (animaux clonés)**
identical animal resulting from human manipulation of embryos and embryo transfer, using techniques such as somatic cell nuclear transfer, embryonic cell nuclear transfer or embryo splitting.

**3.13**
**commercially available (disponible sur le marché)**
documented ability to obtain a production input or an ingredient in an appropriate form, quality, quantity or variety, irrespective of cost, in order to fulfil an essential function in organic production or preparation.

**3.14**
**commingling (mélange)**
mixing of or physical contact between bulk, unbound or unpackaged organic products and non-organic products during production, preparation, transportation, or storage.

**3.15**
**compost (compost)**
product of a carefully managed aerobic process by which non-synthetic materials are digested by micro-organisms.

**3.16**
**compost tea (thé de compost)**
soil amendment or foliar feed used to promote beneficial bacterial growth that is created by steeping mature compost.

**3.17**
**crop rotation (rotation des cultures)**
practice of alternating crops grown in a specific field, in a planned sequence and in successive crop years so that crops of the same species or family are not continuously grown in the same field. Perennial cropping systems employ techniques such as alley cropping, intercropping and hedgerows to introduce biological diversity in lieu of crop rotation.

**3.18**
**derogation (derogation)**
exemption from the practices in CAN/CGSB-32.310.

**3.19**
**exception (exception)**
substance otherwise prohibited by CAN/CGSB-32.311.

**3.20**
**feed additive (additif pour alimentation animale)**
substance added to feed in small quantities to fulfil a specific nutritional need. Examples are essential nutrients in the form of amino acids or vitamins and minerals, and non-nutritive additives such as anticaking agents and antioxidants.

**3.21**
**feed supplement (supplément alimentaire)**
feed that is used in conjunction with other feed to improve the nutritive balance of the total and that is intended to be

a) fed undiluted as a supplement to other feeds,

b) available separately and offered free choice, along with other parts of the ration, or

c) further diluted and mixed to produce a complete feed.

NOTE In Canada, the *Feeds Act* requires that the resulting feed is acceptable for registration.

**3.22**
**fertilizer (engrais)**
single or blended substance composed of one or more recognized plant nutrient(s).

**3.23**
**filtrate (filtrat)**
liquid that passes through an osmosis filter, in the production of maple or other tree sap syrup.

**3.24**
**food additive (additif alimentaire)**
has the same meaning as in B.01.001 of *The Food and Drug Regulations*.

**3.25**
**food-grade (qualité ou grade alimentaire)**
designation used to identify that a substance, (for example, a cleaning material, gas, etc.) or material (for example, a counter, containers, a conveyor, etc.) may come in contact with food, food contact surfaces and/or is safe for human consumption.

**3.26**
**forage (fourrage)**
vegetative material in fresh, dried or ensiled state that is fed to livestock, for example, pasture, hay or silage.

**3.27**
**genetic engineering (génie génétique)**
refers to techniques by which the genetic material of an organism is changed in a way that does not occur naturally by multiplication and/or natural recombination. Examples of the techniques used in genetic engineering include, but are not limited to:

- recombinant DNA (rDNA) techniques that use vector systems;
- techniques involving the direct introduction into the organism of hereditary materials prepared outside the organism;
- cell fusion (including protoplast fusion) or hybridization techniques that overcome natural physiological, reproductive or recombination barriers, where the donor cells/protoplasts do not fall within the same taxonomic family.

Unless the donor/recipient organism is derived from any of the above techniques, examples of techniques not covered by this definition include:

- in vitro fertilization;
- conjugation, transduction, transformation, or any other natural process;
- polyploidy induction;
- cell fusion (including protoplast fusion) or hybridization techniques where the donor cells/protoplasts are in the same taxonomic family.

**3.28**
**herbivore (herbivore)**
animal that feeds chiefly on plants.

**3.29**
**hydroponics (hydroponie)**
cultivation of plants in aqueous nutrient solutions without the aid of soil.

**3.30**
**incidental additives (additifs indirects)**
substances used in organic processing facilities that have the potential to remain present in organic products as residues. Examples are: hand products (cleaners, antiseptics, lotions, barrier creams), boiler water treatment compounds, water treatment compounds, lubricants (release agents, solvents), antifoaming agents and non-food chemicals (sanitizers, disinfectants, cleaning agents and detergents).

**3.31**
**ingredient (ingrédient)**
substance, including a food additive, used in the manufacture or preparation of a product. The substance is present in the final product, possibly in a modified form.

**3.32**
**input (intrant)**
substance used in production or preparation. Examples are: fertilizers, feed supplements, pesticides, and soil amendments, veterinary treatments, processing aids, sanitizing and cleaning materials.

**3.33**
**irradiation (irradiation des aliments)**
treatment with ionizing radiation (see B.26.001 of the *Food and Drug Regulations*).

**3.34**
**isolation distance (distance d'isolement)**
distance established to segregate an organic crop from a commercialized GE crop of the same crop type. An isolation distance is the shortest distance from the edge of an organic crop to the edge of the nearest GE crop of that crop type.

**3.35**
**livestock (animaux d'élevage)**
any domestic or domesticated animal including bovine, ovine, porcine, caprine, equine, poultry and bees raised for food or used in the production of food. The products of hunting or fishing of wild animals are not included in this definition.

**3.36**
**manure (déjections animales)**
livestock feces, urine and other excrement, including bedding, used or soiled by livestock.

**3.37**
**microgreens (micro-pousses)**
edible young plants that are harvested later than sprouts, generally when cotyledons are fully formed or when two or four true leaves are present.

**3.38**
**nanotechnology (nanotechnologie)**
manipulation of matter at atomic, molecular, or macromolecular dimensions typically between 1 and 100 nm to create materials, devices and systems with fundamentally new properties and functions. Nanoscale chemical substances, or nanomaterials, behave differently from their macroscale counterparts, exhibiting different mechanical, optical, magnetic or electronic properties.

**3.39**
**non-synthetic (non synthétique)**
substance derived from mineral, plant or animal matter that has not been chemically altered.

**3.40**
**nutrient management plan (plan de gestion des nutriments)**
nutrient budget or plan in which the timing and rate of nutrient application is based on soil nutrient status (soil test results), crop nutrient needs, amendment (manure, compost, plow-down crop or other permitted substance), nutrient content and expected nutrient release rates. The goal of a nutrient management plan is to minimize nutrient loss, protect water quality, maintain soil fertility and ensure effective use of permitted soil amendments.

**3.41**
**operation (exploitation)**
farm, company or organization that produces or prepares an organic product; an operation may have multiple production units (see 3.56 *production unit*).

**3.42**
**operator (exploitant)**
person, company or organization that produces or prepares with a view to the subsequent marketing of products referred to as organic.

**3.43**
**organic integrity (intégrité biologique)**
maintenance of the inherent organic qualities of a product from the receipt of ingredients through to the end consumer.

**3.44**
**organic product (produit biologique)**
any commodity or output produced by a system compliant with this standard.

**3.45**
**organic production (production biologique)**
method of agricultural production in compliance with this standard.

**3.46**
**parallel production (production parallèle)**
simultaneous production or preparation of organic and non-organic crops, including transitional crops, livestock and other organic products of the same or similar, visually indistinguishable varieties.

**3.47**
**para-probiotics (para-probiotiques)**
“non-viable microbial cells” that are inactivated or dead micro-organisms which can prevent pathogen growth.

**3.48**
**perennial crop (culture vivace)**
crop, other than a biennial crop, that can be harvested from the same planting for more than one crop year or that requires at least one year after planting before harvest.

**3.49**
**pest (organisme nuisible)**
organism causing damage to humans or to resources used by humans, such as some viruses, bacteria, fungi, weeds, parasites, arthropods and rodents.

**3.50**
**pesticide (pesticide)**
substances used, directly or indirectly, to attract, prevent, destroy, repel or mitigate pests; or to alter the growth, development or characteristics of plants. Includes any organism, substance or mixture of substances and devices such as lures or traps.

**3.51**
**planting stock (matériel de reproduction végétale)**
plant or plant tissue, other than annual seedlings, used in plant production or propagation. Examples are rhizomes, shoots, leaf or stem cuttings, roots or tubers, bulbs or cloves.

**3.52**
**prebiotics (prébiotiques)**
fibre food and potential carriers for bacteria. Examples of prebiotic substrates are inulin, lactulose, various galacto, fructo, or xylo-oligosaccharides and sugar alcohols.

**3.53**
**preparation (préparation)**
includes, with respect to an organic product, post-harvest handling, manufacturing, processing, treatment, preservation, and slaughter.

**3.54**
**probiotics (probiotiques)**
micro-organisms that provide health benefits when consumed.

**3.55**
**processing aids (auxiliaires de production)**
substances added to food during processing, for a technological effect, but are not present in the finished product or at insignificant and non-functional levels.

**3.56**
**production unit (unité de production)**
identifiable portion of an operation in which production or preparation of an organic product occurs.

**3.57**
**prohibited substances (substances interdites)**
substances prohibited by 1.4 and/or not listed in CAN/CGSB-32.311.

**3.58**
**records (registres)**
information in written, visual or electronic form that documents the activities undertaken by an operator engaged in the production or preparation of organic products.

**3.59**
**removal event (intervention subséquente)**
procedure performed prior to organic production runs, batches or loads, to prevent organic product from coming into contact with prohibited substances or commingling with non-organic products. Examples of removal events are rinsing with potable water, letting surfaces drip-dry and purging a system with organic product.

**3.60**
**salt (sel)**
sodium chloride, or low-sodium and sodium-free substitutes that serve the purpose of providing salt flavour, nutrition or microbial control in a product**.**

**3.61**
**sewage sludge (boues d'épuration)**
solid, liquid or semisolid residues generated by municipal or industrial sewage treatment facilities. Sewage sludge includes but is not limited to: domestic septage; scum or solids removed in primary, secondary or advanced wastewater treatment processes; or material derived from sewage sludge.

**3.62**
**soil (sol)**
mixture of minerals, organic matter and living organisms.

**3.63**
**split production–split operation (production fractionnée–exploitation fractionnée)**
operation that produces or prepares organic and non-organic agricultural products, including transitional products.

**3.64**
**symbiotics (symbiotiques)**
combination of prebiotics and probiotics. Many contain a combination of probiotic culture with a prebiotic substrate that favors its growth.

**3.65**
**synthetic substance (substance synthétique)**
manufactured substance, including petrochemicals, formulated by a chemical process or by a process that chemically alters compounds extracted from plant, micro-organisms, animal or mineral sources. This term does not apply to compounds synthesized or produced by physical processing or biological processes, which may include heat and mechanical processing. However, minerals altered through chemical reactions caused by heating or burning shall be classified as synthetic.

**3.66**
**traceability (traçabilité)**
ability to track product, backwards and forwards, through all stages of production and preparation.

**3.67**
**transitional period (période de conversion)**
period of time between the start of an organic management program and the attainment of organic status by a production unit or operation.

**3.68**
**transplant (plant repiqué)**
seedling that has been removed from its original place of production, transported and replanted.

**3.69**
**veterinary biologic (produit biologique vétérinaire)**
helminth, protozoa or micro-organism; or a substance or mixture of substances derived from animals, helminths, protozoa or micro-organisms; or a substance of synthetic origin that is manufactured, sold or represented for use in restoring, correcting or modifying functions in animals or for use in the diagnosis, treatment, mitigation or prevention of a disease, disorder, abnormal physical state, or the symptoms thereof, in animals. Veterinary biologics include vaccines, bacterins, bacterin-toxoids, immunoglobulin products, diagnostic kits and any veterinary biologic derived through biotechnology.

**3.70**
**veterinary drug (médicament vétérinaire)**
substance or mixture of substances represented for use or administrated in the diagnosis, treatment, mitigation or prevention of disease, disorder, abnormal physical state or its symptoms in animals; restoring, correcting or modifying functions in animals.

**3.71**
**wild crop (plante sauvage)**
plants collected or harvested in their natural habitat.

**3.72**
**yeast (levure)**
single celled micro-organisms that produce enzymes, carbon dioxide ($CO_2$), and other metabolites from carbohydrates, whose functional roles are frequently used in the processes of fermentation, baking, flavouring foods, adding nutritional value and providing health benefits.

**3.73**
**yeast autolysate extract (extraits d'autolysats de levure)**
water-soluble components of the yeast cell, generally produced by autolysis, a process in which the rupture of cell wall is induced mechanically or chemically.

## 4 Organic plan

**4.1** The operator shall prepare an organic plan outlining the details of transition, production, preparation and management practices.

**4.2** The organic plan shall be updated annually to address changes to the plan or management system, problems encountered in executing the plan, and measures taken to overcome such problems.

**4.3** The organic plan shall include a description of the internal record-keeping system, with documents sufficient to meet traceability requirements as specified in 4.4.2 and other record-keeping requirements.

### 4.4 Record keeping and identification

**4.4.1** The operator shall maintain records and relevant supporting documentation such as visual aids (for example, maps, work-flow charts) concerning inputs and details of their use, production, preparation and transport of organic crops, livestock and products. The operator shall maintain the organic integrity of products and shall fully record and disclose all activities and transactions in sufficient detail to be easily understood and sufficient to demonstrate compliance with this standard.

**4.4.2** Records shall make it possible to trace

a) the origin, nature and quantity of organic products that have been delivered to the production unit or operation;

b) the nature, quantity and consignees of products that have left the production unit;

c) any other information for the purposes of verification, such as the origin, nature and quantity of ingredients, additives and manufacturing aids delivered to the unit, and the composition of processed products;

d) activities or processes that demonstrate compliance with this standard.

**4.4.3** An identification system shall be implemented to distinguish organic and non-organic crops, livestock (for example, general appearance, colour, variety and types) and products.

**4.4.4** The operator shall design and implement a risk management plan to prevent GE contamination which may include strategies such as physical barriers, border rows, delayed planting, testing of seeds, isolation distances and equipment and storage sanitation protocols.

**4.4.5** Records shall be maintained for at least five years beyond their creation.

## 5 Crop production

Subclause 8.4 on Transport also applies to crops.

### 5.1 Land requirements for organic crop production

**5.1.1** This standard shall be fully applied on a production unit for at least 12 months before the first harvest of organic products. Prohibited substances shall not have been used for at least 36 months before the harvest of an organic crop.

**5.1.2** When new production units are added to an existing organic operation, the operator shall provide records to show that prohibited substances have not been used for at least 36 months (see 5.1.1) and verification shall be conducted before the first harvest of product from this new production unit.

NOTE The Canadian *Organic Products Regulations* require operators to document that they have not used prohibited substances. The *Organic Products Regulations* also require that, in the case of an initial application for an organic certification of field crops, the application shall be filed 15 months before the day on which the product is expected to be marketed. During that period of time, compliance with this standard will be assessed by the certification body and this assessment must include at least one inspection of the production unit, during production, in the year before field crops may be eligible for certification and one inspection, during production, in the year field crops are eligible for certification.

**5.1.3** The enterprise shall aim at a complete transition of its production. During the transition period, the enterprise can maintain, in addition to the production in transition, a non-organic system of production (split operation) that shall be entirely separate and identified separately, pending its incorporation into the overall transition process.

**5.1.4** The enterprise can be converted one unit at a time, and each converted unit shall respect the requirements of this standard. The exception to this norm, parallel production, is only allowed in the following cases: perennial crops (already planted), agricultural research facilities and production of seed, vegetative propagating materials and transplants.

**5.1.5** The following special conditions shall be observed for parallel production:

a) The operator shall clearly demonstrate that the identity of the crops so produced can be maintained during their production, harvesting, storage, processing, packaging and marketing;

b) The operator shall maintain verifiable, accurate records of both non-organic and organic produce and product storage, transportation, processing and marketing.

NOTE Parallel production crops, both organic and non-organic, are inspected just prior to harvest and an audit of all parallel production crops occurs after harvest.

**5.1.6** All production units shall have distinct, defined boundaries.

**5.1.7** Production methods shall not alternate between organic and non-organic on a production unit.

## 5.2 Environmental factors

**5.2.1** Measures shall be taken to minimize the physical movement of prohibited substances onto organic land and crops from:

a) adjacent areas;

b) equipment used for both organic and non-organic crops.

**5.2.2** If unintended contact with prohibited substances is possible, distinct buffer zones or other features sufficient to prevent contamination are required:

a) buffer zones shall be at least 8 m (26 ft 3 in.) wide;

b) permanent hedgerows or windbreaks, artificial windbreaks, permanent roads or other physical barriers may be used instead of buffer zones;

c) crops grown in buffer zones shall not be considered organic whether or not they are used on the operation.

d) crops at risk of contamination from commercialized GE crops shall be protected from cross-pollination. Mitigation strategies such as but not limited to physical barriers, border rows, strategic testing or delayed planting shall be implemented unless generally accepted isolation distances for the at risk crop type are present (see Note below).

NOTE Generally accepted isolation distances for crops at risk of contamination from commercialized GE crop types include: soybeans – 10 m, corn – 300 m, canola, alfalfa (for seed production) and apples– 3 km.

**5.2.3** Fence posts or wood treated with substances listed in Table 4.3 of CAN/CGSB-32.311 are permitted.

a) For new installations or replacement purposes, fence posts or wood treated with prohibited substances are prohibited unless alternatives such as metal, plastic, concrete, or protective sleeves, are not commercially available.

b) Recycling of existing fence posts within the operation is permitted.

## 5.3 Seeds and planting stock

Organic seed, bulbs, tubers, cuttings, annual seedlings, transplants and other propagules shall be used. The following exceptions or conditions apply:

a) Non-organic, untreated seed and planting stock or seed treated with substances listed in Table 4.3 of CAN/CGSB-32.311 are permitted provided that the organic seed or planting stock variety is:

   1) not produced on or available from within the operation; or

   2) not commercially available.

b) Non-organic perennial planting stock treated with substances prohibited by 1.4 d), 1.4 e), 1.4 f) or 1.4 g) shall be managed in accordance with this standard for at least 12 months before the first harvest of organic product. The land on which non-organic stock is planted is subject to the requirements of 5.1.1.

## 5.4 Soil fertility and crop nutrient management

**5.4.1** The main objective of the soil fertility and crop nutrient management program shall be to establish and maintain a fertile soil using practices that maintain or increase soil humus levels, that promote an optimum balance and supply of nutrients, and that stimulate biological activity within the soil.

**5.4.2** Where appropriate, the soil fertility and biological activity shall be maintained or increased, through:

a) crop rotations that are as varied as possible and include plough-down, legumes, catch crops and deep-rooting plants;

b) incorporation of plant and animal matter in compliance with this standard and with Table 4.2 of CAN/CGSB-32.311, including the following:

   1) composted animal and plant matter;

   2) non-composted plant matter, specifically legumes, plough-down crops or deep-rooting plants within the framework of an appropriate multiyear rotation plan; and

   3) unprocessed animal manure, including liquid manure and slurry, subject to the requirements of 5.5.1.

**5.4.3** Tillage and cultivation practices shall maintain or improve the physical, chemical and biological condition of soil, and minimize damage to the structure and tilth of soil, and soil erosion.

**5.4.4** Plant and livestock materials shall be managed to maintain or improve soil organic matter content, crop nutrients, and soil fertility, and in a manner that does not contribute to the contamination of crops, soil or water, by plant nutrients, pathogenic organisms, heavy metals or prohibited substances residue.

**5.4.5** The organic matter produced on the operation shall be the basis of the nutrient cycling program. It may be supplemented with other organic and non-organic nutrient sources. Non-organic sources shall be listed in Table 4.2 of CAN/CGSB-32.311. Manure is also subject to the requirements of 5.5.1.

**5.4.6** Burning to dispose of crop residue produced on the operation is prohibited. However, burning may be used for documented pest, disease or weed problems (see 5.6.1) or to stimulate seed germination.

## 5.5 Manure management

### 5.5.1 Manure sources

Animal manure produced on the operation shall be used first. When all available manure is used up, organic manure from other sources may be used. If organic manure is not commercially available, non-organic manure is permitted provided that:

a) the non-organic source is not a fully caged system in which livestock cannot turn 360°; and

b) livestock is not permanently kept in the dark; and

c) the source and quantity of manure, type of livestock, and evaluation of the criteria in 5.5.1 a) and 5.5.1 b) shall be recorded.

NOTE Organic operations should make it a priority to use manure obtained from transitional or extensive livestock operations, not from landless livestock production units or from livestock operations that use genetically engineered (GE) ingredients and/or GE derivatives in animal feeds.

### 5.5.2 Land application of manure

**5.5.2.1** The manure application program shall address land area, rate of application, time of application, incorporation into the soil and retention of nutrient components.

**5.5.2.2** Soil amendments including liquid manure, slurries, compost tea, solid manure, raw manure, compost and other substances listed in Table 4.2 of CAN/CGSB-32.311, shall be applied to land in accordance with good nutrient management practices.

NOTE In Canada, some additional provincial requirements may also apply.

**5.5.2.3** Where manure is applied, the soil shall be sufficiently warm and moist to ensure active bio-oxidation.

**5.5.2.4** The seasonal timing, rate and method of application shall ensure that manure does not:

a) contribute to the contamination of crops by pathogenic bacteria;

b) run off, significantly, into ponds, rivers and streams;

c) contribute, significantly, to ground and surface water contamination.

**5.5.2.5** The non-composted solid or liquid manure shall be

a) incorporated into the soil at least 90 days before the harvest of crops that do not come into contact with soil and are intended for human consumption; or

b) incorporated into the soil at least 120 days before the harvest of crops that have edible parts that come into direct contact with the surface of the soil or with soil particles.

**5.5.2.6** If livestock is used as part of the cropping or pest control program, a management plan shall be in place to ensure that livestock is controlled and that manure or manure related contamination does not reach the portion of the crop intended for harvest.

### 5.5.3 Manure processing

Processing of animal manure using physical (for example, dehydration), biological or chemical treatment with substances listed in Table 4.2 of CAN/CGSB-32.311 is permitted. Loss of nutritional elements due to processing shall be minimized.

### 5.6 Crop pest, disease and weed management

**5.6.1** Pest, disease and weed control practices shall focus on organic management practices that enhance crop health and reduce losses due to weeds, disease and pests. Management practices include cultural practices (for example, rotations, establishment of a balanced ecosystem, and use of resistant varieties), mechanical techniques (for example, sanitation measures, cultivation, traps, mulches and grazing) and physical techniques (for example, flaming against weeds, heat against diseases).

**5.6.2** When organic management practices alone cannot prevent or control crop pests, disease or weeds, a biological or botanical substance, or other substances listed in Table 4.3 of CAN/CGSB-32.311, may be used. Conditions for and of the use of substances shall be documented in the organic plan (see clause 4).

**5.6.3** If application equipment, such as sprayers, is used to apply prohibited substances, it shall be thoroughly cleaned prior to use in an organic crop.

### 5.7 Irrigation

The irrigation of organic crops is permitted provided that the operator documents precautions taken to prevent contamination of land and products with substances not included in CAN/CGSB-32.311.

### 5.8 Crop product preparation

Wherever organic product preparation takes place, 8.1 and 8.2 apply.

### 5.9 Facility pest management

Subclause 8.3 applies to pest management practices in and around crop facilities.

## 6 Livestock production

Livestock excludes apiculture which is covered in 7.1. Subclause 8.4 on Transport applies when organic livestock is transported.

### 6.1 General

**6.1.1** Livestock can make an important contribution to an organic agricultural system by

a) improving and maintaining the fertility of the soil;

b) managing the flora through grazing; and

c) enhancing biodiversity and facilitating complementary interactions on the operation.

**6.1.2** Organic livestock products shall be from livestock raised according to this standard.

**6.1.3** Livestock production is a land-related activity.

a) Herbivores shall have access to pasture during the grazing season and access to the open air at other times whenever weather conditions permit:

    1) calculated on the basis of dry matter intake, the consumption of grazed forage by ruminants that have reached sexual maturity shall represent a minimum of 30% of the total forage intake;

    2) consumption of grazed forage shall rise above 30% during high forage growth periods;

3) a minimum of 0.13 ha (0.33 ac.)/animal unit shall be devoted to grazing. [One animal unit = one cow or one bull, or two calves, each 102 to 227 kg (225 to 500 lb) or five calves, each less than 102 kg (225 lb), or four ewes and their lambs, or six does and their kids];

b) Other livestock, including poultry, shall have access to the outdoors whenever weather conditions permit;

c) Winter-only production of poultry is restricted to operations that are able to comply with land-related requirements for the specific livestock type, regardless of the time of year (see 6.13.9);

d) Derogations in 6.7.2 and 6.11 may apply.

**6.1.4** Livestock stocking rates shall correspond to local agri-climatic conditions and take into consideration feed production capacity, stock health, nutrient balance and environmental impact.

**6.1.5** Livestock management shall aim to utilize natural breeding methods, minimize stress, prevent disease, progressively eliminate the use of chemical allopathic veterinary drugs, including antibiotics, and maintain animal health and welfare.

**6.1.6** As a general principle, the operator shall demonstrate their commitment to animal welfare. When an animal welfare issue is identified, the operator shall develop a corrective action plan. The operator shall document demonstrated improvements in animal welfare practices and shall make available upon request any documents or assessments mandated by industry associations.

## 6.2 Origin of livestock

**6.2.1** Livestock breeds, strains and types shall be

a) suitable for and able to adapt to site-specific conditions within the local environment and production system;

b) known for their absence of disease and health problems, specific to breeds or strains;

c) recognized for their vitality and resistance to prevalent diseases and parasites.

**6.2.2** Livestock breeders shall

a) use natural methods of reproduction. Artificial insemination is permitted, including the use of sexed semen if it is mechanically separated;

b) not use embryo transfer techniques or breeding techniques using genetic engineering or related technology;

c) not use reproductive hormones to trigger and synchronize estrus.

**6.2.3** Livestock used for organic livestock products shall

a) be born or hatched on organic production units;

b) be the offspring of organic parents;

c) be managed organically throughout their lifetime;

**6.2.3.1** Exceptions to 6.2.3 a), b), and c) apply to poultry:

a) poultry products shall be from poultry that has been under continuous organic management, beginning no later than the second day of life; and

b) neither day-old chicks nor the fertilized eggs they hatched from shall be given medication other than vaccines;

**6.2.3.2** An exception to 6.2.3 a), b) and c) applies when herds and individual animals are converted to organic production:

a) animals used for milk production shall have been under continuous organic management for at least 12 months; and

b) animals used for meat shall have been under continuous organic management from the beginning of the last third of the dam's gestation period.

**6.2.4** Animals purchased for breeding shall be organic. However:

a) if suitable organic breeding stock is not commercially available, non-organic, non-gestating breeder animals and breeding males may be brought onto an organic operation and integrated into the organic system. Meat from such animals shall be non-organic;

b) if transferred outside the organic operation, livestock obtained from non-organic sources in accordance with 6.2.4 a) shall be considered non-organic, either for breeding or slaughter;

c) when expanding a herd and increasing the land-base, breeding stock brought on to the operation may graze third-year transitional pasture until the end of the second trimester.

**6.2.5** Livestock or livestock products removed from an organic operation and subsequently managed on a non-organic operation shall be considered non-organic.

## 6.3 Transition of livestock production units to organic production

**6.3.1** If an entire dairy herd is under conversion to organic production, the operator shall:

a) provide, in the first nine months of the 12-month transition period, a minimum of 80% feed, calculated in terms of dry matter intake, that is either organic or raised on land included in the organic system plan and that is managed in accordance with clause 5 of this standard;

b) provide only organic feed during the final three months of the 12-month transition period.

**6.3.2** Transition of land intended for feed crops or pasture shall comply with 5.1.

**6.3.3** When an animal production unit, with an entire herd, or a flock of sheep, is in transition to organic production, pasture and feed produced during the final 12 months of the land transition period may be considered organic when consumed by livestock on the same production unit. This feed and forage shall not be considered organic outside the production unit.

## 6.4 Livestock feed

**6.4.1** The operator shall provide an organic feed ration that is balanced to meet the nutritional requirements of the livestock.

**6.4.2** Livestock feed shall consist of substances that are necessary and essential for animal health, well-being and vitality, and that meet the physiological and behavioural needs of the species in question.

**6.4.3** Specific livestock rations shall take the following into account:

a) for young mammals, the need for natural milk, including colostrum, within the first day of life;

b) in dairy operations, calves, lambs and kids may be taken from their mothers at the age of 24 h, provided that they receive colostrum. If contagious diseases are present in the herd, removal can occur sooner provided that calves, lambs and kids receive colostrum;

c) calves shall be given fresh, whole, organic milk or reconstituted organic milk, until the age of three months;

d) lambs and kids shall be given fresh, whole, organic milk or reconstituted organic milk, until the age of two months or a weight of 18 kg (39.7 lb);

e) if they are not nursing, young animals shall be fed to meet their nutritional requirements and to achieve optimal growth and health, using artificial teats to satisfy their motivation to suck;

f) dairy calves shall have access to solid food at all times;

NOTE Refer to the *Code of Practice for the Care and Handling of Dairy Cattle* for recommendations on colostrum feeding and the quantity of milk to be fed to dairy calves.[4]

g) for ruminants, at least 60% of dry matter in daily rations shall consist of: hay; fodder that is fresh or dried; or ensiled forage, for example, fermented grass, legumes, and corn plants. An increased grain ration is permitted to ensure that nutritional requirements are met during uncommonly cold periods or when forage quality is compromised due to extraordinary weather events.

h) if ensiled forage is fed to ruminants, at least 15% of the total dry matter in daily rations shall consist of long-fibre forage, that is, greater than 10 cm (4 in.) stem length. When ensiled corn is fed, unless there is analysis to the contrary, it shall be considered 40% grain/60% forage. The proportion of grain in ensiled corn shall be included in the percentage of grains in the ration (see 6.4.3 g);

i) in the finishing phase, poultry shall be given grain.

j) poultry and pigs shall be given vegetable matter other than grain.

k) poultry shall be fed daily. A “skip-a-day” feeding regime for breeding birds is prohibited.

l) rabbits shall be given forage, such as grass and hay, and have access to material that keeps teeth healthy, such as gnawing blocks, root vegetables and tree branches. Substances in gnawing blocks shall be listed in Table 5.2 of CAN/CGSB-32.311.

**6.4.4** The following feed, feed additives and supplements are prohibited:

a) feed and feed additives, including amino acids and feed supplements, that contain substances not listed in Table 5.2 of CAN/CGSB-32.311;

b) feed medications or veterinary drugs, including hormones and prophylactic antibiotics, to promote growth;

c) approved feed supplements or additives, used in amounts above those required for adequate nutrition and health maintenance for the species at its specific stage of life;

d) feeds that are chemically extracted or defatted with prohibited substances;

e) feed that contains mammalian or avian slaughter by-products;

f) feed that contains synthetic preservatives;

g) silage preservation products, unless they are listed in Table 5.2 of CAN/CGSB-32.311;

h) synthetic appetite- or flavour-enhancers;

[4] In this standard, Codes of Practice or Code of Practice refers to Canada’s best practices for the care and handling of livestock (https://www.nfacc.ca/codes-of-practice).

i) feed formulas that contain manure or other animal waste; and

j) feed that contains synthetic colouring-agents.

**6.4.5** Livestock of all ages shall be given clean, fresh water on demand. The main water source shall be tested initially for potential livestock toxins, for example, heavy metals, ions and bacteria, according to livestock drinking water quality guidelines. Thereafter, the water source shall be tested annually for bacterial contamination. If colony forming unit (CFU) levels are higher than 100/100 mL, remedial action shall be taken.

**6.4.6** Force feeding of ducks and geese is prohibited.

**6.4.7** By derogation, non-organic feed is permitted under the following circumstances:

a) if organic feed is unobtainable as the result of a catastrophic event with direct impact on the production unit (for example, fire, flood, or extraordinary weather conditions), non-organic feed may be used for a maximum of ten consecutive days, to ensure a balanced livestock ration. Non-organic feed, from land in transition to organic production and free of prohibited substances, shall be used in preference to non-organic feed;

b) in the event of regional shortages, breeding herds may be given non-organic forage, provided that the animals are segregated, visually distinguishable (for example, have ear tags and age verification records) and record keeping is maintained. Forage from land in transition to organic production and free of prohibited substances shall be used in preference to non-organic forage. Genetically engineered forage crops are prohibited at all times. In all other respects, breeding herds whose offspring is intended for organic products shall be under organic management at all times. The breeding herd shall be re-transitioned when an organic forage supply becomes available. Subclause 6.2.3 applies to any offspring. The organic status of other livestock on the operation is not affected.

## 6.5 Transport and handling

**6.5.1** Livestock shall be managed responsibly, with care and consideration. Stress, injury and suffering shall be minimized in all livestock handling practices, including transport and slaughter.

**6.5.2** Stocking density within transport vehicles shall conform to recommendations in the *Code of Practice for the Care and Handling of Farm Animals: Transportation*. The use of electrical stimulation or allopathic tranquilizers is prohibited.

**6.5.3** While in transit and before slaughter, animals shall have shelter against inclement weather, such as, wind, rain and excessive heat or cold.

**6.5.4** If possible, animals shall be transported directly from the operation to their final destination.

**6.5.5** The duration of transportation shall be as short as possible. If animals are in transit for more than 5 h, recommendations regarding maximum transit times and minimum feed and water requirements, and rest times, as provided in the *Code of Practice for the Care and Handling of Farm Animals: Transportation*, shall apply. If these recommendations are not followed, justification shall be provided.

**6.5.6** Fitness for transport shall be assessed before loading. Sick or unfit animals shall not be transported, for example, those that are injured, lame, emaciated, in late gestation or heavily lactating.

**6.5.7** If livestock is unfit for transport and euthanasia is necessary, it shall be performed by competent personnel with appropriate equipment. The method used shall be quick and cause the least possible pain and distress.

NOTE In Canada, see also the *Health of Animals Regulations* under the *Health of Animals Act* (Canadian Food Inspection Agency). For guidance, refer to the transportation requirements in the Code of Practice for each animal type.

## 6.6 Livestock health care

**6.6.1** The operator shall establish and maintain preventative livestock health care practices, including:

a) the choice of appropriate breeds or strains of livestock, as specified in 6.2.1;

b) a feed ration sufficient to meet the nutritional requirements of the livestock, including vitamins, minerals, protein, fatty acids, energy sources, and fibre;

c) housing, pasture conditions, space allowance and sanitation practices, that minimize crowding and the occurrence and spread of disease and parasites;

d) conditions appropriate to the species that allow for exercise, freedom of movement, and minimal stress;

e) prompt treatment for animals with detectable disease, lesions, lameness, injury and other physical ailments;

f) vaccines, in accordance with this standard and Table 5.3 of CAN/CGSB-32.311, if it has been documented that the targeted diseases are communicable to livestock on the production unit and/or operation and cannot be combated by other means.

**6.6.2** The operator shall not administer:

a) veterinary drugs, in the absence of illness, other than vaccines. Anaesthetics and analgesics are permitted, subject to the requirements for physical alterations in 6.6.4;

b) synthetic substances to stimulate or retard growth or production, including hormones for growth promotion;

c) synthetic parasiticides, except by way of derogations provided in 6.6.11;

d) antibiotics to meat animals or to birds for meat or egg production;

e) chemical allopathic veterinary drugs for preventative treatments, for example, pharmaceuticals, antibiotics, hormones and steroids.

**6.6.3** Hormonal treatment shall only be used for therapeutic reasons and under veterinary supervision. The meat from treated animals shall not be organic unless the treatment is listed in Table 5.3 of CAN/CGSB-32.311.

**6.6.4** Physical alterations are prohibited, unless they are essential for animal health, welfare or hygiene, for identification or for safety reasons.

a) The following physical alterations are permitted; restrictions in 6.6.4 c) apply:

    1) castration of piglets, lambs, kids and calves;

    2) tail docking of lambs;

    3) branding and ear tagging; and

    4) dehorning and debudding.

b) If they are the only remaining option, the following physical alterations are permitted; restrictions in 6.6.4 c) apply:

    1) minimal beak trimming or treatment to remove sharp hook;

    2) trimming of needle teeth in piglets; and

3) tail docking of pigs and cattle.

c) Restrictions on physical alterations:

1) physical alterations shall be carried out in a manner that minimizes pain, stress and suffering;

2) regardless of age or method, consideration shall be given to the use of anaesthetics, sedatives and non-steroid anti-inflammatory analgesics, such as lidocaine, xylazine, and ketoprofen;

3) for castration, tail docking, dehorning and branding, operators shall consult the applicable Code of Practice and follow the requirements for age restrictions and methods and the use of pain control medications;

4) beak trimming of birds, tail docking of pigs and trimming of needle teeth in piglets are permitted when they are necessary to control problem behaviour that has a negative impact on the welfare of other livestock. Operators shall document the other measures taken to control or eliminate problem behaviour;

5) tail docking of cattle is permitted only when necessary for veterinary treatment of injured animals;

6) castration of piglets shall take place in the first two weeks of life. Castration of cull boars is prohibited; and

7) spaying of female beef cattle is prohibited.

**6.6.5** Biological, cultural, and physical treatments and practices outlined in Table 5.3 of CAN/CGSB-32.311 are permitted, if preventative practices and vaccines are inadequate to prevent sickness or injury and treatment is required.

**6.6.6** Medical treatment shall not be withheld from sick or injured livestock to preserve their organic status. If methods acceptable to organic production fail, all appropriate medications shall be used to restore livestock to health.

**6.6.7** If the presence of injured or diseased livestock presents a health risk to individual animals or birds, they shall be separated from the herd or flock, and/or euthanized, if necessary (see 6.6.13).

**6.6.8** Shipping diseased livestock to slaughter is prohibited, if the end product is intended for human consumption.

**6.6.9** Products from sick animals or those undergoing treatment with restricted substances shall not be organic or fed to organic livestock.

**6.6.10** The use of veterinary medicinal substances shall comply with the following:

a) if no alternative treatments or management practices exist, veterinary biologics, including vaccines, parasiticides or the therapeutic use of synthetic medications may be administered, provided that such medications are permitted by this standard and Table 5.3 of CAN/CGSB-32.311 or are required by law.

b) phytotherapeutic medicines, that is, botanical compounds such as atropine, butorphanol and other medicines from herbaceous plants, excluding antibiotics; and homeopathic or similar products, shall be used in preference to chemical, allopathic veterinary drugs or antibiotics, provided that they are effective for the species and the condition for which the treatment is intended.

c) if the products permitted by 6.6.10 a) and b) are ineffective in combating illness or injury, prescribed veterinary drugs, not enumerated in this standard and/or in Table 5.3 of CAN/CGSB-32.311, may be administered with written authorization by a veterinarian. If meat animals are treated, some restrictions apply (see 6.6.2, 6.6.11 d) and 6.6.12).

d) if a veterinary drug is administered and it does not have specific withdrawal requirements, a withholding period twice the label requirement or 14 days, whichever is longer, shall be observed before livestock products from treated animals may be considered organic.

e) in emergencies, antibiotic treatment of dairy animals is permitted under the following conditions:

   1) the operator shall have written instructions from a veterinarian indicating the product and the treatment method to be used;

   2) treatment shall result in a milk withdrawal period of at least 30 days, after the last day of a course of treatment, or a withholding period that is twice the label requirement, whichever is longer;

   3) antibiotic use shall be documented in herd health records;

   4) if dairy animals receive more than two treatments of veterinary drugs annually, whether of antibiotics, parasiticides, or one of each, they shall lose their organic status and go through a 12-month transition period;

   5) dairy animals with chronic conditions that require repeated use of antibiotics shall be removed from the herd.

**6.6.11** Organic livestock operations shall have a comprehensive plan to minimize parasite problems. The plan shall include preventative measures, such as pasture management, fecal monitoring and emergency measures in the event of a parasite outbreak. By way of derogation, if preventative measures fail, due to climatic conditions for example, or other uncontrollable factors, the operator may use parasiticides that are not listed in Table 5.3 of CAN/CGSB-32.311, provided that:

a) observation of the animal or fecal test results, as appropriate for the species, indicate that livestock is infected with parasites;

b) the operator has written instructions from a veterinarian indicating the product and method to be used;

c) withdrawal times are twice the label requirement or 14 days, whichever is longer;

d) meat animals less than 12 months old receive only one treatment. Older meat animals shall receive a maximum of two treatments. Meat animals that require additional treatment shall lose their organic status;

e) dairy animals that receive more than two treatments in a 12-month period, whether of parasiticides, antibiotics or one of each, shall lose their organic status and go through a 12-month transition period. Meat animals that receive more than two treatments of parasiticides shall never be organic;

f) a dam may be treated during gestation;

g) laying hens that receive more than one treatment in a 12-month period shall lose their organic status. Treatment of the flock, rather than individual hens, is permitted;

h) the operator provides a written action plan, with a timeline, describing how they will amend their parasite control plan, to avoid similar emergencies.

**6.6.12** Poultry or breeding livestock treated with a parasiticide or veterinary drug not listed in Table 5.3 of CAN/CGSB-32.311 shall be considered non-organic meat animals. Exceptions pertaining to parasiticide use may apply (see 6.6.11).

**6.6.13** Injured, diseased or sick animals shall be given individual treatment designed to minimize pain and suffering, which may include euthanasia.

**6.6.14** Forced moulting of poultry is prohibited.

## 6.7 Livestock living conditions

**6.7.1** The operator shall establish and maintain animal living conditions that accommodate the health and natural behaviour of animals, including:

a) access to the outdoors, shade, shelter, rotational pasture, exercise areas, fresh air and daylight, suitable for the species and stage of production taking into consideration the climate and the environment;

b) access to fresh water (see 6.4.5) and high-quality feed that meets the needs of the animal;

c) sufficient space and freedom to lie down in full lateral recumbence, stand up, stretch limbs and turn freely, and to express normal patterns of behaviour;

d) space allowances in proportion to local conditions, feed production capacity of the operation, livestock health, nutrient balance of livestock and soils, and environmental impact;

e) production techniques that foster the long-term health of livestock, especially when high levels of production or growth rates are required of animals;

f) good air quality. Humidity, dust particles and ammonia levels shall not impair the well-being of animals. Ammonia levels shall not exceed 25 ppm. If levels exceed 25 ppm, remedial action shall be taken;

g) appropriate resting and bedded areas that meet the needs of the animal. Indoor areas shall be large enough, solidly built, comfortable, clean and dry. Resting areas shall be covered with a thick layer of dry bedding that absorbs excrement. If organic bedding is commercially unavailable, non-genetically engineered bedding material that is free of prohibited substances for at least 60 days prior to harvest may be used;

h) housing with non-slip floors. Solid flooring is preferable. Where non-slip slatted floors exist, the floor shall not be entirely of slatted or grid construction. The floor design shall ensure that the feet of the smallest animal cannot get caught in a void. Areas between voids shall be at least as wide as the feet of the animals;

i) animals that give birth indoors shall be provided with sufficient space and a clean, dry, well-bedded space with stable footing. Birthing facilities must allow for separation from other animals and all the mother's needs shall be accommodated, including milking and nursing, until the mother is recovered from the birthing process. Animals shall not be tied or tethered when giving birth;

j) management of outdoor runs and pasture so that soil degradation, long-term damage to vegetation and the contamination of water are avoided.

**6.7.2** Access to the outdoors and freedom of movement may be restricted for the following reasons, provided that confinement is temporary:

a) inclement weather;

b) conditions in which livestock health or safety is jeopardized, given the stage of production; and

c) soil, water or plant quality would be compromised.

The operator shall document the reasons for and duration of confinement.

**6.7.3** The continuous tethering of livestock is prohibited, with an exemption for dairy cattle under conditions specified in 6.12.2.

**6.7.4** Housing, pens, runs, equipment and utensils shall be cleaned and disinfected to prevent cross infection and build-up of disease-carrying organisms. Appropriate cleaners and disinfectants shall be used, giving preference to substances listed in Tables 5.3, 7.3 and 7.4 of CAN/CGSB-32.311. In the event of a reportable disease, any effective disinfectant may be used to clean housing, pens and runs. Such uses shall be documented. For equipment that comes into contact with food products, the requirements in 8.2 apply, and substances listed in Tables 7.3 and 7.4 of CAN/CGSB-32.311 are permitted.

**6.7.5** All livestock in a production unit shall be managed organically. If they are clearly identified and managed organically, individual, non-organic animals may be present in the production unit. Non-organic livestock production units may be present on an operation, if they are clearly identified and kept separate from organic livestock production units.

**6.7.6** Organic animals may graze with non-organic animals on common land, that is, crown range or community pasture, provided that:

a) documentation confirms that the land has not been treated with prohibited substances for at least 36 months;

b) documentation confirms that healthcare and feed products available to organic livestock while on common land are in accordance with this standard;

c) identification permits clear distinction between organically and non-organically raised animals.

## 6.8 Manure management

**6.8.1** Manure management practices used to maintain areas in which livestock is housed, penned or pastured shall be implemented in a manner that minimizes soil and water degradation.

**6.8.2** Manure storage and handling facilities, including composting facilities, shall be designed, constructed and operated to prevent contamination of ground and surface water. See also 5.5.2.

## 6.9 Livestock product preparation

Wherever organic livestock product preparation takes place (for example, facilities used for milking), 8.1 and 8.2 apply.

## 6.10 Pest management

Subclause 8.3 applies to pest management practices in and around livestock facilities.

## 6.11 Additional requirements for cattle, sheep and goats

**6.11.1** Herbivores shall have access to pasture during the grazing season. At other times, they shall have access to the open air or an outdoor exercise area, weather permitting. Exceptions to the pasture requirement can be made for:

a) breeding males;

b) cattle that are confined to outdoor lots during the final finishing phase. Lots shall provide at least 23 $m^2$/animal (246 $ft^2$) for 363 kg (800 lb) finishers and increase to 46.5 $m^2$ (500 $ft^2$)/animal for 545 kg (1200 lb) finishers;

c) young animals, when it can be documented that their health and welfare are jeopardized.

**6.11.2** Minimum indoor and outdoor space requirements for cattle are shown in Table 1 below.

**Table 1 Minimum indoor and outdoor space requirements for cattle**

| Cattle | Indoor space | Outdoor runs and pens |
|---|---|---|
| **Adult beef cows** | 6 $m^2$ (65 $ft^2$)/head | 9 $m^2$ (97 $ft^2$)/head |
| **Dairy cows – tie stalls** | Stall size appropriate for size of cow | 6.5 $m^2$ (70 $ft^2$)/head in spring and fall when not on pasture |
| **Dairy cows – bedded pack** | 11 $m^2$ (118 $ft^2$)/head | No minimum area required |
| **Dairy cows – individual maternity pens**[a] NOTE 1 maternity pen per 35 cows is recommended. | 15 $m^2$ (161 $ft^2$)/head | — |
| **Dairy cow – group maternity pens**[b] | 11 $m^2$ (118 $ft^2$)/head | — |
| **Calves and young cattle** | 2.5 $m^2$ (27 $ft^2$)/head for young calves; increasing to 5 $m^2$ (54 $ft^2$)/head for growing steers and heifers (12 months old) | 5 $m^2$ (54 $ft^2$)/head to 9 $m^2$ (97 $ft^2$)/head, depending on the size of animals |

[a] With justification, space requirements may be reduced for small breeds of cattle.

[b] With justification, when new constructions or major renovations are underway, the addition of maternity pens can be integrated into the building plan (see 6.12.1.1 b).

### 6.11.3 Sheep and goat housing

Minimum indoor and outdoor space requirements for sheep and goats are shown in Table 2.

