

MVOAI

Wild Crop, Greenhouse, and Apiary Guidelines

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Wild Crop, Greenhouse, and Apiculture Products - General Points

Detailed guidelines do not yet exist for apiculture, greenhouse, or wild crop production in the NOP standards. However the organic production, processing, and labeling of these products must follow all the NOP standards as provided in the MVOAI Standards manual. Until USDA publishes more detailed standards for such production methods, the following guidelines may be useful. These are suggested guidelines only.

Wild Crop Products

Wild products are produced in natural environments that are not generally subject to local impact, pollution or its detrimental influences. Wild products may be harvested from land or water ecosystems.

Wild products are not cultivated and managed by humans except for their harvest. Harvest methods used to collect wild products must maintain the target crop's capacity for continued self-propagation, as well as for the flourishing of the populations of non-target species, and the ecosystem as a whole.

The sole management tool allowed for wild systems is adjustment of harvest levels and methods, based on monitoring of population levels. Wild products are exempt from

certification regulations that require active organic management such as crop rotation and fertilization. Because wild crop products come from natural environments they may be used as ingredients in organically processed products.

Product Identification

All wild harvested species proposed for certification must be clearly identified. The operator should provide MVOAI information on the populations (historic, current, and projected) of each variety proposed for certification.

The operator should submit and utilize information on the life cycles of all species targeted for harvest to allow a firm understanding of continued population maintenance, growth requirements, and population fluctuations.

Description of the Supervised Area

The boundaries of the wild-harvested area must be clearly defined and, if applicable, differentiated from the boundaries of the harvest area. Maps must be used to show the harvest area as well as all other regions that the target organism inhabits throughout its life cycle. Maps must include topography, human developments, and other items of geological/geographical significance.

Management and Oversight by Supervisory Agencies

The wild-crop operator must supply information on how the area is monitored and/or managed by governmental bodies or other supervisory agencies that are in control of the area, if applicable. The same should be provided for privately owned land. The frequency of monitoring/research activities by the supervisory body must also be reported.

All regulations pertaining to the use of the area as well as any indirect impacts upon it by humans must be described or referenced. Information on mechanisms used for enforcement of these regulations must also be included.

The operator must present all required licenses or permits for harvest to MVOAI, along with an explanation of the responsibilities associated with holding such licenses as well as the frequency of their issuance. Specific use agreements between the party to be certified and the supervisory authority for the area must also be submitted.

Non-contamination

An analysis of the potential for contamination of the supervised area must be submitted along with documentation supporting the conclusions of the analysis. All direct and indirect human impacts on the supervised zone must be described as thoroughly as possible. Factors not linked to human-related impacts that can adversely affect the safety of the product for

consumption by humans must also be documented and reported. The operator must submit a plan for ongoing monitoring of the supervised area to confirm that no contamination occurs. Any information regarding pollution of the target species' habitat must be reported to MVOAI.

Inspection

All harvested areas to be certified, as well as other areas that the target species inhabits during its life span, must be capable of being inspected.

Sustainability

The operator must submit anticipated harvest schedules for the current year and a minimum of 1 additional year. The operator must demonstrate that harvesting techniques are consistent with maintenance of a sustained population of the target species. When fluctuations of the target specie's population occur (as reflected by changes in harvest levels), the operator must demonstrate that the ecosystem as a whole, as well as the specie's population, is being adequately monitored.

Record Keeping

The record keeping system for wild harvest products must be capable of completely tracking the chain of custody for all certified products, from the point of sale back to the original area of harvest.

Apiculture Standards Guidance

§ 205.2 Definitions

Apiculture definition. The management and production of honey bees and queens and their products including but not limited to honey, beeswax, pollen, royal jelly, propolis, and bee venom.

Forage zone. Land surrounding bee colonies that provides bees with water, nectar, honeydew, pollen, and propolis.

§ 205.240 Apiculture practice standard

(a) Products from an apiculture operation that are to be sold, labeled, or represented as organic must be from hives which have been under continuous organic management for no less than 270 days prior to the removal of the products from the hive. If a prohibited material has been used in or on the hive prior to the 270-day transition, the producer must replace the hive's foundation with foundation made from organic wax and remove those products to be sold as organic, prior to the start of the transition period.

