

**National Organic Standards Board
Livestock Committee
Organic Apiculture Recommendation**

October 27, 2010

Introduction

Honey, and its associated products are valued in the organic food industry. A key alternative to refined sugars and a respected contributor to managing allergies and abrasions, honey represents an iconic product, one that consumers assume is one of the purest and simplest ways to eat as close to nature's intent. Since honeybees are animals, the Livestock Committee of the National Organic Standards Board takes responsibility for developing a recommendation for USDA standards to govern the production of organic honey and honey-related products, such as pollen, propolis, royal jelly, beeswax, and bee venom. Because the biology and behavior of honeybees is so markedly different from other types of organic livestock, and because they fly and forage a wide area, specific standards are required to ensure consistency between organic certifiers and to ensure that organic honey meets consumers' expectations for organic products.

Honey is the end result of an intricate process of Nature, performed by honey bees, which also serves as a critical input in successful agriculture and food for other species of animals and birds. At least 30% of agriculture relies directly on pollination, a job that bees perform with pure enjoyment. As the bee retrieves the nectar it needs to eat, it also collects pollen. As it travels from flower to flower on a variety of different plants to satisfy its hunger, it carries the pollen with it, thereby 'pollinating' other plants and crops, a necessary jump-start to crop maturity. While not only a functional requirement for some crops, and definitely honey production, in the true spirit of organic, the honey bee promotes biodiversity. That these bees and their forage be managed organically has a significant impact. At the near bottom of the food chain, and responsible through forage for their own contribution to 'drift,' it is important to create reliable, rigorous standards that ensure the quality and organic integrity of the food supply.

In the past decade, several issues have arisen to pose real threats to the health and survival of all honey bees. Tracheal mites, Varroa mites and Colony Collapse Disorder have all been identified as reasons for significant declines in healthy bee colonies, in fact colonies that are able to survive at all.

The commercial organic honey industry is well in place, despite the lack of organic standards specific to organic apiculture. Refined standards, which provide much needed clarification on practices specific to honeybee product production, will ensure the continued success and growth of the U.S. organic honey market. While the many certified producers have honored all the requirements of the existing regulation, there has been some variation in certifier expectations and interpretation. Finally, the EU and Canada have detailed apiculture requirements as part of their organic standards. In order to facilitate effective trade with other countries, and to effectively compete in the international market, it is important that a U.S. organic apiculture standard be implemented.

Background

As the original organic standards were being developed, an NOSB Apiculture Task Force was charged with development of organic apiculture standards. In September 2001, they issued a report and Draft Organic Apiculture Standards. The draft organic apiculture standard established allowed and prohibited production practices for organic apiculture operations based on the requirements of the Organic Foods Production Act (OFPA). It was consistent with the National Organic Program Final Rule, published December 21, 2000, and cross-references applicable sections of the rule.

The OFPA-based livestock certification requirements include provisions for the origin of livestock, the feed ration, living conditions, health care management practices, and the record keeping arrangements necessary for identification and audit trail purposes. All livestock certification requirements were addressed in the draft organic apiculture standard.

During the same time period as the release of this recommendation, the first Organic Rule was being prepared for implementation as of October 2002. The competition for priorities to address left organic apiculture on the list of items requiring attention in the future improvement and embellishment of the law.

In the interim, certifiers have used the existing Livestock Standards as a baseline for certifying organic apiculture operations, 205.236 – 205.239, and the related sections of the National List, 205.603 and 205.604. The fact that apiculture varies considerably from other livestock operations has led to a great deal of variability in the requirements of certification. Growing pressure from the apiculture industry, the certifier community and the movement toward equivalency agreements spawned a renewed effort to develop apiculture specific organic standards.

At the Fall 2009 NOSB Meeting, the Accredited Certifiers Association Apiculture Working Group presented a document which suggested updates to the 2001 NOSB Apiculture Recommendation. The Livestock Committee's current recommendation incorporates many of the ACA Apiculture Working Group's recommendations, and also attempts to harmonize certain requirements - such as the forage zone, surveillance zone, and transition period - with EU and Canadian organic apiculture standards.