**Table 2 Minimum indoor and outdoor space requirements for sheep and goats**

| Indoor space | Outdoor runs and pens |
|---|---|
| 1.5 $m^2$ (16 $ft^2$)/head plus 0.35 $m^2$ (3.8 $ft^2$)/ head for each additional lamb/kid | 2.5 $m^2$ (27 $ft^2$)/head plus 0.5 $m^2$ (5.4 $ft^2$)/head for each additional lamb/kid |

## 6.12 Additional requirements for dairy cattle housing

### 6.12.1 Dairy cattle housing

**6.12.1.1** Tie stalls, in existing dairy barns, may be used for lactating dairy cows, and for a period of one month for the training of heifers raised in loose housing. Tie stalls are prohibited in new construction and major renovations.

a) If tie stalls are used during the winter season, dairy cows shall have an exercise period every day whenever possible, or at least twice a week.

b) If construction of new infrastructure is required in order to comply with 6.12.1.1, operators are granted an exemption that permits the use of existing infrastructure for five years following the date of publication of this standard, provided that a plan for the new construction or renovation is in place one year after the publication and:

1) tethered cows shall have an exercise period every day, whenever possible, but at least twice a week, OR

2) there shall be no tethering of heifers or dry cows.

**6.12.1.2** In a free-stall system, the ratio of cows to stalls shall not exceed 1:1.

**6.12.1.3** Electric trainers are allowed on existing tie-stall operations and prohibited in new constructions or major barn renovations. All use of electric trainers shall be discontinued within five years from the date of publication.

a) When electric trainers are used, the applicable requirements and recommendations of the *Code of Practice for the care and handling of dairy cattle* shall be followed. In addition, the following restrictions apply:

   1) Electric cow trainers shall only be continually activated for the first week that cows are spending nights in the barn, and thereafter shall only be switched on for a maximum of two days per week to reinforce the initial training;

   2) Electric trainers shall be located above a contact safety bar to alert the cow that she is getting close to the trainer.

b) The tails of cows in stalls may be tied to prevent the tail from lying in the gutter, provided that the tying allows for natural behaviour, free movement of the tail and quick release when necessary.

**6.12.1.4** If milking parlours are in use:

a) operators shall minimize animal waiting time between the time they are moved to the holding area and the time they return to the barn or pasture;

b) portable milking units shall be available for sick or weak animals that are unable to make it to the milking parlour;

c) electric crowd gates are prohibited;

d) non-slip flooring shall be used in the holding area, parlour and alleys.

**6.12.1.5** Calves may be housed in individual pens and hutches, up to three months of age, provided that the following conditions are met:

a) they are not tethered and have enough room to turn around, lie down, stretch out when lying down, get up, rest and groom themselves;

b) individual pens are designed and located so that each calf can see, smell and hear other calves;

c) Individual pens have an area of at least 2.5 $m^2$ (27 $ft^2$) and a minimum width of 1.5 m (4.9 ft);

d) outdoor hutches shall have access to an enclosed yard or run.

**6.12.1.6** Calves shall be group-housed after weaning.

**6.12.1.7** Dairy replacement calves over nine months of age shall have access to pasture, as appropriate for the season.

## 6.13 Additional requirements for poultry

**6.13.1** The operator shall establish and maintain poultry living conditions that accommodate the health and natural behaviour of poultry as follows:

a) The keeping of poultry in row, battery, enriched or colony cages, is prohibited;

b) Layer flocks shall be limited to 10 000 birds. More than one flock may be in the same building if flocks are separated and have separate runs;

c) Poultry shall be reared in open-range conditions and have free access to pasture, open-air runs, and other exercise areas, subject to weather and ground conditions. Outdoor areas shall:

   1) be free of prohibited substances for 36 months prior to their use;

   2) be covered with vegetation, seeded if necessary, and periodically left empty to allow vegetation to re-grow and to prevent disease build-up. To facilitate rodent control, a vegetation-free perimeter around poultry houses is permitted;

   3) provide protection from predators and be managed in a way that encourages use by the birds;

   4) show signs of use as appropriate for the season.

d) In an emergency situation, when outdoor access results in an imminent threat to the health and welfare of poultry, access may be restricted. Outdoor access shall resume when the imminent threat ends. Producers shall document periods of confinement.

e) Operators shall have an organic plan that describes outdoor access and how they will protect birds from disease and predators.

f) Layers may be confined during onset of lay, that is, until peak production is reached. The laying flock shall have outdoor access for a minimum one-third of its laying life.

g) Rearing facilities closely matched with the conditions that exist in the layer barn are recommended. Pullets, however, may be kept indoors until they are fully immunized.

h) Barn-raised meat chickens shall have outdoor access on a daily basis by 25 days of age. Meat chickens raised outdoors in shelters without indoor access shall have access to pasture on a daily basis by four weeks of age, unless weather conditions endanger the health or safety of the birds. Turkeys shall have outdoors access by eight weeks of age.

**6.13.2** Ducks and geese shall have access to a water area created for their use, whenever weather conditions permit. Facility design shall address the need to prevent commingling of wild waterfowl and domestic poultry.

**6.13.3** Layers shall have access to an adequate number of nests, as recommended by best management practices.

**6.13.4** Perch area of at least 18 cm (7 in.)/hen shall be provided for layers. Perch area may include raised perches, nest rails and raised floors.

**6.13.5** Poultry barns shall have sufficient exits (popholes) to ensure that all birds have ready access to the outdoors.

**6.13.5.1** Exits shall:

a) allow passage for more than one bird at a time, and be evenly distributed along the line of access to the outdoor range;

b) shall correspond to the requirements shown in Table 3 for the number and size of exits:

**Table 3 Poultry barns minimum exit numbers and size**

| Poultry | Combined width of popholes | Minimum width of each pophole | Minimum height | Minimum number |
|---|---|---|---|---|
| **Layers** | 2 m (6.6 ft)/1000 hens | 50 cm (20 in.) | 35 cm (14 in.) | 2 |
| **Broilers** | 1 m (3.3 ft)/1000 birds OR all birds within 15 m (49 ft) of an exit | 50 cm (20 in.) | 35 cm (14 in.) | 2 |
| **Turkeys** | 2 m (6.6 ft)/1000 birds | 150 cm (59 in.) | 75 cm (30 in.) | 2 |

**6.13.5.2** When existing organic poultry barns do not meet the requirements of 6.13.5.1 b), either the distance from an exit from anywhere in the barn shall be no more than 15 m (49 ft), or the operator shall provide evidence that birds utilize outdoor range. Evidence shall demonstrate that 25-50 % of birds are on range when there are no age or weather constraints.

**6.13.6** Litter shall be provided and kept dry. Houses with slatted floors shall have a minimum of 30% solid floor area with sufficient litter for dust bathing, scratching and foraging.

**6.13.7** Poultry shall have access to at least the number of waterers and feeders required by the relevant Code of Practice.

**6.13.8** Poultry housed indoors shall be provided with natural light either with evenly distributed windows or light permeable fabric. The total window area shall be no less than 1% of the total ground-floor area, unless it can be demonstrated that natural light levels are sufficient to read a document such as a newspaper anywhere in the barn. If day length is artificially prolonged, the total duration of light shall not exceed 16 h, and shall be terminated by gradual reduction of light intensity followed by 8 h of continuous darkness. The following exceptions are permitted and shall be documented:

a) periods of increased lighting are permitted due to stage of production, for example, arrival of chicks and turkey poults;

b) decreased lighting intensity is permitted due to animal welfare concerns, for example, outbreaks of cannibalism.

**6.13.9** The maximum indoor and outdoor densities are shown in Table 4.

**Table 4 Maximum indoor and outdoor densities for poultry**

| Poultry | Indoors | Outdoor runs |
|---|---|---|
| **Layers** | 6 birds/$m^2$ (10.76 $ft^2$) | 4 birds/$m^2$ (10.76 $ft^2$) |
| **Pullets 0-8 weeks**[a] | 24 birds/$m^2$ (10.76 $ft^2$) | 16 birds/$m^2$ (10.76 $ft^2$) |
| **Pullets 9-18 weeks**[a] | 15 birds/$m^2$ (10.76 $ft^2$) | 10 birds/$m^2$ (10.76 $ft^2$) |
| **Broilers** | 21 kg/$m^2$ (4.3 lb/$ft^2$) | 21 kg/$m^2$ (4.3 lb/$ft^2$) |
| **Turkeys/large birds** | 26 kg/$m^2$ (5.3 lb/$ft^2$) | 17 kg/$m^2$ (3.5 lb/$ft^2$) |

[a] Outdoor runs are not required when flocks are undergoing an immunization program.

**6.13.10** Multi-level aviary systems for layers shall have no more than three levels or tiers above ground level. Total floor space, for calculation of solid-floor area and bird density requirements, shall include all usable floor levels (see 6.13.6 and 6.13.9). If winter gardens are used to provide required scratching areas, they shall be accessible year-round.

**6.13.11** For pasture-based operations with mobile units, stocking density shall be no more than 2000 layers/ha (800 layers/ac.), 2500 broilers/ha (1000 broilers/ac.) or 1300 large birds (turkeys/geese)/ha (540 large birds/ac.), based on the total amount of land used for rotational poultry pasture. When birds are in moveable field shelters, the shelters shall be moved daily, whenever possible, and at least once every four days, taking into consideration the impact on the birds and on the land. Density within the moveable shelters shall correspond to the indoor densities described in 6.13.9.

**6.13.12** Buildings shall be emptied, cleaned and disinfected, between flocks, and runs shall be left empty to allow the vegetation to grow back.

**6.13.13** If major renovation of barns on existing operations is required in order to comply with 6.13.1 b), 6.13.5 and 6.13.8, operators are granted an extended period of three years from the date of publication of this standard to come into compliance, provided that a plan for the new construction or renovation is in place within 12 months after the publication of this standard.

## 6.14 Additional requirements for rabbits

**6.14.1** If required for comfort and security, rabbits may be temporarily confined, for example, overnight, in cages or hutches. Continuous confinement is prohibited.

**6.14.2** The use of mobile pasture pens is permitted, provided that pens do not restrict natural behaviour and they are moved at least once every three days.

**6.14.3** Rabbits shall have space to run, hop and dig, and to sit upright on their back legs with ears erect. The minimum indoor and outdoor space requirements are shown in Table 5.

**Table 5 Minimum indoor and outdoor space requirements for rabbits**

| Rabbits | Indoor space | Outdoor – runs and concrete exercise areas | Outdoor – pasture | Mobile pens |
|---|---|---|---|---|
| **From weaning to slaughter** | 0.3 $m^2$ (3.23 $ft^2$)/ head | 2 $m^2$ (22 $ft^2$)/ head | 5 $m^2$ (54 $ft^2$)/ head | 0.4 $m^2$ (4.3 $ft^2$)/ head |
| **Pregnant does** | 0.5 $m^2$ (5.4 $ft^2$)/ head | 2 $m^2$ (22 $ft^2$)/ head | 5 $m^2$ (54 $ft^2$)/ head | 0.5 $m^2$(5.4 $ft^2$)/ head |
| **Does and litters** | 0.7 $m^2$ (7.5 $ft^2$) | 2 $m^2$ (22 $ft^2$) | — | 0.4 $m^2$ (4.3 $ft^2$)/ head in shelter<br>2.4 $m^2$ (26 $ft^2$) for grazing area |
| **Bucks** | 0.3 $m^2$(3.23 $ft^2$)/ head | 2 $m^2$ (22 $ft^2$)/ head | 5 $m^2$ (54 $ft^2$)/ head | 0.4 $m^2$ (4.3 $ft^2$)/ head |

**6.14.4** Rabbits shall not be subjected to continuous lighting or kept in permanent darkness. During the day, rabbits shall be able to clearly see each other and their surroundings.

**6.14.5** Does about to give birth shall be given secluded individual burrows or nest boxes for kindling (birthing).

**6.14.6** The doe and litter shall have free access to outdoor range and foraging areas once the kits reach 21 days of age.

**6.14.7** Weaning before the kits are 30 days of age is prohibited. However, if the welfare of the doe or kits is compromised, earlier weaning is permitted.

## 6.15 Additional requirements for pigs and farm-raised wild boar

**6.15.1** The number of animals on a production unit shall reflect the size of the available land-base, which comprises land owned, leased and available for spreading their manure, and based on a balance between animal units, feed production and manure management. Farrow to finish operators shall not exceed 2.5 sows/ha (1 sow/ac.).

**6.15.2** Pigs shall have access to outdoor exercise areas. Outdoor areas may include woodlands or other natural environments. Access to pasture is recommended but not mandatory. Pasture management guidelines apply to all outdoor areas (see 6.7.1 j).

**6.15.3** Sows and gilts shall be kept in groups, with the following exceptions:

a) individual pens are permitted for the protection of females during estrus, or for other health reasons, for a period of up to five days;

b) sows may be individually housed in a pen [7.5 $m^2$ (81 $ft^2$)/sow with litter] for up to five days prior to farrowing and during the suckling period;

c) if needed for piglet protection during the suckling period, sow restraint is permitted for a maximum of three days. Sows may be restrained for a shorter period to protect the operator during piglet processing or pen cleaning;

d) the use of farrowing crates as a means of restraint is prohibited.

**6.15.4** Piglets shall not be weaned before four weeks of age. However, if the welfare of the sow and piglets is compromised, earlier weaning is permitted.

**6.15.5** Piglets shall not be kept on flat decks or in cages.

**6.15.6** If there is visual and tactile contact with other pigs, boars may be housed in individual enclosures.

**6.15.7** Indoor and outdoor exercise areas shall permit rooting.

**6.15.8** The use of nose rings is prohibited.

**6.15.9** The minimum indoor and outdoor space requirements are shown in Table 6.

**Table 6 Minimum indoor and outdoor space requirements for pigs and boars**

| Pigs and boars | Indoor space | Outdoor runs and pens |
|---|---|---|
| **Sow and piglets (up to 40 days old).** | 7.5 $m^2$ (81 $ft^2$) for each sow and litter | Not required |
| **Growing pigs**<br>**a) up to 30 kg (66 lb)**<br>**b) 30–50 kg (66–110 lb)**<br>**c) 50–85 kg (110–187 lb)**<br>**d) >85 kg (187 lb)** | <br>0.6 $m^2$ (6.5 $ft^2$)/ head<br>0.8 $m^2$ (8.6 $ft^2$)/ head<br>1.1 $m^2$ (12 $ft^2$)/ head<br>1.3 $m^2$ (14 $ft^2$)/ head | <br>0.4 $m^2$ (4.3 $ft^2$)/ head<br>0.6 $m^2$ (6.5 $ft^2$)/ head<br>0.8 $m^2$ (8.6 $ft^2$)/ head<br>1.0 $m^2$ (10.76 $ft^2$)/ head |
| **Sows in group pens** | 3 $m^2$ (32.3 $ft^2$)/ head | 3 $m^2$ (32.3 $ft^2$)/ head |
| **Boars in individual pens** | 9 $m^2$ (97 $ft^2$)/ head | 9 $m^2$ (97 $ft^2$)/ head |

# 7 Specific production requirements

## 7.1 Apiculture

**7.1.1** Bees may be introduced to an operation and managed for production benefits, such as pollination of organic crops. If managed as a livestock species for the production of organic products (for example, honey, pollen, propolis, royal jelly, beeswax and bee venom), bees shall be managed in accordance with this standard.

**7.1.2** The operator shall prepare a detailed organic plan (see 4.1, 4.2 and 4.3) that describes the source of bees, production methods, bee diet, disease and pest control, breeding and other related issues of colony management. Where applicable, the organic plan shall also describe crop management practices.

**7.1.3** Records that document all apiary management activities, including removal of supers and extraction of honey (see 4.4), shall be maintained.

**7.1.4** The treatment and management of bee colonies shall be informed by the principles of organic production (see Introduction, section II).

**7.1.5** Organic plants and undomesticated, non-agricultural vegetation shall be the primary source of nectar, honeydew and pollen. Crops treated with prohibited substances and genetically engineered crops shall be avoided.

**7.1.6** Bee health shall be based on appropriate measures such as selection of stock with disease-resistant traits, availability of suitable forage, and good apiary management practices.

**7.1.7** When bees are placed in wild areas, impact on the indigenous insect population shall be considered.

### 7.1.8 Transition

**7.1.8.1** Colonies shall be under continuous organic management for at least 12 months before products may be considered organic.

**7.1.8.2** During transition, all non-organic wax shall be replaced with organic wax. If prohibited substances were not used in the colony for at least 12 months prior to the start of continuous organic management, replacement of wax is not mandatory. However, all products produced prior to the start of continuous organic management shall be considered non-organic.

**7.1.8.3** Colonies and hives shall not be rotated between organic and non-organic management systems. Bees treated with antibiotics are subject to the requirements of 7.1.15.7.

### 7.1.9 Introduced bees

If commercially available, introduced bees, that is, replacement bees for established colonies, shall be organic. Replacement colonies shall be produced within the operation or come from another established organic apiary.

### 7.1.10 Location of hives

Where sources or zones of prohibited substances are present, that is, genetically engineered crops or environmental contamination, apiaries shall be protected with a buffer zone of 3 km (1.875 mi.). The following exceptions apply:

a) fertilizers are permitted in the buffer zone, with the exception of sewage sludge; and

b) if natural features that would restrict the likelihood of bee travel (such as forests, hills or waterways) and abundant organic forage are present, buffer zones may be reduced.

### 7.1.11 Forage and feeding

**7.1.11.1** Organic honey and pollen shall be the primary food source for adult bees. Adequate food supplies shall be maintained in the colony, including sufficient food reserves for the colony to survive dormancy periods.

a) In the event of a feed shortage due to climatic or other exceptional circumstances, temporary feeding of colonies is permitted. However, feeding shall only occur between the last honey harvest and 15 days before the start of the next nectar or honeydew flow-period.

b) Organic honey or sugar shall be used. When the health of the colony cannot be maintained with honey or sugar that is organic, non-organic, refined sugar may be used.

**7.1.11.2** Feed shall not be provided less than 30 days before the harvest of honey.

### 7.1.12 Colony management

**7.1.12.1** Hives shall be clearly and individually identified, and shall be monitored regularly, that is, at one- to two-week intervals, depending upon the colony, weather conditions and time of year.

**7.1.12.2** Wing clipping of queen bees is prohibited.

**7.1.12.3** Bees shall be removed from hives with bee escape-boards, shaking, brushing and forced-air blowers.

**7.1.12.4** Use of synthetic materials in bee smokers is prohibited (see 1.4).

**7.1.12.5** Annual destruction of bee colonies, following nectar flows, is prohibited.

### 7.1.13 Hive construction

**7.1.13.1** Hives shall be constructed of and maintained with natural materials, such as wood and metal. Pressure-treated lumber or particleboard, wood preservatives and lumber treated with prohibited substances are not permitted.

**7.1.13.2** Exterior surfaces of the hive shall be painted with non-lead-based paints.

**7.1.13.3** If dipped in organic beeswax, plastic foundation is permitted.

**7.1.14 Health care**

**7.1.14.1** Preventative health care practices shall be established and maintained, including the selection of bee stocks resistant to prevalent diseases and pests; the selection of colony locations considering site-specific conditions; the availability of sufficient pollen and honey; the renewal of beeswax; the regular cleaning and disinfection of equipment; and the destruction of contaminated hives and materials.

**7.1.14.2** The operator shall promote strong, healthy colonies. Management practices may include: merging weaker, albeit healthy, colonies; renewing queens, if necessary; maintaining adequate hive density; inspecting colonies systematically; and relocating diseased colonies to isolated areas.

**7.1.15 Disease and pest management**

**7.1.15.1** The operator shall be a knowledgeable beekeeper who is familiar with the life cycle and behaviour of bees, related disease-causing organisms, parasitic mites and other pests. In the presence of such pests, every effort shall be made to restore the health of a colony.

**7.1.15.2** Every effort shall be made to select and breed queen bees for diseases and parasite resistance.

**7.1.15.3** Comb foundation shall be obtained from beeswax within the operation or, if commercially available, from other organic sources.

**7.1.15.4** Pests and diseases shall be controlled with management methods or modified equipment.

**7.1.15.5** Botanical compounds may be introduced into the hive provided that such remedies are listed in Table 5.3 of CAN/CGSB-32.311, and are not used within 30 days of nectar flow or when honey supers are on the hive.

**7.1.15.6** Therapeutic applications of pest, parasite and disease control substances listed in Table 5.3 of CAN/CGSB-32.311 are permitted.

**7.1.15.7** Synthetic allopathic drugs (for example, antibiotics) are prohibited. However, where the imminent health of the colony is threatened, substances listed in Table 5.3 of CAN/CGSB-32.311 are permitted. Before treatment, hives shall be removed from the foraging area and taken out of organic production to prevent the spread of antibiotics within the apiary. Treated hives shall be placed in isolation and undergo a 12-month transition period. Wax shall be replaced with organic wax and all veterinary treatments shall be clearly documented.

**7.1.15.8** Destroying the male brood is only permitted to contain infestation with varroa mites.

**7.1.16 Extraction, processing and storage**

**7.1.16.1** Extraction of honey from a comb with live brood is prohibited.

**7.1.16.2** The quality and organic integrity of honey and other products of apiculture (see 7.1.1) shall be preserved and protected as specified in 8.1.

**7.1.16.3** Surfaces in direct contact with honey shall be constructed of food-grade materials or coated with beeswax.

**7.1.16.4** Heating of honey for extraction shall not exceed 35°C (95°F) and the decrystallization temperature shall not exceed 47°C (116.6°F). If organic honey is heated above those temperatures, then it can only be used as an ingredient in a multi-ingredient product.

**7.1.16.5** Gravitational settling shall be used to remove debris from extracted honey. Sieves are permitted for removal of residual debris.

**7.1.16.6** Honey shall be packaged in airtight containers.

**7.1.16.7** Facility cleaning, sanitation and pest management are subject to the requirements in 8.2 and 8.3.

## 7.2 Maple products

**7.2.1** The standards for maple production also apply to syrup production in other tree types, such as birch.

**7.2.2** Organic maple products shall be from production units managed in accordance with this standard.

**7.2.3** In the production of maple syrup or products made from maple syrup, care shall be taken to ensure that the characteristic maple flavour predominates. This standard applies to all stages of production and preparation — the maintenance and development of the sugar bush, collecting and storing sap, converting sap to syrup, making products out of syrup, washing and sterilizing equipment, and storing finished products.

**7.2.4** The production of maple syrup shall be characterized by good management practices of the sugar bush and its ecosystem. Development and maintenance shall focus, over the long term, on preservation of the sugar bush ecosystem and improvement of tree vigour.

**7.2.5** Tapping practices shall minimize risk to the health and longevity of the trees.

**7.2.6** Equipment and techniques used to collect and store sap shall lead to a prepared product of the highest possible quality. Equipment shall be in good condition and shall be used according to the manufacturer's instructions.

**7.2.7** During conversion of sap to syrup, the sap can take on the odour of anything it comes into contact with. Therefore, care shall be taken to avoid denaturing the product during preparation. The use of technology that is likely to alter the intrinsic qualities of the product is prohibited.

### 7.2.8 Transition

This standard shall be fully applied on a production unit for at least 12 months before the harvest of sap may be considered organic. Prohibited substances, such as fertilizers or synthetic pesticides used in forest management, shall not have been used for at least 36 months preceding the first harvest. Parallel production is prohibited.

NOTE The Canadian *Organic Products Regulations* require operators to document that they have not used prohibited substances. The Regulations also require that, in the case of an initial application for an organic certification of maple products, the application must be filed 15 months before the day on which the product is expected to be marketed. During that period of time, compliance with this standard will be assessed by the certification body and this assessment must include at least one inspection of the production unit, during production, in the year before maple products may be eligible for certification and one inspection, during production, in the year maple products are eligible for certification.

### 7.2.9 Sugar bush development and maintenance

#### 7.2.9.1 Plant diversity

The operator shall encourage species diversity in the sugar bush, in particular, companion species to the sugar maple. Companion species should represent a minimum of 15% of the volume of wood within the sugar bush. If companion species represent less than 15%, their growth shall be encouraged. Systematic clearing of undergrowth and brush is prohibited, even if growth is abundant. However, vegetation may be removed to clear paths and to facilitate movement.

#### 7.2.9.2 Thinning

When it is necessary or when required by the forest administrator, thinning of the sugar bush shall be performed according to current good management practices, both public and private, and shall be evenly distributed throughout the sugar bush.

#### 7.2.9.3 Tree protection

If livestock (for example, beef or dairy cattle, pigs or domestic deer) could harm sugar trees, access to the bush is prohibited in order to preserve plant diversity and the growth of young trees. Pipeline networks shall be installed so as not to wound or harm the growth of trees.

#### 7.2.9.4 Fertilization

Fertility recommendations and applications shall be based on observed, diagnosed and documented deficiencies. Soil amendments permitted for maple production include wood ash, agricultural lime and non-synthetic fertilizers listed in Table 4.2 of CAN/CGSB-32.311.

#### 7.2.9.5 Pest control

Knowledge and understanding of sugar bush and preparation facility pests, their habits, and solutions that maintain the bush ecosystem, are the preferred basis for pest control. Within the sugar bush, substances listed in Table 4.3 of CAN/CGSB-32.311, are permitted for disease and insect control. Within preparation facilities, mechanical and sticky traps are permitted for rodents and other destructive pests, as are natural repellents listed in Table 8.2 of CAN/CGSB-32.311. If an infestation occurs, pests may be hunted. Poisons of any kind are prohibited.

### 7.2.10 Tapping

#### 7.2.10.1 Tree diameter and number of taps

Table 7 indicates the maximum number of taps a healthy maple can support, based on its chest height diameter (CHD); CHD is the diameter measured at a height of 1.3 m (4.3 ft) above the soil surface. A tree shall not have more than three tap holes.

**Table 7 — Maximum number of taps per healthy maple tree**

| Diameter measured at a height of 1.3 m (4.3 ft) above the soil surface | Maximum number of taps |
|---|---|
| Less than 20 cm (8 in.) | 0 |
| 20 to 40 cm (8 to 16 in.) | 1 |
| 40 to 60 cm (16 to 23.6 in.) | 2 |
| 60 cm (23.6 in.) or greater | 3 |

#### 7.2.10.2 Depth and diameter of tap holes

Depth of tap holes shall be no more than 4 cm (1.6 in.), not counting the bark, or 6 cm (2.4 in.), if the measurement is made from the surface of the bark. Diameters shall not be greater than 11 mm (0.4375 in.). If a tree is diseased, infested with pests, decaying or tap holes are not healing properly, stricter standards shall be implemented: the number of taps per tree shall be reduced to 2 where 7.2.10.1 allows 3, and 1 where 2 are allowed. When the chest height diameter is less than 25 cm (~9 7/8 in.), tapping is prohibited. If a majority of trees are affected, regular tapping standards apply. However, spouts with a smaller diameter shall be used or trees, in the affected area, shall not be tapped.

#### 7.2.10.3 Disinfection of tap holes and tapping equipment

The use of germicide, including paraformaldehyde tablets or denatured alcohol (a mixture of ethanol and ethyl acetate), in tap holes and on tapping equipment is prohibited. Food-grade ethyl alcohol may be sprinkled onto spouts and drill bits during tapping.

#### 7.2.10.4 Over-tapping, renewing the tap and removal of spouts

The practice of retapping a previously tapped tree during the same season or double tapping is prohibited. Renewing the same hole is allowed if the diameter is not changed. To allow trees to heal, spouts shall be removed no later than 60 days after the final, seasonal sap flow. Maple trees shall only be tapped during the sugar bush operation period (maple syrup season).

### 7.2.11 Collection and storage of maple syrup

#### 7.2.11.1 Spouts

Spouts shall be made of food-grade materials.

#### 7.2.11.2 Vacuum collection system

All parts of the collection system that may come in contact with sap shall be made of materials suitable for use in the manufacture of food products. Pumps shall be well-maintained and used oil shall be collected and disposed of so as to not contaminate the environment.

#### 7.2.11.3 Storage

All equipment that may come into contact with sap or its concentrate and filtrates, such as storage tanks, connections and transfer systems, shall be made of materials suitable for use in the manufacture of food products. This also applies to any surface coatings, such as paints. For new installations or replacement purposes, stainless steel storage tanks with tin-lead soldered joints are prohibited.

#### 7.2.11.4 Collecting with buckets

Pails or buckets may be made of aluminum or plastic. Galvanized steel is prohibited. Buckets shall be covered with a lid. The standards that apply to storage tanks also apply to reservoirs used to transport collected sap.

### 7.2.12 Conversion of sap to syrup

#### 7.2.12.1 Sap filtration

Sap shall be filtered before processing. The filtration shall not compromise the sap’s inherent qualities.

#### 7.2.12.2 Sap sterilization

Sterilization of sap with ultraviolet radiation or by adding a sterilizer prior to conversion is prohibited.

#### 7.2.12.3 Osmosis extraction and membranes

Sap may be concentrated via reverse osmosis. Only reverse osmosis and nano-filtration (ultra-osmosis) membranes are allowed. In the off-season, osmosis membranes shall be stored, in filtrate, in a hermetically sealed container and kept in a frost-free location. Sodium metabisulfite (SMBS) may be added to the filtrate to prevent mould growth. If SMBS is used, the membrane shall be rinsed before next use with a volume of water equal to the hourly capacity of the membrane [for example, 2728 L (600 gal.) of water for a 2728 L/h (600 gal./h) membrane]. Off-site storage of the membrane (for example, by the membrane supplier) shall be documented.

#### 7.2.12.4 Evaporator

Evaporator pans shall be made of stainless steel. They shall be tungsten-inert gas (TIG) welded or soldered with tin-silver solder. Pans made of galvanized steel, copper, aluminum or tin-plated steel are prohibited. Permitted fuels include wood and heating oil. Used oils may be used as a primary or supplementary fuel. Air and environmental quality shall be controlled in the evaporator room. Air injection systems are prohibited.

NOTE In Canada, additional provincial requirements may apply to the use of used oils.

#### 7.2.12.5 Defoamers

Pennsylvania maple wood (*Acer pennsylvanicum*, also known as striped maple or moosewood) and organic vegetable oils, except those with allergenic potential, are the only permitted antifoaming agents.

#### 7.2.12.6 Syrup filtration and other treatments

Organic maple syrup shall not be refined by artificial means, bleached or lightened in colour. Simple filtration via the following methods is permitted: through cloth or paper, a filter press or food-grade diatomaceous earth, or use of silica powder or clay dust with a filter press to remove suspended solids.

### 7.2.13 Cleaning of equipment for use in syrup production

#### 7.2.13.1 Maple sap collection systems, tubing and tanks

Cleaning shall take place before or after each production season. Permitted sanitation substances include:

a) in-season: for all equipment except tubing, sodium hypochlorite followed by a potable water or filtrate rinse;

b) off-season: for all equipment, sodium hypochlorite or fermented sap followed by a potable water, filtrate or sap rinse, isopropyl alcohol (for tubing only). Other substances are prohibited, including those with a phosphoric acid base.

#### 7.2.13.2 Osmosis extraction and membranes

Reverse osmosis units and membranes shall first be cleaned using filtrate, according to the time and temperature recommended by the manufacturer.

a) Cleaning during the production season:

   1) If a Pure Water Permeability (PWP) test indicates that controlled efficiency is less than 85% of the controlled efficiency recorded at the beginning of the season, a caustic soda-based soap (NaOH) recommended by the manufacturer for membrane cleaning is permitted.

   2) If PWP test results stay below 75% of the efficiency recorded at the beginning of the season after the use of a NaOH-based soap, citric acid is permitted.

   3) Cleaning or a cleaning sequence with substances permitted in 1) and 2), shall be followed by a rinse with clean filtrate or potable water. The rinse volume shall be greater than or equal to 40 times the dead (residual) volume of the unit (total volume of the unit and its components after it is drained).

   4) Daily efficiency readings and calculations shall be recorded. Membrane flush water shall be disposed of in a manner that does not harm the environment.

b) Cleaning after the production season: Off-season treatment of membranes with citric acid is permitted. Following the citric acid treatment, the use of acetic acid, peracetic acid, and hydrogen peroxide is permitted.

#### 7.2.13.3 Evaporators

Evaporators may be cleaned with potable water or filtrate at any time. Vinegar or fermented sap may be used at the end of the season.

#### 7.2.13.4 Prohibited substances

Substances other than those specified in 7.2.13.1, 7.2.13.2 and 7.2.13.3 are prohibited, including those with phosphoric acid content.

### 7.2.14 Food additives and processing aids

Transformation of syrup into maple products (for example, maple butter, sugar and taffy) shall comply with this standard. Boiling with microwaves is prohibited. No other substances shall be added to syrup or maple products during production or preparation, whether to improve the taste, texture or appearance. Cones may be used if they constitute less than 5% of the weight of the final product.

### 7.2.15 Transport, storage and conservation

Maple syrup not intended for immediate consumption shall be stored in food-grade containers that do not alter the chemical composition or quality of the syrup. Permitted containers include barrels made of stainless steel, fibreglass, food-grade plastic or metal with an interior food-grade coating. Reusing single-use barrels is prohibited. Barrels shall carry a unique identification number that is used in all related records. The barrel fill-date shall be recorded.

## 7.3 Mushroom production

All relevant subclauses in this standard apply to mushroom production where this subclause has no specific requirements, including 5.1.2, 5.1.6, and 5.1.7. For outdoor production, 5.2.2 also applies.

### 7.3.1 Production sites and structures

For organic mushrooms or mushroom products, the operator shall manage production units in a manner that ensures substrates and mushrooms do not come into contact with prohibited substances. Substrates shall be produced in accordance with this standard and applicable entries in Table 4.2 of CAN/CGSB-32.311 such as *Composting feedstocks* and *Compost produced on the production unit*:

a) For indoor facilities, organic mushrooms shall not come into contact with prohibited substances that would compromise the integrity of the crop.

b) For mushrooms grown in soil, prohibited substances shall not have been used for at least 36 months before the harvest of an organic crop.

c) For new installations or replacement purposes, lumber treated with prohibited substances shall not be used in structures, containers or other surfaces that come into contact with growth substrate or mushrooms.

### 7.3.2 Substrates and growth media

#### 7.3.2.1 Wood substrates

Logs, sawdust or other wood-based materials used as substrates shall come from wood, trees or logs that have not been treated with prohibited substances.

#### 7.3.2.2 Manure

Subclause 5.5.1 applies to manure used in growth substrates (including any non-organic agricultural substances in the manure). Manure shall be composted according to the requirements for soil amendments outlined in Table 4.2 of CAN/CGSB-32.311.

#### 7.3.2.3 Other agricultural substances

If they are not composted, agricultural substances such as straw, hay or grains used as growth substrate shall be from organic sources. If organic sources are not commercially available, non-organic sources may be used, provided that they are composted according to the requirements for soil amendments outlined in Table 4.2 of CAN/CGSB-32.311.

### 7.3.3 Spawn

Organic spawn (seed) shall be used. Spawn grown or treated with substances listed in Table 4.3 of CAN/CGSB-32.311 may be used if organic spawn is not:

a) available from within the production unit;

b) commercially available.

### 7.3.4 Crop pest control and sanitation

Preventative disease control measures shall include the following:

a) removal of diseased materials. Diseased mushroom strains shall be burned, moved at least 50 m (164 ft) from a production site (if, for example, the diseased logs are kept for research), or disposed of as recommended by good management practices;

b) sanitation with substances listed in Table 4.3 of CAN/CGSB-32.311;

c) cultivation sites that are free of debris from understory and diseased trees;

d) cleaning and maintenance of equipment with sanitizers and disinfectants listed in Table 4.3 of CAN/CGSB-32.311.

### 7.3.5 Mushroom product preparation

Wherever organic product preparation takes place, 8.1 and 8.2 apply.

### 7.3.6 Facility pest management

Subclause 8.3 applies to pest management practices in and around mushroom facilities.

## 7.4 Sprouts, shoots and micro-greens production

Subclause 7.4 applies to crops that are generally harvested within 30 days of imbibition, either with roots attached (sprouts) or cut from the roots (shoots and micro-greens).

### 7.4.1 Sprouts, shoots and micro-greens produced in water

**7.4.1.1** Organic seed shall be used.

**7.4.1.2** Water sources (for example, potable water, distilled or processed by osmosis) shall meet or exceed drinking water guidelines for quality, including microbial and chemical contaminant levels.

**7.4.1.3** A water quality monitoring program shall be in place and water shall be analyzed at least twice a year (once every six months).

**7.4.1.4** Fertilizers are prohibited at all stages of growing and harvesting.

**7.4.1.5** Substances used for cleaning or sanitation of seed or harvested product shall be limited to substances listed in Table 4.3 of CAN/CGSB-32.311.

#### 7.4.2 Shoots and micro-greens produced in soil

**7.4.2.1** Subclauses 7.4.1.1, 7.4.1.2, 7.4.1.3 and 7.4.1.5 also apply to shoots and micro-greens produced in soil.

**7.4.2.2** Subclause 7.5 applies to shoots and micro-greens produced in soil, whether they are grown in a growth chamber, greenhouse or other sheltered structure, or outdoors.

#### 7.4.3 Shoots and micro-greens product preparation

Wherever organic product preparation takes place, 8.1 and 8.2 apply.

#### 7.4.4 Facility pest management

Subclause 8.3 applies to pest management practices in and around facilities.

### 7.5 Greenhouse crops

**7.5.1** In a permanent, in-ground soil system, prohibited substances shall not have been used for at least 36 months before the harvest of an organic crop.

**7.5.2** In a container system, soil shall be free of prohibited substances.

NOTE The Canadian *Organic Products Regulations* require operators to document that they have not used prohibited substances. The Regulations also require that, in the case of an initial application for organic certification of crops grown in greenhouses with a permanent, in-ground soil system, the application for certification must be filed 15 months before the day on which the product is expected to be marketed. During that period of time, compliance with this standard will be assessed by the certification body and this assessment must include at least one inspection of the production unit, during production, in the year before crops may be eligible for certification and one inspection, during production, in the year crops are eligible for certification. This requirement does not apply to greenhouses built on land that is part of an existing organic operation.

**7.5.3** Hydroponic and aeroponic productions are prohibited.

**7.5.4** Soil used in a container system, with the exception of transplants, shall provide nutrients to plants continuously. The soil (growth media) shall contain a mineral fraction (sand, silt or clay) and an organic fraction; it shall support life and ecosystem diversity.

**7.5.5** The following conditions apply to containerized, staked crops (for example, tomatoes, sweet peppers, cucumbers, eggplant):

a) at the start of production, the total volume of soil shall consist of at least 10% compost;

b) compost shall be included in the fertility program;

c) containers shall be at least 30 cm (12 in.) high; and

d) the soil volume shall be at least 70 L/m² (15.4 gal./10.8 ft$^2$), based on the total growing area.

**7.5.6** Supplemental heat, with proper exhaust of burnt gasses, and supplemental lighting, are permitted. Supplemental nutrition with substances listed in Table 4.2 of CAN/CGSB-32.311, is permitted.

**7.5.7** Plants and soil, including potting soil, shall not come into contact with prohibited substances, including wood treated with prohibited substances.

**7.5.8** For crop production, the operator shall:

a) use reusable and recyclable pots and flats whenever possible;

b) use substances listed in Tables 4.2 and 4.3 of CAN/CGSB-32.311;

c) use appropriate equipment cleaners, disinfectants and sanitizers listed in Tables 7.3 and 7.4 of CAN/CGSB-32.311.

**7.5.9** Full-spectrum lighting is permitted.

**7.5.10** The following procedures, processes or substances are permitted to:

a) enrich carbon dioxide levels:

    1) flaming;

    2) fermentation;

    3) composting; and

    4) compressed gas ($CO_2$);

b) clean and disinfect plant containers, pots and flats:

    1) substances listed in Tables 7.3 or 7.4 of CAN/CGSB-32.311; and

    2) steam-heat sterilization;

c) stimulate growth or development:

    1) substances listed in Tables 4.2 or 4.3 of CAN/CGSB-32.311; and

    2) control of daily temperature and light levels;

d) prevent damping-off:

    1) low-temperature baking;

    2) hot-water treatment; and

    3) steam treatment.

**7.5.11** The following procedures or substances are permitted for the prevention and control of disease, insects or other pests:

a) substances listed in Table 4.3 of CAN/CGSB-32.311;

b) pruning;

c) rouging;

d) vacuuming;

e) pest exclusion from greenhouses with air filters, screens or other physical devices; and

f) biological control methods.

**7.5.12** Soil regeneration and recycling procedures shall be practiced. The following alternatives to crop rotation are permitted: grafting of plants onto disease-resistant rootstock, freezing the soil in winter, regeneration by incorporating biodegradable plant mulch (for example, straw or hay), and partial or complete replacement of greenhouse soil or container soil, provided it is re-used outside the greenhouse for another crop.

#### 7.5.13 Greenhouse crop product preparation

Wherever organic product preparation takes place, 8.1 and 8.2 apply.

#### 7.5.14 Facility pest management

Subclause 8.3 applies to pest management practices in and around crop facilities.

### 7.6 Wild crops

**7.6.1** An organic wild plant product shall be harvested from a clearly defined area or production unit. Documented evidence that prohibited substances have not been used for at least 36 months before the harvest of an organic crop shall be available.

**7.6.2** The operator shall prepare an organic plan (see 4.1, 4.2 and 4.3) that includes:

a) a detailed description of production areas and harvest methods;

b) management practices that preserve wild species and avoid disturbance of the environment; and

c) a record keeping system that meets the requirements of 4.4.

**7.6.3** Wild products shall be considered organic on the condition that they are harvested in relatively undisturbed or stable natural settings. A wild plant shall be harvested or picked in a manner that promotes growth and production, and does not damage the environment.

**7.6.4** The production zone for wild crops shall be isolated from contact with prohibited substances by a clearly defined buffer (see 5.2.2). Harvest sites shall be located more than one kilometre (0.62 mi) from potential sources of environmental contamination, such as golf courses, dumps, sanitary landfill sites and industrial complexes.

#### 7.6.5 Wild crop product preparation

Wherever organic product preparation takes place, 8.1 and 8.2 apply.

#### 7.6.6 Facility pest management

Subclause 8.3 applies to pest management practices in and around crop facilities.

### 7.7 Organic insects

All the relevant elements of clauses 1-6 in this standard shall apply.

# 8 Maintaining organic integrity during cleaning, preparation and transportation

Clause 8 applies to all operations that handle, store and transport organic products for production and processing. During these activities, a central objective is to maintain the inherent organic qualities of the product through strict adherence to the procedures and principles of this standard. Operators are responsible for maintaining organic integrity at all points of the market supply chain, from production through point of sale to the final consumer.

## 8.1 Maintaining integrity

**8.1.1** Preparation materials, such as counters, containers and conveyors, in contact with food shall be clean and of food-grade quality.

**8.1.2** Incidental additives shall not compromise organic integrity:

a) hand sanitizer substances, if used in direct contact with organic products, shall be listed in Table 7.3 of CAN/CGSB-32.311.

b) culinary steam, that is, steam used in direct contact with organic products or packaging, shall only contain:

   1) substances listed in Tables 6.3-6.5 of CAN/CGSB-32.311; and/or

   2) food-grade cleaners, disinfectants and sanitizers authorized for organic product contact in Table 7.3 of CAN/CGSB-32.311.

c) food-contact lubricants shall be listed in Tables 6.3-6.5 of CAN/CGSB-32.311.

d) use of cleaners, disinfectants and sanitizers shall comply with the requirements in 8.2 of this standard.

**8.1.3** Mechanical, physical or biological processes (such as fermentation and smoking) are permitted.

**8.1.4** To prevent commingling, organic products shall be segregated or otherwise protected from non-organic products at all times, for example, during processing, storage, at bulk and unbound stages.

**8.1.5** If a production unit prepares both organic and non-organic products:

a) organic and non-organic products shall not be mixed at any stage of preparation;

b) every measure shall be taken to ensure that the organic and non-organic identity of finished product is maintained;

c) operators shall document removal events used to prevent cross-contamination of organic and non-organic production runs;

d) preparation of organic products shall be carried out continuously until the run is complete;

e) organic runs shall be separated by place or time from similar preparation of non-organic products;

f) organic runs shall be planned in advance to prevent commingling; and

g) additional measures are required to prevent accidental commingling of bulk at-risk organic seed or grain with non-organic grain which may contain trace GE contamination:

   1) Storage bins containing organic crops shall be visibly identified as organic using well-maintained, weather-resistant signage.

2) When at-risk organic crops are being moved between bulk storage bins (for example, grain drying, lot mixing), temporary signage shall be attached to the wagon or truck to visibly identify the load in transit as organic.

3) When organic crops are held in bulk bins for drying or roasting, temporary signage shall be attached to the bin to visibly identify the contents as organic.

**8.1.6** Organic product packaging shall

a) maintain organic product quality and integrity; and

b) be minimal in a manner that is consistent with 8.1.6 a). Packaging materials that minimize harm to the environment throughout their life cycle are preferred; and

c) comply with prohibitions in 1.4 a), b), and k).

## 8.2 Cleaning, disinfecting and sanitizing

**8.2.1** Food-grade cleaners, disinfectants and/or sanitizers listed in Table 7.3 of CAN/CGSB-32.311 may be used as annotated:

a) on organic product contact surfaces, which include equipment, storage and transport units; and/or

b) in direct contact with organic products.

**8.2.2** If substances in Table 7.3 are ineffective, cleaners, disinfectants and/or sanitizers listed in Table 7.4 of CAN/CGSB-32.311 may be used on organic product contact surfaces, provided that documentation demonstrates:

a) they are used as annotated; and

b) removal event(s) have eliminated the substance(s) from organic product contact surfaces prior to organic production.

**8.2.3** If substances in Table 7.4 are ineffective, other cleaners, disinfectants and/or sanitizers may be used on organic product contact surfaces, provided that documentation demonstrates:

a) the efficacy of the alternative substance(s); and

b) removal event(s) have eliminated the alternative substance(s) from organic product contact surfaces prior to organic production; and

c) that effluent discharge was neutralized to minimize negative impact on the environment.

**8.2.4** Specific cleaning, sanitation and disinfection requirements in clause 7 of this standard supersede those specified in 8.2.

## 8.3 Facility pest management and post-harvest management

**8.3.1** Good production and manufacturing practices shall be adopted to prevent pests. Pest management practices shall involve the following, in descending order:

a) the removal of pest habitat and food;

b) the prevention of access and environmental management (for example, light, temperature and atmosphere), to prevent pest intrusion and reproduction;

c) mechanical and physical methods, such as traps;

d) lures and repellents, as listed in Table 8.2 of CAN/CGSB-32.311.

**8.3.2** If the practices enumerated in 8.3.1 are ineffective, the operator may use pest control substances listed in Tables 8.2 and 8.3 of CAN/CGSB-32.311. The operator shall record the target pests, substances used, start and end dates, and the location(s) of pest control devices.

**8.3.3** If the practices specified in 8.3.2 are ineffective, substances not listed in Table 8.2 of CAN/CGSB-32.311 may be used whenever organic product preparation takes place, including off-site storage facilities, provided that there is no risk to organic product status or integrity. Operators shall ensure that organic products and/or the packaging materials are not present when these substances are used indoors. Operators shall clearly document:

a) why permitted substances were not suitable or ineffective for pest management;

b) how contact of organic products with unlisted substances was avoided;

c) all activities involved in the use, storage and disposal of unlisted substances.

**8.3.4** If pest and disease control substances that are not listed in Table 8.2 of CAN/CGSB-32.311 are used under any mandatory government program, operators shall monitor and document their use.

**8.3.5** Substances in Table 8.3 of CAN/CGSB-32.311 may be used for post-harvest storage.

NOTE In the event of emergency pest or disease treatment, Canadian operators are required to notify their certification body immediately of any change that may affect organic product certification.

## 8.4 Transportation

**8.4.1** Every measure shall be taken to ensure that the integrity of organic inputs, ingredients and products is not compromised in transit. Physical segregation or other protection methods shall be used to avoid commingling or substitution with non-organic inputs, ingredients and products.

**8.4.2** The following information shall accompany organic product:

a) the name and address of the person or organization responsible for the production, preparation or distribution of the product;

b) the name of the product;

c) the organic status of the product; and

d) information that ensures traceability, for example, the lot number.

**8.4.3** Organic products shall not be exposed to pesticides or pest control substances that are not listed in Table 8.2 of CAN/CGSB-32.311 during any stage of transit or at border crossings.

NOTE Owners are responsible for the organic integrity of organic product while it is in transit. This includes the use of common carriers and custom hauling. Transport companies share responsibility for organic integrity while loading, transporting, or off-loading certified organic product.

# 9 Organic product composition

Clause 9 applies to all operations involved in organic product preparation and resale, including retailers who prepare the product.

## 9.1 Product composition

**9.1.1** Organic product formulations shall consist primarily of organic whole or processed agricultural ingredients and organic processing aids. Other permitted ingredients and processing aids, as described in 9.2, shall be kept to a minimum.

**9.1.2** Evaluation and calculation of organic percentages shall account for all constituent ingredients or ingredient sub-parts, distinguishing between organic and non-organic components of each ingredient contained in the product.

**9.1.3** The percentage of all organic ingredients in an organic product shall be calculated as follows:

a) Solid products (except livestock feed) — Divide the net mass, excluding water and salt, of all organic ingredients in the formulation or finished product, whichever is more relevant, by the net mass, excluding water and salt, of all ingredients.

b) Liquid products — If the product and its ingredients are liquid, divide the fluid volume of all organic ingredients, excluding water and salt, by the fluid volume of all ingredients, excluding water and salt. If the principal display panel uses phrases like “reconstituted from concentrates” to describe the product, single-strength concentrations of the ingredients or the finished product shall be used to calculate organic percentages.

c) Solid products and liquid products — Divide the combined net mass of solid organic ingredients and the net mass of liquid organic ingredients, excluding water and salt, by the total mass, excluding water and salt, of all ingredients in the finished product.

d) Livestock feed shall contain 100% organic agricultural ingredients and necessary feed additives or supplements listed in Table 5.2 of CAN/CGSB-32.311. Divide the total net mass, excluding water, salt and calcium compounds, of combined organic ingredients in the formulation or the finished product, whichever is more relevant, by the total mass, excluding water, and salt and calcium compounds, of all ingredients.

**9.1.4** The percentage of all organic ingredients in an organic product shall be rounded down to the nearest whole number.

## 9.2 Categorization of organic products

Based on the percentage of their organic ingredients, organic products fall into two categories:

### 9.2.1 95% organic content (or more)

Such products may not contain an ingredient in both organic and non-organic form.

Such products may contain up to 5% of the following:

a) “ingredients classified as food additives”, and “ingredients not classified as food additives,” as listed in Tables 6.3 and 6.4 of CAN/CGSB-32.311, respectively, subject to requirements specified in substance listing annotations and restrictions specified in 6.2 of CAN/CGSB-32.311. Listed ingredients of agricultural origin shall meet the requirements in 1.4 a), 1.4 c), 1.4 h) and 6.2 of CAN/CGSB-32.311;

b) non-organic agricultural processing aids that meet the requirements in 1.4 a), 1.4 b), 1.4 c), and 1.4 h), and any annotations listed in Table 6.5 of CAN/CGSB-32.311;

c) non-agricultural processing aids as listed in Table 6.5 of CAN/CGSB-32.311, subject to the requirements specified in substance listing annotations;

d) non-organic agricultural ingredients that meet the requirements in 1.4 a), 1.4 c) and 1.4 h). These ingredients are also subject to organic commercial availability requirements.

#### 9.2.2 70-95% organic content

Such products may not contain an ingredient in both its organic and non-organic form.

Such products may contain up to 30% of the following :

a) non-organic agricultural ingredient subject to the requirements in 1.4 a), 1.4 c), and 1.4 h);

b) “ingredients classified as food additives”, and “ingredients not classified as food additives,” as listed in Tables 6.3 and 6.4 of CAN/CGSB-32.311, respectively, subject to the requirements specified in substance listing annotations and restrictions specified in 6.2 of CAN/CGSB-32.311. Listed ingredients of agricultural origin shall meet the requirements in 1.4 a), 1.4 c), 1.4 h) and 6.2 of CAN/CGSB-32.311;

c) non-organic agricultural processing aids that meet the requirements in 1.4 a), 1.4 b), 1.4 c), and 1.4 h), and any annotations listed in Table 6.5 of CAN/CGSB-32.311;

d) non-agricultural processing aids listed in Table 6.5 of CAN/CGSB-32.311 subject to the requirements specified in substance listing annotations.

NOTE See Annex A for a summary of clause 9.

## 10 Procedures, criteria and conditions to amend CAN/CGSB-32.311 *Organic production systems – Permitted substances lists*

Clause 10 applies to all proposed amendments to the Permitted Substances Lists (PSL). Only generic substances are listed in the PSL. Brand name substances, which may be a combination of generic substances, are not eligible for inclusion on the PSL. This clause does not apply to packaging materials, equipment surfaces, or other similar substances or materials.

### 10.1 Substance review procedures

**10.1.1** Criteria provided in this clause shall be the determinants for amending CAN/CGSB-32.311.

**10.1.2** The substance review process shall be open, transparent and fully participatory according to the Canadian General Standards Board (CGSB) procedures.

**10.1.3** Consideration shall be given to the consequences a proposed amendment may have on equivalency and harmonization of this standard with standards and regulations of other jurisdictions.

### 10.2 Permitted substances criteria

**10.2.1** Substances included in the Permitted Substances Lists shall:

a) comply with the general principles of organic production specified in section II of the Introduction of this standard, and

b) comply with the prohibitions set out in 1.4.

**10.2.2** Substance reviews shall:

a) consider the necessity, origin and mode of production, and the social and ecological impact of the production and application of the substance;

b) include a detailed description of the substance and a substantive rationale along with documentation in support of the proposed amendment; and

c) include an evaluation of all available alternatives, including substances and acceptable practices outlined in this standard, and in other production systems.

**10.2.3** If applicable, the substance annotation shall include:

a) restrictions concerning its origin and mode of production;

b) restrictions concerning its composition and usage; and

c) a commercial availability clause which allows for the use of a synthetic equivalent when the non-synthetic form of the substance is not available in sufficient quality or quantity, at the time of publication.

**10.2.4** Exceptions to 10.2:

a) if a substance review confirms that a non-synthetic form of the substance is not available, a synthetic version may be approved as an exception.

b) if alternatives to synthetic substances are anticipated, the synthetic version may be permitted as a temporary exception. The temporary exception shall be noted in the annotation.

c) temporary exceptions shall be re-evaluated at each full review of the standards.

## 10.3 Specific substance review criteria

The criteria used for guiding the review of a substance are described in Tables 8, 9, 10 and 11.

**Table 8 Substance review criteria for permitted substances in crop production**

| | Soil amendments and crop nutrition (Table 4.2 of CAN/CGSB-32.311) | Crop production aids and materials (Table 4.3 of CAN/CGSB-32.311) |
|---|---|---|
| **A. Necessity** | Shall be necessary to improve or maintain soil fertility, to fulfil specific requirements of crops, and/or for specific soil conditioning and rotational purposes that cannot be satisfied by the requirements and practices of this standard. | Shall be necessary to manage plant diseases, insects, weeds and other pests. Used when no other adequate biological, physical or plant breeding alternatives or effective management practices are available. |
| **B. Origin and mode of production** | 1. Shall be of plant, animal, microbial or mineral origin. Substances may be produced through physical (for example, mechanical or thermal), enzymatic or microbial (for example, composting, fermentation or digestion) methods of transformation.<br><br>2. Shall be derived from crops and livestock produced in accordance with this standard, or from naturally occurring minerals.<br><br>3. Shall be non-synthetic. If non-synthetic forms of these substances do not exist, synthetic substances may be considered for inclusion. | |

| | Soil amendments and crop nutrition (Table 4.2 of CAN/CGSB-32.311) | Crop production aids and materials (Table 4.3 of CAN/CGSB-32.311) |
|---|---|---|
| **C. Impact** | Substance reviews shall consider:<br><br>1. The impact of a substance's manufacture and disposal after use on the environment including impacts on ecology, surface and ground water, and soil and air quality, including substance persistence, degradation and concentration effects.<br><br>2. The impact of a substance's use or potential misuse on soil quality (including biological diversity and activity, structure, salinity, sodicity, erodability and tilth), surface and ground water quality, ecosystems (in particular, non-target organisms) including wildlife and wildlife habitat, and animal and human health. | |

**Table 9 – Substance review criteria for permitted substances in livestock production**

| | Livestock feed (Table 5.2 of CAN/CGSB-32.311) | Livestock health care (Table 5.3 of CAN/CGSB-32.311) |
|---|---|---|
| **A. Necessity** | 1. Shall be necessary to correct documented essential nutrient deficiencies in the forage or feed ration, when other biological, cultural or physical treatments permitted by this standard are not available; and/or<br><br>2. Shall be necessary to ensure and preserve product quality, when other biological, cultural or physical treatments permitted by this standard are not available. | Shall be necessary to prevent or treat livestock health problems when other treatments permitted by this standard are not available. |
| **B. Origin and mode of production** | Shall be organic or from non-synthetic sources occurring in nature, such as marine products. Mineral substances are permitted only if they are of natural origin. | Shall be from organic sources or of non-synthetic origin, whenever possible. |
| **C. Impact** | Substance reviews shall consider:<br><br>1. The impact of a substance's manufacture and disposal after use on the environment including impacts on ecology, surface and ground water, and soil and air quality including substance persistence, degradation and concentration effects.<br><br>2. The impact of a substance's use or potential misuse on soil quality (including biological diversity and activity, structure, salinity, sodicity, erodability and tilth), surface and ground water quality, ecosystems (in particular non-target organisms) including wildlife and wildlife habitat, and animal and human health. | |

**Table 10 – Substance review criteria for permitted substances in processing of organic food**

| | Food ingredients and processing aids (Tables 6.3-6.5 of CAN/CGSB-32.311) |
|---|---|
| **A. Necessity** | 1. Shall be necessary to correct documented, essential nutrient deficiencies of the product, that is, vitamins and minerals; or when required by regulations; and/or<br><br>2. Shall be essential for ensuring the safety of the product; or<br><br>3. Shall be used only when it is not feasible or practical to produce or store such products without the use of these substances; or<br><br>4. Shall be necessary to achieve a technological effect during processing (for example, filtration) or an organoleptic effect in the final product (for example, colouring and flavouring). |
| **B. Origin and mode of production** | 1. Shall be found in nature. Substances may be produced using physical (for example, extraction, precipitation), enzymatic or microbial (for example, fermentation) processes, as well as through chemical extractions that do not alter the substance's chemical structure.<br><br>2. Preferably from organic sources.<br><br>3. If non-synthetic forms of these substances do not exist, synthetic substances may be considered. |
| **C. Impact** | Substance reviews shall consider the impact of use and potential misuse on:<br><br>1. Human health through both food and non-food exposure, including acute and chronic toxicity, allergenicity and metabolites;<br><br>2. product quality, including nutrition, flavour, taste, appearance and storage, if applicable;<br><br>3. consumer perception of the nature, substance and quality of a food product. |

**Table 11 – Substance review criteria for permitted substances in cleaning and sanitation**

| | Cleaning and sanitation substances (Tables 7.3 and 7.4 of CAN/CGSB-32.311) | Facility management substances (Tables 8.2 and 8.3 of CAN/CGSB-32.311) |
|---|---|---|
| **A. Necessity** | Substances used for cleaning and sanitizing organic products and organic product contact surfaces shall be necessary and appropriate for the intended use. | Substances used for pest control or to cause a post-harvest physiological effect shall be necessary and appropriate for the intended use. |
| **B. Origin and mode of production** | 1. Shall be non-synthetic whenever possible.<br><br>2. If non-synthetic forms of these substances do not exist, synthetic substances may be considered. | |
| **C. Impact** | Substance reviews shall consider:<br><br>1. The impact of a substance's manufacture and disposal after use on the environment including impacts on ecology, surface and ground water, and soil and air quality including substance persistence, degradation and concentration effects.<br><br>2. The impact of a substance's use or potential misuse on soil quality (including biological diversity and activity, structure, salinity, sodicity, erodability and tilth), surface and ground water quality, ecosystems (in particular non-target organisms) including wildlife and wildlife habitat, and animal and human health. | |

# Annex A
*(informative)*

# Categorization of organic products

**Table A.1 – Categorization of organic products based on their percentage of organic ingredients**

| Summary | Categories | | |
|---|---|---|---|
| | 95%[a] (or more) | 70-95%[b] (or more) | <70%[c] |
| May not contain an ingredient in both its organic and non-organic form. | ✔ | ✔ | |
| May contain up to 5% non-organic ingredients if the organic form is not commercially available. | ✔ | | |
| May contain up to 30% non-organic ingredients. | | ✔ | |
| May contain less than 70% organic ingredients. | | | ✔ |
| Non-organic ingredients both “classified as food additives”, and “not classified as food additives,” shall be listed in Tables 6.3 and 6.4 of CAN/CGSB-32.311, meet the specified annotations and comply with 6.2 of CAN/CGSB-32.311. | ✔ | ✔ | |
| Whether listed or not in Tables 6.3 and 6.4 of CAN/CGSB-32.311, agricultural, non-organic ingredients shall meet 1.4 a), c) and h), and 6.2 of CAN/CGSB-32.311. | ✔ | ✔ | |
| Non-listed agricultural, non-organic ingredients are subject to commercially availability requirements. | ✔ | | |
| Non-organic processing aids of agricultural origin are permitted, subject to the requirements of 1.4 a), b), c), and h); and any annotations listed in Table 6.5 of CAN/CGSB-32.311. | ✔ | ✔ | |
| Non-agricultural processing aids are permitted if they are listed in Table 6.5 (processing aids) of CAN/CGSB-32.311. | ✔ | ✔ | |

[a] Products compliant with 9.2.1 may be identified as organic.
[b] Products compliant with 9.2.2 may only declare the percentage of organic ingredients.
[c] Products with less than 70% organic content may identify which ingredients are organic in their ingredient list. For full labelling requirements refer to current regulations.

# Annex B
*(informative)*

# Historical organic principles

**The principles listed below were the original principles published in 2006. Though they have been updated in the introduction of this standard, they have been retained in this annex to provide context for existing organic plans.**

Organic production is based on principles that support healthy practices. These principles aim to increase the quality and the durability of the environment through specific management and production methods. They also focus on ensuring the humane treatment of animals.

The general principles of organic production include the following:

1. Protect the environment, minimize soil degradation and erosion, decrease pollution, optimize biological productivity and promote a sound state of health.

2. Maintain long-term soil fertility by optimizing conditions for biological activity within the soil.

3. Maintain biological diversity within the system.

4. Recycle materials and resources to the greatest extent possible within the enterprise.

5. Provide attentive care that promotes the health and meets the behavioural needs of livestock.

6. Prepare organic products, emphasizing careful processing, and handling methods in order to maintain the organic integrity and vital qualities of the products at all stages of production.

7. Rely on renewable resources in locally organized agriculture systems.

# Bibliography

**[1]** Canadian Food Inspection Agency (CFIA), Organic Products Equivalence Arrangements. Available from http://www.inspection.gc.ca/food/organic-products/equivalence-arrangements/eng/1311987562418/1311987760268

**[2]** Canadian Food Inspection Agency (CFIA), Organic Products Regulations, 2009 (SOR/2009-176). Available from CFIA at http://inspection.gc.ca or from Justice Laws Website at http://laws-lois.justice.gc.ca.

**[3]** Certified Organic Associations of British Columbia (COABC), *British Columbia Certified Organic Production Operation Policies and Management Standards*, December 2009. Available from http://www.certifiedorganic.bc.ca.

**[4]** Codex Alimentarius Commission, CAC/GL 20-1995 — *Principles for Food Import and Export Certification and Inspection*. Available from http://www.codexalimentarius.org.

**[5]** Codex Alimentarius Commission, CAC/GL 32-1999 — *Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods*. Available from http://www.codexalimentarius.org.

**[6]** Conseil des appellations réservées et des termes valorisants (CARTV), *Québec Organic Designation Specification Manual*, January 2015. Available from http://www.cartv.gouv.qc.ca.

**[7]** Health Canada (HC), *Pest Control Products Act* (2002, c. 28). Available from http://www.justice.gc.ca.

**[8]** International Federation of Organic Agriculture Movements (IFOAM), IFOAM Norms for Organic Production and Processing, August 2014. Available from http://www.ifoam.bio.

**[9]** U.S. Department of Agriculture, Agricultural Marketing Service, National Organic Program. Available from http://www.ams.usda.gov/AMSv1.0/nop.

## Schurkamp, Lynnea - AMS

**From:** Alexandra "Gamai" Gregory <ggregory@ccof.org>
**Sent:** Thursday, December 10, 2015 4:24 PM
**To:** Yang, RobertH - AMS
**Cc:** Lewin Jake-FASConatct; Amy Lamendella
**Subject:** Clarification: Hydroponic in US/Canada Equivalence
**Attachments:** CAN CGSB-32.310-2015E.PDF

Hello Robert,

With the recent Canadian Organic Regime (COR) standards change, we are not sure how to best honor the Canadian equivalence critical variance of prohibiting hydroponic products for export to Canada.

The COR standard has become more prescriptive as to what is classified as non-hydroponic container grown (see excerpt below), and we are not sure if we should now use these conditions to classify hydroponic product. We currently use the Canadian definition of hydroponic ("cultivation of plants in aqueous nutrient solutions without the aid of soil") and our own criteria for non-hydroponic container grown crops.

**Excerpt from CAN/CGSB-32.310-2015**

*7.5.5 The following conditions apply to containerized, staked crops (for example, tomatoes, sweet peppers, cucumbers, eggplant):*
*a) at the start of production, the total volume of soil shall consist of at least 10% compost;*
*b) compost shall be included in the fertility program;*
*c) containers shall be at least 30 cm (12 in.) high; and*
*d) the soil volume shall be at least 70 L/m² (15.4 gal./10.8 ft2), based on the total growing area*

Thank you in advance for your response,
**Alexandra "Gamai" Gregory**
Senior International & Programs Specialist
CCOF Certification Services, LLC
2155 Delaware Ave., Suite 150
Santa Cruz, CA 95060
(831) 423-2263, ext. 6234
direct (831) 346-6234
fax (831) 423-4528
ggregory@ccof.org
www.ccof.org

## Decision to approve the use of Oasis® Horticubes® in organic hydroponic production.

A Bee Organic has determined that Oasis® Horticubes® qualifies for organic production because it is an inert plastic growing container, similar to allowable plastic net pot containers.

The following definition was consulted when reviewing Oasis® Horticubes®:

- NOSB letter to NOP on April 29, 2010:

**Hydroponics-** The production of normally terrestrial, vascular plants in nutrient rich solutions or in an inert, porous, solid matrix bathed in nutrient rich solutions.

The following sections of 7 CFR Part 205 were consulted when reviewing Oasis® Horticubes®:

**§205.2** Terms defined- See attached sheet "Distinction between substances and materials in §205.2"

Substances and materials are not defined by NOP. So we looked up definitions of substance and material and chose the one(s) that seemed most relevant to the terms.

The common definition for substance (as a noun) is: "A type of solid, liquid or gas that has particular qualities." *Examples: a chemical/radioactive, etc. substance, banned or illegal substances, a sticky substance*

Common definitions of material are: "Things that are needed in order to do a particular activity." *Examples: household cleaning materials, training materials* and "A substance that things can be made from" *Examples: building materials, raw materials.*

**We realized that neither word was applicable to Oasis® Horticubes®. The word "object", defined as "a thing that you can see and touch and that is not alive" was applicable. While potting soil and coconut fiber seem to fit into the NOP distinction of "materials", Oasis® Horticubes® do not.**

**§205.105** Allowed and prohibited substances, methods, and ingredients in organic production and handling. To be sold or labeled as "100 percent organic," "organic," or "made with organic (specified ingredients or food group(s))," the product must be produced and handled without the use of:

(a) Synthetic substances and ingredients, except as provided in §205.601 or §205.603;
(b) Nonsynthetic substances prohibited in §205.602 or §205.604;
(c) Nonagricultural substances used in or on processed products, except as otherwise provided in §205.605;
(d) Nonorganic agricultural substances used in or on processed products, except as otherwise provided in §205.606;
(e) Excluded methods, except for vaccines: Provided, That, the vaccines are approved in accordance with §205.600(a);
(f) Ionizing radiation, as described in Food and Drug Administration regulation, 21 CFR 179.26; and
(g) Sewage sludge.

**§205.600** Evaluation criteria for allowed and prohibited substances, methods, and ingredients.
The following criteria will be utilized in the evaluation of substances or ingredients for the organic production and handling sections of the National List:

(a) Synthetic and nonsynthetic substances considered for inclusion on or deletion from the National List of allowed and prohibited substances will be evaluated using the criteria specified in the Act (7 U.S.C. 6517 and 6518).

**Both sections of the rule are looking at substances, methods, and ingredients. Oasis® Horticubes® are none of these. For due diligence we went back to the Act mentioned in 205.600 (OFPA) and found the following information on how the NOSB should evaluate substances:**

**§2119.17 U.S.C. 6517 (m) EVALUATION**. In evaluating substances considered for inclusion in the proposed National List or proposed amendment to the National List, the Board shall consider
(1) the potential of such substances for detrimental chemical interactions with other materials used in organic farming systems;
(2) the toxicity and mode of action of the substance and of its breakdown products or any contaminants, and their persistence and areas of concentration in the environment.
(3) the probability of environmental contamination during manufacture, use, misuse or disposal of such substance;
(4) the effect of the substance on human health;
(5) the effects of the substance on biological and chemical interactions in the agroecosystem, including the physiological effects of the substance on soil organisms (including the salt index and solubility of the soil), crop and livestock.
(6) the alternatives to using the substance in terms of practices or other available materials; and
(7) its compatibility with a system of sustainable agriculture.

**The manufacturer of Oasis® Horticubes® provided a letter stating that there are no active ingredients in Oasis® Horticubes®. The letter stated that the cubes are similar to florist foam, are completely inert and do not leach any substance or material into water. See attached letter "Oasis® Horticubes® composition"**

**We considered all of the evaluation criteria and the information provided and found**
**1- No potential detrimental chemical actions**
**2- No toxicity or breakdown into contaminants**
**3- No probability of environmental contamination**
**4- No effect on human health**
**5- No effect on the agrosystem**
**6- Oasis® Horticubes® are less likely to be contaminated than coconut coir blocks which are the only alternative and not suitable for some hydroponic and aquaponic systems.**
**7- Like any container, Oasis® Horticubes® are outside of the grower's sustainability loop. However, the cubes are low density and contain no abrasive fibers.**

**Conclusion:**

**Oasis® Horticubes® do not fall under any definition of a "substance". They are not added or applied to plants. They are not taken up by the plant root system, nor do they become a part of the plant. They are a structural support system, a permeable container.**

**Oasis® Horticubes® are NOT composed of rockwool. Oasis® Horticubes® do not pose a risk to human health or the environment any more (and perhaps less) than plastic pots, float systems, irrigation pipes, hoses, and numerous other objects used in production of organic agricultural products.**

**A Bee Organic approves Oasis® Horticubes® for use as a container/support system in organic hydroponic and aquaponic systems.**

**A Bee Organic has not yet reviewed Oasis® Rootcubes® or Oasis® Rootcubes Plus® as none of our certified producers use these products.**

## Distinction between substances and materials in §205.2

A Bee Organic has noted all use of “substance” or “material”in terms defined in §205.2. These words are highlighted in bold red or green to differentiate. We discovered that the word “substance” was generally used to define a synthetic or processed matter while the word “material” was used to define nonsynthetic matter. However, confusing the issue, nonsynthetic substance is one of the terms. (The entire definition is not given in this list, just areas where the words “substance” and/or “material” appear.)

*Agricultural inputs*. All **substances or materials** used in the production or handling of organic agricultural products.

*Ingredient*. **Any substance...**

*Feed*. Edible **materials…**

*Feed additive*. A **substance…**

*Fertilizer*. A single or blended **substance** containing one or more recognized plant nutrient(s) which is used primarily for its plant nutrient content and which is designed for use or claimed to have value in promoting plant growth.

*Forage*. Vegetative **material**

*Inert ingredient*. Any **substance** (or **group of substances** with similar chemical structures...

*Mulch*. Any nonsynthetic **material…**

*National List*. A list of allowed and prohibited **substances…**

*Nonagricultural **substance***. A **substance** that is not a product of agriculture, such as a mineral or a bacterial culture, that is used as an ingredient in an agricultural product. For the purposes of this part, a nonagricultural ingredient also includes any **substance**, such as gums, citric acid, or pectin, that is extracted from, isolated from, or a fraction of an agricultural product so that the identity of the agricultural product is unrecognizable in the extract, isolate, or fraction.

*Nonsynthetic (natural)*. A **substance** that is derived from mineral, plant, or animal matter and does not undergo a synthetic process as defined in section 6502(21) of the Act (7 U.S.C. 6502(21)). For the purposes of this part, nonsynthetic is used as a synonym for natural as the term is used in the Act.

*Pesticide*. Any **substance** which alone, in chemical combination, or in any formulation with one or more **substances** is defined as a pesticide in section 2(u) of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136(u) et seq).

*Processing aid*. (1) **Substance** that is added to a food during the processing of such food but is removed in some manner from the food before it is packaged in its finished form;

(2) a **substance** that is added to a food during processing, is converted into constituents normally present in the food, and does not significantly increase the amount of the constituents naturally found in the food; and

(3) a **substance** that is added to a food for its technical or functional effect in the processing but is present in the finished food at insignificant levels and does not have any technical or functional effect in that food.

*Prohibited **substance***. A **substance** the use of which in any aspect of organic production or handling is prohibited or not provided for in the Act or the regulations of this part.

*Residue testing*. An official or validated analytical procedure that detects, identifies, and measures the presence of chemical **substances**, their metabolites, or degradations products in or on raw or processed agricultural products.

*Synthetic*. A **substance** that is formulated or manufactured by a chemical process or by a process that chemically changes a substance extracted from naturally occurring plant, animal, or mineral sources, except that such term shall not apply to **substances** created by naturally occurring biological processes.

## Schurkamp, Lynnea - AMS

**From:** Brines, Lisa - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=BRINES, LISA76BD0B16-352D-42DE-BC50-FCF457F88103>
**Sent:** Wednesday, August 20, 2014 4:00 PM
**To:** McEvoy, Miles - AMS
**Subject:** FW: CCOF / A Bee Organics - Hydroponics Product
**Attachments:** Oasis Grower Solutions growth media.pdf

FYI. CCOF notice of discrepancy with A Bee Organics (hydroponics products)

---

**From:** Brines, Lisa - AMS
**Sent:** Wednesday, May 21, 2014 1:01 PM
**To:** devon@ccof.org
**Cc:** jake@ccof.org; Rakola, Betsy - AMS; Mann, Renee - AMS
**Subject:** RE: Notification per PM 11-4 Oasis Grower Solutions Growth Media

Dear Mr. Patillo:

Thank you for contacting the USDA National Organic Program. We have received your notification below regarding a possible discrepancy regarding the status of the products Horticubes and Rootcubes for crop production under the USDA organic regulations.

The information you provided is under review. We will contact you by email if additional information is needed to determine whether the regulations have been properly applied in evaluating this product.

If you have any further questions, please do not hesitate to let me know.

Sincerely,

Lisa M. Brines, Ph.D.
National List Manager
Standards Division, National Organic Program
USDA Agricultural Marketing Service
Direct: 202-821-9683
lisa.brines@ams.usda.gov

*Register for the USDA Organic Insider, the National Organic Program's email notification service, by visiting http://bit.ly/NOPOrganicInsiderRegistration.*

---

**From:** AMS - Guidance, NOP
**Sent:** Tuesday, May 20, 2014 8:07 PM
**To:** Brines, Lisa - AMS
**Subject:** FW: Notification per PM 11-4 Oasis Grower Solutions Growth Media

---

**From:** Devon Pattillo
**Sent:** Wednesday, May 21, 2014 12:07:11 AM (UTC) Coordinated Universal Time

**To:** AMS - Guidance, NOP
**Cc:** Jake Lewin; Rakola, Betsy - AMS
**Subject:** Notification per PM 11-4 Oasis Grower Solutions Growth Media

Per NOP Policy Memo 11-4, CCOF is providing NOP with this notification.

CCOF differs from A Bee Organic in our evaluation of the product "Horticubes" and "Rootcubes" by Oasis Grower Solutions. See http://www.oasiseasyhydro.com/oasis-easy-hydro-horticubes-product.asp. These are growing media products used in hydroponic systems.

CCOF is evaluating hydroponic growing media based on 1) determination of synthetic vs. non-synthetic status, and 2) the potential for uptake and/or translocation of synthetic materials via root-media interaction.

As we understand it, this is a phenolic foam product based on phenol-formaldehyde chemistry with added surfactants, colorants, and catalysts (see attached). Therefore, we find these material to be synthetic and not allowed per the National List. This is based on information provided by the manufacturer about the manufacturing process (attached).

Furthermore, we expect plant roots to permeate the growing media and therefore expect significant root-media interaction (compared to a Styrofoam block used to float plants, for instance). Our evaluation of the of the potential for root-media interactions is supported by evidence presented in the attached document (page 3) disclosing that analysis of plants grown on these products indicate presence of surfactants and sulfonic acids. These are synthetic products involved in the manufacture of the products.

CCOF has not allowed our certified hydroponic operations to use these specific products and have communicated the same position on a number of similar products. We also understand our review practices to be aligned with OMRI's policies and those of other accredited certifiers.

We have communicated in the past with Ron Elgas at A Bee Organic on this issue and he has notified us that they differ from CCOF in our conclusion on this material.

Please let me know if you need anything else from CCOF. We look forward to hearing from you soon.

Regards,

**Devon Pattillo**
Livestock Certification Supervisor & Materials Coordinator
CCOF
2155 Delaware Ave., Suite 150
Santa Cruz, CA 95060
(831) 423-2263, ext. 39
fax (831) 423-4528
www.ccof.org
Visit CCOF on Facebook and Twitter

## Schurkamp, Lynnea - AMS

**From:** Dave Lockman <dave.lockman@pro-cert.org>
**Sent:** Wednesday, March 09, 2016 1:16 PM
**To:** McElroy, Bridget - AMS
**Subject:** FW: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
**Attachments:** image001.jpg

Dear Bridget,

We do not currently certify hydroponic, aeroponic or aquaponics operations.

If you have any questions please do not hesitate to contact me.

Sincerely,
**Pro-Cert Organic Systems Ltd.**
Dave Lockman, MBA, P.Ag.
Certification Manager, Eastern Region

2311 Elm Tree Road, P.O. Box 74
Cambray, ON CANADA K0M 1E0
Ph: (705) 374-5602
Fx: (705) 374-5604
E: dave.lockman@pro-cert.org
Web: www.pro-cert.org


**From:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **On Behalf Of** AMS - AIAinbox
**Sent:** March-01-16 10:12 AM
**To:** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**Cc:** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au; organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au; michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA, Reno, NV <clinton.koble@nv.usda.gov>; emel.erkan@bio-inspecta.com; central@biolatina.com; baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; rporto@caae.es; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; rporto@caae.es; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct <jake@ccof.org>; jvdschootbrugge@controlunion.com; ceres@ceres-cert.com; rsetti@ccpb.it; vincent.morel@ecocert.com; info@certisys.eu; direccionejecutiva@certimexsc.com; agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us;

Nathalie.Boes@certisys.eu; joy.mccracken@georgiacrop.com; organic@controlunion.com; organic@clemson.edu; cvanhook77@earthlink.net; info.ecocertico@ecocert.com; amy.stafford@state.co.us; goabecky@centurylink.net; aude.bonnet@ecocert.com; dszalai@controlunion.com; camila@ibd.com.br; ep@ecoglobe.am; Jeffry.EVARD@ecocert.com; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; aude.bonnet@ecocert.com; Beatrice.Breuer@imo.ch; info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@eco-logica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; a.moutapam@lacon-institut.org; Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov; spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; soh@imo.ch; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; lacon@lacon-institut.org; adam.watson@ky.gov; kirrilley.becker@nasaa.com.au; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; j.kopp@lacon-institut.org; jabbott@agri.nv.gov; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; abrewster@ocia.org; sachin.ayachit@nasaa.com.au; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; sachin.ayachit@nasaa.com.au; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; thughes@nsf.org; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org; ocd@omicnet.com; susan@occert.com; pco@paorganic.org; celder@ocia.org; PrimusOrganic@primuslabs.com; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; qai@qai-inc.com; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; deborah.mansfield@primuslabs.com; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; irendon@nsf.org; Organic@TexasAgriculture.gov; robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org

**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both

systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** Mann, Renee - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MANN, RENEE6BA41DDD-4FFB-41B9-9712-F7EF2E4B19ED>
**Sent:** Tuesday, March 01, 2016 10:35 AM
**To:** McElroy, Bridget - AMS
**Subject:** FW: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

FYI

Renee Mann
Assistant Director, Accreditation and International Activities Division
USDA National Organic Program
(202) 260-8635
Join the NOP mailing list.

---

**From:** Baron , Anne - AMS
**Sent:** Tuesday, March 01, 2016 10:29 AM
**To:** Courtney, Cheri - AMS <Cheri.Courtney@ams.usda.gov>; Crail, Lars - AMS <Lars.Crail@ams.usda.gov>; Gebault King, ReneeA - AMS <ReneeA.GebaultKing@ams.usda.gov>; Lopez, JasonJ - AMS <JasonJ.Lopez@ams.usda.gov>; Lusby, MaryLou - AMS <MaryLou.Lusby@ams.usda.gov>; Mann, Renee - AMS <Renee.Mann@ams.usda.gov>; Yang, RobertH - AMS <RobertH.Yang@ams.usda.gov>; Zuck, Penelope - AMS <Penelope.Zuck@ams.usda.gov>; Adams, Edith - AMS <Edith.Adams@ams.usda.gov>; Caceres, Miguel - AMS <Miguel.Caceres@ams.usda.gov>; Friesenhahn, Martin - AMS <Martin.Friesenhahn@ams.usda.gov>; Gilbert, Corey - AMS <Corey.Gilbert@ams.usda.gov>; Heckart, Patricia - AMS <Patricia.Heckart@ams.usda.gov>; Hildreth, David - AMS <David.Hildreth@ams.usda.gov>; Horne, Willy - AMS <Willy.Horne@ams.usda.gov>; Kohles, Alan - AMS <Alan.Kohles@ams.usda.gov>; Lopez, Mike - AMS <Mike.Lopez@ams.usda.gov>; Matejovsky, Kathryn - AMS <Kathryn.Matejovsky@ams.usda.gov>; Ross, Steve - AMS <Steve.Ross@ams.usda.gov>; Schoop, Jamie - AMS <Jamie.Schoop@ams.usda.gov>; Skinner, Rick - AMS <Rick.Skinner@ams.usda.gov>; Wilson, Darrell - AMS <Darrell.Wilson@ams.usda.gov>; Gebel, Kelley - AMS <Kelley.Gebel@ams.usda.gov>; McEvoy, Miles - AMS <Miles.McEvoy@ams.usda.gov>; Tucker, Jennifer - AMS <Jennifer.Tucker@ams.usda.gov>; Nelson, Kristen - AMS <Kristen.Nelson@ams.usda.gov>; Lewis, Paul I - AMS <PaulI.Lewis@ams.usda.gov>; Holmes, Vella - AMS <Vella.Holmes@ams.usda.gov>; Michael, Matthew - AMS <Matthew.Michael@ams.usda.gov>; andy@oeffa.org
**Subject:** FW: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Dear AIA staff, NOP Management Team and QAD auditors,

Please find below the message sent to the certifiers.
Let us know if you have any questions.

Regards,
Alvik Joseph

---

**From:** Baron , Anne - AMS **On Behalf Of** AMS - AIAinbox
**Sent:** Tuesday, March 01, 2016 10:12 AM
**To:** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**Cc:** 'admin@abeeorganic.com' <admin@abeeorganic.com>; 'sarah@abeeorganic.com' <sarah@abeeorganic.com>; 'ro@abeeorganic.com' <ro@abeeorganic.com>; 'info@ascorganic.com' <info@ascorganic.com>; 'Kat@ascorganic.com' <Kat@ascorganic.com>; 'mfigueiras@argencert.com.ar' <mfigueiras@argencert.com.ar>; 'americert@gmail.com'

<americert@gmail.com>; 'americert@gmail.com' <americert@gmail.com>; 'organic@ausmeat.com.au' <organic@ausmeat.com.au>; 'info@argencert.com.ar' <info@argencert.com.ar>; 'lmontenegro@argencert.com.ar' <lmontenegro@argencert.com.ar>; 'jorge.larranaga@aco.net.au' <jorge.larranaga@aco.net.au>; 'organic@ausqual.com.au' <organic@ausqual.com.au>; 'elise@ausqual.com.au' <elise@ausqual.com.au>; 'dcox@baystateorganic.org' <dcox@baystateorganic.org>; 'michael.baker@aco.net.au' <michael.baker@aco.net.au>; 'michael.baker@aco.net.au' <michael.baker@aco.net.au>; 'roxana.priego@biolatina.com.pe' <roxana.priego@biolatina.com.pe>; 'baystateorganic@earthlink.net' <baystateorganic@earthlink.net>; Koble, Clinton - FSA, Reno, NV <clinton.koble@nv.usda.gov>; 'emel.erkan@bio-inspecta.com' <emel.erkan@bio-inspecta.com>; 'central@biolatina.com' <central@biolatina.com>; 'baystateorganic@earthlink.net' <baystateorganic@earthlink.net>; 'amalia.rueda@bioagricert.org' <amalia.rueda@bioagricert.org>; 'admin@bio-inspecta.ch' <admin@bio-inspecta.ch>; 'central@biolatina.com' <central@biolatina.com>; 'Pat.Kennelly@cdph.ca.gov' <Pat.Kennelly@cdph.ca.gov>; 'info@bioagricert.org' <info@bioagricert.org>; 'julia.winter@bio-inspecta.ch' <julia.winter@bio-inspecta.ch>; 'accreditation@ccof.org' <accreditation@ccof.org>; 'Bolicert@megalink.com' <Bolicert@megalink.com>; 'riccardo.cozzo@bioagricert.org' <riccardo.cozzo@bioagricert.org>; 'calidad@certimexsc.com' <calidad@certimexsc.com>; 'rporto@caae.es' <rporto@caae.es>; 'Bolicert@bolicert.org' <Bolicert@bolicert.org>; 'tom.nizet@certisys.eu' <tom.nizet@certisys.eu>; 'ccof@ccof.org' <ccof@ccof.org>; 'rporto@caae.es' <rporto@caae.es>; saltmn@clemson.edu; 'ccpb@ccpb.it' <ccpb@ccpb.it>; 'Danny.Lee@cdfa.ca.gov' <Danny.Lee@cdfa.ca.gov>; 'mitchell.yergert@state.co.us' <mitchell.yergert@state.co.us>; 'certimex@certimexsc.com' <certimex@certimexsc.com>; Lewin Jake-FASConatct <jake@ccof.org>; 'jvdschootbrugge@controlunion.com' <jvdschootbrugge@controlunion.com>; 'ceres@ceres-cert.com' <ceres@ceres-cert.com>; 'rsetti@ccpb.it' <rsetti@ccpb.it>; 'vincent.morel@ecocert.com' <vincent.morel@ecocert.com>; 'info@certisys.eu' <info@certisys.eu>; 'direccionejecutiva@certimexsc.com' <direccionejecutiva@certimexsc.com>; 'agroecologiauna@gmail.com' <agroecologiauna@gmail.com>; 'organic@clemson.edu' <organic@clemson.edu>; 'benzing@ceres-cert.com' <benzing@ceres-cert.com>; 'mefraga@foodsafety.com.ar' <mefraga@foodsafety.com.ar>; 'amy.stafford@state.co.us' <amy.stafford@state.co.us>; 'Nathalie.Boes@certisys.eu' <Nathalie.Boes@certisys.eu>; 'joy.mccracken@georgiacrop.com' <joy.mccracken@georgiacrop.com>; 'organic@controlunion.com' <organic@controlunion.com>; 'organic@clemson.edu' <organic@clemson.edu>; 'cvanhook77@earthlink.net' <cvanhook77@earthlink.net>; 'info.ecocertico@ecocert.com' <info.ecocertico@ecocert.com>; 'amy.stafford@state.co.us' <amy.stafford@state.co.us>; 'goabecky@centurylink.net' <goabecky@centurylink.net>; 'aude.bonnet@ecocert.com' <aude.bonnet@ecocert.com>; 'dszalai@controlunion.com' <dszalai@controlunion.com>; 'camila@ibd.com.br' <camila@ibd.com.br>; 'ep@ecoglobe.am' <ep@ecoglobe.am>; 'Jeffry.EVARD@ecocert.com' <Jeffry.EVARD@ecocert.com>; 'Jason.Laney@agri.idaho.gov' <Jason.Laney@agri.idaho.gov>; 'pdescamps@eco-logica.com' <pdescamps@eco-logica.com>; 'aude.bonnet@ecocert.com' <aude.bonnet@ecocert.com>; 'Beatrice.Breuer@imo.ch' <Beatrice.Breuer@imo.ch>; 'info@etko.org' <info@etko.org>; 'nd@ecoglobe.am' <nd@ecoglobe.am>; 'Mary.nieland@iowaagriculture.gov' <Mary.nieland@iowaagriculture.gov>; 'foodsafety@foodsafety.com.ar' <foodsafety@foodsafety.com.ar>; 'pdescamps@eco-logica.com' <pdescamps@eco-logica.com>; 'p.perrone@icea.info' <p.perrone@icea.info>; 'terry.hollifield@georgiacrop.com' <terry.hollifield@georgiacrop.com>; 'ma@etko.org' <ma@etko.org>; 'Kristen.Branscum@ky.gov' <Kristen.Branscum@ky.gov>; 'info@globalculture.us' <info@globalculture.us>; 'calidad@foodsafety.com.ar' <calidad@foodsafety.com.ar>; 'herr@bcs-oeko.de' <herr@bcs-oeko.de>; 'goaorg@centurylink.net' <goaorg@centurylink.net>; 'terry.hollifield@georgiacrop.com' <terry.hollifield@georgiacrop.com>; 'a.moutapam@lacon-institut.org' <a.moutapam@lacon-institut.org>; 'Ibd@Ibd.com.br' <Ibd@Ibd.com.br>; 'globalculture@earthlink.net' <globalculture@earthlink.net>; 'monica@letis.org' <monica@letis.org>; 'Johanna.Phillips@agri.idaho.gov' <Johanna.Phillips@agri.idaho.gov>; 'goaorg@centurylink.net' <goaorg@centurylink.net>; scarlsen@co.marin.ca.us; 'imo@imo.ch' <imo@imo.ch>; 'gwendal@ibd.com.br' <gwendal@ibd.com.br>; 'juanantonio.mendoza@mayacert.com' <juanantonio.mendoza@mayacert.com>; 'info@ics-intl.com' <info@ics-intl.com>; 'Johanna.Phillips@agri.idaho.gov' <Johanna.Phillips@agri.idaho.gov>; 'spwalker@mosaorganic.org' <spwalker@mosaorganic.org>; 'maury.wills@iowaagriculture.gov' <maury.wills@iowaagriculture.gov>; 'soh@imo.ch' <soh@imo.ch>; 'wippl001@umn.edu' <wippl001@umn.edu>; 'nop@icea.info' <nop@icea.info>; 'dawn@ics-intl.com' <dawn@ics-intl.com>; 'knewkirk@mofga.org' <knewkirk@mofga.org>; 'adam.watson@ky.gov' <adam.watson@ky.gov>; 'maury.wills@iowaagriculture.gov' <maury.wills@iowaagriculture.gov>; 'etyanich@mt.gov' <etyanich@mt.gov>; 'info@bcs-oeko.de' <info@bcs-oeko.de>;

'nop@icea.info' <nop@icea.info>; 'CarltonN@co.monterey.ca.us' <CarltonN@co.monterey.ca.us>; 'lacon@lacon-institut.org' <lacon@lacon-institut.org>; 'adam.watson@ky.gov' <adam.watson@ky.gov>; 'kirrilley.becker@nasaa.com.au' <kirrilley.becker@nasaa.com.au>; 'letis@letis.org' <letis@letis.org>; 'fischer@bcs-oeko.de' <fischer@bcs-oeko.de>; 'cfanta@naturesinternational.com' <cfanta@naturesinternational.com>; 'jstiles@marincounty.org' <jstiles@marincounty.org>; 'j.kopp@lacon-institut.org' <j.kopp@lacon-institut.org>; 'jabbott@agri.nv.gov' <jabbott@agri.nv.gov>; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; 'internacional@letis.org' <internacional@letis.org>; 'Victoria.Smith@agr.nh.gov' <Victoria.Smith@agr.nh.gov>; 'info@mayacert.com' <info@mayacert.com>; 'jstiles@marincounty.org' <jstiles@marincounty.org>; 'Daniel.wunderlich@ag.state.nj.us' <Daniel.wunderlich@ag.state.nj.us>; 'mosa@mosaorganic.org' <mosa@mosaorganic.org>; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; 'SGerk@nmda.nmsu.edu' <SGerk@nmda.nmsu.edu>; 'mncia@mncia.org' <mncia@mncia.org>; 'noe.rivera@mayacert.com' <noe.rivera@mayacert.com>; 'lisaengelbert@nofany.org' <lisaengelbert@nofany.org>; 'certification@mofga.org' <certification@mofga.org>; 'cskolaski@mosaorganic.org' <cskolaski@mosaorganic.org>; 'Bryan.Buchwald@ag.ok.gov' <Bryan.Buchwald@ag.ok.gov>; 'agrorganic@mt.gov' <agrorganic@mt.gov>; 'michelle.menken@mncia.org' <michelle.menken@mncia.org>; 'leng@oda.state.or.us' <leng@oda.state.or.us>; 'agcomm@co.monterey.ca.us' <agcomm@co.monterey.ca.us>; 'yurlina@mofga.org' <yurlina@mofga.org>; 'abrewster@ocia.org' <abrewster@ocia.org>; 'sachin.ayachit@nasaa.com.au' <sachin.ayachit@nasaa.com.au>; 'gwebster@mt.gov' <gwebster@mt.gov>; 'gestiondecalidad@oia.com.ar' <gestiondecalidad@oia.com.ar>; 'nfccertification@gmail.com' <nfccertification@gmail.com>; 'Huntinggb@co.monterey.ca.us' <Huntinggb@co.monterey.ca.us>; 'hi.yoshida@omicnet.com' <hi.yoshida@omicnet.com>; 'nics@naturesinternational.com' <nics@naturesinternational.com>; 'sachin.ayachit@nasaa.com.au' <sachin.ayachit@nasaa.com.au>; 'kyla@paorganic.org' <kyla@paorganic.org>; 'Jennifer.Gornnert@agr.nh.gov' <Jennifer.Gornnert@agr.nh.gov>; 'nfccertification@gmail.com' <nfccertification@gmail.com>; 'brian.mansfield@primuslabs.com' <brian.mansfield@primuslabs.com>; 'erich.bremer@ag.state.nj.us' <erich.bremer@ag.state.nj.us>; 'dave@naturesinternational.com' <dave@naturesinternational.com>; 'byron.hamm@pro-cert.org' <byron.hamm@pro-cert.org>; 'organic@nmda.nmsu.edu' <organic@nmda.nmsu.edu>; 'ajeppson@agri.nv.gov' <ajeppson@agri.nv.gov>; 'thughes@nsf.org' <thughes@nsf.org>; 'certifiedorganic@nofany.org' <certifiedorganic@nofany.org>; 'Jennifer.Gornnert@agr.nh.gov' <Jennifer.Gornnert@agr.nh.gov>; 'ram@qcsinfo.org' <ram@qcsinfo.org>; 'organic@oeffa.org' <organic@oeffa.org>; 'erich.bremer@ag.state.nj.us' <erich.bremer@ag.state.nj.us>; 'dkirsanovaphillips@scscertified.com' <dkirsanovaphillips@scscertified.com>; 'jeff.stearns@ag.ok.gov' <jeff.stearns@ag.ok.gov>; 'bbakker@nmda.nmsu.edu' <bbakker@nmda.nmsu.edu>; 'rhougaard@utah.gov' <rhougaard@utah.gov>; 'info@onecert.com' <info@onecert.com>; 'lori@nofany.org' <lori@nofany.org>; 'Laura@nofavt.org' <Laura@nofavt.org>; 'cid-organic@oda.state.or.us' <cid-organic@oda.state.or.us>; 'andy@oeffa.org' <andy@oeffa.org>; 'srice@agr.wa.gov' <srice@agr.wa.gov>; 'organic@tilth.org' <organic@tilth.org>; 'jeff.stearns@ag.ok.gov' <jeff.stearns@ag.ok.gov>; john.young@yolocounty.org; 'info@occert.com' <info@occert.com>; 'sam@onecert.com' <sam@onecert.com>; 'xiao@ofdc.org.cn' <xiao@ofdc.org.cn>; 'kallen@oda.state.or.us' <kallen@oda.state.or.us>; 'oia@oia.com.ar' <oia@oia.com.ar>; 'connie@tilth.org' <connie@tilth.org>; 'ocd@omicnet.com' <ocd@omicnet.com>; 'susan@occert.com' <susan@occert.com>; 'pco@paorganic.org' <pco@paorganic.org>; 'celder@ocia.org' <celder@ocia.org>; 'PrimusOrganic@primuslabs.com' <PrimusOrganic@primuslabs.com>; 'xiao@ofdc.org.cn' <xiao@ofdc.org.cn>; 'info@pro-cert.org' <info@pro-cert.org>; 'pedroalanda@oia.com.ar' <pedroalanda@oia.com.ar>; 'qai@qai-inc.com' <qai@qai-inc.com>; 'ocd@omicnet.com' <ocd@omicnet.com>; 'qcs@qcsinfo.org' <qcs@qcsinfo.org>; leslie@paorganic.org; matt.green@dem.ri.gov; 'deborah.mansfield@primuslabs.com' <deborah.mansfield@primuslabs.com>; 'organic@scsglobalservice.com' <organic@scsglobalservice.com>; 'Dave.Lockman@pro-cert.org' <Dave.Lockman@pro-cert.org>; 'Sally@Demeter-USA.org' <Sally@Demeter-USA.org>; 'irendon@nsf.org' <irendon@nsf.org>; 'Organic@TexasAgriculture.gov' <Organic@TexasAgriculture.gov>; 'robin@qcsinfo.org' <robin@qcsinfo.org>; 'Toaf007@gmail.com' <Toaf007@gmail.com>; matt.green@dem.ri.gov; 'rlarsen@utah.gov' <rlarsen@utah.gov>; 'bnauman@scsglobalservices.com' <bnauman@scsglobalservices.com>; 'Info@nofavt.org' <Info@nofavt.org>; 'Sally@Demeter-USA.org' <Sally@Demeter-USA.org>; 'organic@agr.wa.gov' <organic@agr.wa.gov>; 'Mary.Holliman@texasagriculture.gov' <Mary.Holliman@texasagriculture.gov>; 'dennis.chambers@yolocounty.org' <dennis.chambers@yolocounty.org>; (b) (6) @gmail.com (b) (6) @gmail.com>; 'rlarsen@utah.gov' <rlarsen@utah.gov>; 'Nicole@nofavt.org' <Nicole@nofavt.org>; 'bbook@agr.wa.gov' <bbook@agr.wa.gov>;

'dennis.chambers@yolocounty.org' <dennis.chambers@yolocounty.org>
**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** Baron , Anne - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=BARON, ANNE -9E6767D8-A2C1-4F25-B867-3CDCFF9C6FF6AA9>
**Sent:** Tuesday, March 01, 2016 10:29 AM
**To:** Courtney, Cheri - AMS; Crail, Lars - AMS; Gebault King, ReneeA - AMS; Lopez, JasonJ - AMS; Lusby, MaryLou - AMS; Mann, Renee - AMS; Yang, RobertH - AMS; Zuck, Penelope - AMS; Adams, Edith - AMS; Caceres, Miguel - AMS; Friesenhahn, Martin - AMS; Gilbert, Corey - AMS; Heckart, Patricia - AMS; Hildreth, David - AMS; Horne, Willy - AMS; Kohles, Alan - AMS; Lopez, Mike - AMS; Matejovsky, Kathryn - AMS; Ross, Steve - AMS; Schoop, Jamie - AMS; Skinner, Rick - AMS; Wilson, Darrell - AMS; Gebel, Kelley - AMS; McEvoy, Miles - AMS; Tucker, Jennifer - AMS; Nelson, Kristen - AMS; Lewis, Paul I - AMS; Holmes, Vella - AMS; Michael, Matthew - AMS; andy@oeffa.org
**Subject:** FW: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Dear AIA staff, NOP Management Team and QAD auditors,

Please find below the message sent to the certifiers.
Let us know if you have any questions.

Regards,
Alvik Joseph

---

**From:** Baron , Anne - AMS **On Behalf Of** AMS - AIAinbox
**Sent:** Tuesday, March 01, 2016 10:12 AM
**To:** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**Cc:** 'admin@abeeorganic.com' <admin@abeeorganic.com>; 'sarah@abeeorganic.com' <sarah@abeeorganic.com>; 'ro@abeeorganic.com' <ro@abeeorganic.com>; 'info@ascorganic.com' <info@ascorganic.com>; 'Kat@ascorganic.com' <Kat@ascorganic.com>; 'mfigueiras@argencert.com.ar' <mfigueiras@argencert.com.ar>; 'americert@gmail.com' <americert@gmail.com>; 'americert@gmail.com' <americert@gmail.com>; 'organic@ausmeat.com.au' <organic@ausmeat.com.au>; 'info@argencert.com.ar' <info@argencert.com.ar>; 'lmontenegro@argencert.com.ar' <lmontenegro@argencert.com.ar>; 'jorge.larranaga@aco.net.au' <jorge.larranaga@aco.net.au>; 'organic@ausqual.com.au' <organic@ausqual.com.au>; 'elise@ausqual.com.au' <elise@ausqual.com.au>; 'dcox@baystateorganic.org' <dcox@baystateorganic.org>; 'michael.baker@aco.net.au' <michael.baker@aco.net.au>; 'michael.baker@aco.net.au' <michael.baker@aco.net.au>; 'roxana.priego@biolatina.com.pe' <roxana.priego@biolatina.com.pe>; 'baystateorganic@earthlink.net' <baystateorganic@earthlink.net>; Koble, Clinton - FSA, Reno, NV <clinton.koble@nv.usda.gov>; 'emel.erkan@bio-inspecta.com' <emel.erkan@bio-inspecta.com>; 'central@biolatina.com' <central@biolatina.com>; 'baystateorganic@earthlink.net' <baystateorganic@earthlink.net>; 'amalia.rueda@bioagricert.org' <amalia.rueda@bioagricert.org>; 'admin@bio-inspecta.ch' <admin@bio-inspecta.ch>; 'central@biolatina.com' <central@biolatina.com>; 'Pat.Kennelly@cdph.ca.gov' <Pat.Kennelly@cdph.ca.gov>; 'info@bioagricert.org' <info@bioagricert.org>; 'julia.winter@bio-inspecta.ch' <julia.winter@bio-inspecta.ch>; 'accreditation@ccof.org' <accreditation@ccof.org>; 'Bolicert@megalink.com' <Bolicert@megalink.com>; 'riccardo.cozzo@bioagricert.org' <riccardo.cozzo@bioagricert.org>; 'calidad@certimexsc.com' <calidad@certimexsc.com>; 'rporto@caae.es' <rporto@caae.es>; 'Bolicert@bolicert.org' <Bolicert@bolicert.org>; 'tom.nizet@certisys.eu' <tom.nizet@certisys.eu>; 'ccof@ccof.org' <ccof@ccof.org>; 'rporto@caae.es' <rporto@caae.es>; saltmn@clemson.edu; 'ccpb@ccpb.it' <ccpb@ccpb.it>; 'Danny.Lee@cdfa.ca.gov' <Danny.Lee@cdfa.ca.gov>; 'mitchell.yergert@state.co.us' <mitchell.yergert@state.co.us>; 'certimex@certimexsc.com' <certimex@certimexsc.com>; Lewin Jake-FASConatct <jake@ccof.org>; 'jvdschootbrugge@controlunion.com' <jvdschootbrugge@controlunion.com>; 'ceres@ceres-cert.com' <ceres@ceres-cert.com>; 'rsetti@ccpb.it'

<rsetti@ccpb.it>; 'vincent.morel@ecocert.com' <vincent.morel@ecocert.com>; 'info@certisys.eu' <info@certisys.eu>; 'direccionejecutiva@certimexsc.com' <direccionejecutiva@certimexsc.com>; 'agroecologiauna@gmail.com' <agroecologiauna@gmail.com>; 'organic@clemson.edu' <organic@clemson.edu>; 'benzing@ceres-cert.com' <benzing@ceres-cert.com>; 'mefraga@foodsafety.com.ar' <mefraga@foodsafety.com.ar>; 'amy.stafford@state.co.us' <amy.stafford@state.co.us>; 'Nathalie.Boes@certisys.eu' <Nathalie.Boes@certisys.eu>; 'joy.mccracken@georgiacrop.com' <joy.mccracken@georgiacrop.com>; 'organic@controlunion.com' <organic@controlunion.com>; 'organic@clemson.edu' <organic@clemson.edu>; 'cvanhook77@earthlink.net' <cvanhook77@earthlink.net>; 'info.ecocertico@ecocert.com' <info.ecocertico@ecocert.com>; 'amy.stafford@state.co.us' <amy.stafford@state.co.us>; 'goabecky@centurylink.net' <goabecky@centurylink.net>; 'aude.bonnet@ecocert.com' <aude.bonnet@ecocert.com>; 'dszalai@controlunion.com' <dszalai@controlunion.com>; 'camila@ibd.com.br' <camila@ibd.com.br>; 'ep@ecoglobe.am' <ep@ecoglobe.am>; 'Jeffry.EVARD@ecocert.com' <Jeffry.EVARD@ecocert.com>; 'Jason.Laney@agri.idaho.gov' <Jason.Laney@agri.idaho.gov>; 'pdescamps@eco-logica.com' <pdescamps@eco-logica.com>; 'aude.bonnet@ecocert.com' <aude.bonnet@ecocert.com>; 'Beatrice.Breuer@imo.ch' <Beatrice.Breuer@imo.ch>; 'info@etko.org' <info@etko.org>; 'nd@ecoglobe.am' <nd@ecoglobe.am>; 'Mary.nieland@iowaagriculture.gov' <Mary.nieland@iowaagriculture.gov>; 'foodsafety@foodsafety.com.ar' <foodsafety@foodsafety.com.ar>; 'pdescamps@eco-logica.com' <pdescamps@eco-logica.com>; 'p.perrone@icea.info' <p.perrone@icea.info>; 'terry.hollifield@georgiacrop.com' <terry.hollifield@georgiacrop.com>; 'ma@etko.org' <ma@etko.org>; 'Kristen.Branscum@ky.gov' <Kristen.Branscum@ky.gov>; 'info@globalculture.us' <info@globalculture.us>; 'calidad@foodsafety.com.ar' <calidad@foodsafety.com.ar>; 'herr@bcs-oeko.de' <herr@bcs-oeko.de>; 'goaorg@centurylink.net' <goaorg@centurylink.net>; 'terry.hollifield@georgiacrop.com' <terry.hollifield@georgiacrop.com>; 'a.moutapam@lacon-institut.org' <a.moutapam@lacon-institut.org>; 'Ibd@Ibd.com.br' <Ibd@Ibd.com.br>; 'globalculture@earthlink.net' <globalculture@earthlink.net>; 'monica@letis.org' <monica@letis.org>; 'Johanna.Phillips@agri.idaho.gov' <Johanna.Phillips@agri.idaho.gov>; 'goaorg@centurylink.net' <goaorg@centurylink.net>; scarlsen@co.marin.ca.us; 'imo@imo.ch' <imo@imo.ch>; 'gwendal@ibd.com.br' <gwendal@ibd.com.br>; 'juanantonio.mendoza@mayacert.com' <juanantonio.mendoza@mayacert.com>; 'info@ics-intl.com' <info@ics-intl.com>; 'Johanna.Phillips@agri.idaho.gov' <Johanna.Phillips@agri.idaho.gov>; 'spwalker@mosaorganic.org' <spwalker@mosaorganic.org>; 'maury.wills@iowaagriculture.gov' <maury.wills@iowaagriculture.gov>; 'soh@imo.ch' <soh@imo.ch>; 'wippl001@umn.edu' <wippl001@umn.edu>; 'nop@icea.info' <nop@icea.info>; 'dawn@ics-intl.com' <dawn@ics-intl.com>; 'knewkirk@mofga.org' <knewkirk@mofga.org>; 'adam.watson@ky.gov' <adam.watson@ky.gov>; 'maury.wills@iowaagriculture.gov' <maury.wills@iowaagriculture.gov>; 'etyanich@mt.gov' <etyanich@mt.gov>; 'info@bcs-oeko.de' <info@bcs-oeko.de>; 'nop@icea.info' <nop@icea.info>; 'CarltonN@co.monterey.ca.us' <CarltonN@co.monterey.ca.us>; 'lacon@lacon-institut.org' <lacon@lacon-institut.org>; 'adam.watson@ky.gov' <adam.watson@ky.gov>; 'kirrilley.becker@nasaa.com.au' <kirrilley.becker@nasaa.com.au>; 'letis@letis.org' <letis@letis.org>; 'fischer@bcs-oeko.de' <fischer@bcs-oeko.de>; 'cfanta@naturesinternational.com' <cfanta@naturesinternational.com>; 'jstiles@marincounty.org' <jstiles@marincounty.org>; 'j.kopp@lacon-institut.org' <j.kopp@lacon-institut.org>; 'jabbott@agri.nv.gov' <jabbott@agri.nv.gov>; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; 'internacional@letis.org' <internacional@letis.org>; 'Victoria.Smith@agr.nh.gov' <Victoria.Smith@agr.nh.gov>; 'info@mayacert.com' <info@mayacert.com>; 'jstiles@marincounty.org' <jstiles@marincounty.org>; 'Daniel.wunderlich@ag.state.nj.us' <Daniel.wunderlich@ag.state.nj.us>; 'mosa@mosaorganic.org' <mosa@mosaorganic.org>; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; 'SGerk@nmda.nmsu.edu' <SGerk@nmda.nmsu.edu>; 'mncia@mncia.org' <mncia@mncia.org>; 'noe.rivera@mayacert.com' <noe.rivera@mayacert.com>; 'lisaengelbert@nofany.org' <lisaengelbert@nofany.org>; 'certification@mofga.org' <certification@mofga.org>; 'cskolaski@mosaorganic.org' <cskolaski@mosaorganic.org>; 'Bryan.Buchwald@ag.ok.gov' <Bryan.Buchwald@ag.ok.gov>; 'agrorganic@mt.gov' <agrorganic@mt.gov>; 'michelle.menken@mncia.org' <michelle.menken@mncia.org>; 'leng@oda.state.or.us' <leng@oda.state.or.us>; 'agcomm@co.monterey.ca.us' <agcomm@co.monterey.ca.us>; 'yurlina@mofga.org' <yurlina@mofga.org>; 'abrewster@ocia.org' <abrewster@ocia.org>; 'sachin.ayachit@nasaa.com.au' <sachin.ayachit@nasaa.com.au>; 'gwebster@mt.gov' <gwebster@mt.gov>; 'gestiondecalidad@oia.com.ar' <gestiondecalidad@oia.com.ar>; 'nfccertification@gmail.com' <nfccertification@gmail.com>; 'Huntinggb@co.monterey.ca.us' <Huntinggb@co.monterey.ca.us>; 'hi.yoshida@omicnet.com' <hi.yoshida@omicnet.com>; 'nics@naturesinternational.com'

<nics@naturesinternational.com>; 'sachin.ayachit@nasaa.com.au' <sachin.ayachit@nasaa.com.au>; 'kyla@paorganic.org' <kyla@paorganic.org>; 'Jennifer.Gornnert@agr.nh.gov' <Jennifer.Gornnert@agr.nh.gov>; 'nfccertification@gmail.com' <nfccertification@gmail.com>; 'brian.mansfield@primuslabs.com' <brian.mansfield@primuslabs.com>; 'erich.bremer@ag.state.nj.us' <erich.bremer@ag.state.nj.us>; 'dave@naturesinternational.com' <dave@naturesinternational.com>; 'byron.hamm@pro-cert.org' <byron.hamm@pro-cert.org>; 'organic@nmda.nmsu.edu' <organic@nmda.nmsu.edu>; 'ajeppson@agri.nv.gov' <ajeppson@agri.nv.gov>; 'thughes@nsf.org' <thughes@nsf.org>; 'certifiedorganic@nofany.org' <certifiedorganic@nofany.org>; 'Jennifer.Gornnert@agr.nh.gov' <Jennifer.Gornnert@agr.nh.gov>; 'ram@qcsinfo.org' <ram@qcsinfo.org>; 'organic@oeffa.org' <organic@oeffa.org>; 'erich.bremer@ag.state.nj.us' <erich.bremer@ag.state.nj.us>; 'dkirsanovaphillips@scscertified.com' <dkirsanovaphillips@scscertified.com>; 'jeff.stearns@ag.ok.gov' <jeff.stearns@ag.ok.gov>; 'bbakker@nmda.nmsu.edu' <bbakker@nmda.nmsu.edu>; 'rhougaard@utah.gov' <rhougaard@utah.gov>; 'info@onecert.com' <info@onecert.com>; 'lori@nofany.org' <lori@nofany.org>; 'Laura@nofavt.org' <Laura@nofavt.org>; 'cid-organic@oda.state.or.us' <cid-organic@oda.state.or.us>; 'andy@oeffa.org' <andy@oeffa.org>; 'srice@agr.wa.gov' <srice@agr.wa.gov>; 'organic@tilth.org' <organic@tilth.org>; 'jeff.stearns@ag.ok.gov' <jeff.stearns@ag.ok.gov>; john.young@yolocounty.org; 'info@occert.com' <info@occert.com>; 'sam@onecert.com' <sam@onecert.com>; 'xiao@ofdc.org.cn' <xiao@ofdc.org.cn>; 'kallen@oda.state.or.us' <kallen@oda.state.or.us>; 'oia@oia.com.ar' <oia@oia.com.ar>; 'connie@tilth.org' <connie@tilth.org>; 'ocd@omicnet.com' <ocd@omicnet.com>; 'susan@occert.com' <susan@occert.com>; 'pco@paorganic.org' <pco@paorganic.org>; 'celder@ocia.org' <celder@ocia.org>; 'PrimusOrganic@primuslabs.com' <PrimusOrganic@primuslabs.com>; 'xiao@ofdc.org.cn' <xiao@ofdc.org.cn>; 'info@pro-cert.org' <info@pro-cert.org>; 'pedroalanda@oia.com.ar' <pedroalanda@oia.com.ar>; 'qai@qai-inc.com' <qai@qai-inc.com>; 'ocd@omicnet.com' <ocd@omicnet.com>; 'qcs@qcsinfo.org' <qcs@qcsinfo.org>; leslie@paorganic.org; matt.green@dem.ri.gov; 'deborah.mansfield@primuslabs.com' <deborah.mansfield@primuslabs.com>; 'organic@scsglobalservice.com' <organic@scsglobalservice.com>; 'Dave.Lockman@pro-cert.org' <Dave.Lockman@pro-cert.org>; 'Sally@Demeter-USA.org' <Sally@Demeter-USA.org>; 'irendon@nsf.org' <irendon@nsf.org>; 'Organic@TexasAgriculture.gov' <Organic@TexasAgriculture.gov>; 'robin@qcsinfo.org' <robin@qcsinfo.org>; 'Toaf007@gmail.com' <Toaf007@gmail.com>; matt.green@dem.ri.gov; 'rlarsen@utah.gov' <rlarsen@utah.gov>; 'bnauman@scsglobalservices.com' <bnauman@scsglobalservices.com>; 'Info@nofavt.org' <Info@nofavt.org>; 'Sally@Demeter-USA.org' <Sally@Demeter-USA.org>; 'organic@agr.wa.gov' <organic@agr.wa.gov>; 'Mary.Holliman@texasagriculture.gov' <Mary.Holliman@texasagriculture.gov>; 'dennis.chambers@yolocounty.org' <dennis.chambers@yolocounty.org>; (b) (6) @gmail.com' (b) (6) @gmail.com>; 'rlarsen@utah.gov' <rlarsen@utah.gov>; 'Nicole@nofavt.org' <Nicole@nofavt.org>; 'bbook@agr.wa.gov' <bbook@agr.wa.gov>; 'dennis.chambers@yolocounty.org' <dennis.chambers@yolocounty.org>
**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

<u>What do we mean by hydroponic, aquaponic, aeroponic?</u>

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)

- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** Brines, Lisa - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=BRINES, LISA76BD0B16-352D-42DE-BC50-FCF457F88103>
**Sent:** Monday, September 08, 2014 5:45 PM
**To:** Bradley, Mark - AMS
**Cc:** Schurkamp, Lynnea - AMS
**Subject:** FW: Request for information: Horticubes and Rootcubes
**Attachments:** image001.jpg; Decision to approve the use of Oasis® Horticubes®.docx; Distinction between substances and materials in 205.2.docx; Oasis Safety Letter.docx

Hi Mark,

Below is some additional information related to a hydroponics product that the Materials Team has taken up that involves CCOF and A Bee Organics.

For a hydroponic TR and/or task force, the subject of growing media and how growing media should be reviewed is likely to be an important issue. I have had previous correspondence with a few growing media manufacturers (although not with Oasis, the Horticubes manufacturer) and encouraged them to submit petitions. To date, we have not received a petition for any hydroponic growing media.

We may end up (b) (5) [redacted] Lynnea – I'll set up a time later this week to discuss.

Lisa

---

**From:** Gebault King, ReneeA - AMS
**Sent:** Monday, September 08, 2014 12:55 PM
**To:** Schurkamp, Lynnea - AMS; Brines, Lisa - AMS
**Subject:** FW: Request for information: Horticubes and Rootcubes

FYI

---

**From:** Sarah Costin [mailto:sarah@abeeorganic.com]
**Sent:** Thursday, September 04, 2014 4:54 PM
**To:** Gebault King, ReneeA - AMS
**Cc:** Ro Elgas
**Subject:** Request for information: Horticubes and Rootcubes

Good afternoon Renée,

Attached is the summary of the decision making process regarding approval of Oasis® Horticubes® in organic hydroponic production. We have not reviewed Rootcubes or Rootcubes Plus.

Also attached are the Oasis® Safety Letter and the "Distinction between substances and materials in §205.2" document that we use when looking at materials.

I will be out of the office until 9/29/14 but will be answering e-mails should you need further information. Ro will be in the office and is well informed on this, so you could also call or e-mail her.

Best regards,
Sarah
Sarah Costin
Co-Creator/Owner

A Bee Organic
40707 Daily Road
De Luz, CA 92028
760-731-0155

Link to the NOP regulations http://bit.ly/NOPStandard-e

## Schurkamp, Lynnea - AMS

**From:** Courtney, Cheri - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=COURTNEY, CHERID311097C-9075-4E08-8FF4-F74949B0F969>
**Sent:** Wednesday, June 18, 2014 10:34 AM
**To:** JonesKing, Stacy - AMS
**Cc:** Mann, Renee - AMS
**Subject:** FW: Rockwool Use n organic hyrdoponic production
**Attachments:** Rockwool.docx

Hi Stacy,
Can we please have STD's input on this issue.
Thank you,
*Cheri*

---

**From:** Mann, Renee - AMS
**Sent:** Tuesday, June 17, 2014 4:54 PM
**To:** Courtney, Cheri - AMS
**Subject:** FW: Rockwool Use n organic hyrdoponic production

Hello Cheri –
This is a certifier question I would like to forward to Standards.

QCS suggested that rockwool is synthetic and is clearly prohibited. They also insist this is a question regarding a material. They have good arguments, but ultimately, this is also a complicated policy issue. I don't know (b) (5) [redacted]

I asked Ram to tell me which certifier disagrees with QCS's decision and to provide evidence. In the meantime, I would like to request that Standards review this issue, to at least get it on their radar.

Thanks,
Renee

Ms. Renee Mann
Assistant Director, Accreditation and International Activities Division
USDA National Organic Program
(202) 260-8635
NOP website
Sign up for our newsletter, the USDA Organic Insider

---

**From:** Ramkrishnan P.B. [mailto:ram@qcsinfo.org]
**Sent:** Tuesday, June 17, 2014 3:17 PM
**To:** Mann, Renee - AMS
**Cc:** denise aguero
**Subject:** Rockwool Use n organic hyrdoponic production

Renee,

QCS is seeking guidance of rockwool in hydroponics. QCS refused to allow rockwool to be a media for crop growth in hydroponic and come in contact with organic crop. Rockwool is a synthetic. The client switched to another certifier who allows rockwool for organic hydroponic production. We were advised by NOP that when certifiers disagree to bring it to NOP attention.

A guidance on whether rockwool is allowed or not will be helpful. Question attached.

Thanks,
Ramkrishnan

## Schurkamp, Lynnea - AMS

**From:** Mann, Renee - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MANN, RENEE6BA41DDD-4FFB-41B9-9712-F7EF2E4B19ED>
**Sent:** Tuesday, June 17, 2014 4:54 PM
**To:** Courtney, Cheri - AMS
**Subject:** FW: Rockwool Use n organic hyrdoponic production
**Attachments:** Rockwool.docx

Hello Cheri –
This is a certifier question I would like to forward to Standards.

QCS suggested that rockwool is synthetic and is clearly prohibited. They also insist this is a question regarding a material. They have good arguments, but ultimately, this is also a complicated policy issue. I don't know (b) (5) [redacted]

I asked Ram to tell me which certifier disagrees with QCS's decision and to provide evidence. In the meantime, I would like to request that Standards review this issue, to at least get it on their radar.

Thanks,
Renee

Ms. Renee Mann
Assistant Director, Accreditation and International Activities Division
USDA National Organic Program
(202) 260-8635
NOP website
Sign up for our newsletter, the USDA Organic Insider

---

**From:** Ramkrishnan P.B. [mailto:ram@qcsinfo.org]
**Sent:** Tuesday, June 17, 2014 3:17 PM
**To:** Mann, Renee - AMS
**Cc:** denise aguero
**Subject:** Rockwool Use n organic hyrdoponic production

Renee,

QCS is seeking guidance of rockwool in hydroponics. QCS refused to allow rockwool to be a media for crop growth in hydroponic and come in contact with organic crop. Rockwool is a synthetic. The client switched to another certifier who allows rockwool for organic hydroponic production. We were advised by NOP that when certifiers disagree to bring it to NOP attention.

A guidance on whether rockwool is allowed or not will be helpful. Question attached.

Thanks,
Ramkrishnan

## Schurkamp, Lynnea - AMS

**From:** Mann, Renee - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MANN, RENEE6BA41DDD-4FFB-41B9-9712-F7EF2E4B19ED>
**Sent:** Wednesday, June 18, 2014 5:41 PM
**To:** Brines, Lisa - AMS
**Cc:** Courtney, Cheri - AMS; JonesKing, Stacy - AMS
**Subject:** FW: Rockwool Use n organic hyrdoponic production
**Attachments:** Rockwool Use n organic hyrdoponic production .msg

Hello Lisa,
I would like to forward this issue to the Materials Team to consider, because it is two certifiers disagreeing about the use of rockwool. QCS disallowed rockwool in hydroponic iproduction and Ecocert allowed the material in hydroponic production. Attached is QCS's original question and below is QCS's explanation that Ecocert-IMO allows the material. Ultimately, I still think (b) (5) [redacted] http://grodan101.com/knowledge-center/rockwool-growing-substrate-hydroponic-systems.

Thank you,
Renee

Ms. Renee Mann
Assistant Director, Accreditation and International Activities Division
USDA National Organic Program
**(202) 205-9643 - New phone number**
NOP website
Sign up for our newsletter, the USDA Organic Insider

---

**From:** Ramkrishnan P.B. [mailto:ram@qcsinfo.org]
**Sent:** Wednesday, June 18, 2014 3:46 PM
**To:** Mann, Renee - AMS
**Cc:** 'denise aguero'
**Subject:** RE: Rockwool Use n organic hyrdoponic production

Renee

ECOCERT-IMO. Client informed QCS they are switching because ECOCERT is allowing rockwool. QCS confirmed it via phone call between QCS and ECOCERT-IMO on June 16, 2014.

Our big picture here is to get a guidance from NOP whether rockwool would be allowed in Hydroponic/Aquaponics. This will create consistency and clients do not have to switch certifiers depending on who allows what.

A guidance would be much appreciated.

Thanks,
Ramkrishnan

---

**From:** Mann, Renee - AMS [mailto:Renee.Mann@ams.usda.gov]
**Sent:** Tuesday, June 17, 2014 4:51 PM

**To:** Ramkrishnan P.B.
**Cc:** denise aguero
**Subject:** RE: Rockwool Use n organic hyrdoponic production

Hello Ram:
Thank you for your inquiry. In order to process such a request, I need to know what other certifier you are in disagreement with and what evidence you have that they allow rockwool.
Thank you,
Renee

Ms. Renee Mann
Assistant Director, Accreditation and International Activities Division
USDA National Organic Program
(202) 260-8635
NOP website
Sign up for our newsletter, the USDA Organic Insider

---

**From:** Ramkrishnan P.B. [mailto:ram@qcsinfo.org]
**Sent:** Tuesday, June 17, 2014 3:17 PM
**To:** Mann, Renee - AMS
**Cc:** denise aguero
**Subject:** Rockwool Use n organic hyrdoponic production

Renee,

QCS is seeking guidance of rockwool in hydroponics. QCS refused to allow rockwool to be a media for crop growth in hydroponic and come in contact with organic crop. Rockwool is a synthetic. The client switched to another certifier who allows rockwool for organic hydroponic production. We were advised by NOP that when certifiers disagree to bring it to NOP attention.

A guidance on whether rockwool is allowed or not will be helpful. Question attached.

Thanks,
Ramkrishnan

## Schurkamp, Lynnea - AMS

**From:** Lopez, JasonJ - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=LOPEZ, JASONJ5418CFE5-681F-4992-82F0-2EC48A970563417>
**Sent:** Wednesday, September 09, 2015 7:41 AM
**To:** Gebault King, ReneeA - AMS
**Subject:** FW: Technical Consultation
**Attachments:** image001.png

Here is the email.

*Jason Lopez*
Accreditation Manager
USDA National Organic Program
1400 Independence Ave, SW
Room 2649- South, Stop 0268
Washington, DC 20250-0268
Office: (202)260-9445
www.ams.usda.gov/nop

---

**From:** Certificaciones [mailto:certificacion@certimexsc.com]
**Sent:** Tuesday, September 08, 2015 2:36 PM
**To:** Lopez, JasonJ - AMS
**Subject:** RV: Technical Consultation

Jason estimated , again sending a technical consultation .

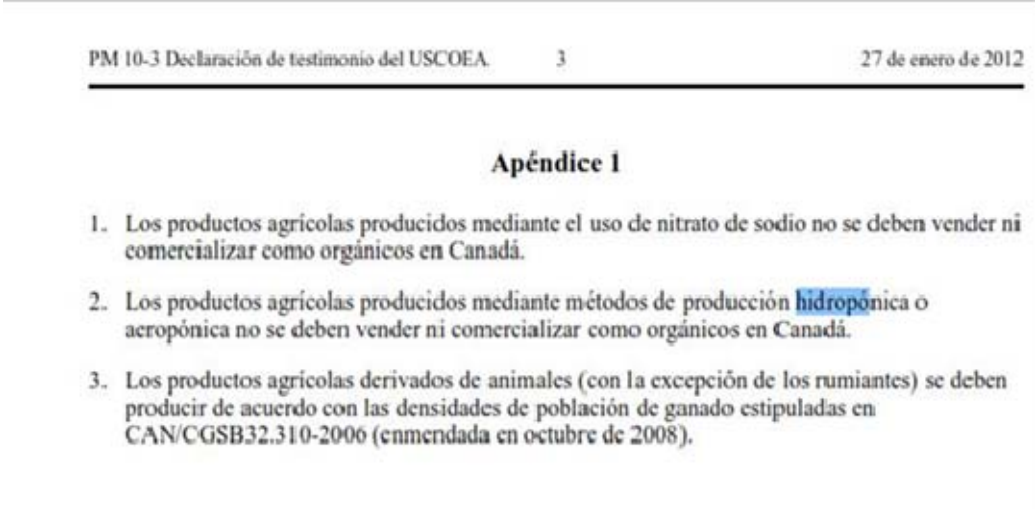
---

**De:** Certificaciones [mailto:certificacion@certimexsc.com]
**Enviado el:** martes, 8 de septiembre de 2015 01:29 p. m.
**Para:** 'Howley, JannaB - AMS' <JannaB.Howley@ams.usda.gov>
**Asunto:** RE: Technical Consultation

Janna estimated , again sending a technical consultation .

1. What is “At Issue,” or your “Question”: Please state briefly, with no more than a few sentences, the issue or the question you wish answered. The producer of specialty produce (b) (4) small tomato / grape / round / red and yellow type , these tomatoes are produced in different parts of the republic ; San Isidro Mazatepec , Zapotlán , Colima and Nayarit Tuxcacuesco , the total area of (b) (4) ha The production system is now standard . ; greenhouses , drip irrigation and drip gray slab and pickaxe with coconut fiber substrate .

2. Relevant Standard(s): Please cite the relevant NOP standard(s), if applicable. Only it mentioned as well :



PM 10-3 Declaración de testimonio del USCOEA 3 27 de enero de 2012

**Apéndice 1**

1. Los productos agrícolas producidos mediante el uso de nitrato de sodio no se deben vender ni comercializar como orgánicos en Canadá.
2. Los productos agrícolas producidos mediante métodos de producción hidropónica o aeropónica no se deben vender ni comercializar como orgánicos en Canadá.
3. Los productos agrícolas derivados de animales (con la excepción de los rumiantes) se deben producir de acuerdo con las densidades de población de ganado estipuladas en CAN/CGSB32.310-2006 (enmendada en octubre de 2008).

3. Background: Please provide us the context surrounding the issue and/or why this question is relevant. As much as possible, keep this section brief and on topic.

Our USA market is 95 % and 5 % between Canada and Mexico .

4. Proposed Solution(s): This is your opportunity to provide us valuable input and insight. Since you have a greater understanding of the specific circumstances, you may be better equipped to foresee and suggest a solution. Your solution should be supported by the information in the other sections.

Because to be produced under organic management in hydroponics .

5. Attachment(s): Relevant documents and/or links, if applicable. Attachments

6. Urgency: If you are facing a deadline or under a time constraint, please indicate this to me. If I have this information, I will be better able to prioritize your question(s). 11.09. 2015

Best regards

Ing. Rocío Pacheco García
Area de Revisión
Usuario Skype: rocio.cmx.cmx
CERTIMEX, Certificadora Mexicana de Productos y Procesos Ecológicos, S. C.
Calle 16 de Septiembre No. 204, Ejido Guadalupe Victoria,
Oaxaca de Juárez, Oax., México. C. P. 68026
Tel. / Fax. ++ 951 5202687 / ++ 951 52 00617/ ++951 1336113
Email. Gral. certimex@certimexsc.com
Pag. Web: www.certimexsc.com

Horarios de Atención:

Lunes a Viernes
9: 00 a.m. a 14:00 p.m.
15:00 p.m. a 17:00 p.m.

Acreditada
1. ISO-IEC 17065 (EN 45011) por el organismo Alemán de Acreditación DAkkS para certificar productos orgánicos para el mercado Nacional y Europa.
2. Departamento de Agricultura de los Estados Unidos (USDA-NOP) para certificar productos Orgánicos para el Mercado de Estados Unidos y Canadá.
3. MAFF-JAS (Ministerio de Agricultura, Silvicultura y Pesca) para certificar productos orgánicos para el mercado Japonés.
4. SAGARPA-SENASICA (Lineamientos para la Operación Orgánica de las Actividades Agropecuarias) para certificar productos orgánicos para el Mercado Nacional.
5. FUNDEPPO (SPP - Símbolo de Pequeños Productores) para el Mercado de Comercio Justo.

---

**From:** Certificaciones [mailto:certificacion@certimexsc.com]
**Sent:** Tuesday, August 04, 2015 10:17 AM
**To:** Howley, JannaB - AMS
**Subject:** Consultar a NOP

## Schurkamp, Lynnea - AMS

**From:** Baron , Anne - AMS on behalf of AMS - AIAinbox
**Sent:** Tuesday, March 01, 2016 10:12 AM
**To:** AMS - AIAinbox
**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** Sarah Costin <sarah@abeeorganic.com>
**Sent:** Friday, November 21, 2014 7:26 PM
**To:** Courtney, Cheri - AMS; McEvoy, Miles - AMS
**Cc:** Ro Elgas
**Subject:** Letter regarding OASIS decision
**Attachments:** image001.jpg; ABO-Letter regarding OASIS decision.pdf

Good afternoon Cheri,

I'm sending this letter to you because your signature is on the official notification regarding the decision on OASIS Horticubes and Rootcubes. I am copying Miles McEvoy because he is mentioned in the letter.

The OASIS decision is already adversely affecting our clients with vendors no longer purchasing products due to the perception that they are no longer certified organic.

A Bee Organic will send an official proposal to the AIA Inbox on or before December 3, 2014. Just to be clear, this letter is NOT that proposal.

Thank you for taking time to read the attached letter.
Sarah

Sarah Costin
Co-Creator/Owner

A Bee Organic
40707 Daily Road
De Luz, CA 92028
760-731-0155

Link to the NOP regulations http://bit.ly/NOPStandard-e

A-7.1

## Specialized media for hydroponics seed germination

A low density, high-drainage foam, OASIS® *Horticube*® growing medium is specifically engineered for hydroponics seed germination of vegetables and herbs. Growers will appreciate the simplicity this medium brings to the challenges of hydroponics production.

The excellent performance of *Horticube* medium is based upon its unique cell structure which closely resembles the cellular structure of plants. This growing media is designed to drain off excess water from the base of the seed, allowing an optimal balance of oxygen and water, even when the foam is completely saturated.

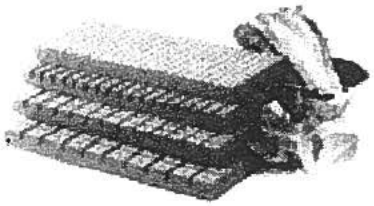
*Horticube* growing medium is sterile upon receipt and provides a clean start, pathogen-free, environment which reduces disease and insect problems for plant germination. All *Horticube* media is manufactured in a "sheet" style that fits easily on a bench or into industry standard "1020" trays. Each sheet is pre-scored for easy removal of a single cube, block of cubes, or strip of cubes.

# OASIS®
# HORTICUBE®
## Growing Medium

### Features and Benefits

From sowing to transplanting, *Horticube* growing medium makes hydroponics an easy process. Growers benefit from:

- Simple to use – just add water and sow seeds
- High-drainage product characteristic is ideal for crops requiring high water usage
- Specially-engineered balance of water and air promotes vigorous root development
- Consistent product quality cell to cell
- Product cells do not compact after continual watering, maintaining the original air porosity
- Pre-dibbled holes make it easy to set the seed into place in the media
- Sterile sheets reduce disease problems





OASIS GROWER PRODUCTS

A-7.3

# PHENOLIC FOAM FOOD SAFETY STUDY

## EXECUTIVE SUMMARY

Phenolic foam plant growing or growth supporting medium is a synthetic substrate for soiless propagation of vegetative cuttings, raising of seedlings and growth of plants. The Oasis Grower Foam is a porous solid matrix based on phenol–formaldehyde chemistry. The foaming process starts with a liquid phenol–formaldehyde resin, to which a number of proprietary surfactants, colorants, inert ingredients and acid blend catalysts are added to manufacture a solid wettable foam product. Blowing agents are used to further "expand" the foam to produce a physical support structure for growing plants. Depending on the intended usage, the ingredients are added at different proportions to give desired characteristics.

One of the intended uses of the phenolic foam is for starting, supporting and/or growing certain food crops for human consumption such as lettuce, herbs, vegetables, rice, etc. The testing described in this report was commissioned by the Smithers-Oasis Company to evaluate the safety of the phenolic foam products as delivered to the customers (raw foam). This study had three major objectives: 1) determine if common pathogenic bateria associated with foodborne illness may be present on the raw foam; 2) determine if the phenolic foam products have mutagenic properties that could be transferred to food plants grown on the products; and 3) determine if the foam products contain soluble organic compounds of potential concern related to the manufacturing process that could be translocated into plants grown on the foam.

The results of the tests performed as a part of this safety study are summarized below.

### Objective 1: Determine if Common Pathogenic Bacteria are Present in the Raw Foam

Since the intended use of the phenolic foam products is to germinate/grow certain crops for human consumption, tests were conducted determine if common bacteria indicative of fecal contamination and known to cause foodborne illnesses (i.e., Escherichia coli, Salmonella sp. and Listeria monocytogenes) may be present in the phenolic foam plant growing or growth supporting products-as manufactured and before being packaged and supplied to the customer.

***Tests conducted on the products indicated that these genera of bacteria were NOT present on the raw foam products immediately after manufacture.***

### Objective 2: Determine Potential Mutagenicity of the Products

Standard protocol Ames Assays were performed on extracts from the phenolic foam plant growing or growth supporting products, and lettuce and rice plants grown on the products to screen for the presence of mutagens.

***The results of the Ames tests were negative, indicating that there are no mutagenic constituents in the phenolic foam products or in plants grown on those products. Since many (but not all)***

***carcinogens are also mutagens, the Ames Assay results provide supporting evidence against the presence of carcinogenic compounds.***

**Objective 3: Determine if Soluble Chemicals of Potential Concern are Present**

The third objective was to determine if potentially toxic soluble chemicals of public health concern might be present in the phenolic foam plant growing or growth supportingproducts as supplied to the customer. Two screening methods were used to determine if chemicals related to the manufacture of the foam were likely to be present in the final products. Gas Chromatography – Mass Spectroscopy (GC-MS) was used to look for volatile organic compounds; and High Performance Liquid Chromatography (HPLC) was used to look for other compounds that are not readily detected by GC-MS methods. The HPLC method can also reveal the presence of some types of compounds produced by plants growing on the phenolic foam growing medium.

***GC-MS analysis of extracts from three different phenolic foam plant growing or growth supporting products and from lettuce and rice plants grown on those products did not detect the presence of volatile organic compounds of potential concern.***

***HPLC analysis of the phenolic foam plant growing or growth supporting products and from lettuce and rice plants grown on those products indicated the presence of low levels of surfactants and sulfonic acids used in making the products, and natural sugars and related compounds formed by the lettuce and rice plants.***

**Conclusion**

Based on the testing described in this report, it is concluded that when used as intended, the phenolic foam plant growing or growth supporting products do not pose a risk to the people who handle the foam or to people who eat food crops grown on the products.

**SMITHERS-OASIS COMPANY**
**CORPORATE RESEARCH & DEVELOPMENT**

Date: 5/8/2014

Subject: OASIS® HORTICUBES®

Dear Dean,

OASIS® Growing Medium is an inert plastic foam container designed for the support of plant seedlings for germination and growing applications. The material is stable and considered as inert. The material is highly porous (99% porosity) with an extremely low bulk density (0.016 g/cc). Water flows readily into and out of this open celled foam.

With respect to certified organic growing practices, we have been requested to address the following:

1. That after a full growing cycle (from seedling to harvest), a plant tissue analysis be conducted to demonstrate that there are no traces of the material present in the crop tissue.
2. That the foam is inert – not adding or removing anything to the plant or environment
3. That the disposal of the foam matrix not pose an environmental concern

Please find attached the "Phenolic Foam Food Safety Study Report" in response to the above requests. The study demonstrates that the foam is an inert plastic and that, furthermore, no materials in the foam plastic translocate into plant tissue.

Best Regards,

Vijay Rapaka, PhD

Manager - Grower Research
E-Mail: vrapaka@smithersoasis.com

Tel: (330) 673-5831
Fax: (330) 673-5351

919 Marvin Avenue
Kent, OH 44240
USA

www.smithersoasis.com

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Thursday, March 03, 2016 4:22 PM
**To:** Moutapam, Annette (Prüfinstitut LACON GmbH)
**Subject:** RE: [CAUTION: Suspicious Link]WG: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Thank you, Annette.

---

**From:** Moutapam, Annette (Prüfinstitut LACON GmbH) [mailto:a.moutapam@lacon-institut.org]
**Sent:** Tuesday, March 01, 2016 11:12 AM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** [CAUTION: Suspicious Link]WG: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems


Dear Bridget

Further to your message below please find the following answers on behalf of LACON GmbH, Germany:

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards? No

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify? None

In what state or country (if international) are the certified operations located (list)? None

What crops do these certified operations produce (list)? None

Best regards,
Annette Moutapam

Mit freundlichen Grüßen

Annette Moutapam
Team International

Telefon +49 (0) 781 96679-242
Telefax +49 (0) 781 96679-300
Mobil +(b) (6)
a.moutapam@lacon-institut.org
www.lacon-institut.com

Prüfinstitut LACON GmbH. Zentrale Offenburg, Moltkestr. 4, 77654 Offenburg
HRB 471342 Amtsgericht Freiburg
Geschäftsführung: Dr. H.-Joachim Kopp, Jürgen Schwarz

**Audits und Zertifizierungen:**
Bio-Produkte / IFS Standards / Ohne Gentechnik / ggA, gU, gtS / GQ-Bayern / QS / GLOBALG.A.P. / RSPO / UTZ / REDcert / ISO 9001 / KAT / Regionalfenster / GMF / HACCP / ZNU / Vegan

**Bio-Betriebe**:
Die deutschen Bio-Betriebe finden Sie auf der behördlich autorisierten Webseite:
http://www.oeko-kontrollstellen.de/suchebiounternehmen/SuchForm.php



---

**Von:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **Im Auftrag von** AMS - AIAinbox
**Gesendet:** Dienstag, 1. März 2016 16:12
**An:** AMS - AIAinbox
**Cc:** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au; organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au; michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA, Reno, NV; emel.erkan@bio-inspecta.com; central@biolatina.com; baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; rporto@caae.es; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; rporto@caae.es; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct; jvdschootbrugge@controlunion.com; ceres@ceres-cert.com; rsetti@ccpb.it; vincent.morel@ecocert.com; info@certisys.eu; direccionejecutiva@certimexsc.com; agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us; Nathalie.Boes@certisys.eu; joy.mccracken@georgiacrop.com; organic@controlunion.com; organic@clemson.edu; cvanhook77@earthlink.net; info.ecocertico@ecocert.com; amy.stafford@state.co.us; goabecky@centurylink.net; aude.bonnet@ecocert.com; dszalai@controlunion.com; camila@ibd.com.br; ep@ecoglobe.am; Jeffry.EVARD@ecocert.com; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; aude.bonnet@ecocert.com; Beatrice.Breuer@imo.ch; info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@eco-logica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; Moutapam, Annette (Prüfinstitut LACON GmbH); Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov; spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; soh@imo.ch; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; LACON; adam.watson@ky.gov; kirrilley.becker@nasaa.com.au; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; Kopp, Dr. H.-Joachim (Prüfinstitut LACON GmbH); jabbott@agri.nv.gov; FGIS OA, Maryland; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland;

SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; abrewster@ocia.org; sachin.ayachit@nasaa.com.au; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; sachin.ayachit@nasaa.com.au; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; thughes@nsf.org; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org; ocd@omicnet.com; susan@occert.com; pco@paorganic.org; celder@ocia.org; PrimusOrganic@primuslabs.com; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; qai@qai-inc.com; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; deborah.mansfield@primuslabs.com; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; irendon@nsf.org; Organic@TexasAgriculture.gov; robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org
**Betreff:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Friday, April 01, 2016 10:51 AM
**To:** michelle.menken@mncia.org
**Subject:** RE: aquaponic/hydroponic
**Attachments:** image001.png; image002.png

Thank you Michelle!

---

**From:** Michelle Menken [mailto:michelle.menken@mncia.org]
**Sent:** Wednesday, March 23, 2016 4:19 PM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** aquaponic/hydroponic

Hello Bridget,

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards? Yes

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify? We have two certified operations- one aquaponics and one hydroponic.

In what state or country (if international) are the certified operations located (list)? Both are in Minnesota.

What crops do these certified operations produce (list)? Here are the crop lists off the two certificates:

**100% Organic Production**

Products: Aquaponic production of Arugula; Basil; Chard; Cilantro; Kale; Lettuce; Mint; Pak choi; Parsley; Rosemary; Spinach; Tatsoi; Thyme; and Watercress

**100% Organic Production**

Processes: Growing in hydroponic system and packaging

Products: Arugula; Basil; Bay leaves; Chervil; Chives; Cilantro; Dill; Lavender; Lemongrass; Marjoram; Mint; Oregano; Parsley; Sage; Savory; Sorrel; Tarragon; Thyme; Thyme (lemon); and Watercress

Yours truly,

Michelle Menken
Organic Program

Minnesota Crop Improvement Association/MCIA
1-855-213-4461
612-625-3123 (direct)

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Thursday, March 03, 2016 4:24 PM
**To:** Gwendal Bellocq - IBD Certificações
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production System_01032016
**Attachments:** image001.gif; image007.jpg; image008.png; image002.jpg; image003.jpg

Thank you, Gwendal.

**Bridget McElroy**

Policy Analyst
USDA National Organic Program
1400 Independence Ave. SW
Room 2646-S. (Stop 0268)
Washington, D.C. 20205

(202) 260-9288

---

**From:** Gwendal Bellocq - IBD Certificações [mailto:gwendal@ibd.com.br]
**Sent:** Tuesday, March 01, 2016 11:59 AM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production System_01032016

Dear Bridget McElroy,

As requested please see IBD's answer below:

- Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards? NO.
- If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify? NONE
- In what state or country (if international) are the certified operations located (list)? NO ONE
- What crops do these certified operations produce (list)? NONE

I remain at your service for any further question you may have.

Best regards.

Gwendal Bellocq

Gerente Geral de Certificação / General Manager

FONE: +55(14)38119800 / FAX: +55(14)38119801
ibd@ibd.com.br www.ibd.com.br
PRODUTO BIODINÂMICO E ORGÂNICO- ALIMENTE ESSA IDÉIA
BIODYNAMIC AND ORGANIC PRODUCTS- FEED THIS IDEA




**De:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **Em nome de** AMS - AIAinbox
**Enviada em:** terça-feira, 1 de março de 2016 12:12
**Para:** AMS - AIAinbox
**Cc:** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au; organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au; michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA, Reno, NV; emel.erkan@bio-inspecta.com; central@biolatina.com; baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; rporto@caae.es; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; rporto@caae.es; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct; jvdschootbrugge@controlunion.com; ceres@ceres-cert.com; rsetti@ccpb.it; vincent.morel@ecocert.com; info@certisys.eu; direccionejecutiva@certimexsc.com; agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us; Nathalie.Boes@certisys.eu;

joy.mccracken@georgiacrop.com; organic@controlunion.com; organic@clemson.edu; cvanhook77@earthlink.net; info.ecocertico@ecocert.com; amy.stafford@state.co.us; goabecky@centurylink.net; aude.bonnet@ecocert.com; dszalai@controlunion.com; camila@ibd.com.br; ep@ecoglobe.am; Jeffry.EVARD@ecocert.com; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; aude.bonnet@ecocert.com; Beatrice.Breuer@imo.ch; info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@eco-logica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; a.moutapam@lacon-institut.org; Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov; spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; soh@imo.ch; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; lacon@lacon-institut.org; adam.watson@ky.gov; kirrilley.becker@nasaa.com.au; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; j.kopp@lacon-institut.org; jabbott@agri.nv.gov; FGIS OA, Maryland; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland; SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; abrewster@ocia.org; sachin.ayachit@nasaa.com.au; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; sachin.ayachit@nasaa.com.au; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; thughes@nsf.org; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org; ocd@omicnet.com; susan@occert.com; pco@paorganic.org; celder@ocia.org; PrimusOrganic@primuslabs.com; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; qai@qai-inc.com; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; deborah.mansfield@primuslabs.com; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; irendon@nsf.org; Organic@TexasAgriculture.gov; robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org

**Assunto:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)

- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Tuesday, April 05, 2016 1:29 PM
**To:** Emily Garcia
**Cc:** PrimusOrganic; AuditQA
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
**Attachments:** image001.jpg; image002.jpg

Hello Emily,

Thank you again for sharing your information regarding certification of hydroponic production. As we go through the results, we are realizing that it would be helpful to have slightly more detailed information from certifiers in an effort to differentiate between production that is more clearly hydroponic and production which falls more under "container" production. We know that the systems out there are quite diverse and the continuum from in ground, to container, to hydroponic production can make it challenging to know where to draw the line. For this survey, it would simply be helpful to know how many of the operations that you are certifying are:

1. Systems like NFT, raft, ebb and flow (hydroponic)
2. Systems like pots, upright bags, Dutch bucket ("container")
3. And systems that fall under #1 but use fish waste for fertility (aquaponics)

Among the 28 operations that you are certifying, would you consider them all to be hydroponic and aquaponic, or are some closer to container production?

Regards,

**Bridget McElroy**

Policy Analyst
USDA National Organic Program
1400 Independence Ave. SW
Room 2646-S. (Stop 0268)
Washington, D.C. 20205

(202) 260-9288

---

**From:** Emily Garcia [mailto:Emily.Garcia@primusauditingops.com]
**Sent:** Friday, March 11, 2016 1:48 PM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Cc:** PrimusOrganic <PrimusOrganic@primuslabs.com>; AuditQA <auditqa@primusauditingops.com>
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Hello Bridget,

Please see Primus Labs responses in Red:

1. Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards? Yes, we certify hydroponic operations

2. If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify? 28

3. In what state or country (if international) are the certified operations located (list)?
   California
   Mexico

4. What crops do these certified operations produce (list)?
   Raspberries
   Blueberries
   Butter lettuce

Let me know if you have any questions.

Best,

**Emily Garcia**
QA Specialist
Emily.Garcia@primusauditingops.com
Office 805.631.5248 | Direct Line 805.623.5542
Fax 805.352.1364
1259 Furukawa Way | Santa Maria | CA


---

**From:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **On Behalf Of** AMS - AIAinbox
**Sent:** Tuesday, March 01, 2016 7:12 AM
**To:** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**Cc:** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au; organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au; michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA, Reno, NV <clinton.koble@nv.usda.gov>; emel.erkan@bio-inspecta.com; central@biolatina.com; baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; rporto@caae.es; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; rporto@caae.es; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct <jake@ccof.org>; jvdschootbrugge@controlunion.com; ceres@ceres-cert.com; rsetti@ccpb.it; vincent.morel@ecocert.com; info@certisys.eu; direccionejecutiva@certimexsc.com; agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us; Nathalie.Boes@certisys.eu; joy.mccracken@georgiacrop.com; organic@controlunion.com; organic@clemson.edu;

cvanhook77@earthlink.net; info.ecocertico@ecocert.com; amy.stafford@state.co.us; goabecky@centurylink.net; aude.bonnet@ecocert.com; dszalai@controlunion.com; camila@ibd.com.br; ep@ecoglobe.am; Jeffry.EVARD@ecocert.com; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; aude.bonnet@ecocert.com; Beatrice.Breuer@imo.ch; info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@eco-logica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; a.moutapam@lacon-institut.org; Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov; spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; soh@imo.ch; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; lacon@lacon-institut.org; adam.watson@ky.gov; kirrilley.becker@nasaa.com.au; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; j.kopp@lacon-institut.org; jabbott@agri.nv.gov; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; abrewster@ocia.org; sachin.ayachit@nasaa.com.au; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; sachin.ayachit@nasaa.com.au; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; thughes@nsf.org; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org; ocd@omicnet.com; susan@occert.com; pco@paorganic.org; celder@ocia.org; PrimusOrganic <PrimusOrganic@primuslabs.com>; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; qai@qai-inc.com; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; Deborah Mansfield <deborah.mansfield@primusauditingops.com>; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; irendon@nsf.org; Organic@TexasAgriculture.gov; robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org

**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media

for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Thursday, March 17, 2016 4:04 PM
**To:** Nune Darbinjan
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Thank you, Dr. Darbinyan!

---

**From:** Nune Darbinjan [mailto(b) (6) @yahoo.com]
**Sent:** Wednesday, March 09, 2016 1:44 AM
**To:** AMS - AIAinbox <AIAinbox@ams.usda.gov>; Nune Darbinjan (b) (6) @yahoo.com>; McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** Re: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Dear NOP,

I would like to inform you that ECOGLOBE (EGLO) does not certify any hydroponic, aquaponic, aeroponic.
We are especially interested in any instruction and new approaches to this technologies by the NOP.

*Best regards, Ms. Nune Darbinyan*

*Liebe Grüße, Frau Nune Darbinyan*

**Dr. Nune Darbinyan**
**General Director**
**ECOGLOBE**

_____

***Contact information:***
Tel: +37410221295
Tel mob: +(b) (6)
Fax: +37410221295
E-mail: nd@ecoglobe.am
(b) (6) @yahoo.com
**Internet: www.ecoglobe.am**

***Organic certification worldwide USA, Canada, EU, Switzerland***

***EU and Swiss code is BIO-112***

***Mind about environment before printing!***

---

**From:** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**To:** AMS - AIAinbox <AIAinbox@ams.usda.gov>

**Cc:** "admin@abeeorganic.com" <admin@abeeorganic.com>; "sarah@abeeorganic.com" <sarah@abeeorganic.com>; "ro@abeeorganic.com" <ro@abeeorganic.com>; "info@ascorganic.com" <info@ascorganic.com>; "Kat@ascorganic.com" <Kat@ascorganic.com>; "mfigueiras@argencert.com.ar" <mfigueiras@argencert.com.ar>; "americert@gmail.com" <americert@gmail.com>; "americert@gmail.com" <americert@gmail.com>; "organic@ausmeat.com.au" <organic@ausmeat.com.au>; "info@argencert.com.ar" <info@argencert.com.ar>; "lmontenegro@argencert.com.ar" <lmontenegro@argencert.com.ar>; "jorge.larranaga@aco.net.au" <jorge.larranaga@aco.net.au>; "organic@ausqual.com.au" <organic@ausqual.com.au>; "elise@ausqual.com.au" <elise@ausqual.com.au>; "dcox@baystateorganic.org" <dcox@baystateorganic.org>; "michael.baker@aco.net.au" <michael.baker@aco.net.au>; "michael.baker@aco.net.au" <michael.baker@aco.net.au>; "roxana.priego@biolatina.com.pe" <roxana.priego@biolatina.com.pe>; "baystateorganic@earthlink.net" <baystateorganic@earthlink.net>; "Koble, Clinton - FSA, Reno, NV" <clinton.koble@nv.usda.gov>; "emel.erkan@bio-inspecta.com" <emel.erkan@bio-inspecta.com>; "central@biolatina.com" <central@biolatina.com>; "baystateorganic@earthlink.net" <baystateorganic@earthlink.net>; "amalia.rueda@bioagricert.org" <amalia.rueda@bioagricert.org>; "admin@bio-inspecta.ch" <admin@bio-inspecta.ch>; "central@biolatina.com" <central@biolatina.com>; "Pat.Kennelly@cdph.ca.gov" <Pat.Kennelly@cdph.ca.gov>; "info@bioagricert.org" <info@bioagricert.org>; "julia.winter@bio-inspecta.ch" <julia.winter@bio-inspecta.ch>; "accreditation@ccof.org" <accreditation@ccof.org>; "Bolicert@megalink.com" <Bolicert@megalink.com>; "riccardo.cozzo@bioagricert.org" <riccardo.cozzo@bioagricert.org>; "calidad@certimexsc.com" <calidad@certimexsc.com>; "rporto@caae.es" <rporto@caae.es>; "Bolicert@bolicert.org" <Bolicert@bolicert.org>; "tom.nizet@certisys.eu" <tom.nizet@certisys.eu>; "ccof@ccof.org" <ccof@ccof.org>; "rporto@caae.es" <rporto@caae.es>; "saltmn@clemson.edu" <saltmn@clemson.edu>; "ccpb@ccpb.it" <ccpb@ccpb.it>; "Danny.Lee@cdfa.ca.gov" <Danny.Lee@cdfa.ca.gov>; "mitchell.yergert@state.co.us" <mitchell.yergert@state.co.us>; "certimex@certimexsc.com" <certimex@certimexsc.com>; Lewin Jake-FASConatct <jake@ccof.org>; "jvdschootbrugge@controlunion.com" <jvdschootbrugge@controlunion.com>; "ceres@ceres-cert.com" <ceres@ceres-cert.com>; "rsetti@ccpb.it" <rsetti@ccpb.it>; "vincent.morel@ecocert.com" <vincent.morel@ecocert.com>; "info@certisys.eu" <info@certisys.eu>; "direccionejecutiva@certimexsc.com" <direccionejecutiva@certimexsc.com>; "agroecologiauna@gmail.com" <agroecologiauna@gmail.com>; "organic@clemson.edu" <organic@clemson.edu>; "benzing@ceres-cert.com" <benzing@ceres-cert.com>; "mefraga@foodsafety.com.ar" <mefraga@foodsafety.com.ar>; "amy.stafford@state.co.us" <amy.stafford@state.co.us>; "Nathalie.Boes@certisys.eu" <Nathalie.Boes@certisys.eu>; "joy.mccracken@georgiacrop.com" <joy.mccracken@georgiacrop.com>; "organic@controlunion.com" <organic@controlunion.com>; "organic@clemson.edu" <organic@clemson.edu>; "cvanhook77@earthlink.net" <cvanhook77@earthlink.net>; "info.ecocertico@ecocert.com" <info.ecocertico@ecocert.com>; "amy.stafford@state.co.us" <amy.stafford@state.co.us>; "goabecky@centurylink.net" <goabecky@centurylink.net>; "aude.bonnet@ecocert.com" <aude.bonnet@ecocert.com>; "dszalai@controlunion.com" <dszalai@controlunion.com>; "camila@ibd.com.br" <camila@ibd.com.br>; "ep@ecoglobe.am" <ep@ecoglobe.am>; "Jeffry.EVARD@ecocert.com" <Jeffry.EVARD@ecocert.com>; "Jason.Laney@agri.idaho.gov" <Jason.Laney@agri.idaho.gov>; "pdescamps@eco-logica.com" <pdescamps@eco-logica.com>; "aude.bonnet@ecocert.com" <aude.bonnet@ecocert.com>; "Beatrice.Breuer@imo.ch" <Beatrice.Breuer@imo.ch>; "info@etko.org" <info@etko.org>; "nd@ecoglobe.am" <nd@ecoglobe.am>; "Mary.nieland@iowaagriculture.gov" <Mary.nieland@iowaagriculture.gov>; "foodsafety@foodsafety.com.ar" <foodsafety@foodsafety.com.ar>; "pdescamps@eco-logica.com" <pdescamps@eco-logica.com>; "p.perrone@icea.info" <p.perrone@icea.info>; "terry.hollifield@georgiacrop.com" <terry.hollifield@georgiacrop.com>; "ma@etko.org" <ma@etko.org>; "Kristen.Branscum@ky.gov" <Kristen.Branscum@ky.gov>; "info@globalculture.us" <info@globalculture.us>; "calidad@foodsafety.com.ar" <calidad@foodsafety.com.ar>; "herr@bcs-oeko.de" <herr@bcs-oeko.de>; "goaorg@centurylink.net" <goaorg@centurylink.net>; "terry.hollifield@georgiacrop.com" <terry.hollifield@georgiacrop.com>; "a.moutapam@lacon-institut.org" <a.moutapam@lacon-institut.org>; "lbd@lbd.com.br" <lbd@lbd.com.br>; "globalculture@earthlink.net" <globalculture@earthlink.net>; "monica@letis.org" <monica@letis.org>; "Johanna.Phillips@agri.idaho.gov" <Johanna.Phillips@agri.idaho.gov>; "goaorg@centurylink.net" <goaorg@centurylink.net>; "scarlsen@co.marin.ca.us" <scarlsen@co.marin.ca.us>; "imo@imo.ch" <imo@imo.ch>; "gwendal@ibd.com.br" <gwendal@ibd.com.br>; "juanantonio.mendoza@mayacert.com" <juanantonio.mendoza@mayacert.com>; "info@ics-intl.com" <info@ics-intl.com>; "Johanna.Phillips@agri.idaho.gov" <Johanna.Phillips@agri.idaho.gov>; "spwalker@mosaorganic.org" <spwalker@mosaorganic.org>; "maury.wills@iowaagriculture.gov" <maury.wills@iowaagriculture.gov>; "soh@imo.ch" <soh@imo.ch>; "wippl001@umn.edu" <wippl001@umn.edu>; "nop@icea.info" <nop@icea.info>; "dawn@ics-intl.com" <dawn@ics-intl.com>; "knewkirk@mofga.org" <knewkirk@mofga.org>; "adam.watson@ky.gov" <adam.watson@ky.gov>; "maury.wills@iowaagriculture.gov" <maury.wills@iowaagriculture.gov>; "etyanich@mt.gov" <etyanich@mt.gov>; "info@bcs-oeko.de" <info@bcs-oeko.de>; "nop@icea.info" <nop@icea.info>; "CarltonN@co.monterey.ca.us" <CarltonN@co.monterey.ca.us>; "lacon@lacon-institut.org" <lacon@lacon-institut.org>; "adam.watson@ky.gov" <adam.watson@ky.gov>; "kirrilley.becker@nasaa.com.au" <kirrilley.becker@nasaa.com.au>; "letis@letis.org" <letis@letis.org>; "fischer@bcs-oeko.de" <fischer@bcs-oeko.de>; "cfanta@naturesinternational.com" <cfanta@naturesinternational.com>; "jstiles@marincounty.org" <jstiles@marincounty.org>; "j.kopp@lacon-institut.org" <j.kopp@lacon-institut.org>; "jabbott@agri.nv.gov" <jabbott@agri.nv.gov>; "FGIS OA, Maryland"

<Deanna.Baldwin@maryland.gov>; "internacional@letis.org" <internacional@letis.org>; "Victoria.Smith@agr.nh.gov" <Victoria.Smith@agr.nh.gov>; "info@mayacert.com" <info@mayacert.com>; "jstiles@marincounty.org" <jstiles@marincounty.org>; "Daniel.wunderlich@ag.state.nj.us" <Daniel.wunderlich@ag.state.nj.us>; "mosa@mosaorganic.org" <mosa@mosaorganic.org>; "FGIS OA, Maryland" <Deanna.Baldwin@maryland.gov>; "SGerk@nmda.nmsu.edu" <SGerk@nmda.nmsu.edu>; "mncia@mncia.org" <mncia@mncia.org>; "noe.rivera@mayacert.com" <noe.rivera@mayacert.com>; "lisaengelbert@nofany.org" <lisaengelbert@nofany.org>; "certification@mofga.org" <certification@mofga.org>; "cskolaski@mosaorganic.org" <cskolaski@mosaorganic.org>; "Bryan.Buchwald@ag.ok.gov" <Bryan.Buchwald@ag.ok.gov>; "agrorganic@mt.gov" <agrorganic@mt.gov>; "michelle.menken@mncia.org" <michelle.menken@mncia.org>; "leng@oda.state.or.us" <leng@oda.state.or.us>; "agcomm@co.monterey.ca.us" <agcomm@co.monterey.ca.us>; "yurlina@mofga.org" <yurlina@mofga.org>; "abrewster@ocia.org" <abrewster@ocia.org>; "sachin.ayachit@nasaa.com.au" <sachin.ayachit@nasaa.com.au>; "gwebster@mt.gov" <gwebster@mt.gov>; "gestiondecalidad@oia.com.ar" <gestiondecalidad@oia.com.ar>; "nfccertification@gmail.com" <nfccertification@gmail.com>; "Huntinggb@co.monterey.ca.us" <Huntinggb@co.monterey.ca.us>; "hi.yoshida@omicnet.com" <hi.yoshida@omicnet.com>; "nics@naturesinternational.com" <nics@naturesinternational.com>; "sachin.ayachit@nasaa.com.au" <sachin.ayachit@nasaa.com.au>; "kyla@paorganic.org" <kyla@paorganic.org>; "Jennifer.Gornnert@agr.nh.gov" <Jennifer.Gornnert@agr.nh.gov>; "nfccertification@gmail.com" <nfccertification@gmail.com>; "brian.mansfield@primuslabs.com" <brian.mansfield@primuslabs.com>; "erich.bremer@ag.state.nj.us" <erich.bremer@ag.state.nj.us>; "dave@naturesinternational.com" <dave@naturesinternational.com>; "byron.hamm@pro-cert.org" <byron.hamm@pro-cert.org>; "organic@nmda.nmsu.edu" <organic@nmda.nmsu.edu>; "ajeppson@agri.nv.gov" <ajeppson@agri.nv.gov>; "thughes@nsf.org" <thughes@nsf.org>; "certifiedorganic@nofany.org" <certifiedorganic@nofany.org>; "Jennifer.Gornnert@agr.nh.gov" <Jennifer.Gornnert@agr.nh.gov>; "ram@qcsinfo.org" <ram@qcsinfo.org>; "organic@oeffa.org" <organic@oeffa.org>; "erich.bremer@ag.state.nj.us" <erich.bremer@ag.state.nj.us>; "dkirsanovaphillips@scscertified.com" <dkirsanovaphillips@scscertified.com>; "jeff.stearns@ag.ok.gov" <jeff.stearns@ag.ok.gov>; "bbakker@nmda.nmsu.edu" <bbakker@nmda.nmsu.edu>; "rhougaard@utah.gov" <rhougaard@utah.gov>; "info@onecert.com" <info@onecert.com>; "lori@nofany.org" <lori@nofany.org>; "Laura@nofavt.org" <Laura@nofavt.org>; "cid-organic@oda.state.or.us" <cid-organic@oda.state.or.us>; "andy@oeffa.org" <andy@oeffa.org>; "srice@agr.wa.gov" <srice@agr.wa.gov>; "organic@tilth.org" <organic@tilth.org>; "jeff.stearns@ag.ok.gov" <jeff.stearns@ag.ok.gov>; "john.young@yolocounty.org" <john.young@yolocounty.org>; "info@occert.com" <info@occert.com>; "sam@onecert.com" <sam@onecert.com>; "xiao@ofdc.org.cn" <xiao@ofdc.org.cn>; "kallen@oda.state.or.us" <kallen@oda.state.or.us>; "oia@oia.com.ar" <oia@oia.com.ar>; "connie@tilth.org" <connie@tilth.org>; "ocd@omicnet.com" <ocd@omicnet.com>; "susan@occert.com" <susan@occert.com>; "pco@paorganic.org" <pco@paorganic.org>; "celder@ocia.org" <celder@ocia.org>; "PrimusOrganic@primuslabs.com" <PrimusOrganic@primuslabs.com>; "xiao@ofdc.org.cn" <xiao@ofdc.org.cn>; "info@pro-cert.org" <info@pro-cert.org>; "pedroalanda@oia.com.ar" <pedroalanda@oia.com.ar>; "qai@qai-inc.com" <qai@qai-inc.com>; "ocd@omicnet.com" <ocd@omicnet.com>; "qcs@qcsinfo.org" <qcs@qcsinfo.org>; "leslie@paorganic.org" <leslie@paorganic.org>; "matt.green@dem.ri.gov" <matt.green@dem.ri.gov>; "deborah.mansfield@primuslabs.com" <deborah.mansfield@primuslabs.com>; "organic@scsglobalservice.com" <organic@scsglobalservice.com>; "Dave.Lockman@pro-cert.org" <Dave.Lockman@pro-cert.org>; "Sally@Demeter-USA.org" <Sally@Demeter-USA.org>; "irendon@nsf.org" <irendon@nsf.org>; "Organic@TexasAgriculture.gov" <Organic@TexasAgriculture.gov>; "robin@qcsinfo.org" <robin@qcsinfo.org>; "Toaf007@gmail.com" <Toaf007@gmail.com>; "matt.green@dem.ri.gov" <matt.green@dem.ri.gov>; "rlarsen@utah.gov" <rlarsen@utah.gov>; "bnauman@scsglobalservices.com" <bnauman@scsglobalservices.com>; "Info@nofavt.org" <Info@nofavt.org>; "Sally@Demeter-USA.org" <Sally@Demeter-USA.org>; "organic@agr.wa.gov" <organic@agr.wa.gov>; "Mary.Holliman@texasagriculture.gov" <Mary.Holliman@texasagriculture.gov>; "dennis.chambers@yolocounty.org" <dennis.chambers@yolocounty.org>; (b) (6) @gmail.com" (b) (6) @gmail.com>; "rlarsen@utah.gov" <rlarsen@utah.gov>; "Nicole@nofavt.org" <Nicole@nofavt.org>; "bbook@agr.wa.gov" <bbook@agr.wa.gov>; "dennis.chambers@yolocounty.org" <dennis.chambers@yolocounty.org>

**Sent:** Tuesday, March 1, 2016 6:11 PM
**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** Sam Welsch <sam@onecert.com>
**Sent:** Friday, March 04, 2016 7:13 AM
**To:** McElroy, Bridget - AMS
**Subject:** Re: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Thanks. I hope you get prompt response from all ACAs.

Sam Welsch, President
OneCert, Inc.
2219 C Street
Lincoln, NE 68502
402-420-6080
www.onecert.com



On Thu, Mar 3, 2016 at 2:16 PM, McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov> wrote:

> Thanks, Sam. It shouldn't take too long. Maybe a week just to give a little time for late submissions.
>
> Bridget
>
> **From:** Sam Welsch [mailto:sam@onecert.com]
> **Sent:** Thursday, March 03, 2016 6:54 AM
> **To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
> **Cc:** OneCert Info <info@onecert.com>
> **Subject:** Fwd: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
>
> Bridget,
>
> As you are already aware, OneCert does not certify hydroponic, aeroponic or aquaponic operations.
>
> How soon after March 11 do you expect to have a summary of this information available to the hydroponics task force?

Thanks,

Sam Welsch, President
OneCert, Inc.
2219 C Street
Lincoln, NE 68502
402-420-6080

www.onecert.com



---------- Forwarded message ----------
From: **AMS - AIAinbox** <AIAinbox@ams.usda.gov>
Date: Tue, Mar 1, 2016 at 9:11 AM
Subject: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
To: AMS - AIAinbox <AIAinbox@ams.usda.gov>
Cc: "admin@abeeorganic.com" <admin@abeeorganic.com>, "sarah@abeeorganic.com" <sarah@abeeorganic.com>, "ro@abeeorganic.com" <ro@abeeorganic.com>, "info@ascorganic.com" <info@ascorganic.com>, "Kat@ascorganic.com" <Kat@ascorganic.com>, "mfigueiras@argencert.com.ar" <mfigueiras@argencert.com.ar>, "americert@gmail.com" <americert@gmail.com>, "organic@ausmeat.com.au" <organic@ausmeat.com.au>, "info@argencert.com.ar" <info@argencert.com.ar>, "lmontenegro@argencert.com.ar" <lmontenegro@argencert.com.ar>, "jorge.larranaga@aco.net.au" <jorge.larranaga@aco.net.au>, "organic@ausqual.com.au" <organic@ausqual.com.au>, "elise@ausqual.com.au" <elise@ausqual.com.au>, "dcox@baystateorganic.org" <dcox@baystateorganic.org>, "michael.baker@aco.net.au" <michael.baker@aco.net.au>, "roxana.priego@biolatina.com.pe" <roxana.priego@biolatina.com.pe>, "baystateorganic@earthlink.net" <baystateorganic@earthlink.net>, "Koble, Clinton - FSA, Reno, NV" <clinton.koble@nv.usda.gov>, "emel.erkan@bio-inspecta.com" <emel.erkan@bio-inspecta.com>, "central@biolatina.com" <central@biolatina.com>, "amalia.rueda@bioagricert.org" <amalia.rueda@bioagricert.org>, "admin@bio-inspecta.ch" <admin@bio-inspecta.ch>, "Pat.Kennelly@cdph.ca.gov" <Pat.Kennelly@cdph.ca.gov>, "info@bioagricert.org" <info@bioagricert.org>, "julia.winter@bio-inspecta.ch" <julia.winter@bio-inspecta.ch>, "accreditation@ccof.org" <accreditation@ccof.org>, "Bolicert@megalink.com" <Bolicert@megalink.com>, "riccardo.cozzo@bioagricert.org" <riccardo.cozzo@bioagricert.org>, "calidad@certimexsc.com" <calidad@certimexsc.com>, "rporto@caae.es" <rporto@caae.es>, "Bolicert@bolicert.org" <Bolicert@bolicert.org>, "tom.nizet@certisys.eu" <tom.nizet@certisys.eu>, "ccof@ccof.org" <ccof@ccof.org>, "saltmn@clemson.edu" <saltmn@clemson.edu>, "ccpb@ccpb.it" <ccpb@ccpb.it>, "Danny.Lee@cdfa.ca.gov" <Danny.Lee@cdfa.ca.gov>, "mitchell.yergert@state.co.us" <mitchell.yergert@state.co.us>, "certimex@certimexsc.com" <certimex@certimexsc.com>, Lewin Jake-FASConatct <jake@ccof.org>, "jvdschootbrugge@controlunion.com" <jvdschootbrugge@controlunion.com>,

"ceres@ceres-cert.com" <ceres@ceres-cert.com>, "rsetti@ccpb.it" <rsetti@ccpb.it>, "vincent.morel@ecocert.com" <vincent.morel@ecocert.com>, "info@certisys.eu" <info@certisys.eu>, "direccionejecutiva@certimexsc.com" <direccionejecutiva@certimexsc.com>, "agroecologiauna@gmail.com" <agroecologiauna@gmail.com>, "organic@clemson.edu" <organic@clemson.edu>, "benzing@ceres-cert.com" <benzing@ceres-cert.com>, "mefraga@foodsafety.com.ar" <mefraga@foodsafety.com.ar>, "amy.stafford@state.co.us" <amy.stafford@state.co.us>, "Nathalie.Boes@certisys.eu" <Nathalie.Boes@certisys.eu>, "joy.mccracken@georgiacrop.com" <joy.mccracken@georgiacrop.com>, "organic@controlunion.com" <organic@controlunion.com>, "cvanhook77@earthlink.net" <cvanhook77@earthlink.net>, "info.ecocertico@ecocert.com" <info.ecocertico@ecocert.com>, "goabecky@centurylink.net" <goabecky@centurylink.net>, "aude.bonnet@ecocert.com" <aude.bonnet@ecocert.com>, "dszalai@controlunion.com" <dszalai@controlunion.com>, "camila@ibd.com.br" <camila@ibd.com.br>, "ep@ecoglobe.am" <ep@ecoglobe.am>, "Jeffry.EVARD@ecocert.com" <Jeffry.EVARD@ecocert.com>, "Jason.Laney@agri.idaho.gov" <Jason.Laney@agri.idaho.gov>, "pdescamps@eco-logica.com" <pdescamps@eco-logica.com>, "Beatrice.Breuer@imo.ch" <Beatrice.Breuer@imo.ch>, "info@etko.org" <info@etko.org>, "nd@ecoglobe.am" <nd@ecoglobe.am>, "Mary.nieland@iowaagriculture.gov" <Mary.nieland@iowaagriculture.gov>, "foodsafety@foodsafety.com.ar" <foodsafety@foodsafety.com.ar>, "p.perrone@icea.info" <p.perrone@icea.info>, "terry.hollifield@georgiacrop.com" <terry.hollifield@georgiacrop.com>, "ma@etko.org" <ma@etko.org>, "Kristen.Branscum@ky.gov" <Kristen.Branscum@ky.gov>, "info@globalculture.us" <info@globalculture.us>, "calidad@foodsafety.com.ar" <calidad@foodsafety.com.ar>, "herr@bcs-oeko.de" <herr@bcs-oeko.de>, "goaorg@centurylink.net" <goaorg@centurylink.net>, "a.moutapam@lacon-institut.org" <a.moutapam@lacon-institut.org>, "Ibd@Ibd.com.br" <Ibd@ibd.com.br>, "globalculture@earthlink.net" <globalculture@earthlink.net>, "monica@letis.org" <monica@letis.org>, "Johanna.Phillips@agri.idaho.gov" <Johanna.Phillips@agri.idaho.gov>, "scarlsen@co.marin.ca.us" <scarlsen@co.marin.ca.us>, "imo@imo.ch" <imo@imo.ch>, "gwendal@ibd.com.br" <gwendal@ibd.com.br>, "juanantonio.mendoza@mayacert.com" <juanantonio.mendoza@mayacert.com>, "info@ics-intl.com" <info@ics-intl.com>, "spwalker@mosaorganic.org" <spwalker@mosaorganic.org>, "maury.wills@iowaagriculture.gov" <maury.wills@iowaagriculture.gov>, "soh@imo.ch" <soh@imo.ch>, "wippl001@umn.edu" <wippl001@umn.edu>, "nop@icea.info" <nop@icea.info>, "dawn@ics-intl.com" <dawn@ics-intl.com>, "knewkirk@mofga.org" <knewkirk@mofga.org>, "adam.watson@ky.gov" <adam.watson@ky.gov>, "etyanich@mt.gov" <etyanich@mt.gov>, "info@bcs-oeko.de" <info@bcs-oeko.de>, "CarltonN@co.monterey.ca.us" <CarltonN@co.monterey.ca.us>, "lacon@lacon-institut.org" <lacon@lacon-institut.org>, "kirrilley.becker@nasaa.com.au" <kirrilley.becker@nasaa.com.au>, "letis@letis.org" <letis@letis.org>, "fischer@bcs-oeko.de" <fischer@bcs-oeko.de>, "cfanta@naturesinternational.com" <cfanta@naturesinternational.com>, "jstiles@marincounty.org" <jstiles@marincounty.org>, "j.kopp@lacon-institut.org" <j.kopp@lacon-institut.org>, "jabbott@agri.nv.gov" <jabbott@agri.nv.gov>, "FGIS OA, Maryland" <Deanna.Baldwin@maryland.gov>, "internacional@letis.org" <internacional@letis.org>, "Victoria.Smith@agr.nh.gov" <Victoria.Smith@agr.nh.gov>, "info@mayacert.com" <info@mayacert.com>, "Daniel.wunderlich@ag.state.nj.us" <Daniel.wunderlich@ag.state.nj.us>, "mosa@mosaorganic.org" <mosa@mosaorganic.org>, "SGerk@nmda.nmsu.edu" <SGerk@nmda.nmsu.edu>, "mncia@mncia.org" <mncia@mncia.org>, "noe.rivera@mayacert.com" <noe.rivera@mayacert.com>, "lisaengelbert@nofany.org" <lisaengelbert@nofany.org>, "certification@mofga.org" <certification@mofga.org>, "cskolaski@mosaorganic.org" <cskolaski@mosaorganic.org>, "Bryan.Buchwald@ag.ok.gov" <Bryan.Buchwald@ag.ok.gov>, "agrorganic@mt.gov" <agrorganic@mt.gov>, "michelle.menken@mncia.org" <michelle.menken@mncia.org>, "leng@oda.state.or.us" <leng@oda.state.or.us>, "agcomm@co.monterey.ca.us" <agcomm@co.monterey.ca.us>, "yurlina@mofga.org" <yurlina@mofga.org>, "abrewster@ocia.org" <abrewster@ocia.org>, "sachin.ayachit@nasaa.com.au" <sachin.ayachit@nasaa.com.au>, "gwebster@mt.gov" <gwebster@mt.gov>, "gestiondecalidad@oia.com.ar" <gestiondecalidad@oia.com.ar>, "nfccertification@gmail.com" <nfccertification@gmail.com>, "Huntinggb@co.monterey.ca.us" <Huntinggb@co.monterey.ca.us>, "hi.yoshida@omicnet.com"

<hi.yoshida@omicnet.com>, "nics@naturesinternational.com" <nics@naturesinternational.com>, "kyla@paorganic.org" <kyla@paorganic.org>, "Jennifer.Gornnert@agr.nh.gov" <Jennifer.Gornnert@agr.nh.gov>, "brian.mansfield@primuslabs.com" <brian.mansfield@primuslabs.com>, "erich.bremer@ag.state.nj.us" <erich.bremer@ag.state.nj.us>, "dave@naturesinternational.com" <dave@naturesinternational.com>, "byron.hamm@pro-cert.org" <byron.hamm@pro-cert.org>, "organic@nmda.nmsu.edu" <organic@nmda.nmsu.edu>, "ajeppson@agri.nv.gov" <ajeppson@agri.nv.gov>, "thughes@nsf.org" <thughes@nsf.org>, "certifiedorganic@nofany.org" <certifiedorganic@nofany.org>, "ram@qcsinfo.org" <ram@qcsinfo.org>, "organic@oeffa.org" <organic@oeffa.org>, "dkirsanovaphillips@scscertified.com" <dkirsanovaphillips@scscertified.com>, "jeff.stearns@ag.ok.gov" <jeff.stearns@ag.ok.gov>, "bbakker@nmda.nmsu.edu" <bbakker@nmda.nmsu.edu>, "rhougaard@utah.gov" <rhougaard@utah.gov>, "info@onecert.com" <info@onecert.com>, "lori@nofany.org" <lori@nofany.org>, "Laura@nofavt.org" <Laura@nofavt.org>, "cid-organic@oda.state.or.us" <cid-organic@oda.state.or.us>, "andy@oeffa.org" <andy@oeffa.org>, "srice@agr.wa.gov" <srice@agr.wa.gov>, "organic@tilth.org" <organic@tilth.org>, "john.young@yolocounty.org" <john.young@yolocounty.org>, "info@occert.com" <info@occert.com>, "sam@onecert.com" <sam@onecert.com>, "xiao@ofdc.org.cn" <xiao@ofdc.org.cn>, "kallen@oda.state.or.us" <kallen@oda.state.or.us>, "oia@oia.com.ar" <oia@oia.com.ar>, "connie@tilth.org" <connie@tilth.org>, "ocd@omicnet.com" <ocd@omicnet.com>, "susan@occert.com" <susan@occert.com>, "pco@paorganic.org" <pco@paorganic.org>, "celder@ocia.org" <celder@ocia.org>, "PrimusOrganic@primuslabs.com" <PrimusOrganic@primuslabs.com>, "info@pro-cert.org" <info@pro-cert.org>, "pedroalanda@oia.com.ar" <pedroalanda@oia.com.ar>, "qai@qai-inc.com" <qai@qai-inc.com>, "qcs@qcsinfo.org" <qcs@qcsinfo.org>, "leslie@paorganic.org" <leslie@paorganic.org>, "matt.green@dem.ri.gov" <matt.green@dem.ri.gov>, "deborah.mansfield@primuslabs.com" <deborah.mansfield@primuslabs.com>, "organic@scsglobalservice.com" <organic@scsglobalservice.com>, "Dave.Lockman@pro-cert.org" <Dave.Lockman@pro-cert.org>, "Sally@Demeter-USA.org" <Sally@demeter-usa.org>, "irendon@nsf.org" <irendon@nsf.org>, "Organic@TexasAgriculture.gov" <Organic@texasagriculture.gov>, "robin@qcsinfo.org" <robin@qcsinfo.org>, (b) (6) @gmail.com" (b) (6) @gmail.com>, "rlarsen@utah.gov" <rlarsen@utah.gov>, "bnauman@scsglobalservices.com" <bnauman@scsglobalservices.com>, "Info@nofavt.org" <Info@nofavt.org>, "organic@agr.wa.gov" <organic@agr.wa.gov>, "Mary.Holliman@texasagriculture.gov" <Mary.Holliman@texasagriculture.gov>, "dennis.chambers@yolocounty.org" <dennis.chambers@yolocounty.org>, "Nicole@nofavt.org" <Nicole@nofavt.org>, "bbook@agr.wa.gov" <bbook@agr.wa.gov>

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:

The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media.

This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,

Cheri Courtney

Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** Rendon, Iris <irendon@gftc.ca>
**Sent:** Monday, March 21, 2016 9:49 AM
**To:** McElroy, Bridget - AMS
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Thank you for confirming receipt.
Best regards,

**Iris Rendon**
Quality Specialist
NSF International - Canada
☏ (+1) 519-821-1246 ext. 5059
✉ irendon@nsf.org
www.nsf.org



---

**From:** McElroy, Bridget - AMS [mailto:Bridget.McElroy@ams.usda.gov]
**Sent:** March-17-16 4:20 PM
**To:** Rendon, Iris
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Hi Iris,

I am going through a whole lot of emails in the order that they came in, so I didn't see your second one until now. I will use this updated information.

Thank you again for your help.

Bridget

---

**From:** Rendon, Iris [mailto:irendon@gftc.ca]
**Sent:** Thursday, March 10, 2016 4:12 PM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** FW: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Hello,
I had submitted a response to this inquiry earlier, however, some corrections have been made by the technical team.
Please accept this response and disregard the previous email on this subject.
Thank you and best regards.

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards? Yes

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify? Eight, however, please see attachment with comments. You may arrive at a different conclusion.

In what state or country (if international) are the certified operations located (list)? See attached.

What crops do these certified operations produce (list)? See attached.


**Iris Rendon**
Quality Specialist
NSF International - Canada
☏ (+1) 519-821-1246 ext. 5059
✉ irendon@nsf.org
www.nsf.org




---

**From:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **On Behalf Of** AMS - AIAinbox
**Sent:** March-01-16 10:12 AM
**To:** AMS - AIAinbox
**Cc:** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au; organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au; michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA, Reno, NV; emel.erkan@bio-inspecta.com; central@biolatina.com; baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; rporto@caae.es; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; rporto@caae.es; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct; jvdschootbrugge@controlunion.com; ceres@ceres-cert.com; rsetti@ccpb.it; vincent.morel@ecocert.com; info@certisys.eu; direccionejecutiva@certimexsc.com; agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us; Nathalie.Boes@certisys.eu; joy.mccracken@georgiacrop.com; organic@controlunion.com; organic@clemson.edu; cvanhook77@earthlink.net; info.ecocertico@ecocert.com; amy.stafford@state.co.us; goabecky@centurylink.net; aude.bonnet@ecocert.com; dszalai@controlunion.com; camila@ibd.com.br; ep@ecoglobe.am; Jeffry.EVARD@ecocert.com; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; aude.bonnet@ecocert.com; Beatrice.Breuer@imo.ch; info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@eco-logica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; a.moutapam@lacon-institut.org; Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov;

spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; soh@imo.ch; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; lacon@lacon-institut.org; adam.watson@ky.gov; kirrilley.becker@nasaa.com.au; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; j.kopp@lacon-institut.org; jabbott@agri.nv.gov; FGIS OA, Maryland; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland; SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; abrewster@ocia.org; sachin.ayachit@nasaa.com.au; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; sachin.ayachit@nasaa.com.au; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; Hughes, Theresa; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org; ocd@omicnet.com; susan@occert.com; pco@paorganic.org; celder@ocia.org; PrimusOrganic@primuslabs.com; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; QAI 2; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; deborah.mansfield@primuslabs.com; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; Rendon, Iris; Organic@TexasAgriculture.gov; robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org
**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division



NOTICE: This email and its contents/attachments may be confidential and are intended solely for the individual to whom it is addressed.
If you are not the named addressee or if this email is otherwise received in error, please immediately notify the sender without
reading it and do not take any action based on its contents or otherwise copy or disclose it to anyone. Any opinions or views expressed in
this transmission are solely of the author and do not necessarily represent those of NSF International or its affiliates.

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Monday, March 14, 2016 9:09 AM
**To:** Mann, Renee - AMS
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Good morning Renee,

So, I (b) (5) [redacted]

Let me know what you think is the best thing to do. Thanks again to AIA for the help on this!

Bridget

---

**From:** Mann, Renee - AMS
**Sent:** Tuesday, March 01, 2016 11:00 AM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

It went to the 80 accredited certifiers, and the California State Organic Program (so they know what we're asking of the certifiers).

Renee Mann
Assistant Director, Accreditation and International Activities Division
USDA National Organic Program
(202) 260-8635
Join the NOP mailing list.

---

**From:** McElroy, Bridget - AMS
**Sent:** Tuesday, March 01, 2016 10:55 AM
**To:** Mann, Renee - AMS <Renee.Mann@ams.usda.gov>
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Oh, how many ACAs total did it go to?

---

**From:** Mann, Renee - AMS
**Sent:** Tuesday, March 01, 2016 10:35 AM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** FW: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

FYI

Renee Mann
Assistant Director, Accreditation and International Activities Division
USDA National Organic Program
(202) 260-8635
Join the NOP mailing list.

---

**From:** Baron , Anne - AMS
**Sent:** Tuesday, March 01, 2016 10:29 AM
**To:** Courtney, Cheri - AMS <Cheri.Courtney@ams.usda.gov>; Crail, Lars - AMS <Lars.Crail@ams.usda.gov>; Gebault King, ReneeA - AMS <ReneeA.GebaultKing@ams.usda.gov>; Lopez, JasonJ - AMS <JasonJ.Lopez@ams.usda.gov>; Lusby, MaryLou - AMS <MaryLou.Lusby@ams.usda.gov>; Mann, Renee - AMS <Renee.Mann@ams.usda.gov>; Yang, RobertH - AMS <RobertH.Yang@ams.usda.gov>; Zuck, Penelope - AMS <Penelope.Zuck@ams.usda.gov>; Adams, Edith - AMS <Edith.Adams@ams.usda.gov>; Caceres, Miguel - AMS <Miguel.Caceres@ams.usda.gov>; Friesenhahn, Martin - AMS <Martin.Friesenhahn@ams.usda.gov>; Gilbert, Corey - AMS <Corey.Gilbert@ams.usda.gov>; Heckart, Patricia - AMS <Patricia.Heckart@ams.usda.gov>; Hildreth, David - AMS <David.Hildreth@ams.usda.gov>; Horne, Willy - AMS <Willy.Horne@ams.usda.gov>; Kohles, Alan - AMS <Alan.Kohles@ams.usda.gov>; Lopez, Mike - AMS <Mike.Lopez@ams.usda.gov>; Matejovsky, Kathryn - AMS <Kathryn.Matejovsky@ams.usda.gov>; Ross, Steve - AMS <Steve.Ross@ams.usda.gov>; Schoop, Jamie - AMS <Jamie.Schoop@ams.usda.gov>; Skinner, Rick - AMS <Rick.Skinner@ams.usda.gov>; Wilson, Darrell - AMS <Darrell.Wilson@ams.usda.gov>; Gebel, Kelley - AMS <Kelley.Gebel@ams.usda.gov>; McEvoy, Miles - AMS <Miles.McEvoy@ams.usda.gov>; Tucker, Jennifer - AMS <Jennifer.Tucker@ams.usda.gov>; Nelson, Kristen - AMS <Kristen.Nelson@ams.usda.gov>; Lewis, Paul I - AMS <PaulI.Lewis@ams.usda.gov>; Holmes, Vella - AMS <Vella.Holmes@ams.usda.gov>; Michael, Matthew - AMS <Matthew.Michael@ams.usda.gov>; andy@oeffa.org
**Subject:** FW: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Dear AIA staff, NOP Management Team and QAD auditors,

Please find below the message sent to the certifiers.
Let us know if you have any questions.

Regards,
Alvik Joseph

---

**From:** Baron , Anne - AMS **On Behalf Of** AMS - AIAinbox
**Sent:** Tuesday, March 01, 2016 10:12 AM
**To:** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**Cc:** 'admin@abeeorganic.com' <admin@abeeorganic.com>; 'sarah@abeeorganic.com' <sarah@abeeorganic.com>; 'ro@abeeorganic.com' <ro@abeeorganic.com>; 'info@ascorganic.com' <info@ascorganic.com>; 'Kat@ascorganic.com' <Kat@ascorganic.com>; 'mfigueiras@argencert.com.ar' <mfigueiras@argencert.com.ar>; 'americert@gmail.com' <americert@gmail.com>; 'americert@gmail.com' <americert@gmail.com>; 'organic@ausmeat.com.au' <organic@ausmeat.com.au>; 'info@argencert.com.ar' <info@argencert.com.ar>; 'lmontenegro@argencert.com.ar' <lmontenegro@argencert.com.ar>; 'jorge.larranaga@aco.net.au' <jorge.larranaga@aco.net.au>; 'organic@ausqual.com.au' <organic@ausqual.com.au>; 'elise@ausqual.com.au' <elise@ausqual.com.au>; 'dcox@baystateorganic.org' <dcox@baystateorganic.org>; 'michael.baker@aco.net.au' <michael.baker@aco.net.au>; 'michael.baker@aco.net.au' <michael.baker@aco.net.au>; 'roxana.priego@biolatina.com.pe' <roxana.priego@biolatina.com.pe>; 'baystateorganic@earthlink.net' <baystateorganic@earthlink.net>; Koble, Clinton - FSA, Reno, NV <clinton.koble@nv.usda.gov>; 'emel.erkan@bio-inspecta.com' <emel.erkan@bio-inspecta.com>; 'central@biolatina.com' <central@biolatina.com>; 'baystateorganic@earthlink.net' <baystateorganic@earthlink.net>; 'amalia.rueda@bioagricert.org' <amalia.rueda@bioagricert.org>; 'admin@bio-inspecta.ch' <admin@bio-inspecta.ch>; 'central@biolatina.com' <central@biolatina.com>; 'Pat.Kennelly@cdph.ca.gov' <Pat.Kennelly@cdph.ca.gov>; 'info@bioagricert.org' <info@bioagricert.org>; 'julia.winter@bio-inspecta.ch' <julia.winter@bio-inspecta.ch>; 'accreditation@ccof.org' <accreditation@ccof.org>; 'Bolicert@megalink.com' <Bolicert@megalink.com>;

'riccardo.cozzo@bioagricert.org' <riccardo.cozzo@bioagricert.org>; 'calidad@certimexsc.com' <calidad@certimexsc.com>; 'rporto@caae.es' <rporto@caae.es>; 'Bolicert@bolicert.org' <Bolicert@bolicert.org>; 'tom.nizet@certisys.eu' <tom.nizet@certisys.eu>; 'ccof@ccof.org' <ccof@ccof.org>; 'rporto@caae.es' <rporto@caae.es>; saltmn@clemson.edu; 'ccpb@ccpb.it' <ccpb@ccpb.it>; 'Danny.Lee@cdfa.ca.gov' <Danny.Lee@cdfa.ca.gov>; 'mitchell.yergert@state.co.us' <mitchell.yergert@state.co.us>; 'certimex@certimexsc.com' <certimex@certimexsc.com>; Lewin Jake-FASConatct <jake@ccof.org>; 'jvdschootbrugge@controlunion.com' <jvdschootbrugge@controlunion.com>; 'ceres@ceres-cert.com' <ceres@ceres-cert.com>; 'rsetti@ccpb.it' <rsetti@ccpb.it>; 'vincent.morel@ecocert.com' <vincent.morel@ecocert.com>; 'info@certisys.eu' <info@certisys.eu>; 'direccionejecutiva@certimexsc.com' <direccionejecutiva@certimexsc.com>; 'agroecologiauna@gmail.com' <agroecologiauna@gmail.com>; 'organic@clemson.edu' <organic@clemson.edu>; 'benzing@ceres-cert.com' <benzing@ceres-cert.com>; 'mefraga@foodsafety.com.ar' <mefraga@foodsafety.com.ar>; 'amy.stafford@state.co.us' <amy.stafford@state.co.us>; 'Nathalie.Boes@certisys.eu' <Nathalie.Boes@certisys.eu>; 'joy.mccracken@georgiacrop.com' <joy.mccracken@georgiacrop.com>; 'organic@controlunion.com' <organic@controlunion.com>; 'organic@clemson.edu' <organic@clemson.edu>; 'cvanhook77@earthlink.net' <cvanhook77@earthlink.net>; 'info.ecocertico@ecocert.com' <info.ecocertico@ecocert.com>; 'amy.stafford@state.co.us' <amy.stafford@state.co.us>; 'goabecky@centurylink.net' <goabecky@centurylink.net>; 'aude.bonnet@ecocert.com' <aude.bonnet@ecocert.com>; 'dszalai@controlunion.com' <dszalai@controlunion.com>; 'camila@ibd.com.br' <camila@ibd.com.br>; 'ep@ecoglobe.am' <ep@ecoglobe.am>; 'Jeffry.EVARD@ecocert.com' <Jeffry.EVARD@ecocert.com>; 'Jason.Laney@agri.idaho.gov' <Jason.Laney@agri.idaho.gov>; 'pdescamps@eco-logica.com' <pdescamps@eco-logica.com>; 'aude.bonnet@ecocert.com' <aude.bonnet@ecocert.com>; 'Beatrice.Breuer@imo.ch' <Beatrice.Breuer@imo.ch>; 'info@etko.org' <info@etko.org>; 'nd@ecoglobe.am' <nd@ecoglobe.am>; 'Mary.nieland@iowaagriculture.gov' <Mary.nieland@iowaagriculture.gov>; 'foodsafety@foodsafety.com.ar' <foodsafety@foodsafety.com.ar>; 'pdescamps@eco-logica.com' <pdescamps@eco-logica.com>; 'p.perrone@icea.info' <p.perrone@icea.info>; 'terry.hollifield@georgiacrop.com' <terry.hollifield@georgiacrop.com>; 'ma@etko.org' <ma@etko.org>; 'Kristen.Branscum@ky.gov' <Kristen.Branscum@ky.gov>; 'info@globalculture.us' <info@globalculture.us>; 'calidad@foodsafety.com.ar' <calidad@foodsafety.com.ar>; 'herr@bcs-oeko.de' <herr@bcs-oeko.de>; 'goaorg@centurylink.net' <goaorg@centurylink.net>; 'terry.hollifield@georgiacrop.com' <terry.hollifield@georgiacrop.com>; 'a.moutapam@lacon-institut.org' <a.moutapam@lacon-institut.org>; 'Ibd@Ibd.com.br' <Ibd@Ibd.com.br>; 'globalculture@earthlink.net' <globalculture@earthlink.net>; 'monica@letis.org' <monica@letis.org>; 'Johanna.Phillips@agri.idaho.gov' <Johanna.Phillips@agri.idaho.gov>; 'goaorg@centurylink.net' <goaorg@centurylink.net>; scarlsen@co.marin.ca.us; 'imo@imo.ch' <imo@imo.ch>; 'gwendal@ibd.com.br' <gwendal@ibd.com.br>; 'juanantonio.mendoza@mayacert.com' <juanantonio.mendoza@mayacert.com>; 'info@ics-intl.com' <info@ics-intl.com>; 'Johanna.Phillips@agri.idaho.gov' <Johanna.Phillips@agri.idaho.gov>; 'spwalker@mosaorganic.org' <spwalker@mosaorganic.org>; 'maury.wills@iowaagriculture.gov' <maury.wills@iowaagriculture.gov>; 'soh@imo.ch' <soh@imo.ch>; 'wippl001@umn.edu' <wippl001@umn.edu>; 'nop@icea.info' <nop@icea.info>; 'dawn@ics-intl.com' <dawn@ics-intl.com>; 'knewkirk@mofga.org' <knewkirk@mofga.org>; 'adam.watson@ky.gov' <adam.watson@ky.gov>; 'maury.wills@iowaagriculture.gov' <maury.wills@iowaagriculture.gov>; 'etyanich@mt.gov' <etyanich@mt.gov>; 'info@bcs-oeko.de' <info@bcs-oeko.de>; 'nop@icea.info' <nop@icea.info>; 'CarltonN@co.monterey.ca.us' <CarltonN@co.monterey.ca.us>; 'lacon@lacon-institut.org' <lacon@lacon-institut.org>; 'adam.watson@ky.gov' <adam.watson@ky.gov>; 'kirrilley.becker@nasaa.com.au' <kirrilley.becker@nasaa.com.au>; 'letis@letis.org' <letis@letis.org>; 'fischer@bcs-oeko.de' <fischer@bcs-oeko.de>; 'cfanta@naturesinternational.com' <cfanta@naturesinternational.com>; 'jstiles@marincounty.org' <jstiles@marincounty.org>; 'j.kopp@lacon-institut.org' <j.kopp@lacon-institut.org>; 'jabbott@agri.nv.gov' <jabbott@agri.nv.gov>; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; 'internacional@letis.org' <internacional@letis.org>; 'Victoria.Smith@agr.nh.gov' <Victoria.Smith@agr.nh.gov>; 'info@mayacert.com' <info@mayacert.com>; 'jstiles@marincounty.org' <jstiles@marincounty.org>; 'Daniel.wunderlich@ag.state.nj.us' <Daniel.wunderlich@ag.state.nj.us>; 'mosa@mosaorganic.org' <mosa@mosaorganic.org>; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; 'SGerk@nmda.nmsu.edu' <SGerk@nmda.nmsu.edu>; 'mncia@mncia.org' <mncia@mncia.org>; 'noe.rivera@mayacert.com' <noe.rivera@mayacert.com>; 'lisaengelbert@nofany.org' <lisaengelbert@nofany.org>; 'certification@mofga.org' <certification@mofga.org>; 'cskolaski@mosaorganic.org' <cskolaski@mosaorganic.org>; 'Bryan.Buchwald@ag.ok.gov'

<Bryan.Buchwald@ag.ok.gov>; 'agrorganic@mt.gov' <agrorganic@mt.gov>; 'michelle.menken@mncia.org' <michelle.menken@mncia.org>; 'leng@oda.state.or.us' <leng@oda.state.or.us>; 'agcomm@co.monterey.ca.us' <agcomm@co.monterey.ca.us>; 'yurlina@mofga.org' <yurlina@mofga.org>; 'abrewster@ocia.org' <abrewster@ocia.org>; 'sachin.ayachit@nasaa.com.au' <sachin.ayachit@nasaa.com.au>; 'gwebster@mt.gov' <gwebster@mt.gov>; 'gestiondecalidad@oia.com.ar' <gestiondecalidad@oia.com.ar>; 'nfccertification@gmail.com' <nfccertification@gmail.com>; 'Huntinggb@co.monterey.ca.us' <Huntinggb@co.monterey.ca.us>; 'hi.yoshida@omicnet.com' <hi.yoshida@omicnet.com>; 'nics@naturesinternational.com' <nics@naturesinternational.com>; 'sachin.ayachit@nasaa.com.au' <sachin.ayachit@nasaa.com.au>; 'kyla@paorganic.org' <kyla@paorganic.org>; 'Jennifer.Gornnert@agr.nh.gov' <Jennifer.Gornnert@agr.nh.gov>; 'nfccertification@gmail.com' <nfccertification@gmail.com>; 'brian.mansfield@primuslabs.com' <brian.mansfield@primuslabs.com>; 'erich.bremer@ag.state.nj.us' <erich.bremer@ag.state.nj.us>; 'dave@naturesinternational.com' <dave@naturesinternational.com>; 'byron.hamm@pro-cert.org' <byron.hamm@pro-cert.org>; 'organic@nmda.nmsu.edu' <organic@nmda.nmsu.edu>; 'ajeppson@agri.nv.gov' <ajeppson@agri.nv.gov>; 'thughes@nsf.org' <thughes@nsf.org>; 'certifiedorganic@nofany.org' <certifiedorganic@nofany.org>; 'Jennifer.Gornnert@agr.nh.gov' <Jennifer.Gornnert@agr.nh.gov>; 'ram@qcsinfo.org' <ram@qcsinfo.org>; 'organic@oeffa.org' <organic@oeffa.org>; 'erich.bremer@ag.state.nj.us' <erich.bremer@ag.state.nj.us>; 'dkirsanovaphillips@scscertified.com' <dkirsanovaphillips@scscertified.com>; 'jeff.stearns@ag.ok.gov' <jeff.stearns@ag.ok.gov>; 'bbakker@nmda.nmsu.edu' <bbakker@nmda.nmsu.edu>; 'rhougaard@utah.gov' <rhougaard@utah.gov>; 'info@onecert.com' <info@onecert.com>; 'lori@nofany.org' <lori@nofany.org>; 'Laura@nofavt.org' <Laura@nofavt.org>; 'cid-organic@oda.state.or.us' <cid-organic@oda.state.or.us>; 'andy@oeffa.org' <andy@oeffa.org>; 'srice@agr.wa.gov' <srice@agr.wa.gov>; 'organic@tilth.org' <organic@tilth.org>; 'jeff.stearns@ag.ok.gov' <jeff.stearns@ag.ok.gov>; john.young@yolocounty.org; 'info@occert.com' <info@occert.com>; 'sam@onecert.com' <sam@onecert.com>; 'xiao@ofdc.org.cn' <xiao@ofdc.org.cn>; 'kallen@oda.state.or.us' <kallen@oda.state.or.us>; 'oia@oia.com.ar' <oia@oia.com.ar>; 'connie@tilth.org' <connie@tilth.org>; 'ocd@omicnet.com' <ocd@omicnet.com>; 'susan@occert.com' <susan@occert.com>; 'pco@paorganic.org' <pco@paorganic.org>; 'celder@ocia.org' <celder@ocia.org>; 'PrimusOrganic@primuslabs.com' <PrimusOrganic@primuslabs.com>; 'xiao@ofdc.org.cn' <xiao@ofdc.org.cn>; 'info@pro-cert.org' <info@pro-cert.org>; 'pedroalanda@oia.com.ar' <pedroalanda@oia.com.ar>; 'qai@qai-inc.com' <qai@qai-inc.com>; 'ocd@omicnet.com' <ocd@omicnet.com>; 'qcs@qcsinfo.org' <qcs@qcsinfo.org>; leslie@paorganic.org; matt.green@dem.ri.gov; 'deborah.mansfield@primuslabs.com' <deborah.mansfield@primuslabs.com>; 'organic@scsglobalservice.com' <organic@scsglobalservice.com>; 'Dave.Lockman@pro-cert.org' <Dave.Lockman@pro-cert.org>; 'Sally@Demeter-USA.org' <Sally@Demeter-USA.org>; 'irendon@nsf.org' <irendon@nsf.org>; 'Organic@TexasAgriculture.gov' <Organic@TexasAgriculture.gov>; 'robin@qcsinfo.org' <robin@qcsinfo.org>; 'Toaf007@gmail.com' <Toaf007@gmail.com>; matt.green@dem.ri.gov; 'rlarsen@utah.gov' <rlarsen@utah.gov>; 'bnauman@scsglobalservices.com' <bnauman@scsglobalservices.com>; 'Info@nofavt.org' <Info@nofavt.org>; 'Sally@Demeter-USA.org' <Sally@Demeter-USA.org>; 'organic@agr.wa.gov' <organic@agr.wa.gov>; 'Mary.Holliman@texasagriculture.gov' <Mary.Holliman@texasagriculture.gov>; 'dennis.chambers@yolocounty.org' <dennis.chambers@yolocounty.org>; (b) (6) @gmail.com' (b) (6) @gmail.com>; 'rlarsen@utah.gov' <rlarsen@utah.gov>; 'Nicole@nofavt.org' <Nicole@nofavt.org>; 'bbook@agr.wa.gov' <bbook@agr.wa.gov>; 'dennis.chambers@yolocounty.org' <dennis.chambers@yolocounty.org>

**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:

The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Tuesday, March 01, 2016 10:37 AM
**To:** Mann, Renee - AMS
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Thank you! I've already received a couple of responses.

Bridget

---

**From:** Mann, Renee - AMS
**Sent:** Tuesday, March 01, 2016 10:35 AM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** FW: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

FYI

Renee Mann
Assistant Director, Accreditation and International Activities Division
USDA National Organic Program
(202) 260-8635
Join the NOP mailing list.

---

**From:** Baron , Anne - AMS
**Sent:** Tuesday, March 01, 2016 10:29 AM
**To:** Courtney, Cheri - AMS <Cheri.Courtney@ams.usda.gov>; Crail, Lars - AMS <Lars.Crail@ams.usda.gov>; Gebault King, ReneeA - AMS <ReneeA.GebaultKing@ams.usda.gov>; Lopez, JasonJ - AMS <JasonJ.Lopez@ams.usda.gov>; Lusby, MaryLou - AMS <MaryLou.Lusby@ams.usda.gov>; Mann, Renee - AMS <Renee.Mann@ams.usda.gov>; Yang, RobertH - AMS <RobertH.Yang@ams.usda.gov>; Zuck, Penelope - AMS <Penelope.Zuck@ams.usda.gov>; Adams, Edith - AMS <Edith.Adams@ams.usda.gov>; Caceres, Miguel - AMS <Miguel.Caceres@ams.usda.gov>; Friesenhahn, Martin - AMS <Martin.Friesenhahn@ams.usda.gov>; Gilbert, Corey - AMS <Corey.Gilbert@ams.usda.gov>; Heckart, Patricia - AMS <Patricia.Heckart@ams.usda.gov>; Hildreth, David - AMS <David.Hildreth@ams.usda.gov>; Horne, Willy - AMS <Willy.Horne@ams.usda.gov>; Kohles, Alan - AMS <Alan.Kohles@ams.usda.gov>; Lopez, Mike - AMS <Mike.Lopez@ams.usda.gov>; Matejovsky, Kathryn - AMS <Kathryn.Matejovsky@ams.usda.gov>; Ross, Steve - AMS <Steve.Ross@ams.usda.gov>; Schoop, Jamie - AMS <Jamie.Schoop@ams.usda.gov>; Skinner, Rick - AMS <Rick.Skinner@ams.usda.gov>; Wilson, Darrell - AMS <Darrell.Wilson@ams.usda.gov>; Gebel, Kelley - AMS <Kelley.Gebel@ams.usda.gov>; McEvoy, Miles - AMS <Miles.McEvoy@ams.usda.gov>; Tucker, Jennifer - AMS <Jennifer.Tucker@ams.usda.gov>; Nelson, Kristen - AMS <Kristen.Nelson@ams.usda.gov>; Lewis, Paul I - AMS <Paull.Lewis@ams.usda.gov>; Holmes, Vella - AMS <Vella.Holmes@ams.usda.gov>; Michael, Matthew - AMS <Matthew.Michael@ams.usda.gov>; andy@oeffa.org
**Subject:** FW: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Dear AIA staff, NOP Management Team and QAD auditors,

Please find below the message sent to the certifiers.
Let us know if you have any questions.

Regards,
Alvik Joseph

---

**From:** Baron , Anne - AMS **On Behalf Of** AMS - AIAinbox
**Sent:** Tuesday, March 01, 2016 10:12 AM
**To:** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**Cc:** 'admin@abeeorganic.com' <admin@abeeorganic.com>; 'sarah@abeeorganic.com' <sarah@abeeorganic.com>; 'ro@abeeorganic.com' <ro@abeeorganic.com>; 'info@ascorganic.com' <info@ascorganic.com>; 'Kat@ascorganic.com' <Kat@ascorganic.com>; 'mfigueiras@argencert.com.ar' <mfigueiras@argencert.com.ar>; 'americert@gmail.com' <americert@gmail.com>; 'americert@gmail.com' <americert@gmail.com>; 'organic@ausmeat.com.au' <organic@ausmeat.com.au>; 'info@argencert.com.ar' <info@argencert.com.ar>; 'lmontenegro@argencert.com.ar' <lmontenegro@argencert.com.ar>; 'jorge.larranaga@aco.net.au' <jorge.larranaga@aco.net.au>; 'organic@ausqual.com.au' <organic@ausqual.com.au>; 'elise@ausqual.com.au' <elise@ausqual.com.au>; 'dcox@baystateorganic.org' <dcox@baystateorganic.org>; 'michael.baker@aco.net.au' <michael.baker@aco.net.au>; 'michael.baker@aco.net.au' <michael.baker@aco.net.au>; 'roxana.priego@biolatina.com.pe' <roxana.priego@biolatina.com.pe>; 'baystateorganic@earthlink.net' <baystateorganic@earthlink.net>; Koble, Clinton - FSA, Reno, NV <clinton.koble@nv.usda.gov>; 'emel.erkan@bio-inspecta.com' <emel.erkan@bio-inspecta.com>; 'central@biolatina.com' <central@biolatina.com>; 'baystateorganic@earthlink.net' <baystateorganic@earthlink.net>; 'amalia.rueda@bioagricert.org' <amalia.rueda@bioagricert.org>; 'admin@bio-inspecta.ch' <admin@bio-inspecta.ch>; 'central@biolatina.com' <central@biolatina.com>; 'Pat.Kennelly@cdph.ca.gov' <Pat.Kennelly@cdph.ca.gov>; 'info@bioagricert.org' <info@bioagricert.org>; 'julia.winter@bio-inspecta.ch' <julia.winter@bio-inspecta.ch>; 'accreditation@ccof.org' <accreditation@ccof.org>; 'Bolicert@megalink.com' <Bolicert@megalink.com>; 'riccardo.cozzo@bioagricert.org' <riccardo.cozzo@bioagricert.org>; 'calidad@certimexsc.com' <calidad@certimexsc.com>; 'rporto@caae.es' <rporto@caae.es>; 'Bolicert@bolicert.org' <Bolicert@bolicert.org>; 'tom.nizet@certisys.eu' <tom.nizet@certisys.eu>; 'ccof@ccof.org' <ccof@ccof.org>; 'rporto@caae.es' <rporto@caae.es>; saltmn@clemson.edu; 'ccpb@ccpb.it' <ccpb@ccpb.it>; 'Danny.Lee@cdfa.ca.gov' <Danny.Lee@cdfa.ca.gov>; 'mitchell.yergert@state.co.us' <mitchell.yergert@state.co.us>; 'certimex@certimexsc.com' <certimex@certimexsc.com>; Lewin Jake-FASConatct <jake@ccof.org>; 'jvdschootbrugge@controlunion.com' <jvdschootbrugge@controlunion.com>; 'ceres@ceres-cert.com' <ceres@ceres-cert.com>; 'rsetti@ccpb.it' <rsetti@ccpb.it>; 'vincent.morel@ecocert.com' <vincent.morel@ecocert.com>; 'info@certisys.eu' <info@certisys.eu>; 'direccionejecutiva@certimexsc.com' <direccionejecutiva@certimexsc.com>; 'agroecologiauna@gmail.com' <agroecologiauna@gmail.com>; 'organic@clemson.edu' <organic@clemson.edu>; 'benzing@ceres-cert.com' <benzing@ceres-cert.com>; 'mefraga@foodsafety.com.ar' <mefraga@foodsafety.com.ar>; 'amy.stafford@state.co.us' <amy.stafford@state.co.us>; 'Nathalie.Boes@certisys.eu' <Nathalie.Boes@certisys.eu>; 'joy.mccracken@georgiacrop.com' <joy.mccracken@georgiacrop.com>; 'organic@controlunion.com' <organic@controlunion.com>; 'organic@clemson.edu' <organic@clemson.edu>; 'cvanhook77@earthlink.net' <cvanhook77@earthlink.net>; 'info.ecocertico@ecocert.com' <info.ecocertico@ecocert.com>; 'amy.stafford@state.co.us' <amy.stafford@state.co.us>; 'goabecky@centurylink.net' <goabecky@centurylink.net>; 'aude.bonnet@ecocert.com' <aude.bonnet@ecocert.com>; 'dszalai@controlunion.com' <dszalai@controlunion.com>; 'camila@ibd.com.br' <camila@ibd.com.br>; 'ep@ecoglobe.am' <ep@ecoglobe.am>; 'Jeffry.EVARD@ecocert.com' <Jeffry.EVARD@ecocert.com>; 'Jason.Laney@agri.idaho.gov' <Jason.Laney@agri.idaho.gov>; 'pdescamps@eco-logica.com' <pdescamps@eco-logica.com>; 'aude.bonnet@ecocert.com' <aude.bonnet@ecocert.com>; 'Beatrice.Breuer@imo.ch' <Beatrice.Breuer@imo.ch>; 'info@etko.org' <info@etko.org>; 'nd@ecoglobe.am' <nd@ecoglobe.am>; 'Mary.nieland@iowaagriculture.gov' <Mary.nieland@iowaagriculture.gov>; 'foodsafety@foodsafety.com.ar' <foodsafety@foodsafety.com.ar>; 'pdescamps@eco-logica.com' <pdescamps@eco-logica.com>; 'p.perrone@icea.info' <p.perrone@icea.info>; 'terry.hollifield@georgiacrop.com' <terry.hollifield@georgiacrop.com>; 'ma@etko.org' <ma@etko.org>; 'Kristen.Branscum@ky.gov' <Kristen.Branscum@ky.gov>; 'info@globalculture.us' <info@globalculture.us>; 'calidad@foodsafety.com.ar' <calidad@foodsafety.com.ar>; 'herr@bcs-oeko.de' <herr@bcs-oeko.de>; 'goaorg@centurylink.net' <goaorg@centurylink.net>; 'terry.hollifield@georgiacrop.com' <terry.hollifield@georgiacrop.com>; 'a.moutapam@lacon-institut.org' <a.moutapam@lacon-institut.org>; 'Ibd@Ibd.com.br' <Ibd@Ibd.com.br>; 'globalculture@earthlink.net' <globalculture@earthlink.net>; 'monica@letis.org' <monica@letis.org>;

'Johanna.Phillips@agri.idaho.gov' <Johanna.Phillips@agri.idaho.gov>; 'goaorg@centurylink.net' <goaorg@centurylink.net>; scarlsen@co.marin.ca.us; 'imo@imo.ch' <imo@imo.ch>; 'gwendal@ibd.com.br' <gwendal@ibd.com.br>; 'juanantonio.mendoza@mayacert.com' <juanantonio.mendoza@mayacert.com>; 'info@ics-intl.com' <info@ics-intl.com>; 'Johanna.Phillips@agri.idaho.gov' <Johanna.Phillips@agri.idaho.gov>; 'spwalker@mosaorganic.org' <spwalker@mosaorganic.org>; 'maury.wills@iowaagriculture.gov' <maury.wills@iowaagriculture.gov>; 'soh@imo.ch' <soh@imo.ch>; 'wippl001@umn.edu' <wippl001@umn.edu>; 'nop@icea.info' <nop@icea.info>; 'dawn@ics-intl.com' <dawn@ics-intl.com>; 'knewkirk@mofga.org' <knewkirk@mofga.org>; 'adam.watson@ky.gov' <adam.watson@ky.gov>; 'maury.wills@iowaagriculture.gov' <maury.wills@iowaagriculture.gov>; 'etyanich@mt.gov' <etyanich@mt.gov>; 'info@bcs-oeko.de' <info@bcs-oeko.de>; 'nop@icea.info' <nop@icea.info>; 'CarltonN@co.monterey.ca.us' <CarltonN@co.monterey.ca.us>; 'lacon@lacon-institut.org' <lacon@lacon-institut.org>; 'adam.watson@ky.gov' <adam.watson@ky.gov>; 'kirrilley.becker@nasaa.com.au' <kirrilley.becker@nasaa.com.au>; 'letis@letis.org' <letis@letis.org>; 'fischer@bcs-oeko.de' <fischer@bcs-oeko.de>; 'cfanta@naturesinternational.com' <cfanta@naturesinternational.com>; 'jstiles@marincounty.org' <jstiles@marincounty.org>; 'j.kopp@lacon-institut.org' <j.kopp@lacon-institut.org>; 'jabbott@agri.nv.gov' <jabbott@agri.nv.gov>; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; 'internacional@letis.org' <internacional@letis.org>; 'Victoria.Smith@agr.nh.gov' <Victoria.Smith@agr.nh.gov>; 'info@mayacert.com' <info@mayacert.com>; 'jstiles@marincounty.org' <jstiles@marincounty.org>; 'Daniel.wunderlich@ag.state.nj.us' <Daniel.wunderlich@ag.state.nj.us>; 'mosa@mosaorganic.org' <mosa@mosaorganic.org>; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; 'SGerk@nmda.nmsu.edu' <SGerk@nmda.nmsu.edu>; 'mncia@mncia.org' <mncia@mncia.org>; 'noe.rivera@mayacert.com' <noe.rivera@mayacert.com>; 'lisaengelbert@nofany.org' <lisaengelbert@nofany.org>; 'certification@mofga.org' <certification@mofga.org>; 'cskolaski@mosaorganic.org' <cskolaski@mosaorganic.org>; 'Bryan.Buchwald@ag.ok.gov' <Bryan.Buchwald@ag.ok.gov>; 'agrorganic@mt.gov' <agrorganic@mt.gov>; 'michelle.menken@mncia.org' <michelle.menken@mncia.org>; 'leng@oda.state.or.us' <leng@oda.state.or.us>; 'agcomm@co.monterey.ca.us' <agcomm@co.monterey.ca.us>; 'yurlina@mofga.org' <yurlina@mofga.org>; 'abrewster@ocia.org' <abrewster@ocia.org>; 'sachin.ayachit@nasaa.com.au' <sachin.ayachit@nasaa.com.au>; 'gwebster@mt.gov' <gwebster@mt.gov>; 'gestiondecalidad@oia.com.ar' <gestiondecalidad@oia.com.ar>; 'nfccertification@gmail.com' <nfccertification@gmail.com>; 'Huntinggb@co.monterey.ca.us' <Huntinggb@co.monterey.ca.us>; 'hi.yoshida@omicnet.com' <hi.yoshida@omicnet.com>; 'nics@naturesinternational.com' <nics@naturesinternational.com>; 'sachin.ayachit@nasaa.com.au' <sachin.ayachit@nasaa.com.au>; 'kyla@paorganic.org' <kyla@paorganic.org>; 'Jennifer.Gornnert@agr.nh.gov' <Jennifer.Gornnert@agr.nh.gov>; 'nfccertification@gmail.com' <nfccertification@gmail.com>; 'brian.mansfield@primuslabs.com' <brian.mansfield@primuslabs.com>; 'erich.bremer@ag.state.nj.us' <erich.bremer@ag.state.nj.us>; 'dave@naturesinternational.com' <dave@naturesinternational.com>; 'byron.hamm@pro-cert.org' <byron.hamm@pro-cert.org>; 'organic@nmda.nmsu.edu' <organic@nmda.nmsu.edu>; 'ajeppson@agri.nv.gov' <ajeppson@agri.nv.gov>; 'thughes@nsf.org' <thughes@nsf.org>; 'certifiedorganic@nofany.org' <certifiedorganic@nofany.org>; 'Jennifer.Gornnert@agr.nh.gov' <Jennifer.Gornnert@agr.nh.gov>; 'ram@qcsinfo.org' <ram@qcsinfo.org>; 'organic@oeffa.org' <organic@oeffa.org>; 'erich.bremer@ag.state.nj.us' <erich.bremer@ag.state.nj.us>; 'dkirsanovaphillips@scscertified.com' <dkirsanovaphillips@scscertified.com>; 'jeff.stearns@ag.ok.gov' <jeff.stearns@ag.ok.gov>; 'bbakker@nmda.nmsu.edu' <bbakker@nmda.nmsu.edu>; 'rhougaard@utah.gov' <rhougaard@utah.gov>; 'info@onecert.com' <info@onecert.com>; 'lori@nofany.org' <lori@nofany.org>; 'Laura@nofavt.org' <Laura@nofavt.org>; 'cid-organic@oda.state.or.us' <cid-organic@oda.state.or.us>; 'andy@oeffa.org' <andy@oeffa.org>; 'srice@agr.wa.gov' <srice@agr.wa.gov>; 'organic@tilth.org' <organic@tilth.org>; 'jeff.stearns@ag.ok.gov' <jeff.stearns@ag.ok.gov>; john.young@yolocounty.org; 'info@occert.com' <info@occert.com>; 'sam@onecert.com' <sam@onecert.com>; 'xiao@ofdc.org.cn' <xiao@ofdc.org.cn>; 'kallen@oda.state.or.us' <kallen@oda.state.or.us>; 'oia@oia.com.ar' <oia@oia.com.ar>; 'connie@tilth.org' <connie@tilth.org>; 'ocd@omicnet.com' <ocd@omicnet.com>; 'susan@occert.com' <susan@occert.com>; 'pco@paorganic.org' <pco@paorganic.org>; 'celder@ocia.org' <celder@ocia.org>; 'PrimusOrganic@primuslabs.com' <PrimusOrganic@primuslabs.com>; 'xiao@ofdc.org.cn' <xiao@ofdc.org.cn>; 'info@pro-cert.org' <info@pro-cert.org>; 'pedroalanda@oia.com.ar' <pedroalanda@oia.com.ar>; 'qai@qai-inc.com' <qai@qai-inc.com>; 'ocd@omicnet.com' <ocd@omicnet.com>; 'qcs@qcsinfo.org' <qcs@qcsinfo.org>; leslie@paorganic.org; matt.green@dem.ri.gov; 'deborah.mansfield@primuslabs.com' <deborah.mansfield@primuslabs.com>; 'organic@scsglobalservice.com'

<organic@scsglobalservice.com>; 'Dave.Lockman@pro-cert.org' <Dave.Lockman@pro-cert.org>; 'Sally@Demeter-USA.org' <Sally@Demeter-USA.org>; 'irendon@nsf.org' <irendon@nsf.org>; 'Organic@TexasAgriculture.gov' <Organic@TexasAgriculture.gov>; 'robin@qcsinfo.org' <robin@qcsinfo.org>; (b) (6) @gmail.com' (b) (6) @gmail.com>; matt.green@dem.ri.gov; 'rlarsen@utah.gov' <rlarsen@utah.gov>; 'bnauman@scsglobalservices.com' <bnauman@scsglobalservices.com>; 'Info@nofavt.org' <Info@nofavt.org>; 'Sally@Demeter-USA.org' <Sally@Demeter-USA.org>; 'organic@agr.wa.gov' <organic@agr.wa.gov>; 'Mary.Holliman@texasagriculture.gov' <Mary.Holliman@texasagriculture.gov>; 'dennis.chambers@yolocounty.org' <dennis.chambers@yolocounty.org>; 'Toaf007@gmail.com' <Toaf007@gmail.com>; 'rlarsen@utah.gov' <rlarsen@utah.gov>; 'Nicole@nofavt.org' <Nicole@nofavt.org>; 'bbook@agr.wa.gov' <bbook@agr.wa.gov>; 'dennis.chambers@yolocounty.org' <dennis.chambers@yolocounty.org>
**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** Nune Darbinjan [redacted]@yahoo.com>
**Sent:** Wednesday, March 09, 2016 1:44 AM
**To:** AMS - AIAinbox; Nune Darbinjan; McElroy, Bridget - AMS
**Subject:** Re: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Dear NOP,

I would like to inform you that ECOGLOBE (EGLO) does not certify any hydroponic, aquaponic, aeroponic.
We are especially interested in any instruction and new approaches to this technologies by the NOP.

*Best regards, Ms. Nune Darbinyan*
*Liebe Grüße, Frau Nune Darbinyan*

**Dr. Nune Darbinyan**
**General Director**
**ECOGLOBE**

***Contact information:***
Tel: +37410221295
Tel mob: +[redacted]
Fax: +37410221295
E-mail: nd@ecoglobe.am
[redacted]@yahoo.com
**Internet: www.ecoglobe.am**

***Organic certification worldwide USA, Canada, EU, Switzerland***
***EU and Swiss code is BIO-112***

***Mind about environment before printing!***

---

**From:** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**To:** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**Cc:** "admin@abeeorganic.com" <admin@abeeorganic.com>; "sarah@abeeorganic.com" <sarah@abeeorganic.com>; "ro@abeeorganic.com" <ro@abeeorganic.com>; "info@ascorganic.com" <info@ascorganic.com>; "Kat@ascorganic.com" <Kat@ascorganic.com>; "mfigueiras@argencert.com.ar" <mfigueiras@argencert.com.ar>; "americert@gmail.com" <americert@gmail.com>; "americert@gmail.com" <americert@gmail.com>; "organic@ausmeat.com.au" <organic@ausmeat.com.au>; "info@argencert.com.ar" <info@argencert.com.ar>; "lmontenegro@argencert.com.ar" <lmontenegro@argencert.com.ar>; "jorge.larranaga@aco.net.au" <jorge.larranaga@aco.net.au>; "organic@ausqual.com.au" <organic@ausqual.com.au>; "elise@ausqual.com.au" <elise@ausqual.com.au>; "dcox@baystateorganic.org" <dcox@baystateorganic.org>; "michael.baker@aco.net.au" <michael.baker@aco.net.au>; "michael.baker@aco.net.au" <michael.baker@aco.net.au>; "roxana.priego@biolatina.com.pe" <roxana.priego@biolatina.com.pe>; "baystateorganic@earthlink.net" <baystateorganic@earthlink.net>; "Koble, Clinton - FSA, Reno, NV" <clinton.koble@nv.usda.gov>; "emel.erkan@bio-inspecta.com" <emel.erkan@bio-inspecta.com>; "central@biolatina.com" <central@biolatina.com>; "baystateorganic@earthlink.net" <baystateorganic@earthlink.net>; "amalia.rueda@bioagricert.org" <amalia.rueda@bioagricert.org>; "admin@bio-inspecta.ch" <admin@bio-inspecta.ch>; "central@biolatina.com" <central@biolatina.com>; "Pat.Kennelly@cdph.ca.gov" <Pat.Kennelly@cdph.ca.gov>; "info@bioagricert.org"

<info@bioagricert.org>; "julia.winter@bio-inspecta.ch" <julia.winter@bio-inspecta.ch>; "accreditation@ccof.org" <accreditation@ccof.org>; "Bolicert@megalink.com" <Bolicert@megalink.com>; "riccardo.cozzo@bioagricert.org" <riccardo.cozzo@bioagricert.org>; "calidad@certimexsc.com" <calidad@certimexsc.com>; "rporto@caae.es" <rporto@caae.es>; "Bolicert@bolicert.org" <Bolicert@bolicert.org>; "tom.nizet@certisys.eu" <tom.nizet@certisys.eu>; "ccof@ccof.org" <ccof@ccof.org>; "rporto@caae.es" <rporto@caae.es>; "saltmn@clemson.edu" <saltmn@clemson.edu>; "ccpb@ccpb.it" <ccpb@ccpb.it>; "Danny.Lee@cdfa.ca.gov" <Danny.Lee@cdfa.ca.gov>; "mitchell.yergert@state.co.us" <mitchell.yergert@state.co.us>; "certimex@certimexsc.com" <certimex@certimexsc.com>; Lewin Jake-FASConatct <jake@ccof.org>; "jvdschootbrugge@controlunion.com" <jvdschootbrugge@controlunion.com>; "ceres@ceres-cert.com" <ceres@ceres-cert.com>; "rsetti@ccpb.it" <rsetti@ccpb.it>; "vincent.morel@ecocert.com" <vincent.morel@ecocert.com>; "info@certisys.eu" <info@certisys.eu>; "direccionejecutiva@certimexsc.com" <direccionejecutiva@certimexsc.com>; "agroecologiauna@gmail.com" <agroecologiauna@gmail.com>; "organic@clemson.edu" <organic@clemson.edu>; "benzing@ceres-cert.com" <benzing@ceres-cert.com>; "mefraga@foodsafety.com.ar" <mefraga@foodsafety.com.ar>; "amy.stafford@state.co.us" <amy.stafford@state.co.us>; "Nathalie.Boes@certisys.eu" <Nathalie.Boes@certisys.eu>; "joy.mccracken@georgiacrop.com" <joy.mccracken@georgiacrop.com>; "organic@controlunion.com" <organic@controlunion.com>; "organic@clemson.edu" <organic@clemson.edu>; "cvanhook77@earthlink.net" <cvanhook77@earthlink.net>; "info.ecocertico@ecocert.com" <info.ecocertico@ecocert.com>; "amy.stafford@state.co.us" <amy.stafford@state.co.us>; "goabecky@centurylink.net" <goabecky@centurylink.net>; "aude.bonnet@ecocert.com" <aude.bonnet@ecocert.com>; "dszalai@controlunion.com" <dszalai@controlunion.com>; "camila@ibd.com.br" <camila@ibd.com.br>; "ep@ecoglobe.am" <ep@ecoglobe.am>; "Jeffry.EVARD@ecocert.com" <Jeffry.EVARD@ecocert.com>; "Jason.Laney@agri.idaho.gov" <Jason.Laney@agri.idaho.gov>; "pdescamps@eco-logica.com" <pdescamps@eco-logica.com>; "aude.bonnet@ecocert.com" <aude.bonnet@ecocert.com>; "Beatrice.Breuer@imo.ch" <Beatrice.Breuer@imo.ch>; "info@etko.org" <info@etko.org>; "nd@ecoglobe.am" <nd@ecoglobe.am>; "Mary.nieland@iowaagriculture.gov" <Mary.nieland@iowaagriculture.gov>; "foodsafety@foodsafety.com.ar" <foodsafety@foodsafety.com.ar>; "pdescamps@eco-logica.com" <pdescamps@eco-logica.com>; "p.perrone@icea.info" <p.perrone@icea.info>; "terry.hollifield@georgiacrop.com" <terry.hollifield@georgiacrop.com>; "ma@etko.org" <ma@etko.org>; "Kristen.Branscum@ky.gov" <Kristen.Branscum@ky.gov>; "info@globalculture.us" <info@globalculture.us>; "calidad@foodsafety.com.ar" <calidad@foodsafety.com.ar>; "herr@bcs-oeko.de" <herr@bcs-oeko.de>; "goaorg@centurylink.net" <goaorg@centurylink.net>; "terry.hollifield@georgiacrop.com" <terry.hollifield@georgiacrop.com>; "a.moutapam@lacon-institut.org" <a.moutapam@lacon-institut.org>; "Ibd@Ibd.com.br" <Ibd@Ibd.com.br>; "globalculture@earthlink.net" <globalculture@earthlink.net>; "monica@letis.org" <monica@letis.org>; "Johanna.Phillips@agri.idaho.gov" <Johanna.Phillips@agri.idaho.gov>; "goaorg@centurylink.net" <goaorg@centurylink.net>; "scarlsen@co.marin.ca.us" <scarlsen@co.marin.ca.us>; "imo@imo.ch" <imo@imo.ch>; "gwendal@ibd.com.br" <gwendal@ibd.com.br>; "juanantonio.mendoza@mayacert.com" <juanantonio.mendoza@mayacert.com>; "info@ics-intl.com" <info@ics-intl.com>; "Johanna.Phillips@agri.idaho.gov" <Johanna.Phillips@agri.idaho.gov>; "spwalker@mosaorganic.org" <spwalker@mosaorganic.org>; "maury.wills@iowaagriculture.gov" <maury.wills@iowaagriculture.gov>; "soh@imo.ch" <soh@imo.ch>; "wippl001@umn.edu" <wippl001@umn.edu>; "nop@icea.info" <nop@icea.info>; "dawn@ics-intl.com" <dawn@ics-intl.com>; "knewkirk@mofga.org" <knewkirk@mofga.org>; "adam.watson@ky.gov" <adam.watson@ky.gov>; "maury.wills@iowaagriculture.gov" <maury.wills@iowaagriculture.gov>; "etyanich@mt.gov" <etyanich@mt.gov>; "info@bcs-oeko.de" <info@bcs-oeko.de>; "nop@icea.info" <nop@icea.info>; "CarltonN@co.monterey.ca.us" <CarltonN@co.monterey.ca.us>; "lacon@lacon-institut.org" <lacon@lacon-institut.org>; "adam.watson@ky.gov" <adam.watson@ky.gov>; "kirrilley.becker@nasaa.com.au" <kirrilley.becker@nasaa.com.au>; "letis@letis.org" <letis@letis.org>; "fischer@bcs-oeko.de" <fischer@bcs-oeko.de>; "cfanta@naturesinternational.com" <cfanta@naturesinternational.com>; "jstiles@marincounty.org" <jstiles@marincounty.org>; "j.kopp@lacon-institut.org" <j.kopp@lacon-institut.org>; "jabbott@agri.nv.gov" <jabbott@agri.nv.gov>; "FGIS OA, Maryland" <Deanna.Baldwin@maryland.gov>; "internacional@letis.org" <internacional@letis.org>; "Victoria.Smith@agr.nh.gov" <Victoria.Smith@agr.nh.gov>; "info@mayacert.com" <info@mayacert.com>; "jstiles@marincounty.org" <jstiles@marincounty.org>; "Daniel.wunderlich@ag.state.nj.us" <Daniel.wunderlich@ag.state.nj.us>; "mosa@mosaorganic.org" <mosa@mosaorganic.org>; "FGIS OA, Maryland" <Deanna.Baldwin@maryland.gov>; "SGerk@nmda.nmsu.edu" <SGerk@nmda.nmsu.edu>; "mncia@mncia.org" <mncia@mncia.org>; "noe.rivera@mayacert.com" <noe.rivera@mayacert.com>; "lisaengelbert@nofany.org" <lisaengelbert@nofany.org>; "certification@mofga.org" <certification@mofga.org>; "cskolaski@mosaorganic.org" <cskolaski@mosaorganic.org>; "Bryan.Buchwald@ag.ok.gov" <Bryan.Buchwald@ag.ok.gov>; "agrorganic@mt.gov" <agrorganic@mt.gov>; "michelle.menken@mncia.org" <michelle.menken@mncia.org>; "leng@oda.state.or.us" <leng@oda.state.or.us>; "agcomm@co.monterey.ca.us" <agcomm@co.monterey.ca.us>; "yurlina@mofga.org" <yurlina@mofga.org>; "abrewster@ocia.org" <abrewster@ocia.org>; "sachin.ayachit@nasaa.com.au" <sachin.ayachit@nasaa.com.au>; "gwebster@mt.gov" <gwebster@mt.gov>; "gestiondecalidad@oia.com.ar" <gestiondecalidad@oia.com.ar>; "nfccertification@gmail.com" <nfccertification@gmail.com>; "Huntinggb@co.monterey.ca.us" <Huntinggb@co.monterey.ca.us>; "hi.yoshida@omicnet.com" <hi.yoshida@omicnet.com>; "nics@naturesinternational.com" <nics@naturesinternational.com>; "sachin.ayachit@nasaa.com.au"

<sachin.ayachit@nasaa.com.au>; "kyla@paorganic.org" <kyla@paorganic.org>; "Jennifer.Gornnert@agr.nh.gov" <Jennifer.Gornnert@agr.nh.gov>; "nfccertification@gmail.com" <nfccertification@gmail.com>; "brian.mansfield@primuslabs.com" <brian.mansfield@primuslabs.com>; "erich.bremer@ag.state.nj.us" <erich.bremer@ag.state.nj.us>; "dave@naturesinternational.com" <dave@naturesinternational.com>; "byron.hamm@pro-cert.org" <byron.hamm@pro-cert.org>; "organic@nmda.nmsu.edu" <organic@nmda.nmsu.edu>; "ajeppson@agri.nv.gov" <ajeppson@agri.nv.gov>; "thughes@nsf.org" <thughes@nsf.org>; "certifiedorganic@nofany.org" <certifiedorganic@nofany.org>; "Jennifer.Gornnert@agr.nh.gov" <Jennifer.Gornnert@agr.nh.gov>; "ram@qcsinfo.org" <ram@qcsinfo.org>; "organic@oeffa.org" <organic@oeffa.org>; "erich.bremer@ag.state.nj.us" <erich.bremer@ag.state.nj.us>; "dkirsanovaphillips@scscertified.com" <dkirsanovaphillips@scscertified.com>; "jeff.stearns@ag.ok.gov" <jeff.stearns@ag.ok.gov>; "bbakker@nmda.nmsu.edu" <bbakker@nmda.nmsu.edu>; "rhougaard@utah.gov" <rhougaard@utah.gov>; "info@onecert.com" <info@onecert.com>; "lori@nofany.org" <lori@nofany.org>; "Laura@nofavt.org" <Laura@nofavt.org>; "cid-organic@oda.state.or.us" <cid-organic@oda.state.or.us>; "andy@oeffa.org" <andy@oeffa.org>; "srice@agr.wa.gov" <srice@agr.wa.gov>; "organic@tilth.org" <organic@tilth.org>; "jeff.stearns@ag.ok.gov" <jeff.stearns@ag.ok.gov>; "john.young@yolocounty.org" <john.young@yolocounty.org>; "info@occert.com" <info@occert.com>; "sam@onecert.com" <sam@onecert.com>; "xiao@ofdc.org.cn" <xiao@ofdc.org.cn>; "kallen@oda.state.or.us" <kallen@oda.state.or.us>; "oia@oia.com.ar" <oia@oia.com.ar>; "connie@tilth.org" <connie@tilth.org>; "ocd@omicnet.com" <ocd@omicnet.com>; "susan@occert.com" <susan@occert.com>; "pco@paorganic.org" <pco@paorganic.org>; "celder@ocia.org" <celder@ocia.org>; "PrimusOrganic@primuslabs.com" <PrimusOrganic@primuslabs.com>; "xiao@ofdc.org.cn" <xiao@ofdc.org.cn>; "info@pro-cert.org" <info@pro-cert.org>; "pedroalanda@oia.com.ar" <pedroalanda@oia.com.ar>; "qai@qai-inc.com" <qai@qai-inc.com>; "ocd@omicnet.com" <ocd@omicnet.com>; "qcs@qcsinfo.org" <qcs@qcsinfo.org>; "leslie@paorganic.org" <leslie@paorganic.org>; "matt.green@dem.ri.gov" <matt.green@dem.ri.gov>; "deborah.mansfield@primuslabs.com" <deborah.mansfield@primuslabs.com>; "organic@scsglobalservice.com" <organic@scsglobalservice.com>; "Dave.Lockman@pro-cert.org" <Dave.Lockman@pro-cert.org>; "Sally@Demeter-USA.org" <Sally@Demeter-USA.org>; "irendon@nsf.org" <irendon@nsf.org>; "Organic@TexasAgriculture.gov" <Organic@TexasAgriculture.gov>; "robin@qcsinfo.org" <robin@qcsinfo.org>; "Toaf007@gmail.com" <Toaf007@gmail.com>; "matt.green@dem.ri.gov" <matt.green@dem.ri.gov>; "rlarsen@utah.gov" <rlarsen@utah.gov>; "bnauman@scsglobalservices.com" <bnauman@scsglobalservices.com>; "Info@nofavt.org" <Info@nofavt.org>; "Sally@Demeter-USA.org" <Sally@Demeter-USA.org>; "organic@agr.wa.gov" <organic@agr.wa.gov>; "Mary.Holliman@texasagriculture.gov" <Mary.Holliman@texasagriculture.gov>; "dennis.chambers@yolocounty.org" <dennis.chambers@yolocounty.org>; (b) (6) @gmail.com" (b) (6) @gmail.com>; "rlarsen@utah.gov" <rlarsen@utah.gov>; "Nicole@nofavt.org" <Nicole@nofavt.org>; "bbook@agr.wa.gov" <bbook@agr.wa.gov>; "dennis.chambers@yolocounty.org" <dennis.chambers@yolocounty.org>
**Sent:** Tuesday, March 1, 2016 6:11 PM
**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

<u>What do we mean by hydroponic, aquaponic, aeroponic?</u>

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)

- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** Robin Schrieber <robin@qcsinfo.org>
**Sent:** Thursday, March 10, 2016 5:53 PM
**To:** McElroy, Bridget - AMS
**Cc:** Ryan
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Ms. McElroy,

QCS estimates that we currently certify roughly 4-5 operations that fall under the description provided below of "hydroponic, aquaponic, aeroponic and associated production systems." We do not track individual production systems of clients in our database, so the data is not very easy to pull.

We can try digging for more specific data as requested below (location of operation, type of product produced), if provided with some additional time, since it is not readily searchable in our current client database. Please let me know if this is acceptable, and needed, and by when we would need to respond.

Please be sure to cc our Crop Certification Manager, Ryan Brouillard (cc'd on this email), in your response. I am pregnant, and due this Sunday (March 13), so I may not be able to respond to email for a few weeks.

Kind Regards,

Robin Schrieber
Administrative Manager
Quality Certification Services
352.377.0133 | www.qcsinfo.org



---

**From:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **On Behalf Of** AMS - AIAinbox
**Sent:** Tuesday, March 1, 2016 10:12 AM
**To:** AMS - AIAinbox
**Cc:** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au; organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au; michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA, Reno, NV; emel.erkan@bio-inspecta.com; central@biolatina.com; baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; rporto@caae.es; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; rporto@caae.es; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct; jvdschootbrugge@controlunion.com; ceres@ceres-cert.com; rsetti@ccpb.it; vincent.morel@ecocert.com; info@certisys.eu; direccionejecutiva@certimexsc.com; agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us; Nathalie.Boes@certisys.eu; joy.mccracken@georgiacrop.com; organic@controlunion.com; organic@clemson.edu; cvanhook77@earthlink.net; info.ecocertico@ecocert.com; amy.stafford@state.co.us; goabecky@centurylink.net; aude.bonnet@ecocert.com; dszalai@controlunion.com; camila@ibd.com.br; ep@ecoglobe.am; Jeffry.EVARD@ecocert.com; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; aude.bonnet@ecocert.com; Beatrice.Breuer@imo.ch;

info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@ecologica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; a.moutapam@lacon-institut.org; Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov; spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; soh@imo.ch; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; lacon@lacon-institut.org; adam.watson@ky.gov; kirrilley.becker@nasaa.com.au; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; j.kopp@lacon-institut.org; jabbott@agri.nv.gov; FGIS OA, Maryland; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland; SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; abrewster@ocia.org; sachin.ayachit@nasaa.com.au; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; sachin.ayachit@nasaa.com.au; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; thughes@nsf.org; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org; ocd@omicnet.com; susan@occert.com; pco@paorganic.org; celder@ocia.org; PrimusOrganic@primuslabs.com; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; qai@qai-inc.com; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; deborah.mansfield@primuslabs.com; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; irendon@nsf.org; Organic@TexasAgriculture.gov; robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org

**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets

- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** Daniel Szalai <dszalai@controlunion.com>
**Sent:** Tuesday, March 08, 2016 4:59 AM
**To:** McElroy, Bridget - AMS
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
**Attachments:** image001.png

Dear Ms McElroy,

Please find CUC's answers below.

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards? yes
If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify? 1
In what state or country (if international) are the certified operations located (list)? The Netherlands
What crops do these certified operations produce (list)? Peppers/Paprika

Kind regards,
Daniel Szalai


**Dániel Szalai**
T +31-38-426 0100 • F : +31-38-423 7040


Control Union Certifications
OFFICE Meeuwenlaan 4-6, • Zwolle • The Netherlands
http://certification.controlunion.com/


---

**From:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **On Behalf Of** AMS - AIAinbox
**Sent:** Tuesday, March 01, 2016 4:12 PM
**To:** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**Cc:** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au; organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au; michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA, Reno, NV <clinton.koble@nv.usda.gov>; emel.erkan@bio-inspecta.com; central@biolatina.com; baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; rporto@caae.es; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; rporto@caae.es; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct <jake@ccof.org>; Johan van de Schootbrugge <jvdschootbrugge@controlunion.com>; ceres@ceres-cert.com; rsetti@ccpb.it; vincent.morel@ecocert.com; info@certisys.eu; direccionejecutiva@certimexsc.com;

agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us; Nathalie.Boes@certisys.eu; joy.mccracken@georgiacrop.com; Organic <Organic@controlunion.com>; organic@clemson.edu; cvanhook77@earthlink.net; info.ecocertico@ecocert.com; amy.stafford@state.co.us; goabecky@centurylink.net; aude.bonnet@ecocert.com; Daniel Szalai <dszalai@controlunion.com>; camila@ibd.com.br; ep@ecoglobe.am; Jeffry.EVARD@ecocert.com; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; aude.bonnet@ecocert.com; Beatrice.Breuer@imo.ch; info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@eco-logica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; a.moutapam@lacon-institut.org; Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov; spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; soh@imo.ch; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; lacon@lacon-institut.org; adam.watson@ky.gov; kirrilley.becker@nasaa.com.au; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; j.kopp@lacon-institut.org; jabbott@agri.nv.gov; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; abrewster@ocia.org; sachin.ayachit@nasaa.com.au; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; sachin.ayachit@nasaa.com.au; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; thughes@nsf.org; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org; ocd@omicnet.com; susan@occert.com; pco@paorganic.org; celder@ocia.org; PrimusOrganic@primuslabs.com; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; qai@qai-inc.com; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; deborah.mansfield@primuslabs.com; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; irendon@nsf.org; Organic@TexasAgriculture.gov; robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org

**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:

The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

<u>What do we mean by hydroponic, aquaponic, aeroponic?</u>

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Thursday, March 03, 2016 4:22 PM
**To:** Roberto Setti
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Thank you, Roberto.

---

**From:** Roberto Setti [mailto:rsetti@ccpb.it]
**Sent:** Tuesday, March 01, 2016 11:17 AM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** Re: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
**Importance:** High

Dear Bridget,

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards? NO

Kind regards

rs

Roberto Setti
Techn. Dept. & Q.A. Manager
CCPB SRL
Viale Masini 36
40126 Bologna (ITALY)
tel: +39-051-6089811
fax: +39-051-254842
skype: (b) (6)
web: www.ccpb.it


**From:** AMS - AIAinbox
**Sent:** Tuesday, March 01, 2016 4:11 PM

**To:** AMS - AIAinbox
**Cc:** admin@abeeorganic.com ; sarah@abeeorganic.com ; ro@abeeorganic.com ; info@ascorganic.com ; Kat@ascorganic.com ; mfigueiras@argencert.com.ar ; americert@gmail.com ; americert@gmail.com ; organic@ausmeat.com.au ; info@argencert.com.ar ; lmontenegro@argencert.com.ar ; jorge.larranaga@aco.net.au ; organic@ausqual.com.au ; elise@ausqual.com.au ; dcox@baystateorganic.org ; michael.baker@aco.net.au ; michael.baker@aco.net.au ; roxana.priego@biolatina.com.pe ; baystateorganic@earthlink.net ; Koble, Clinton - FSA, Reno, NV ; emel.erkan@bio-inspecta.com ; central@biolatina.com ; baystateorganic@earthlink.net ; amalia.rueda@bioagricert.org ; admin@bio-inspecta.ch ; central@biolatina.com ; Pat.Kennelly@cdph.ca.gov ; info@bioagricert.org ; julia.winter@bio-inspecta.ch ; accreditation@ccof.org ; Bolicert@megalink.com ; riccardo.cozzo@bioagricert.org ; calidad@certimexsc.com ; rporto@caae.es ; Bolicert@bolicert.org ; tom.nizet@certisys.eu ; ccof@ccof.org ; rporto@caae.es ; saltmn@clemson.edu ; ccpb@ccpb.it ; Danny.Lee@cdfa.ca.gov ; mitchell.yergert@state.co.us ; certimex@certimexsc.com ; Lewin Jake-FASConatct ; jvdschootbrugge@controlunion.com ; ceres@ceres-cert.com ; rsetti@ccpb.it ; vincent.morel@ecocert.com ; info@certisys.eu ; direccionejecutiva@certimexsc.com ; agroecologiauna@gmail.com ; organic@clemson.edu ; benzing@ceres-cert.com ; mefraga@foodsafety.com.ar ; amy.stafford@state.co.us ; Nathalie.Boes@certisys.eu ; joy.mccracken@georgiacrop.com ; organic@controlunion.com ; organic@clemson.edu ; cvanhook77@earthlink.net ; info.ecocertico@ecocert.com ; amy.stafford@state.co.us ; goabecky@centurylink.net ; aude.bonnet@ecocert.com ; dszalai@controlunion.com ; camila@ibd.com.br ; ep@ecoglobe.am ; Jeffry.EVARD@ecocert.com ; Jason.Laney@agri.idaho.gov ; pdescamps@eco-logica.com ; aude.bonnet@ecocert.com ; Beatrice.Breuer@imo.ch ; info@etko.org ; nd@ecoglobe.am ; Mary.nieland@iowaagriculture.gov ; foodsafety@foodsafety.com.ar ; pdescamps@eco-logica.com ; p.perrone@icea.info ; terry.hollifield@georgiacrop.com ; ma@etko.org ; Kristen.Branscum@ky.gov ; info@globalculture.us ; calidad@foodsafety.com.ar ; herr@bcs-oeko.de ; goaorg@centurylink.net ; terry.hollifield@georgiacrop.com ; a.moutapam@lacon-institut.org ; Ibd@Ibd.com.br ; globalculture@earthlink.net ; monica@letis.org ; Johanna.Phillips@agri.idaho.gov ; goaorg@centurylink.net ; scarlsen@co.marin.ca.us ; imo@imo.ch ; gwendal@ibd.com.br ; juanantonio.mendoza@mayacert.com ; info@ics-intl.com ; Johanna.Phillips@agri.idaho.gov ; spwalker@mosaorganic.org ; maury.wills@iowaagriculture.gov ; soh@imo.ch ; wippl001@umn.edu ; nop@icea.info ; dawn@ics-intl.com ; knewkirk@mofga.org ; adam.watson@ky.gov ; maury.wills@iowaagriculture.gov ; etyanich@mt.gov ; info@bcs-oeko.de ; nop@icea.info ; CarltonN@co.monterey.ca.us ; lacon@lacon-institut.org ; adam.watson@ky.gov ; kirrilley.becker@nasaa.com.au ; letis@letis.org ; fischer@bcs-oeko.de ; cfanta@naturesinternational.com ; jstiles@marincounty.org ; j.kopp@lacon-institut.org ; jabbott@agri.nv.gov ; FGIS OA, Maryland ; internacional@letis.org ; Victoria.Smith@agr.nh.gov ; info@mayacert.com ; jstiles@marincounty.org ; Daniel.wunderlich@ag.state.nj.us ; mosa@mosaorganic.org ; FGIS OA, Maryland ; SGerk@nmda.nmsu.edu ; mncia@mncia.org ; noe.rivera@mayacert.com ; lisaengelbert@nofany.org ; certification@mofga.org ; cskolaski@mosaorganic.org ; Bryan.Buchwald@ag.ok.gov ; agrorganic@mt.gov ; michelle.menken@mncia.org ; leng@oda.state.or.us ; agcomm@co.monterey.ca.us ; yurlina@mofga.org ; abrewster@ocia.org ; sachin.ayachit@nasaa.com.au ; gwebster@mt.gov ; gestiondecalidad@oia.com.ar ; nfccertification@gmail.com ; Huntinggb@co.monterey.ca.us ; hi.yoshida@omicnet.com ; nics@naturesinternational.com ; sachin.ayachit@nasaa.com.au ; kyla@paorganic.org ; Jennifer.Gornnert@agr.nh.gov ; nfccertification@gmail.com ; brian.mansfield@primuslabs.com ; erich.bremer@ag.state.nj.us ; dave@naturesinternational.com ; byron.hamm@pro-cert.org ; organic@nmda.nmsu.edu ; ajeppson@agri.nv.gov ; thughes@nsf.org ; certifiedorganic@nofany.org ; Jennifer.Gornnert@agr.nh.gov ; ram@qcsinfo.org ; organic@oeffa.org ; erich.bremer@ag.state.nj.us ; dkirsanovaphillips@scscertified.com ; jeff.stearns@ag.ok.gov ; bbakker@nmda.nmsu.edu ; rhougaard@utah.gov ; info@onecert.com ; lori@nofany.org ; Laura@nofavt.org ; cid-organic@oda.state.or.us ; andy@oeffa.org ; srice@agr.wa.gov ; organic@tilth.org ; jeff.stearns@ag.ok.gov ; john.young@yolocounty.org ; info@occert.com ; sam@onecert.com ; xiao@ofdc.org.cn ; kallen@oda.state.or.us ; oia@oia.com.ar ; connie@tilth.org ; ocd@omicnet.com ; susan@occert.com ; pco@paorganic.org ; celder@ocia.org ; PrimusOrganic@primuslabs.com ; xiao@ofdc.org.cn ; info@pro-cert.org ; pedroalanda@oia.com.ar ; qai@qai-inc.com ; ocd@omicnet.com ; qcs@qcsinfo.org ; leslie@paorganic.org ; matt.green@dem.ri.gov ; deborah.mansfield@primuslabs.com ; organic@scsglobalservice.com ; Dave.Lockman@pro-cert.org ; Sally@Demeter-USA.org ; irendon@nsf.org ; Organic@TexasAgriculture.gov ; robin@qcsinfo.org ; (b) (6) @gmail.com ; matt.green@dem.ri.gov ; rlarsen@utah.gov ; bnauman@scsglobalservices.com ; Info@nofavt.org ; Sally@Demeter-USA.org ; organic@agr.wa.gov ; Mary.Holliman@texasagriculture.gov ; dennis.chambers@yolocounty.org ; (b) (6) @gmail.com ; rlarsen@utah.gov ; Nicole@nofavt.org ; bbook@agr.wa.gov ; dennis.chambers@yolocounty.org
**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:

The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Thursday, March 17, 2016 3:47 PM
**To:** Daniel Szalai
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
**Attachments:** image001.png

Thank you, Daniel!

---

**From:** Daniel Szalai [mailto:dszalai@controlunion.com]
**Sent:** Tuesday, March 08, 2016 4:59 AM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Dear Ms McElroy,

Please find CUC's answers below.

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards? yes
If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify? 1
In what state or country (if international) are the certified operations located (list)? The Netherlands
What crops do these certified operations produce (list)? Peppers/Paprika

Kind regards,
Daniel Szalai


**Dániel Szalai**
T +31-38-426 0100 • F : +31-38-423 7040

Control Union Certifications
OFFICE Meeuwenlaan 4-6, • Zwolle • The Netherlands
http://certification.controlunion.com/


---

**From:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **On Behalf Of** AMS - AIAinbox
**Sent:** Tuesday, March 01, 2016 4:12 PM
**To:** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**Cc:** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au; organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au;

michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA, Reno, NV <clinton.koble@nv.usda.gov>; emel.erkan@bio-inspecta.com; central@biolatina.com; baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; rporto@caae.es; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; rporto@caae.es; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct <jake@ccof.org>; Johan van de Schootbrugge <jvdschootbrugge@controlunion.com>; ceres@ceres-cert.com; rsetti@ccpb.it; vincent.morel@ecocert.com; info@certisys.eu; direccionejecutiva@certimexsc.com; agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us; Nathalie.Boes@certisys.eu; joy.mccracken@georgiacrop.com; Organic <Organic@controlunion.com>; organic@clemson.edu; cvanhook77@earthlink.net; info.ecocertico@ecocert.com; amy.stafford@state.co.us; goabecky@centurylink.net; aude.bonnet@ecocert.com; Daniel Szalai <dszalai@controlunion.com>; camila@ibd.com.br; ep@ecoglobe.am; Jeffry.EVARD@ecocert.com; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; aude.bonnet@ecocert.com; Beatrice.Breuer@imo.ch; info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@eco-logica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; a.moutapam@lacon-institut.org; Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov; spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; soh@imo.ch; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; lacon@lacon-institut.org; adam.watson@ky.gov; kirrilley.becker@nasaa.com.au; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; j.kopp@lacon-institut.org; jabbott@agri.nv.gov; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; abrewster@ocia.org; sachin.ayachit@nasaa.com.au; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; sachin.ayachit@nasaa.com.au; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; thughes@nsf.org; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org; ocd@omicnet.com; susan@occert.com; pco@paorganic.org; celder@ocia.org; PrimusOrganic@primuslabs.com; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; qai@qai-inc.com; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; deborah.mansfield@primuslabs.com; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; irendon@nsf.org; Organic@TexasAgriculture.gov; robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org

**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** Nathalie Boes <nathalie.boes@certisys.eu>
**Sent:** Tuesday, March 01, 2016 10:30 AM
**To:** McElroy, Bridget - AMS
**Subject:** Re: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
**Attachments:** logo_02.jpg; logo_03.jpg; logo_04.jpg; logo_06.jpg

Dear,

Certisys does not certify hydroponic or aeroponic operations.

Best regards,

**Nathalie BOES**
QUALITY DEPARTMENT

CERTISYS BIO CERTIFICATION

**TEL** +32(0)81 600 377 | **FAX** +32(0)81 600 313
nathalie.boes@certisys.eu | www.certisys.eu

I am out of office on Monday afternoon, Wednesday and Friday for urgent matters please contact quality@certisys.eu
Le 1/03/2016 16:11, AMS - AIAinbox a écrit :

> This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.
>
> Dear Certifiers:
> The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.
>
> What do we mean by hydroponic, aquaponic, aeroponic?
>
> The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:
>
> - Deep flow/raft
> - Nutrient film technique (NFT)
> - Ebb and flow
> - Slab (lay-flat bags)
> - Upright bags or Dutch buckets
> - Troughs
> - Towers
> - Pots
> - Aeroponics
> - Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Thursday, March 03, 2016 4:26 PM
**To:** Ricardo Porto
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
**Attachments:** image001.jpg

Thank you, Ricardo.

**Bridget McElroy**

Policy Analyst
USDA National Organic Program
1400 Independence Ave. SW
Room 2646-S. (Stop 0268)
Washington, D.C. 20205

(202) 260-9288

---

**From:** Ricardo Porto [mailto:rporto@caae.es]
**Sent:** Wednesday, March 02, 2016 7:51 AM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** RV: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Dear Bridget

Our answer below in the text.

Best regards

**Ricardo J. Porto Martín**
*Quality Manager*
*rporto@caae.es - caae.es*
*Avd. Emilio Lemos nº 2 Edificio Torre Este. Modulo 603. 41020. Sevilla.*

*Piensa antes de imprimir, ahorra recursos y reduce gastos*

*clientes, asociados, proveedores o personal).Sin perjuicio de ello se le informa de que usted podrá ejercitar los derechos de acceso, rectificación, cancelación y oposición para lo cual debe dirigirse a:* ***Servicio de Certificación CAAE*** *en la dirección arriba indicada, adjuntando debidamente acreditación de la identidad.*
*En caso de no ser el destinatario de esta información, por favor, rogamos nos lo comunique en la dirección del remitente para la eliminación de su dirección electrónica, no copiando ni entregando este mensaje a nadie más y procediendo a su destrucción.*

---

**De:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **En nombre de** AMS - AIAinbox
**Enviado el:** martes, 1 de marzo de 2016 16:12
**Para:** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**CC:** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au; organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au; michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA, Reno, NV <clinton.koble@nv.usda.gov>; emel.erkan@bio-inspecta.com; central@biolatina.com; baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; Ricardo Porto <rporto@caae.es>; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; Ricardo Porto <rporto@caae.es>; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct <jake@ccof.org>; jvdschootbrugge@controlunion.com; ceres@ceres-cert.com; rsetti@ccpb.it; vincent.morel@ecocert.com; info@certisys.eu; direccionejecutiva@certimexsc.com; agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us; Nathalie.Boes@certisys.eu; joy.mccracken@georgiacrop.com; organic@controlunion.com; organic@clemson.edu; cvanhook77@earthlink.net; info.ecocertico@ecocert.com; amy.stafford@state.co.us; goabecky@centurylink.net; aude.bonnet@ecocert.com; dszalai@controlunion.com; camila@ibd.com.br; ep@ecoglobe.am; Jeffry.EVARD@ecocert.com; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; aude.bonnet@ecocert.com; Beatrice.Breuer@imo.ch; info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@eco-logica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; a.moutapam@lacon-institut.org; Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov; spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; soh@imo.ch; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; lacon@lacon-institut.org; adam.watson@ky.gov; kirrilley.becker@nasaa.com.au; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; j.kopp@lacon-institut.org; jabbott@agri.nv.gov; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; abrewster@ocia.org; sachin.ayachit@nasaa.com.au; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; sachin.ayachit@nasaa.com.au; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; thughes@nsf.org; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org;

ocd@omicnet.com; susan@occert.com; pco@paorganic.org; celder@ocia.org; PrimusOrganic@primuslabs.com; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; qai@qai-inc.com; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; deborah.mansfield@primuslabs.com; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; irendon@nsf.org; Organic@TexasAgriculture.gov; robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org
**Asunto:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards? NO

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify? NA

In what state or country (if international) are the certified operations located (list)? NA

What crops do these certified operations produce (list)? NO

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Thursday, March 17, 2016 4:06 PM
**To:** Dave Lockman
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
**Attachments:** image001.jpg

Thank you, Dave!

---

**From:** Dave Lockman [mailto:dave.lockman@pro-cert.org]
**Sent:** Wednesday, March 09, 2016 1:16 PM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** FW: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Dear Bridget,

We do not currently certify hydroponic, aeroponic or aquaponics operations.

If you have any questions please do not hesitate to contact me.

Sincerely,
**Pro-Cert Organic Systems Ltd.**
Dave Lockman, MBA, P.Ag.
Certification Manager, Eastern Region

2311 Elm Tree Road, P.O. Box 74
Cambray, ON CANADA K0M 1E0
Ph: (705) 374-5602
Fx: (705) 374-5604
E: dave.lockman@pro-cert.org
Web: www.pro-cert.org

---

**From:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **On Behalf Of** AMS - AIAinbox
**Sent:** March-01-16 10:12 AM
**To:** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**Cc:** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au; organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au; michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA,

Reno, NV <clinton.koble@nv.usda.gov>; emel.erkan@bio-inspecta.com; central@biolatina.com; baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; rporto@caae.es; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; rporto@caae.es; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct <jake@ccof.org>; jvdschootbrugge@controlunion.com; ceres@ceres-cert.com; rsetti@ccpb.it; vincent.morel@ecocert.com; info@certisys.eu; direccionejecutiva@certimexsc.com; agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us; Nathalie.Boes@certisys.eu; joy.mccracken@georgiacrop.com; organic@controlunion.com; organic@clemson.edu; cvanhook77@earthlink.net; info.ecocertico@ecocert.com; amy.stafford@state.co.us; goabecky@centurylink.net; aude.bonnet@ecocert.com; dszalai@controlunion.com; camila@ibd.com.br; ep@ecoglobe.am; Jeffry.EVARD@ecocert.com; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; aude.bonnet@ecocert.com; Beatrice.Breuer@imo.ch; info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@eco-logica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; a.moutapam@lacon-institut.org; Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov; spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; soh@imo.ch; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; lacon@lacon-institut.org; adam.watson@ky.gov; kirrilley.becker@nasaa.com.au; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; j.kopp@lacon-institut.org; jabbott@agri.nv.gov; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; abrewster@ocia.org; sachin.ayachit@nasaa.com.au; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; sachin.ayachit@nasaa.com.au; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; thughes@nsf.org; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org; ocd@omicnet.com; susan@occert.com; pco@paorganic.org; celder@ocia.org; PrimusOrganic@primuslabs.com; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; qai@qai-inc.com; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; deborah.mansfield@primuslabs.com; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; irendon@nsf.org; Organic@TexasAgriculture.gov; robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org

**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Thursday, March 03, 2016 4:25 PM
**To:** Sachin Ayachit
**Cc:** Kirrilley Becker
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Thank you, Sachin.

**Bridget McElroy**

Policy Analyst
USDA National Organic Program
1400 Independence Ave. SW
Room 2646-S. (Stop 0268)
Washington, D.C. 20205

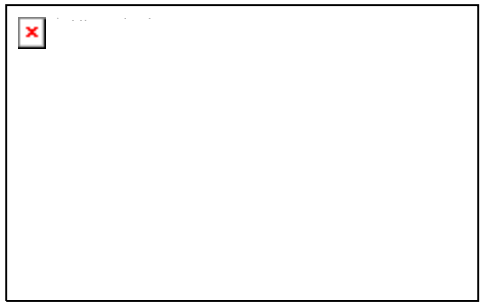
(202) 260-9288

---

**From:** Sachin Ayachit [mailto:Sachin.Ayachit@nasaa.com.au]
**Sent:** Tuesday, March 01, 2016 5:45 PM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Cc:** Kirrilley Becker <Kirrilley.Becker@nasaa.com.au>
**Subject:** FW: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Hi Bridget,
At NASAA Certified Organic (NCO) Australia, we do not certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards.
Please let me know if you have any further questions.
Thanks
Sachin Ayachit

**Sachin Ayachit**
Certification Manager



**NASAA Certified Organic**
**Address:** Unit 7, 3 Mount Barker Road, Stirling SA 5152
PO Box 768, Stirling SA 5152
**Phone:** +61 8 83708455
**Email:** sachin.ayachit@nasaa.com.au
**Website:** www.nasaa.com.au

**Thinking Sustainability? Think NASAA, Australia's First Organic Certification Organisation**

**From:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **On Behalf Of** AMS - AIAinbox
**Sent:** Wednesday, 2 March 2016 1:42 AM
**To:** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**Cc:** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au; organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au; michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA, Reno, NV <clinton.koble@nv.usda.gov>; emel.erkan@bio-inspecta.com; central@biolatina.com; baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; rporto@caae.es; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; rporto@caae.es; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct <jake@ccof.org>; jvdschootbrugge@controlunion.com; ceres@ceres-cert.com; rsetti@ccpb.it; vincent.morel@ecocert.com; info@certisys.eu; direccionejecutiva@certimexsc.com; agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us; Nathalie.Boes@certisys.eu; joy.mccracken@georgiacrop.com; organic@controlunion.com; organic@clemson.edu; cvanhook77@earthlink.net; info.ecocertico@ecocert.com; amy.stafford@state.co.us; goabecky@centurylink.net; aude.bonnet@ecocert.com; dszalai@controlunion.com; camila@ibd.com.br; ep@ecoglobe.am; Jeffry.EVARD@ecocert.com; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; aude.bonnet@ecocert.com; Beatrice.Breuer@imo.ch; info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@eco-logica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; a.moutapam@lacon-institut.org; Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov; spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; soh@imo.ch; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; lacon@lacon-institut.org; adam.watson@ky.gov; Kirrilley Becker <Kirrilley.Becker@nasaa.com.au>; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; j.kopp@lacon-institut.org; jabbott@agri.nv.gov; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; abrewster@ocia.org; Sachin Ayachit <Sachin.Ayachit@nasaa.com.au>; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; Sachin Ayachit <Sachin.Ayachit@nasaa.com.au>; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; thughes@nsf.org; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org; ocd@omicnet.com; susan@occert.com; pco@paorganic.org; celder@ocia.org; PrimusOrganic@primuslabs.com; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; qai@qai-inc.com; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; deborah.mansfield@primuslabs.com; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; irendon@nsf.org; Organic@TexasAgriculture.gov;

robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org
**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Thursday, March 03, 2016 4:23 PM
**To:** Eugenia Fraga
**Subject:** RE: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
**Attachments:** image001.jpg

Thank you, Eugenia.

---

**From:** Eugenia Fraga [mailto:mefraga@foodsafety.com.ar]
**Sent:** Tuesday, March 01, 2016 11:19 AM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** RV: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Dear Bridget,
In Food Safety we do not certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards.

Please let me know if you need something else.

Regards,


---

**De:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **En nombre de** AMS - AIAinbox
**Enviado el:** martes, 01 de marzo de 2016 12:12 p.m.
**Para:** AMS - AIAinbox
**CC:** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au; organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au; michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA, Reno, NV; emel.erkan@bio-inspecta.com; central@biolatina.com; baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; rporto@caae.es; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; rporto@caae.es; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct; jvdschootbrugge@controlunion.com; ceres@ceres-cert.com; rsetti@ccpb.it; vincent.morel@ecocert.com; info@certisys.eu; direccionejecutiva@certimexsc.com; agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us; Nathalie.Boes@certisys.eu;

joy.mccracken@georgiacrop.com; organic@controlunion.com; organic@clemson.edu; cvanhook77@earthlink.net; info.ecocertico@ecocert.com; amy.stafford@state.co.us; goabecky@centurylink.net; aude.bonnet@ecocert.com; dszalai@controlunion.com; camila@ibd.com.br; ep@ecoglobe.am; Jeffry.EVARD@ecocert.com; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; aude.bonnet@ecocert.com; Beatrice.Breuer@imo.ch; info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@eco-logica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; a.moutapam@lacon-institut.org; Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov; spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; soh@imo.ch; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; lacon@lacon-institut.org; adam.watson@ky.gov; kirrilley.becker@nasaa.com.au; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; j.kopp@lacon-institut.org; jabbott@agri.nv.gov; FGIS OA, Maryland; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland; SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; abrewster@ocia.org; sachin.ayachit@nasaa.com.au; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; sachin.ayachit@nasaa.com.au; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; thughes@nsf.org; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org; ocd@omicnet.com; susan@occert.com; pco@paorganic.org; celder@ocia.org; PrimusOrganic@primuslabs.com; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; qai@qai-inc.com; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; deborah.mansfield@primuslabs.com; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; irendon@nsf.org; Organic@TexasAgriculture.gov; robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org

**Asunto:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)

- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Thursday, March 03, 2016 4:23 PM
**To:** Cindy Elder
**Subject:** RE: OCIA Intl FW: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Thank you, Cindy.

---

**From:** Cindy Elder [mailto:CElder@ocia.org]
**Sent:** Tuesday, March 01, 2016 11:18 AM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Cc:** Cindy Elder <CElder@ocia.org>
**Subject:** OCIA Intl FW: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Hello Bridget,

OCIA International does not certify any hydroponic, aeroponic, or aquaponic operations.

Thank you,
Cindy

**Cindy Elder**
Director of Accreditation and Inspector Services/Board Liaison
OCIA International, Inc.
1340 N. Cotner Blvd
Lincoln, NE 68505 USA
Phone: (402) 477-2323 Ext. 327
Fax: (402) 477-4325
www.ocia.org



---

**From:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **On Behalf Of** AMS - AIAinbox
**Sent:** Tuesday, March 01, 2016 9:12 AM
**To:** AMS - AIAinbox
**Cc:** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au;

organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au; michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA, Reno, NV; emel.erkan@bio-inspecta.com; central@biolatina.com; baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; rporto@caae.es; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; rporto@caae.es; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct; jvdschootbrugge@controlunion.com; ceres@ceres-cert.com; rsetti@ccpb.it; vincent.morel@ecocert.com; info@certisys.eu; direccionejecutiva@certimexsc.com; agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us; Nathalie.Boes@certisys.eu; joy.mccracken@georgiacrop.com; organic@controlunion.com; organic@clemson.edu; cvanhook77@earthlink.net; info.ecocertico@ecocert.com; amy.stafford@state.co.us; goabecky@centurylink.net; aude.bonnet@ecocert.com; dszalai@controlunion.com; camila@ibd.com.br; ep@ecoglobe.am; Jeffry.EVARD@ecocert.com; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; aude.bonnet@ecocert.com; Beatrice.Breuer@imo.ch; info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@eco-logica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; a.moutapam@lacon-institut.org; Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov; spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; soh@imo.ch; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; lacon@lacon-institut.org; adam.watson@ky.gov; kirrilley.becker@nasaa.com.au; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; j.kopp@lacon-institut.org; jabbott@agri.nv.gov; FGIS OA, Maryland; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland; SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; Amanda Brewster; sachin.ayachit@nasaa.com.au; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; sachin.ayachit@nasaa.com.au; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; thughes@nsf.org; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org; ocd@omicnet.com; susan@occert.com; pco@paorganic.org; Cindy Elder; PrimusOrganic@primuslabs.com; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; qai@qai-inc.com; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; deborah.mansfield@primuslabs.com; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; irendon@nsf.org; Organic@TexasAgriculture.gov; robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org

**Subject:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:

The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Monday, March 21, 2016 5:50 PM
**To:** Maria Susana Gerlero
**Subject:** RE: Reminder - Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
**Attachments:** image001.png

Thank you, Maria Susana!

---

**From:** Maria Susana Gerlero [mailto:calidad@foodsafety.com.ar]
**Sent:** Monday, March 21, 2016 7:30 AM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** RE: Reminder - Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Dear Ms Bridget

According your request (received trough Ms. Anne Baron)we do not certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards

Best regards


---

**De:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **En nombre de** AMS - AIAinbox
**Enviado el:** miércoles, 16 de marzo de 2016 04:30 p.m.
**Para:** AMS - AIAinbox
**Asunto:** Reminder - Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:

Please remember to submit information about your certification of hydroponic, aquaponic, aeroponic, and associated production systems to Bridget McElroy at bridget.mcelroy@ams.usda.gov as soon as possible. The original message with instructions is below.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

***Original Message***
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

## Schurkamp, Lynnea - AMS

**From:** Book, Brenda (AGR) <BBook@agr.wa.gov>
**Sent:** Friday, March 18, 2016 11:52 AM
**To:** McElroy, Bridget - AMS
**Cc:** O'Brien, Colleen (AGR)
**Subject:** RE: Reminder - Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Hello Bridget,

Yes, only the one operation would fit the definition after this clarification.

Brenda Book
WSDA Organic Program Manager

Direct: 360-902-2090 / bbook@agr.wa.gov
Main: 360-902-1805 / organic@agr.wa.gov
Web: http://agr.wa.gov/FoodAnimal/Organic

Interested in organic certification? Learn more: http://agr.wa.gov/FoodAnimal/Organic/NewOrg.aspx

---

**From:** McElroy, Bridget - AMS [mailto:Bridget.McElroy@ams.usda.gov]
**Sent:** Thursday, March 17, 2016 1:43 PM
**To:** Book, Brenda (AGR)
**Subject:** RE: Reminder - Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Hi Brenda,

Thank you very much for this information. From this and a couple of other responses, I'm realizing that one clarification should have been included in the message to certifiers. We aren't currently considering transplant/start production in the hydroponic/aquaponics count because ultimately these crops end up in the ground.

We are looking to include operations that use small amounts of growing media in hydroponic-based systems. For example, lettuce grown in a small plug of compost mix in an NFT system from seed to harvest.

From what I can gather, WSDA only certifies one operation that would really count (the ebb and flow for the full life cycle) and the rest are transplants. Does that sound right?

Best,

Bridget

---

**From:** Book, Brenda (AGR) [mailto:BBook@agr.wa.gov]
**Sent:** Wednesday, March 16, 2016 7:55 PM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>

**Cc:** Rice, Scott (AGR) <SRice@agr.wa.gov>
**Subject:** RE: Reminder - Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

Hello Bridget –

Thanks for the reminder. Our responses are below:

*Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?*
WSDA currently defines a hydroponic system as a system that is grown without media. We do not certify any operations that are grown without media.

However, if we apply the definition provided in the below email it would require that we include all of our operations that produce plant starts in greenhouses as a hydroponic operation. These growers start seeds in containers with small amounts of growing media and provide additional nutrients in the water provided to the plants. The majority of these growers will then sell these organic transplants to be planted outside in the ground. In very few instances, the grower continues to grow the plants until harvest in these containers, inside greenhouses or other facilities with artificial lighting. All of these growers could qualify as hydroponic systems based on the provided definition; none would be aeroponic or aquaponics systems.

*If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?*
We certify 80 operations that produce plant starts in a container production system. One of these maintains the plants in the container for its full life cycle and they are not considered plant starts; this operation uses an ebb and flow system.

*In what state or country (if international) are the certified operations located (list)?*
All are in Washington except the one that does not sell transplants, which is located in Georgia.

*What crops do these certified operations produce (list)?*
The plant starts are mixed vegetables and herbs. The crops of the operation in Georgia are listed as potted herbs and living herbs.

Brenda Book
WSDA Organic Program Manager

Direct: 360-902-2090 / bbook@agr.wa.gov
Main: 360-902-1805 / organic@agr.wa.gov
Web: http://agr.wa.gov/FoodAnimal/Organic

Interested in organic certification? Learn more: http://agr.wa.gov/FoodAnimal/Organic/NewOrg.aspx

---

**From:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **On Behalf Of** AMS - AIAinbox
**Sent:** Wednesday, March 16, 2016 12:30 PM
**To:** AMS - AIAinbox
**Subject:** Reminder - Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:

Please remember to submit information about your certification of hydroponic, aquaponic, aeroponic, and associated production systems to Bridget McElroy at bridget.mcelroy@ams.usda.gov as soon as possible. The original message with instructions is below.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

***Original Message***
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

law and subject the violator to civil or criminal penalties. If you believe you have received this message in error, please notify the sender and delete the email immediately.

## Schurkamp, Lynnea - AMS

**From:** Maria Susana Gerlero <calidad@foodsafety.com.ar>
**Sent:** Monday, March 21, 2016 7:30 AM
**To:** McElroy, Bridget - AMS
**Subject:** RE: Reminder - Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
**Attachments:** image003.png

Dear Ms Bridget

According your request (received trough Ms. Anne Baron)we do not certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards

Best regards


**De:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **En nombre de** AMS - AIAinbox
**Enviado el:** miércoles, 16 de marzo de 2016 04:30 p.m.
**Para:** AMS - AIAinbox
**Asunto:** Reminder - Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:

Please remember to submit information about your certification of hydroponic, aquaponic, aeroponic, and associated production systems to Bridget McElroy at bridget.mcelroy@ams.usda.gov as soon as possible. The original message with instructions is below.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

***Original Message***
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

## Schurkamp, Lynnea - AMS

**From:** DE COU Dave <dave.decou@ecocert.com>
**Sent:** Monday, July 14, 2014 7:25 PM
**To:** Mann, Renee - AMS
**Cc:** Brines, Lisa - AMS; Melvin, Jonathan - AMS
**Subject:** RE: Rockwool
**Attachments:** image001.png

Renee Mann and all,

Ecocert ICO has not to date approved the use of Rockwool in any operation. We have not allowed the use of rockwool containing products but on the basis of other materials in the product. The question of rockwool appears to be forthcoming because of communication with a previous client of ours who was unable to meet the requirements to be an organic aquaponics client and chose to go to a different certifier and then has apparently chosen to return and to attempt to become certified by Ecocert ICO again after working with a consultant. Whether they can be fully certified or not is in process. Not to our knowledge have we informed them that they can use rockwool. In fact with this discussion we have stated to them that they should not use rockwool because it is in question.
The question of the allowance of rockwool as an input to an agricultural system depends upon a certain degree of interpretation of both the regulations and common practice. Rockwool is made by the melting of rock at high temperatures and creating strands by blowing air or steam through the liquid. Is the heating to 1600 degrees C of rock necessarily the creation of a synthetic? If there are additives to the process, the question becomes clearer, particularly if the additives are synthetic. Vermiculite is a particular rock which expands when heated, also commonly considered non-synthetic by all certifiers. Rockwool is considered to be environmentally good, with an ecolabel endorsement by the WHO. Clearly such a label does not determine the compliance of the material. But what about the use of other synthetic materials, not listed on 205.601, in organic production: Steel for the tools which work soil (hoes, plows, discs, etc. and rubber tires which wear out (slowly) on soil while being used on tractors and implements.

There is a progression of desired materials for organic aquaponic producers which is leading to a grey area:

- Plastic trays have been used in plug and plant production for organic producers for almost as long as plastic trays have been available to farmers. No certifier has denied the allowance of plastic trays in organic production to my knowledge and yet the various types of plastic are considered to be synthetic. If this use of plastic were eliminated for organic growers there would be a drastic reaction.
- Recently companies have blended similar types of plastic with peat moss to create a sponge like material for growing plugs or plants in. Most certifiers have indicated that this is not compliant under the regulations based on the use of a synthetic. It is not clear to me what is the difference between this use of plastic and that of plug trays which all allow and no other certifiers have given me an answer to that question. We do not allow this product because there is also a prohibited fungicide in the product, but both our clients and the manufacturer want us to allow it if the fungicide and any other prohibited substance were removed. The client considered the sponge like material to be a container much like a plastic tray. Insight on this issue would be helpful.
- Rockwool as a growing medium, blended with other allowed ingredients or just alone is also a desirable medium for growers. So is it a container, as the plastic trays above, or something else? And where do we as certifiers draw the line if you consider rockwool to be synthetic? This question will keep coming up for certifiers and their clients.

Regards,
Dave

David DeCOU
Certification Manager
ECOCERT ICO LLC, 70 East Main Street, Ste. B
Greenwood, Indiana 46143
Toll Free: 888-337-8246 Office: 317-865-9700,
Fax: 317-865-9707, Cell: (b) (6)
mailto:dave.decou@ecocert.com / www.ecocertico.com

---

**From:** Mann, Renee - AMS [mailto:Renee.Mann@ams.usda.gov]
**Sent:** Tuesday, June 24, 2014 8:35 PM
**To:** DE COU Dave
**Cc:** Brines, Lisa - AMS; Melvin, Jonathan - AMS
**Subject:** Rockwool

Dear Dave,

This email is a request for additional information in accordance with NOP Policy Memo 11-4, Evaluation of Materials Used in Organic Crop, Livestock, and Handling Operations.

NOP Policy Memo 11-4 provides a process for resolving conflicts in interpretation on the allowance of materials under the USDA organic regulations.

On June 17, 2014, a certifier contacted NOP regarding the use of Rockwool in organic hydroponic production. Specifically, the certifier requested NOP's interpretation on the allowance of Rockwool as an approved growing media in organic hydroponic operations. An operation that was denied the use of Rockwool in its hydroponic operation by its previous certifier was changing certifiers to Ecocert-ICO so that they could use this substance as a growing media for their organic hydroponic production.

In order to resolve this conflict in interpretation on the use of Rockwool in organic hydroponic production, **NOP requests that you provide a brief written summary of any current or previous decisions to approve or deny the use of Rockwool in organic hydroponic production.** The summary should include citations to relevant sections of the USDA organic regulations, as applicable, and indicate whether the Rockwool was previously approved or denied as a synthetic or nonsynthetic substance.

Following receipt, NOP will review the information provided from all parties and determine whether the regulations have been properly applied. NOP's determination will be limited to the application of the USDA organic regulations for generic materials; the NOP does not approve or endorse branded (formulated) input products.

A written response to this inquiry is requested no later than Tuesday, July 15th.

Sincerely,
Renee

Ms. Renee Mann
Assistant Director, Accreditation and International Activities Division
USDA National Organic Program
(202) 260-8635
NOP website
Sign up for our newsletter, the USDA Organic Insider

## Schurkamp, Lynnea - AMS

**From:** Mann, Renee - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MANN, RENEE6BA41DDD-4FFB-41B9-9712-F7EF2E4B19ED>
**Sent:** Wednesday, August 06, 2014 7:12 PM
**To:** DE COU Dave
**Cc:** Brines, Lisa - AMS; Melvin, Jonathan - AMS; Courtney, Cheri - AMS
**Subject:** RE: Rockwool
**Attachments:** image001.png

Hello Dave:

The NOP has completed a review of the rockwool issue to which you responded on July 14, 2014.