(b) A producer of organic apiculture products must develop an organic apiculture plan in accordance with the provisions in § 205.201. In addition, the organic apiculture plan must:

- (1) Contain a map of the forage zone that shows the location of the hives, the location of organic and wild land, and the location of all non-organic areas;
- (2) Describe the quantity of organic and/or wild forage to be provided per colony, including the type or types of forage, approximate bloom period, forage density, competing species density, honeybee colony density, colony health, colony strength, topography, and climatic conditions;
- (3) Describe the water sources available in the forage zone;
- (4) List all sanitary landfills, incinerators, sewage treatment facilities, power plants, golf courses, towns or cities, land to which prohibited materials are applied, and all other sources of potential contamination located in the forage zone; and
- (5) For split operations, list and describe the management practices used to prevent commingling and contamination, including measures to prevent commingling resulting from bee drift and robbing.

(c) A producer of organic apiculture products must maintain records in accordance with § 205.103 and § 205.236(c).

(d) The producer must maintain hives on land that is managed in accordance with the provisions in § 205.202 through 205.206 or § 205.207.

(e) The producer must provide bees with forage that is managed in accordance with the provisions in § 205.202 through 205.206 or § 205.207.

(f) The producer of an organic apiculture operation may:

- (1) Allow bees from their operation to forage on non-organically managed land when adequate forage from organically managed land and/or land that is managed in accordance with § 205.207, as defined by the operation's organic apiculture plan, has been provided; and

- (2) Provide supplemental feed from organic honey, organic sugar syrup, and/or pollen substitutes and supplements that are allowed under 205.603, Except, That, the producer must not provide organic sugar syrup less than 30 days prior to the harvest of honey to be sold, labeled, or represented as organic.

(g) The producer of an organic apiculture operation must not:

- (1) Maintain colonies in an area where land to which prohibited materials, as listed in § 205.105, are applied, or where another source of contamination is located less than 4 miles (6.4 kilometers) from the apiary, as described in the operation's organic apiculture plan.

(h) Approved hive construction materials:

- (1) Hives must be made of natural materials, including wood and metal.
- (2) Outside hive surfaces may be painted with non-lead based paints.
- (3) Plastic foundation may be used if dipped in organic beeswax and mounted in a wooden frame.

(i) The producer must establish and maintain preventive health care practices, including:

- (1) Selection of bee stocks, hive densities, and colony locations appropriate to site-specific conditions and resistant to prevalent diseases and pests;
- (2) Introduction of replacement bees which are from organic sources or from non-organic sources, Provided, That the replacement bees are managed organically for at least 60 days prior to the removal of organic apiculture products from the hive;
- (3) Maintenance of adequate supplies of honey and pollen in the hive, including leaving hives with reserves of honey and pollen sufficient for the colony to survive the dormancy period;
- (4) Use of foundation wax not contaminated with diseases or pests;
- (5) Destruction of equipment and bees contaminated with disease or pests;
- (6) Use of management methods or modified equipment to control pests and diseases;
- (7) Use of therapeutic applications of non-synthetic materials to control pests, parasites, and diseases, Provided, That such materials are not prohibited under § 205.604; and
- (8) Use of therapeutic applications of synthetic materials, Provided, That such materials are allowed under § 205.603.

(j) The producer must not:

- (1) Accept the presence of pests, parasites, or disease without initiating efforts to restore the health of the colony;
- (2) Use synthetic materials not listed as allowed under § 205.603;
- (3) Use non-synthetic materials prohibited under § 205.604;
- (4) Use lumber treated with synthetic materials not listed as allowed under § 205.603 or non-synthetic materials prohibited under § 205.604 for hive construction materials;

- (5) Use synthetic materials or non-synthetic materials prohibited under § 205.604 in bee smokers;
- (6) Annually destroy bee colonies following honey flows;
- (7) Rotate hives between organic and non-organic management; or
- (8) Sell apiculture products as organic if they contain a residue of a prohibited material greater than 5 percent of the Environmental Protection Agency's tolerance for the specific material, pursuant to § 205.671.

Handling Standards for Organic Apiculture Products:

§ 205.273 Handling organic apiculture products.

- (a) A handler of organic apiculture products must develop an organic handling plan in accordance with the provisions in § 205.201.
- (b) A handler of organic apiculture products must maintain records in accordance with § 205.103.
- (c) An operation which handles organic apiculture products must implement Good Manufacturing Practices and be in compliance with all handling requirements of § 205.270 through § 205.272.
- (d) Primary handlers of organic apiculture products must not:
 - (1) Add water to honey to decrease the honey's viscosity;
 - (2) Use fine mesh filters or diatomaceous earth to separate seed crystals from honey;
 - (3) Use high-pressure honey filtration;
 - (4) Heat or handle organic apiculture products using kerosene heaters or any heating system which introduces petroleum fumes into the room; or
 - (5) Control stray bees or other insects using synthetic insecticides, repellants, or fumigants, unless such materials are allowed under § 205.605.

Addendum I: Definition of Honey and Honey Products (FOR REFERENCE ONLY)

Approved by the US National Honey Board June 15, 1996

PART A: HONEY

I. Definition

Honey is the substance made when the nectar and sweet deposits from plants are gathered, modified and stored in the honeycomb by honey bees.

The definition of honey stipulates a pure product that does not allow for the addition of any other substance. This includes, but is not limited to, water or other sweeteners.

II. Typical Composition

As a natural product, the composition of honey is highly variable.

	Average	Range	Standard Deviation
Fructose/ Glucose Ratio	1.23	0.76 - 1.86	0.126
Fructose, %	38.38	30.91 - 44.26	1.77
Glucose, %	30.31	22.89 - 40.75	3.04
Minerals (Ash), %	0.169	0.020 - 1.028	0.15
Moisture, %	17.2	13.4 - 22.9	1.46
Reducing Sugars, %	76.75	61.39 - 83.72	2.76
Sucrose, %	1.31	0.25 - 7.57	0.87
pH	3.91	3.42 - 6.10	---
Total Acidity, meq/kg.	29.12	8.68 - 59.49	10.33
True Protein, mg/100g.	168.6	57.7 - 567	70.9

III. Types of Honey

Comb honey: Honey presented in its original comb or portions thereof.

Extracted honey: Honey removed from the comb and presented in several forms, as defined in the United States Department of Agriculture Standards for Grades: (1) liquid, (2) crystallized or granulated, or (3) partially crystallized. This is commonly known, and referred throughout the document, as "honey."

IV. Designation of Honey Sources - the source of honey determines many of the attributes of honey, e.g., aroma, flavor, color and composition.

Floral: Indicates the primary flowers from which bees gathered nectar to produce the honey.

Non-Floral: Indicates primary sources other than flowers such as extra-floral nectaries and honeydew.

Geographic Origin: The name of an area of production (state, region) may be included, provided the honey has been produced entirely within that area. Blends containing honey of foreign origin must be labeled to indicate their origin(s), in accordance with the Code of Federal Regulations (CFR).

V. Definitions and Forms of Honey

1. Blended Honey: A homogeneous mixture of two or more honeys differing in floral source, color, flavor, density or geographic origin.

2. Churned Honey: See whipped honey.

3. Cremed Honey: See whipped honey

4. Crystallized Honey: Honey in which part of the natural glucose content has spontaneously crystallized from solution as the monohydrate. Also called "Granulated Honey."

5. Filtered Honey: Honey processed by filtration to remove extraneous solids and pollen grains.

6. Honey Fondant: See whipped honey.

7. Organic Honey: Honey produced, processed, and packaged in accordance with State and Federal regulations on honey and organic products, and certified by a State Department of Agriculture or an independent organic farming certification organization.

8. Raw Honey: Honey as it exists in the beehive or as obtained by extraction, settling or straining without adding heat.

8a. Commercially Raw Honey: Honey as obtained by minimum processing. This product is often labeled as raw honey.

Notes: 1) Storage or exposure to either ambient (environmental) or applied (deliberately added) heat influences the character of honey. 2) Enzymatic activity, antimicrobial properties, microbial quality, color and chemical composition are all influenced by heat and storage. 3) There are an infinite number of time and temperature combinations that will affect the raw state of honey. 4) The definition of "minimum" processing can be set by purchasing standards.

9. Spun® Honey: See whipped honey.

10. Strained Honey: Honey which has been passed through a mesh material to remove particulate material (pieces of wax, propolis, other defects) without removing pollen.

11. Whipped Honey: Honey processed by controlled crystallization, to a smooth spreadable consistency. Also called "Cremed Honey," "Spun® Honey," "Whipped Honey," "Churned Honey," "Candied Honey" or "Honey Fondant."

VI. Grading

Current U.S. Standards for Grades of Extracted Honey and Comb Honey (CFR Title 7, Part 52, sections 1391-1405) are herein incorporated by reference. The grading of extracted honey includes factors such as color, clarity, absence of defects, moisture, flavor and aroma.

VII. Methods of Analysis

The official methods of analysis for honey of the Association of Official Analytical Chemists International are herein incorporated by reference (AOAC 1995, 16th edition, section 44.4).

Suggested Amendments to the National List: (For reference only) **Clients wishing or needing to use the suggested additions below in their operation should contact MVAOI for approval.**

The NOSB Apiculture Task Force gathered information on materials currently used by apiculture operations and materials currently allowed by certifying agents. The Task Force proposes that the following materials be reviewed for possible inclusion on the National List, § 205.603.

In the table below, the name of the material appears in the first column. The S/N code in the second column stands for synthetic/natural. The third column contains information and notes on how and why the material is used. The information in this column may be helpful to construct annotations on use of the material.

Material	S/N	Information and Notes
Acetic acid	S	For apicultural use to disinfect empty combs which have been exposed to European foulbrood, Nosema, or the protozoan-caused Amoeba Disease.
Carbon dioxide	S	For apicultural use to control wax moth.
Essential oils	N	For apicultural use to control tracheal mites including: menthol, cinnamon, eucalyptus, spearmint, wintergreen, thyme, and camphor. These materials may be used after the last honey harvest of the season and must be discontinued 30 days before the addition of honey supers.
Folic acid	S	For apicultural use to control Varroa mites. This material may be used after the last honey harvest of the season and must be discontinued 30 days before the addition of honey supers.
Formic acid	S	For apicultural use to control Varroa mites.
Lactic acid	N S	For apicultural use to control Varroa mites. This material may be used after the last honey harvest of the season and must be

		discontinued 30 days before the addition of honey supers.
Oxy-tetracycline (Terramycin)	S	<p>For apicultural use. Only for treatment of American foulbrood (AFB) in apiaries in which the disease has been diagnosed; beekeepers may not make routine, prophylactic applications of oxytetracycline in apiaries in which there has been no confirmation of the presence of AFB.</p> <p>(Note: Included for discussion purposes because oxytetracycline calcium complex is on the National List for crop production. Although terramycin is commonly used to control bee diseases, no antibiotics are allowed for other types of organic livestock. If allowed, an extended withdrawal period or re-transition of the hive should be considered prior to collection of organic apiculture products.)</p>
Vegetable shortening	N	<p>For apicultural use to control tracheal mites. This material may be used after the last honey harvest of the season and must be discontinued 30 days before the addition of honey supers.</p> <p>(Note: Some certifiers have allowed vegetable shortening mixed with sugar to form a patty. It is included here for review, but may not need to appear on the list, since it is a natural material, and may be used by definition. Since it ends up being eaten by the bees, it is assumed that the shortening would have to be from organic sources. If the shortening is used as an excipient, the Task Force is unclear as to whether the shortening must be organic or if it must appear on the list.)</p>

NOSB Guidelines for Greenhouse Production

Definitions

A Greenhouse may be defined as an enclosed structure used to grow organic crops, annual seedlings or planting stock used in organic production.

Greenhouse Production Systems

(a) Greenhouse operations must meet all applicable requirements of subparts B (205.103 – 205.105) and C (205.200 – 205.206) except that:

- (1) The producer operating a greenhouse with crops grown in containers is exempt from requirements of 205.202, 205.203(a) and 205.205. In addition, the producer is exempt from the crop rotation and cover cropping requirements in section 205.203(b). The production environment must prevent contact between

organically produced crops and prohibited substances as listed in 205.105 throughout the entire production period.

(2) The producer of an in-ground permanent soil greenhouse system can seek an exemption from the crop rotation requirements of sections 205.203, and 205.205-205.206 provided that effective alternative strategies for developing and maintaining plant and soil health are established and approved by the certifying agent.

(b) The use of potting mixtures containing prohibited materials is not allowed.

(c) Producers may use artificial light sources

(d) Plants and soil shall not be in direct contact with wood treated with prohibited materials that is used for greenhouse structures or frames of raised beds.

(e) If a producer is growing both organic and non-organic greenhouse crops, the producer must comply with the provisions of 205.201(a)(5) to prevent commingling and contamination.

(f) Organic and non-organic crops can be grown within the same structure if the following conditions are met:

1. An impermeable wall shall separate organic and non-organic production sites if prohibited pesticides are applied to the non-organic crop at a time when the organic crop is present.
2. Adequate provisions must be made to prevent contamination of organic crops when producers alternate between organic and non-organic production during different times of the year.
3. The ventilation system must ensure that prohibited materials do not drift to the organic production area.
4. Separate watering systems must be established if prohibited fertilizers and/or pesticides are injected within the watering system.
5. Producers must insure that no contamination occurs to the organic crop through cross-pollination with crops produced through genetic engineering.
6. Soil mixing machines and other equipment used for non-organic crop production must be thoroughly cleaned prior to use in organic production, except that pesticide sprayers used in conventional production can not be used for organic production purposes; .
7. Adequate physical facilities, as determined by the certifying agent, shall separate organic and non-organic crops and production materials in storage, production or holding areas.
8. Organic and non-organic crops and production areas must be conspicuously labeled.