Much has changed in the intervening years. The largest organic apiculture community, in the state of Hawaii, had long been free of the Varroa mite, one of the most dangerous bee pests. In recent years, the mites reached Hawaii, and its organic honey producers struggle for survival. The feral hives are nearly extinct and the commercial hives fight for another season without the same tools as their international organic competitors from Canada and the EU, whose standards allow the use of formic acid for mite control.

Amendments to the National List

The ACA Working Group discussed materials specific to beekeeping, and noted that some which are specific to beekeeping will be required to be petitioned for inclusion on the National

List. The following are materials the Working Group believes must be reviewed for appropriate status and petitioned for addition to the National List if necessary.

Formic acid
Thymol
Carbon Dioxide

The Group does not believe that oxytetracycline or terramycin should be approved for use in organic beekeeping. Antibiotics are not permitted for any other type of livestock. Synthetic miticides are also not permitted.

The Group also believes that organic formulations of feed supplements are now available, thus non-organic feed supplements do not need to be added to the National List. This includes vegetable shortening and confectionary sugar. These products are produced organically at this time.

The Group also discussed materials used in the smokers. The Group agreed that synthetic materials in bee smokers are prohibited unless listed on the National List. The Group also recommends that tobacco be added to §205.604, Nonsynthetic substances prohibited for use in organic livestock production.

The Group states that there are several materials that are not recognized by the EPA for use in bees including Folic acid, Lactic acid and Oxalic acid for mite control. If these materials do receive EPA registration, the Group recommends they be petitioned for inclusion on the National List. The group recommends that Folic acid and Lactic acid should have the following annotations:

Folic Acid – for use as a pesticide to control varroa mites solely within honeybee hives, after last honey harvest; discontinue 30 days prior to addition of bee product harvest equipment.

Lactic acid – after last honey harvest; discontinue 30 days prior to addition of bee product harvest equipment. The need must be documented and approved prior to use.

The National Organic Standards Board will consider substances related to organic honey bee production for inclusion on the National List as they are petitioned.

Recommendation

The Livestock Committee recommends that the following apiculture standards be added to the organic regulations:

Organic Apiculture Standard

§ 205.2 Terms Defined

Apiary or bee yard. An area of a collection of hives or colonies of bees kept for their bee products.

Apiculture. The management and production of honey bees, queens and bee products.

Bee products. Honey, wax, propolis, royal jelly, beeswax, pollen and bee venom or any other product from bees intended for human use or consumption.

Colony. Queen bee with its attendant worker bees and drone bees used to produce bee products.

Forage zone. Land or bodies of water, within a 1.8 mile (3 km) radius of the edge of the apiary/bee yard which provides bees with water, nectar, honeydew, pollen and propolis.

Harvest Equipment. Equipment used to collect bee products for sale as organic, including honey supers, frames from which royal jelly will be harvested, and any other equipment in contact with organic bee products.

Hive. Equipment used in the production of bee products to include hive boxes, bottom boards, covers, frames, comb.

Nucleus colony or nuc. A smaller sized hive box with reduced numbers of bees and brood, usually containing a queen; used for expansion of the apiary operation.

Replacement bees. Bees introduced into an existing organic apiary operation to replenish established colonies which have been lost to overwintering, predators or other catastrophic loss.

Surveillance zone. Land area of a 2.2 mile radius (3.4 km) beyond the forage zone which may not contain high risk activities.

§ 205.240 Apiculture practice standard.

The application of this practice standard is to regulate the production of bee products, not to require the use of organic bees for organic crop pollination.

(a) Origin of bees

(1) Transition

Bee products from an apiculture operation that are to be sold, labeled, or represented as organic must be from colonies and hives which have been under continuous organic management for no less than one year prior to the removal of the bee products from the hive.

At the beginning of the one year transition, foundation wax (if used) must be replaced and all brood comb must be new and produced by bees under organic management.