I would like to confirm that Rockwool is a synthetic material that is not allowed in organic hydroponic production per §205.100(a). Thank you for informing us that Ecocert ICO has not allowed the use of rockwool for any of its clients.

Please contact me if you have any questions or concerns.

Kind Regards,
Renee

Renee Mann
Assistant Director, Accreditation and International Activities Division
USDA National Organic Program
(202) 260-8635
Join the NOP mailing list.

---

**From:** DE COU Dave [mailto:dave.decou@ecocert.com]
**Sent:** Monday, July 14, 2014 7:25 PM
**To:** Mann, Renee - AMS
**Cc:** Brines, Lisa - AMS; Melvin, Jonathan - AMS
**Subject:** RE: Rockwool

Renee Mann and all,

Ecocert ICO has not to date approved the use of Rockwool in any operation. We have not allowed the use of rockwool containing products but on the basis of other materials in the product. The question of rockwool appears to be forthcoming because of communication with a previous client of ours who was unable to meet the requirements to be an organic aquaponics client and chose to go to a different certifier and then has apparently chosen to return and to attempt to become certified by Ecocert ICO again after working with a consultant. Whether they can be fully certified or not is in process. Not to our knowledge have we informed them that they can use rockwool. In fact with this discussion we have stated to them that they should not use rockwool because it is in question.
The question of the allowance of rockwool as an input to an agricultural system depends upon a certain degree of interpretation of both the regulations and common practice. Rockwool is made by the melting of rock at high temperatures and creating strands by blowing air or steam through the liquid. Is the heating to 1600 degrees C of rock necessarily the creation of a synthetic? If there are additives to the process, the question becomes clearer, particularly if the additives are synthetic. Vermiculite is a particular rock which expands when heated, also commonly considered non-

synthetic by all certifiers. Rockwool is considered to be environmentally good, with an ecolabel endorsement by the WHO. Clearly such a label does not determine the compliance of the material. But what about the use of other synthetic materials, not listed on 205.601, in organic production: Steel for the tools which work soil (hoes, plows, discs, etc. and rubber tires which wear out (slowly) on soil while being used on tractors and implements.

There is a progression of desired materials for organic aquaponic producers which is leading to a grey area:

- Plastic trays have been used in plug and plant production for organic producers for almost as long as plastic trays have been available to farmers. No certifier has denied the allowance of plastic trays in organic production to my knowledge and yet the various types of plastic are considered to be synthetic. If this use of plastic were eliminated for organic growers there would be a drastic reaction.
- Recently companies have blended similar types of plastic with peat moss to create a sponge like material for growing plugs or plants in. Most certifiers have indicated that this is not compliant under the regulations based on the use of a synthetic. It is not clear to me what is the difference between this use of plastic and that of plug trays which all allow and no other certifiers have given me an answer to that question. We do not allow this product because there is also a prohibited fungicide in the product, but both our clients and the manufacturer want us to allow it if the fungicide and any other prohibited substance were removed. The client considered the sponge like material to be a container much like a plastic tray. Insight on this issue would be helpful.
- Rockwool as a growing medium, blended with other allowed ingredients or just alone is also a desirable medium for growers. So is it a container, as the plastic trays above, or something else? And where do we as certifiers draw the line if you consider rockwool to be synthetic? This question will keep coming up for certifiers and their clients.

Regards,
Dave

David DeCOU
Certification Manager
ECOCERT ICO LLC, 70 East Main Street, Ste. B
Greenwood, Indiana 46143
Toll Free: 888-337-8246 Office: 317-865-9700,
Fax: 317-865-9707, Cell: (b) (6)
mailto:dave.decou@ecocert.com / www.ecocertico.com

---

**From:** Mann, Renee - AMS [mailto:Renee.Mann@ams.usda.gov]
**Sent:** Tuesday, June 24, 2014 8:35 PM
**To:** DE COU Dave
**Cc:** Brines, Lisa - AMS; Melvin, Jonathan - AMS
**Subject:** Rockwool

Dear Dave,

This email is a request for additional information in accordance with NOP Policy Memo 11-4, Evaluation of Materials Used in Organic Crop, Livestock, and Handling Operations.

NOP Policy Memo 11-4 provides a process for resolving conflicts in interpretation on the allowance of materials under the USDA organic regulations.

On June 17, 2014, a certifier contacted NOP regarding the use of Rockwool in organic hydroponic production. Specifically, the certifier requested NOP's interpretation on the allowance of Rockwool as an approved growing media in organic hydroponic operations. An operation that was denied the use of Rockwool in its hydroponic operation by its previous certifier was changing certifiers to Ecocert-ICO so that they could use this substance as a growing media for their organic hydroponic production.

In order to resolve this conflict in interpretation on the use of Rockwool in organic hydroponic production, **NOP requests that you provide a brief written summary of any current or previous decisions to approve or deny the use of Rockwool in organic hydroponic production.** The summary should include citations to relevant sections of the USDA organic regulations, as applicable, and indicate whether the Rockwool was previously approved or denied as a synthetic or nonsynthetic substance.

Following receipt, NOP will review the information provided from all parties and determine whether the regulations have been properly applied. NOP's determination will be limited to the application of the USDA organic regulations for generic materials; the NOP does not approve or endorse branded (formulated) input products.

A written response to this inquiry is requested no later than Tuesday, July 15th.

Sincerely,
Renee

Ms. Renee Mann
Assistant Director, Accreditation and International Activities Division
USDA National Organic Program
(202) 260-8635
NOP website
Sign up for our newsletter, the USDA Organic Insider

## Schurkamp, Lynnea - AMS

**From:** McElroy, Bridget - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MCELROY, BRID2CEA01B0-F300-4D5B-A8C2-106C55F5CCE466C>
**Sent:** Friday, April 01, 2016 11:26 AM
**To:** McEvoy, Miles - AMS
**Subject:** RE: Survey

Hi Miles,

For the survey, the systems were defined this way:

What do we mean by hydroponic, aquaponic, aeroponic?

We are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

Most certifiers who responded confirming that they do certify these systems were pretty specific about whether the systems are hydro, aqua, or container. However, there are a few (PCO, Primus, QCS) who didn't give specifics. It could be that some of what they are calling hydroponics are actually container systems. I think it would be helpful to follow up to verify what's what, particularly from Primus who reported 28 certified hydroponic operations. I can do that if necessary.

In the meantime, where are those who ARE certifying these types of operations:

| Certifier | Hydroponic Operations | Aquaponic Operations | Other (Container) |
|---|---|---|---|
| A Bee Organic | 7 | 4 | |
| CCOF | 4 | 3 | 39 |
| Idaho State Department of Agriculture | | 1 | |
| Control Union Certifications | 1 | | |
| OTCO | | 12 | |
| PCO | 5 | | |
| MOFGA | | 1 | |

| | | | |
|---|---|---|---|
| NSF | 2 | | 2 |
| QCS | 5 | | |
| Bay State Organic | 4 | | |
| Primus | 28 | | |
| ASCO | 1 | | |
| Nature's International Certification Services | 1 | | |
| International Certification Services | | | 1 |
| WSDA | 1 | | |
| Americert | 1 | | |
| Eco-LOGCA | 2 | | |
| MCIA | 1 | 1 | |

Bridget

---

**From:** McEvoy, Miles - AMS
**Sent:** Friday, April 01, 2016 9:48 AM
**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** RE: Survey

Please provide a list of certifiers that are certifying hydroponic or aquaponics operations. Also – how are container production systems defined?

---

**From:** McElroy, Bridget - AMS
**Sent:** Monday, March 28, 2016 11:36 AM
**To:** McEvoy, Miles - AMS <Miles.McEvoy@ams.usda.gov>
**Subject:** FW: Survey

Hi Miles,

Can I share the general results from the hydroponics survey with the task force? A few of them have asked about it. By general results, I'm thinking of the items below as we shared in last week's brown bag.

Status of Certification:

- Survey of 80 certifiers, 59 responded.
  - **DO** certify hydro/aquaponics: 18
  - **DO NOT** certify hydro/aquaponics: 41
  - Total **hydroponic** operations certified: 65
  - Total **aquaponic** operations certified: 22
  - Total **container** operations certified: 39
  - Types of crops: herbs, various greens, mixed vegetables (tomatoes, peppers, cucumbers, etc.), various berries, flowers, etc.
  - Geographic location of operations:
    - CA, Mexico, AZ, NM, TX, CO, MI, the Netherlands, OR, HI, WA, MO, LA, KS, ME, PA, GA, NY, NJ, OH, NC, FL, AK, VA

---

**From:** eric sideman [mailto:esideman@mofga.org]
**Sent:** Monday, March 28, 2016 11:24 AM

**To:** McElroy, Bridget - AMS <Bridget.McElroy@ams.usda.gov>
**Subject:** Survey

Good morning Bridget,

I was wondering how the response rate was to the survey done a few weeks ago of certifiers? And of course, are there results to share?

Eric
--
Eric Sideman
Crop Specialist
Maine Organic Farmers and Gardeners Association
Phone: 603 269 6201
esideman@mofga.org

## Schurkamp, Lynnea - AMS

**From:** David DeCou ICO <daved@indianacertifiedorganic.com>
**Sent:** Thursday, September 27, 2012 7:56 PM
**To:** Mann, Renee - AMS
**Subject:** Re: Sweet Water Organics
**Attachments:** ATT00001.jpg; ICO LogoNu.jpg

Renee-
You sent your email last week as I was in Indiana training a new certification officer. Sorry I did not look at this more carefully then. I have felt overwhelmed recently but with new help coming on line things are looking up.

I really do not know when or if they will be changing their name. They were clearly very concerned about not putting any version of the word "organic" on their proposed labels as they did not want to be found noncompliant again. I had to make it very clear that we needed their proposed labels to be able to review them assuming they would meet certification standards on the sprouts.

I have a call in to our inspector about the other issue. He is a good inspector and this could be a complaint from an (b) (6) We had one of those last spring from someone who was clearly (b) (6)

Dave
On 9/17/2012 8:20 AM, Mann, Renee - AMS wrote:

> Hi Dave:
> Thank you for the update. Do you know when SWO plans to change its name? They had originally told me they were already in the process of removing the word “organic.” Now that it appears that part of their operation cannot be certified, it is important for them to change their company name. We will be following up with SWO, but I would like to know if you have any information on this topic.
>
> Also, below is some additional information provided by an anonymous informant to the complainant after we closed our investigation. The NOP does not expect you to respond to us regarding an investigation of this information. ICO can determine whether it is appropriate to address this issue during the inspection of the facility or at another time, or not at all. Regarding the FDA concern noted below, the NOP will inform the FDA of the concern. I have included it below because the allegedly poor production methods described by the informant may be the result of violations of the NOP regulations in addition to FDA regulations.
>
> Below is an excerpt of the information provided to the NOP:
>
> “… the building materials used in both the [SWO’s] older indoor aquaponic systems, and their new outdoor system, as well as the seeding plugs SWO uses to produce it's aquaponic vegetables *should* not permit them to meet organic certification criteria.
> …you should look into the facts around sprout production requiring an FDA approved facility, whether organic or not. Sweet Water's current sprout production area is far from what the FDA would approve, and (as I understand it) is therefore illegal. Removing the word "Organics" from the label doesn't change that. Sweet Water's leaders have proved capable of many egregious shortcuts. At best, their sprouts are cut from trays with the bottom inch overtaken with mold before being rinsed and placed in clamshells for retail sale in local grocery stores. That said, many people have witnessed trays of sprouts from SW delivered to restaurants with the mold still encompassing the bottom parts of the stems. It would be unfortunate if anyone were to get sick from their negligence.”
>
> Kind Regards,
> Renee
>
> Ms. Renee Mann

Compliance Specialist
USDA National Organic Program
+1 (202) 205-5213

**From:** David DeCou ICO [mailto:daved@indianacertifiedorganic.com]
**Sent:** Friday, September 14, 2012 12:42 PM
**To:** Mann, Renee - AMS
**Subject:** Re: Sweet Water Organics

Renee-
Sweetwater has realized that part of their operation will not qualify for organic certification. The aquaponic portion has inputs which are not compliant. They will need to make significant changes for the aquaponics to be certifiable. But the portion of their operation which produces several types of sprouts appears to be certifiable. It is scheduled for inspection on the 23rd of September. The delay has been our scheduling issue.

Dave
On 9/13/2012 1:56 PM, Mann, Renee - AMS wrote:

> Hi Dave:
>
> Can you please provide me with an update on Sweet Water Organics? Have they achieved organic certification as a farmer and/or handler yet?
>
> Thanks,
> Renee
>
> Ms. Renee Mann
> Compliance Specialist
> USDA National Organic Program
> +1 (202) 205-5213



--
Sincerely,
Dave

**David DeCOU**
**Certification Manager**
Indiana Certified Organic, LLC
**NEW ADDRESS/PHONE:**

70 East Main Street, Suite B
Greenwood, Indiana 46143
(317) 865-9700 office (317) 865-9707 fax
Cell: (b) (6)

EMAIL AND WEBSITE INFORMATION WILL REMAIN THE SAME

www.indianacertifiedorganic.com

--
Sincerely,
Dave

**David DeCOU**
**Certification Manager**
Indiana Certified Organic, LLC
**NEW ADDRESS / PHONE:**
70 East Main Street, Suite B
Greenwood, Indiana 46143
(317) 865-9700 office (317) 865-9707 fax
Cell: (b) (6)

EMAIL AND WEBSITE INFORMATION WILL REMAIN THE SAME

www.indianacertifiedorganic.com

## Schurkamp, Lynnea - AMS

**From:** David DeCou ICO <daved@indianacertifiedorganic.com>
**Sent:** Monday, October 01, 2012 12:39 PM
**To:** Mann, Renee - AMS
**Subject:** Re: Sweet Water Organics
**Attachments:** ATT00001.jpg; ICO LogoNu.jpg

Renee
I spoke to the inspector soon after the inspection. He felt that the operation was well managed and had good quality control. He saw something that looked like mold on the base of some types of sprouts and asked the Quality manager there what it was. Apparently broccoli (I think) grows very fine root hairs out of the base of the sprout stem. The root hairs look like mold but are not. Mold would disintegrate if you touch i and the root hairs do not. I suspect that this is the problem that the complainant noticed and it is not actually a problem. Additionally, from what I can understand, sprout growers do not need to be licensed by FDA. FDA has provided sprout growers with guidance but it is only guidance not a licensing program.

Dave
On 10/1/2012 8:58 AM, Mann, Renee - AMS wrote:

> Dear Dave:
> Thank you for the update.
>
> Kind Regards,
>
> Ms. Renee Mann
> Compliance Specialist
> USDA National Organic Program
> +1 (202) 205-5213

---

**From:** David DeCou ICO [mailto:daved@indianacertifiedorganic.com]
**Sent:** Thursday, September 27, 2012 7:56 PM
**To:** Mann, Renee - AMS
**Subject:** Re: Sweet Water Organics

Renee-
You sent your email last week as I was in Indiana training a new certification officer. Sorry I did not look at this more carefully then. I have felt overwhelmed recently but with new help coming on line things are looking up.

I really do not know when or if they will be changing their name. They were clearly very concerned about not putting any version of the word "organic" on their proposed labels as they did not want to be found noncompliant again. I had to make it very clear that we needed their proposed labels to be able to review them assuming they would meet certification standards on the sprouts.

I have a call in to our inspector about the other issue. He is a good inspector and this could be a complaint from an (b) (6) [redacted]. We had one of those last spring from someone who was clearly (b) (6) [redacted]

Dave
On 9/17/2012 8:20 AM, Mann, Renee - AMS wrote:

Hi Dave:
Thank you for the update. Do you know when SWO plans to change its name? They had originally told me they were already in the process of removing the word “organic.” Now that it appears that part of their operation cannot be certified, it is important for them to change their company name. We will be following up with SWO, but I would like to know if you have any information on this topic.

Also, below is some additional information provided by an anonymous informant to the complainant after we closed our investigation. The NOP does not expect you to respond to us regarding an investigation of this information. ICO can determine whether it is appropriate to address this issue during the inspection of the facility or at another time, or not at all. Regarding the FDA concern noted below, the NOP will inform the FDA of the concern. I have included it below because the allegedly poor production methods described by the informant may be the result of violations of the NOP regulations in addition to FDA regulations.

Below is an excerpt of the information provided to the NOP:

“… the building materials used in both the [SWO’s] older indoor aquaponic systems, and their new outdoor system, as well as the seeding plugs SWO uses to produce it's aquaponic vegetables *should* not permit them to meet organic certification criteria. …you should look into the facts around sprout production requiring an FDA approved facility, whether organic or not. Sweet Water's current sprout production area is far from what the FDA would approve, and (as I understand it) is therefore illegal. Removing the word "Organics" from the label doesn't change that. Sweet Water's leaders have proved capable of many egregious shortcuts. At best, their sprouts are cut from trays with the bottom inch overtaken with mold before being rinsed and placed in clamshells for retail sale in local grocery stores. That said, many people have witnessed trays of sprouts from SW delivered to restaurants with the mold still encompassing the bottom parts of the stems. It would be unfortunate if anyone were to get sick from their negligence.”

Kind Regards,
Renee

Ms. Renee Mann
Compliance Specialist
USDA National Organic Program
+1 (202) 205-5213

---

**From:** David DeCou ICO [mailto:daved@indianacertifiedorganic.com]
**Sent:** Friday, September 14, 2012 12:42 PM
**To:** Mann, Renee - AMS
**Subject:** Re: Sweet Water Organics

Renee-
Sweetwater has realized that part of their operation will not qualify for organic certification. The aquaponic portion has inputs which are not compliant. They will need to make significant changes for the aquaponics to be certifiable. But the portion of their operation which produces several types of sprouts appears to be certifiable. It is scheduled for inspection on the 23rd of September. The delay has been our scheduling issue.

Dave
On 9/13/2012 1:56 PM, Mann, Renee - AMS wrote:

> Hi Dave:

Can you please provide me with an update on Sweet Water Organics? Have they achieved organic certification as a farmer and/or handler yet?

Thanks,
Renee

Ms. Renee Mann
Compliance Specialist
USDA National Organic Program
+1 (202) 205-5213



--
Sincerely,
Dave


**David DeCOU**
**Certification Manager**
Indiana Certified Organic, LLC
**NEW ADDRESS / PHONE:**
70 East Main Street, Suite B
Greenwood, Indiana 46143
(317) 865-9700 office (317) 865-9707 fax
Cell: (b) (6) [redacted]

EMAIL AND WEBSITE INFORMATION WILL REMAIN THE SAME

www.indianacertifiedorganic.com

--
Sincerely,

Dave

**David DeCOU**
**Certification Manager**
Indiana Certified Organic, LLC
**NEW ADDRESS/PHONE:**
70 East Main Street, Suite B
Greenwood, Indiana 46143
(317) 865-9700 office (317) 865-9707 fax
Cell: (b) (6)

EMAIL AND WEBSITE INFORMATION WILL REMAIN THE SAME

www.indianacertifiedorganic.com

--
Sincerely,
Dave

**David DeCOU**
**Certification Manager**
Indiana Certified Organic, LLC
**NEW ADDRESS/PHONE:**
70 East Main Street, Suite B
Greenwood, Indiana 46143
(317) 865-9700 office (317) 865-9707 fax
Cell: (b) (6)

EMAIL AND WEBSITE INFORMATION WILL REMAIN THE SAME

www.indianacertifiedorganic.com

## Schurkamp, Lynnea - AMS

**From:** Lopez, JasonJ - AMS </O=MMS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=LOPEZ, JASONJ5418CFE5-681F-4992-82F0-2EC48A970563417>
**Sent:** Wednesday, September 09, 2015 7:44 AM
**To:** certificacion@certimexsc.com
**Cc:** Mann, Renee - AMS
**Subject:** RE: Technical Consultation
**Attachments:** image001.png

Mr. Garcia,

I have forwarded your consultation request to Renee Gebault-King, your accreditation manager, to provide you with a response.

Best regards,

***Jason Lopez***
Accreditation Manager
USDA National Organic Program
1400 Independence Ave, SW
Room 2649- South, Stop 0268
Washington, DC 20250-0268
Office: (202)260-9445
www.ams.usda.gov/nop

---

**From:** Certificaciones [mailto:certificacion@certimexsc.com]
**Sent:** Tuesday, September 08, 2015 2:36 PM
**To:** Lopez, JasonJ - AMS
**Subject:** RV: Technical Consultation

Jason estimated , again sending a technical consultation .

---

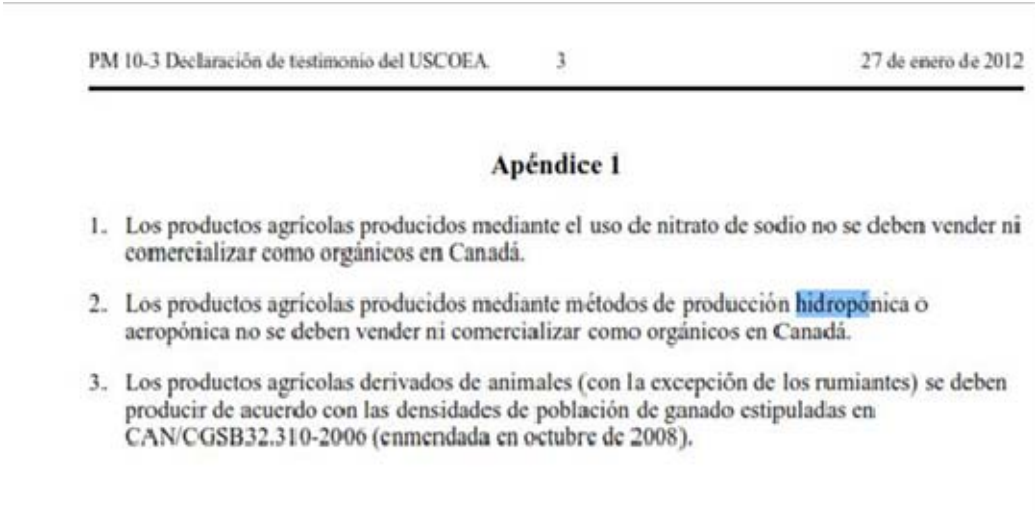
**De:** Certificaciones [mailto:certificacion@certimexsc.com]
**Enviado el:** martes, 8 de septiembre de 2015 01:29 p. m.
**Para:** 'Howley, JannaB - AMS' <JannaB.Howley@ams.usda.gov>
**Asunto:** RE: Technical Consultation

Janna estimated , again sending a technical consultation .

1. What is “At Issue,” or your “Question”: Please state briefly, with no more than a few sentences, the issue or the question you wish answered. The producer of specialty produce (b) (4) small tomato / grape / round / red and yellow type , these tomatoes are produced in different parts of the republic ; San Isidro

Mazatepec , Zapotlán , Colima and Nayarit Tuxcacuesco , the total area of (b) (4) ha The production system is now standard . ; greenhouses , drip irrigation and drip gray slab and pickaxe with coconut fiber substrate .

2. Relevant Standard(s): Please cite the relevant NOP standard(s), if applicable. Only it mentioned as well :



PM 10-3 Declaración de testimonio del USCOEA 3 27 de enero de 2012

**Apéndice 1**

1. Los productos agrícolas producidos mediante el uso de nitrato de sodio no se deben vender ni comercializar como orgánicos en Canadá.
2. Los productos agrícolas producidos mediante métodos de producción hidropónica o acropónica no se deben vender ni comercializar como orgánicos en Canadá.
3. Los productos agrícolas derivados de animales (con la excepción de los rumiantes) se deben producir de acuerdo con las densidades de población de ganado estipuladas en CAN/CGSB32.310-2006 (enmendada en octubre de 2008).

3. Background: Please provide us the context surrounding the issue and/or why this question is relevant. As much as possible, keep this section brief and on topic.

Our USA market is 95 % and 5 % between Canada and Mexico .

4. Proposed Solution(s): This is your opportunity to provide us valuable input and insight. Since you have a greater understanding of the specific circumstances, you may be better equipped to foresee and suggest a solution. Your solution should be supported by the information in the other sections.

Because to be produced under organic management in hydroponics .

5. Attachment(s): Relevant documents and/or links, if applicable. Attachments

6. Urgency: If you are facing a deadline or under a time constraint, please indicate this to me. If I have this information, I will be better able to prioritize your question(s). 11.09. 2015

Best regards

Ing. Rocío Pacheco García
Area de Revisión
Usuario Skype: rocio.cmx.cmx
CERTIMEX, Certificadora Mexicana de Productos y Procesos Ecológicos, S. C.
Calle 16 de Septiembre No. 204, Ejido Guadalupe Victoria,
Oaxaca de Juárez, Oax., México. C. P. 68026

Tel. / Fax. ++ 951 5202687 / ++ 951 52 00617/ ++951 1336113
Email. Gral. certimex@certimexsc.com
Pag. Web: www.certimexsc.com

Horarios de Atención:
Lunes a Viernes
9: 00 a.m. a 14:00 p.m.
15:00 p.m. a 17:00 p.m.

Acreditada
1. ISO-IEC 17065 (EN 45011) por el organismo Alemán de Acreditación DAkkS para certificar productos orgánicos para el mercado Nacional y Europa.
2. Departamento de Agricultura de los Estados Unidos (USDA-NOP) para certificar productos Orgánicos para el Mercado de Estados Unidos y Canadá.
3. MAFF-JAS (Ministerio de Agricultura, Silvicultura y Pesca) para certificar productos orgánicos para el mercado Japonés.
4. SAGARPA-SENASICA (Lineamientos para la Operación Orgánica de las Actividades Agropecuarias) para certificar productos orgánicos para el Mercado Nacional.
5. FUNDEPPO (SPP - Símbolo de Pequeños Productores) para el Mercado de Comercio Justo.

---

**From:** Certificaciones [mailto:certificacion@certimexsc.com]
**Sent:** Tuesday, August 04, 2015 10:17 AM
**To:** Howley, JannaB - AMS
**Subject:** Consultar a NOP

## Schurkamp, Lynnea - AMS

**From:** Ramkrishnan P.B. <ram@qcsinfo.org>
**Sent:** Tuesday, June 17, 2014 3:17 PM
**To:** Mann, Renee - AMS
**Cc:** denise aguero
**Subject:** Rockwool Use n organic hyrdoponic production
**Attachments:** Rockwool.docx

Renee,

QCS is seeking guidance of rockwool in hydroponics. QCS refused to allow rockwool to be a media for crop growth in hydroponic and come in contact with organic crop. Rockwool is a synthetic. The client switched to another certifier who allows rockwool for organic hydroponic production. We were advised by NOP that when certifiers disagree to bring it to NOP attention.

A guidance on whether rockwool is allowed or not will be helpful. Question attached.

Thanks,
Ramkrishnan

Quality Certification Services (QCS)
PO Box 12311 Gainesville FL 32604
phone 352.377.0133 / fax 352.377.8363 / www.qcsinfo.org
*QCS is the Certification Program of Florida Certified Organic Growers and Consumers, Inc. (FOG)*

June 17, 2014

Renee Mann
Regional Accredation Manager
USDA National Organic Program
1400 Independence Ave., SW
Room 2648 – South, Stop 0268
Washington, DC 20250

Dear Ms. Mann,

Quality Certification Services (QCS) is a USDA accredited certifying agent based in Gainesville, Florida. QCS certifies crop, wild crop, livestock, and handling operations to the National Organic Program standards. This letter is a request for NOP guidance. All pertinent information is listed below in compliance with the NOP "Certifier Questions to the NOP" proper question submission format.

1. What is "At Issue," or your "Question"
   Is Rockwool or any other synthetic material able to be uses as a media in a certified organic, hydroponic operation?

2. Relevant Standard
   In reference to §205.105(a) of the National Organic Program, it is stated: *To be sold or labeled as "100 percent organic," "organic," or "made with organic (specified ingredients or food group(s)),"* ***the product must be produced and handled without the use of: (a) synthetic substances and ingredients, except as provided in §205.601 or 205.603.***

3. Background
   Hydroponic growing systems typically rely on an inert growing media to be used as an anchor for plant roots. Many conventional growers in the industry use Rockwool, a synthetically derived substance, as a media. Alternatively, there are many successful certified organic growers that are not using Rockwool or synthetic materials as a media, and using NOP compliant materials instead. Consistent with the NOP, the Organic Materials Review Institute (OMRI) has ruled that Rockwool is not able to be used in organic crop production as a crop fertilizer, soil amendment, crop management tool, or production aid. OMRI based their decision on §205.105(a) of the NOP rules and regulations. The rule, listed above, insists that synthetic substances are not to be used with products claiming organic status. Some grower's and certifier's interpretations of rule §205.105(a) are that it is not applicable to hydroponic soil media because the material stays intact in the system. It is highly unlikely that 100% of the synthetic ingredients contained in Rockwool (and similar synthetic products) stay intact in the system. These synthetic materials and plugs are subject to degradation, and worst, are in direct contact with plant material.

4. Proposed Solution
   Based on the NOP regulations in place for in-ground crop production, QCS's interpretation of §205.105(a) is that certified organic hydroponic systems should not be using Rockwool and other synthetically derived media sources as a plant media.

5. Attachment
   Not Applicable

6. Urgency
   Pressing; many hydroponic operations are seeking to be certified organic. These same operations need guidance on if Rockwool and other synthetically-derived materials are able to be used as a plant media source.

QCS strives to ensure that our certification program is wholly consistent with the National Organic Program standards as set forth in 7 CFR Part 205. Therefore, we greatly appreciate your guidance on this issue. Please do not hesitate to contact us with any questions you may have about this letter.

Sincerely,

Ramkrishnan,
Chief Operating Officer

## Schurkamp, Lynnea - AMS

**From:** Eugenia Fraga <mefraga@foodsafety.com.ar>
**Sent:** Tuesday, March 01, 2016 11:19 AM
**To:** McElroy, Bridget - AMS
**Subject:** RV: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
**Attachments:** image001.jpg

Dear Bridget,
In Food Safety we do not certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards.

Please let me know if you need something else.

Regards,


---

**De:** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **En nombre de** AMS - AIAinbox
**Enviado el:** martes, 01 de marzo de 2016 12:12 p.m.
**Para:** AMS - AIAinbox
**CC:** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au; organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au; michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA, Reno, NV; emel.erkan@bio-inspecta.com; central@biolatina.com; baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; rporto@caae.es; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; rporto@caae.es; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct; jvdschootbrugge@controlunion.com; ceres@ceres-cert.com; rsetti@ccpb.it; vincent.morel@ecocert.com; info@certisys.eu; direccionejecutiva@certimexsc.com; agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us; Nathalie.Boes@certisys.eu; joy.mccracken@georgiacrop.com; organic@controlunion.com; organic@clemson.edu; cvanhook77@earthlink.net; info.ecocertico@ecocert.com; amy.stafford@state.co.us; goabecky@centurylink.net; aude.bonnet@ecocert.com; dszalai@controlunion.com; camila@ibd.com.br; ep@ecoglobe.am; Jeffry.EVARD@ecocert.com; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; aude.bonnet@ecocert.com; Beatrice.Breuer@imo.ch; info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@eco-logica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; a.moutapam@lacon-institut.org; Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov;

spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; soh@imo.ch; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; lacon@lacon-institut.org; adam.watson@ky.gov; kirrilley.becker@nasaa.com.au; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; j.kopp@lacon-institut.org; jabbott@agri.nv.gov; FGIS OA, Maryland; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland; SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; abrewster@ocia.org; sachin.ayachit@nasaa.com.au; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; sachin.ayachit@nasaa.com.au; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; thughes@nsf.org; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org; ocd@omicnet.com; susan@occert.com; pco@paorganic.org; celder@ocia.org; PrimusOrganic@primuslabs.com; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; qai@qai-inc.com; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; deborah.mansfield@primuslabs.com; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; irendon@nsf.org; Organic@TexasAgriculture.gov; robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org
**Asunto:** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

<u>What do we mean by hydroponic, aquaponic, aeroponic?</u>

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards?

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify?

In what state or country (if international) are the certified operations located (list)?

What crops do these certified operations produce (list)?

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division

**Schurkamp, Lynnea - AMS**

**From:** Certificaciones <certificacion@certimexsc.com>
**Sent:** Tuesday, September 08, 2015 2:36 PM
**To:** Lopez, JasonJ - AMS
**Subject:** RV: Technical Consultation
**Attachments:** image001.png

Jason estimated , again sending a technical consultation .

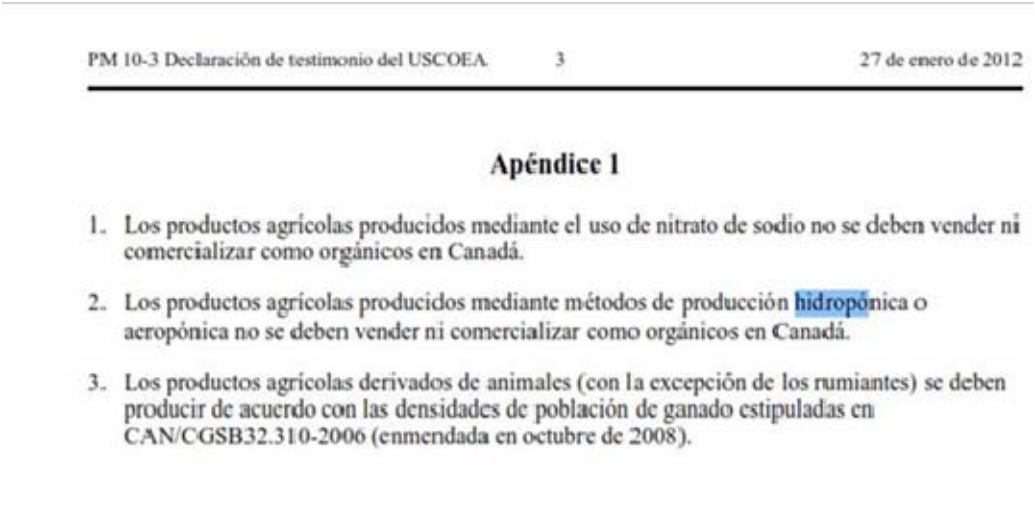
---

**De:** Certificaciones [mailto:certificacion@certimexsc.com]
**Enviado el:** martes, 8 de septiembre de 2015 01:29 p. m.
**Para:** 'Howley, JannaB - AMS' <JannaB.Howley@ams.usda.gov>
**Asunto:** RE: Technical Consultation

Janna estimated , again sending a technical consultation .

1. What is "At Issue," or your "Question": Please state briefly, with no more than a few sentences, the issue or the question you wish answered. The producer of specialty produce (b) (4) small tomato / grape / round / red and yellow type , these tomatoes are produced in different parts of the republic ; San Isidro Mazatepec , Zapotlán , Colima and Nayarit Tuxcacuesco , the total area of (b) (4) ha The production system is now standard . ; greenhouses , drip irrigation and drip gray slab and pickaxe with coconut fiber substrate .

2. Relevant Standard(s): Please cite the relevant NOP standard(s), if applicable. Only it mentioned as well :



PM 10-3 Declaración de testimonio del USCOEA 3 27 de enero de 2012

**Apéndice 1**

1. Los productos agrícolas producidos mediante el uso de nitrato de sodio no se deben vender ni comercializar como orgánicos en Canadá.
2. Los productos agrícolas producidos mediante métodos de producción hidropónica o acropónica no se deben vender ni comercializar como orgánicos en Canadá.
3. Los productos agrícolas derivados de animales (con la excepción de los rumiantes) se deben producir de acuerdo con las densidades de población de ganado estipuladas en CAN/CGSB32.310-2006 (enmendada en octubre de 2008).

3. Background: Please provide us the context surrounding the issue and/or why this question is relevant. As much as possible, keep this section brief and on topic.

Our USA market is 95 % and 5 % between Canada and Mexico .

4. Proposed Solution(s): This is your opportunity to provide us valuable input and insight. Since you have a greater understanding of the specific circumstances, you may be better equipped to foresee and suggest a solution. Your solution should be supported by the information in the other sections.

Because to be produced under organic management in hydroponics .

5. Attachment(s): Relevant documents and/or links, if applicable. Attachments

6. Urgency: If you are facing a deadline or under a time constraint, please indicate this to me. If I have this information, I will be better able to prioritize your question(s). 11.09. 2015

Best regards

Ing. Rocío Pacheco García
Area de Revisión
Usuario Skype: rocio.cmx.cmx
CERTIMEX, Certificadora Mexicana de Productos y Procesos Ecológicos, S. C.
Calle 16 de Septiembre No. 204, Ejido Guadalupe Victoria,
Oaxaca de Juárez, Oax., México. C. P. 68026
Tel. / Fax. ++ 951 5202687 / ++ 951 52 00617/ ++951 1336113
Email. Gral. certimex@certimexsc.com
Pag. Web: www.certimexsc.com

Horarios de Atención:
Lunes a Viernes
9: 00 a.m. a 14:00 p.m.
15:00 p.m. a 17:00 p.m.

Acreditada
1. ISO-IEC 17065 (EN 45011) por el organismo Alemán de Acreditación DAkkS para certificar productos orgánicos para el mercado Nacional y Europa.
2. Departamento de Agricultura de los Estados Unidos (USDA-NOP) para certificar productos Orgánicos para el Mercado de Estados Unidos y Canadá.
3. MAFF-JAS (Ministerio de Agricultura, Silvicultura y Pesca) para certificar productos orgánicos para el mercado Japonés.
4. SAGARPA-SENASICA (Lineamientos para la Operación Orgánica de las Actividades Agropecuarias) para certificar productos orgánicos para el Mercado Nacional.
5. FUNDEPPO (SPP - Símbolo de Pequeños Productores) para el Mercado de Comercio Justo.

**From:** Certificaciones [mailto:certificacion@certimexsc.com]
**Sent:** Tuesday, August 04, 2015 10:17 AM
**To:** Howley, JannaB - AMS
**Subject:** Consultar a NOP

## Schurkamp, Lynnea - AMS

**From:** BONNET Aude <aude.bonnet@ecocert.com>
**Sent:** Tuesday, March 01, 2016 11:48 AM
**To:** McElroy, Bridget - AMS
**Cc:** Yang, RobertH - AMS
**Subject:** TR: Hydroponic, Aquaponic, Aeroponic and Associated Production Systems
**Attachments:** image003.jpg; image004.jpg

Dear Bridget,
Please find Ecocert SA reply below following Cheri's email.

Bien cordialement,
Kind regards,

**Aude BONNET**

*Scheme Manager Organic Agriculture*

[Ecocert SA - BP 47 - 32600 - L'Isle-Jourdain - France]
T [+33 (0) 5 62 07 52 06] – M [+(b) (6) - F [+33 (0) 5 62 07 66 19]
aude.bonnet@ecocert.com
www.ecocert.com


**De :** Baron , Anne - AMS [mailto:AnneP.Baron@ams.usda.gov] **De la part de** AMS - AIAinbox
**Envoyé :** mardi 1 mars 2016 16:12
**À :** AMS - AIAinbox <AIAinbox@ams.usda.gov>
**Cc :** admin@abeeorganic.com; sarah@abeeorganic.com; ro@abeeorganic.com; info@ascorganic.com; Kat@ascorganic.com; mfigueiras@argencert.com.ar; americert@gmail.com; americert@gmail.com; organic@ausmeat.com.au; info@argencert.com.ar; lmontenegro@argencert.com.ar; jorge.larranaga@aco.net.au; organic@ausqual.com.au; elise@ausqual.com.au; dcox@baystateorganic.org; michael.baker@aco.net.au; michael.baker@aco.net.au; roxana.priego@biolatina.com.pe; baystateorganic@earthlink.net; Koble, Clinton - FSA, Reno, NV <clinton.koble@nv.usda.gov>; emel.erkan@bio-inspecta.com; central@biolatina.com;

baystateorganic@earthlink.net; amalia.rueda@bioagricert.org; admin@bio-inspecta.ch; central@biolatina.com; Pat.Kennelly@cdph.ca.gov; info@bioagricert.org; julia.winter@bio-inspecta.ch; accreditation@ccof.org; Bolicert@megalink.com; riccardo.cozzo@bioagricert.org; calidad@certimexsc.com; rporto@caae.es; Bolicert@bolicert.org; tom.nizet@certisys.eu; ccof@ccof.org; rporto@caae.es; saltmn@clemson.edu; ccpb@ccpb.it; Danny.Lee@cdfa.ca.gov; mitchell.yergert@state.co.us; certimex@certimexsc.com; Lewin Jake-FASConatct <jake@ccof.org>; jvdschootbrugge@controlunion.com; ceres@ceres-cert.com; rsetti@ccpb.it; MOREL Vincent <vincent.morel@ecocert.com>; info@certisys.eu; direccionejecutiva@certimexsc.com; agroecologiauna@gmail.com; organic@clemson.edu; benzing@ceres-cert.com; mefraga@foodsafety.com.ar; amy.stafford@state.co.us; Nathalie.Boes@certisys.eu; joy.mccracken@georgiacrop.com; organic@controlunion.com; organic@clemson.edu; cvanhook77@earthlink.net; HOPPER Jordan <Jordan.HOPPER@ecocert.com>; amy.stafford@state.co.us; goabecky@centurylink.net; BONNET Aude <aude.bonnet@ecocert.com>; dszalai@controlunion.com; camila@ibd.com.br; ep@ecoglobe.am; EVARD Jeffry <Jeffry.EVARD@ecocert.com>; Jason.Laney@agri.idaho.gov; pdescamps@eco-logica.com; BONNET Aude <aude.bonnet@ecocert.com>; Beatrice.Breuer@imo.ch; info@etko.org; nd@ecoglobe.am; Mary.nieland@iowaagriculture.gov; foodsafety@foodsafety.com.ar; pdescamps@eco-logica.com; p.perrone@icea.info; terry.hollifield@georgiacrop.com; ma@etko.org; Kristen.Branscum@ky.gov; info@globalculture.us; calidad@foodsafety.com.ar; herr@bcs-oeko.de; goaorg@centurylink.net; terry.hollifield@georgiacrop.com; a.moutapam@lacon-institut.org; Ibd@Ibd.com.br; globalculture@earthlink.net; monica@letis.org; Johanna.Phillips@agri.idaho.gov; goaorg@centurylink.net; scarlsen@co.marin.ca.us; imo@imo.ch; gwendal@ibd.com.br; juanantonio.mendoza@mayacert.com; info@ics-intl.com; Johanna.Phillips@agri.idaho.gov; spwalker@mosaorganic.org; maury.wills@iowaagriculture.gov; HUIGEN Sonja <soh@imo.ch>; wippl001@umn.edu; nop@icea.info; dawn@ics-intl.com; knewkirk@mofga.org; adam.watson@ky.gov; maury.wills@iowaagriculture.gov; etyanich@mt.gov; info@bcs-oeko.de; nop@icea.info; CarltonN@co.monterey.ca.us; lacon@lacon-institut.org; adam.watson@ky.gov; kirrilley.becker@nasaa.com.au; letis@letis.org; fischer@bcs-oeko.de; cfanta@naturesinternational.com; jstiles@marincounty.org; j.kopp@lacon-institut.org; jabbott@agri.nv.gov; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; internacional@letis.org; Victoria.Smith@agr.nh.gov; info@mayacert.com; jstiles@marincounty.org; Daniel.wunderlich@ag.state.nj.us; mosa@mosaorganic.org; FGIS OA, Maryland <Deanna.Baldwin@maryland.gov>; SGerk@nmda.nmsu.edu; mncia@mncia.org; noe.rivera@mayacert.com; lisaengelbert@nofany.org; certification@mofga.org; cskolaski@mosaorganic.org; Bryan.Buchwald@ag.ok.gov; agrorganic@mt.gov; michelle.menken@mncia.org; leng@oda.state.or.us; agcomm@co.monterey.ca.us; yurlina@mofga.org; abrewster@ocia.org; sachin.ayachit@nasaa.com.au; gwebster@mt.gov; gestiondecalidad@oia.com.ar; nfccertification@gmail.com; Huntinggb@co.monterey.ca.us; hi.yoshida@omicnet.com; nics@naturesinternational.com; sachin.ayachit@nasaa.com.au; kyla@paorganic.org; Jennifer.Gornnert@agr.nh.gov; nfccertification@gmail.com; brian.mansfield@primuslabs.com; erich.bremer@ag.state.nj.us; dave@naturesinternational.com; byron.hamm@pro-cert.org; organic@nmda.nmsu.edu; ajeppson@agri.nv.gov; thughes@nsf.org; certifiedorganic@nofany.org; Jennifer.Gornnert@agr.nh.gov; ram@qcsinfo.org; organic@oeffa.org; erich.bremer@ag.state.nj.us; dkirsanovaphillips@scscertified.com; jeff.stearns@ag.ok.gov; bbakker@nmda.nmsu.edu; rhougaard@utah.gov; info@onecert.com; lori@nofany.org; Laura@nofavt.org; cid-organic@oda.state.or.us; andy@oeffa.org; srice@agr.wa.gov; organic@tilth.org; jeff.stearns@ag.ok.gov; john.young@yolocounty.org; info@occert.com; sam@onecert.com; xiao@ofdc.org.cn; kallen@oda.state.or.us; oia@oia.com.ar; connie@tilth.org; ocd@omicnet.com; susan@occert.com; pco@paorganic.org; celder@ocia.org; PrimusOrganic@primuslabs.com; xiao@ofdc.org.cn; info@pro-cert.org; pedroalanda@oia.com.ar; qai@qai-inc.com; ocd@omicnet.com; qcs@qcsinfo.org; leslie@paorganic.org; matt.green@dem.ri.gov; deborah.mansfield@primuslabs.com; organic@scsglobalservice.com; Dave.Lockman@pro-cert.org; Sally@Demeter-USA.org; irendon@nsf.org; Organic@TexasAgriculture.gov; robin@qcsinfo.org; (b) (6) @gmail.com; matt.green@dem.ri.gov; rlarsen@utah.gov; bnauman@scsglobalservices.com; Info@nofavt.org; Sally@Demeter-USA.org; organic@agr.wa.gov; Mary.Holliman@texasagriculture.gov; dennis.chambers@yolocounty.org; (b) (6) @gmail.com; rlarsen@utah.gov; Nicole@nofavt.org; bbook@agr.wa.gov; dennis.chambers@yolocounty.org

**Objet :** Hydroponic, Aquaponic, Aeroponic and Associated Production Systems

This message is sent on behalf of Cheri Courtney, Accreditation and International Activities Division Director of the USDA National Organic Program.

Dear Certifiers:
The NOP is seeking information from certifying agents on the certification of hydroponic, aquaponic, aeroponic and associated production systems. This information is primarily for internal use. The NOP will not share information that identifies you as a certifying agent, or the operations that you certify.

What do we mean by hydroponic, aquaponic, aeroponic?

The exact definition of hydroponics can be unclear. In this case, we are asking about production systems of containment that derive the majority of nutrients for plants from water and/or small amounts of growing media. This includes both systems that rely on mineral nutrient solutions and those that rely on biological activity in the water or growing media for nutrient availability. This also includes aquaponic systems, which use fish effluent in the water as a nutrient supply. Examples of systems that fall under this category:

- Deep flow/raft
- Nutrient film technique (NFT)
- Ebb and flow
- Slab (lay-flat bags)
- Upright bags or Dutch buckets
- Troughs
- Towers
- Pots
- Aeroponics
- Aquaponics

**Questions for Certifying Agents:**

Do you certify hydroponic, aeroponic or aquaponic operations to the USDA organic standards? NO

If you certify hydroponic, aeroponic or aquaponics operations to the USDA organic standards, how many of these operations do you currently certify? 0

In what state or country (if international) are the certified operations located (list)? /

What crops do these certified operations produce (list)? /

Please send your response to Bridget McElroy, Policy Analyst at the following email by March 11: bridget.mcelroy@ams.usda.gov. You can also contact Bridget with any questions that you have.

Regards,
Cheri Courtney
Director, Accreditation and International Activities Division