Foundation may be sourced from:

- (i) Organic foundation
- (ii) Plastic foundation dipped in organic or conventional wax
- (iii) Organic or conventional wax

Once an entire apiary has been converted to organic production, all plastic foundation must be dipped in organic wax. Queen bees are not required to undergo transition.

(2) Replacement Bees

The introduction of bees from organic sources or from non-organic sources (i.e. packaged bees), is permitted for replacement purposes *Provided*, That the bees from non-organic sources are limited to 25% of colonies present in the previous honey flow, are managed organically for at least 60 days , and harvest equipment is removed from the hive during the 60 days.

(i) 25% count is based on the total number of colonies going into winter

(3) Expansion of the apiculture operation may be done by

(i) Purchase of organic hives and bees

(ii) Splitting of existing organic colony to form nucleus colony

(iii) Purchase of nonorganic bees, providing that they undergo a one year transition as per requirements in §205.240(a)(1).

(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 apiary which shows the location of the hives, the forage zone, including the location of organic and wild land, and the surveillance zone, including the location of all non-organic areas and human housing;

(2) Forage Zone: Provide a description of all crops grown, 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; and any sources of potential contamination located within the 1.8 mile (3 km) forage zone.

(3) Surveillance Zone: Provide a description of crops grown and high risk activities such as sanitary landfills, incinerators, sewage treatment facilities, power plants, golf courses, human housing, towns or cities, land to which prohibited materials are applied, and all other sources of potential contamination located in the surveillance zone of 2.2 miles (3.4 km) beyond the forage zone. Crops produced using excluded methods, deemed by the accredited certifying agent to be attractive to bees, are not permitted on land within the surveillance zone.

(4) Describe the water sources available in the forage zone;

(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). Split operations are required to identify hives that have been treated with materials not permitted under §205.603 or materials prohibited under §205.604. Records must include:

- (1) map of the forage zone, the surveillance zone, and the flowering times of the various plants in those zones for all bee yards
 - (2) affidavits verifying the 3 year land management history for the certified forage zones
 - (3) sources of foundation and whether foundation is organic
 - (4) date of last use of prohibited substances
 - (5) identification system for hives and bee yards
 - (6) verification that all comb has been drawn out under organic management
 - (7) the season these “clean” frames had been used for the production of organic honey
 - (8) a system of tracking hives, queens introduced or raised, monitoring through the season
 - (9) a list of inputs used and labels of inputs
 - (10) records of feeding including materials and dates
 - (11) source of any organic sugar, organic honey, organic pollen and/or organic pollen substitutes fed to colonies; certification documentation for materials fed
 - (12) records of all health care interventions and products used
 - (13) estimated yields of all bee products per hive
 - (14) dates of harvest of bee products
 - (15) sales records of bee products
 - (16) packaging and labeling for bee products sold
- (d) The producer must maintain colonies on land that is managed in accordance with the provisions in § 205.202 through § 205.207. All apiaries and transportation activities must be included in the OSP and approved prior to movement.
- (e) The producer must provide bees with water and organic feed by:
- (1) managing the forage zone as certified organic (either as crops or wild harvest) under the provisions of 205.202 through 205.207
 - (2) recognizing that bees from the operation may occasionally and minimally forage on non-organic land in the surveillance zone. The Organic System Plan must demonstrate that sufficient organic forage is available within the forage zone throughout the year. Given that even in well-managed operations with sufficient forage in the forage zone, a small number of bees will travel out of the forage zone to forage, the OSP must also demonstrate the crops in surveillance zone offer minimal risk to organic integrity.
- (f) The producer of an organic apiculture operation may:
- (1) 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 15 days prior to placement of bee product collection equipment.
- (g) The producer of an organic apiculture operation must not:
- (1) Maintain colonies during the forage season in an area where a significant risk of contamination by prohibited materials exists within a 1.8 mile (3 kilometers) radius of the apiary, as described in the operation's organic apiculture plan.
- (h) Approved hive construction materials include:

