



# STANDARDS FOR BEEKEEPING AND HIVE PRODUCTS

FOR THE USE OF  
DEMETER, BIODYNAMIC<sup>®</sup> AND RELATED  
TRADEMARKS

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- to be implemented by each member country by the June 2013 -

**Demeter-International e.V.**

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### **1. Validity and basis**

The validity of the International Demeter Standards for the certification of Demeter beekeeping is additional to existing legal requirements and in particular those of EEC regulations 834/2007 and 889/2008, the 'US Organic Food Production Act' of November 1990 and the 'Australian National Standards for Organic and Biodynamic Production' of February 1992. These must be adhered in addition to the standards which follow. The Demeter Beekeeping Standards are published as a free-standing section of the Demeter Production Standards. Issues concerning the identification of various Demeter hive products are addressed in chapter 10.

Bees have been a part of human culture since the earliest times. The social organisation of the colony, the relationship of bees to light and their ability to live from blossoms is a cause for reverence and admiration. Bee colonies are however dependent on human care today. Strengthening the hives is an important goal of Demeter bee keeping.

The extent of their flying range and the current management of agricultural land means that bees cannot be expected to fly solely or predominantly over biodynamically managed areas. What is essential for Demeter Beekeeping is therefore not the direct link to forage grown on the farm as is the case with other livestock, but the way in which bees are kept and how closely this allows them to express their innate behaviour.

Beekeepers working in the context of Biodynamics orientate themselves primarily towards meeting the natural requirements of the colony. Management is so structured that the bee is able freely to unfold its true nature. Demeter beekeepers allow the colonies to build natural honeycomb. The basis for their reproduction, growth, rejuvenation and breeding is the process of swarming. Its own honey is the mainstay for supporting the colony through the winter.

Due to their activities as pollinators and as carriers of bee poison which has such a stimulating effect on the life of plants and of nature, bees are of great importance to the whole web of life. The beneficial effects of having bees in the cultivated landscape can be experienced in the increased yield and quality of many farmed crops. Their presence is therefore very important and the keeping of bees is recommended for every Biodynamic holding.

## **2. The Siting of Apiaries**

Biodynamically and organically managed land or uncultivated and wild areas should be selected as preferred sites for setting up beehives. The Biodynamic preparations should be applied each year to at least the immediate surroundings of the over wintering location.

Only so many beehives may be established at a given site as can assure each colony an adequate supply of pollen and nectar.

In choosing a site great care must be taken to make sure that environmental pollutants will not contaminate the hive produce. If a high level of pollution is suspected all products must be tested and if contamination is confirmed, the site must be vacated.

The location of apiary sites (permanent, over wintering and temporary) should be accurately recorded. Seasonal hive movements should be recorded as part of a migratory plan. This should include a detailed record of movements and periods of stay, information about the site (property ownership etc.), the source of forage and the number of colonies.

## **3. Beehives**

With the exception of fixings, roof coverings and wire meshing, hives must be built entirely of natural materials such as wood, straw or clay.

### **3.1 Interior Treatment**

The inside of the hive may only be treated with beeswax and propolis obtained from Demeter beekeepers.

### **3.2 Exterior Treatment**

Only natural, ecologically safe and non-synthetic wood preservatives may be applied to the hive exterior.

### **3.3 Cleaning and Disinfection**

The cleaning and disinfection of hives may only be undertaken using heat (flame or hot water) or mechanically.

## **4. Management System**

### **4.1 Colony Increase and Selective Breeding**

Swarming is the natural way to increase the number of bee colonies and is the only permitted means for increasing colony numbers. Pre-empting swarming by creating an artificial swarm with the old queen is allowed. For the further increase the remainder of the hive can be divided into artificial swarms or scions.

As with all forms of livestock management some selective breeding is necessary. The production of queen cells is part of the swarming instinct.

The replacement of an old queen through the swarming process is permitted for breeding purposes.

Exceptions are possible only in certain specific situations and with the agreement of Demeter International or the respective national organisation. Artificial queen breeding (grafting etc.) is prohibited. Instrumental insemination and the use of genetically modified bees are prohibited.

#### **4.1.1 Buying-in of Colonies and Queens**

The system of management cannot rely on the continual introduction of colonies, swarms and queens from elsewhere. Any bees or queens purchased must wherever possible stem from Demeter beekeepers. If these are not available they may be sourced from organically certified

beekeepers. Colonies of neither Demeter nor organically certified origin must be integrated without comb.

#### **4.1.2 Wing Clipping**

Clipping the wings of queens is prohibited.

### **4.2 Methods for increasing Honey Production**

Multiple and routine uniting of colonies as well as systematic queen replacement is not permitted.

#### **4.3 Breeds**

A locally adapted breed of bee suited to the landscape should be chosen.

#### **4.4 The Comb**

The comb is integral to the beehive. Therefore all combs should be constructed as natural combs. Natural combs are those constructed by the bees without the help of waxed midribs. Natural combs can be constructed on fixed or movable frames. Strips of beeswax foundation to guide comb building is permitted.

##### **4.4.1 Combs in the Brood Chamber**

The brood area naturally enough forms a self-contained unity. Both comb and brood area must be able to grow as the bee colony develops through building more natural comb. The brood chamber and frame size must be so chosen that the brood area can expand organically with the combs and without being obstructed by wood from the frames. Separation barriers are not allowed as integral elements of the management system. Exceptions to this are possible during the conversion period.

##### **4.4.2 Combs in the Supers**

Only in the supers may waxen midribs be used. It is nonetheless desirable to avoid their use here too.

##### **4.4.3 Origin of wax**

Wax used for guiding strips or midribs must be natural comb or capping wax and sourced from Demeter beekeepers. Where this is unavailable comb or wax from organic certified sources may be used. Comb of conventional origin must be phased out according to the national organic regulations, at the latest after 3 years or replaced by comb or wax from Demeter sources. (See also Chapter 8 on Conversion)

##### **4.4.4 Wax Processing**

Wax must not come into contact with solvents, thinners, bleaching agents or other similar materials. Equipment and containers used must be made of non-oxidising materials or with non-oxidising coating.

##### **4.4.5 The Storage of Combs**

Only the substances listed in appendix 2 may be used to protect stored combs from wax moths.

### **4.5 Feeding**

#### **4.5.1 Over Wintering**

Honey and blossom pollen are the natural foods for bees. The aim should be to winter them on honey. Where this is not possible supplementary winter feed must contain at least 10% honey by weight. This must come from a Demeter certified source. Camomile tea and salt are also to

be added to the feed. All feed supplements must be of organic if not Biodynamic origin.

#### **4.5.2 Emergency Rations**

Where feeding is necessary prior to the first honey flow of the season, the same procedure as for winter feeding may be carried out. If emergency feeding is required later in the season and before the last harvest of the year, only Demeter honey should be used. The use of sugar is not allowed in such rations.

#### **4.5.3 Stimulative Feeding**

No form of stimulative feeding is permitted.

#### **5.5.4 Feeding of Swarms and Residual Colonies**

In order to build up the strength of swarming bees and those remaining behind, supplementary feeding may be carried out as in the winter.

#### **4.5.5 Pollen**

All pollen substitutes are forbidden.

### **5. Honey Extraction**

#### **5.1 Centrifugal Extraction and Pressing**

During the extraction, pressing, sieving, purifying and subsequent bottling of the honey, temperatures should not exceed 35°C. Pressurised filtration is not permitted. Any additional heating of the honey is to be avoided. As a rule the honey should be filled into the glass or metal jars which they are to be sold in, immediately after extraction and before any solidification occurs. In certain situations subsequent refilling may be permitted subject to the conditions in appendix 3.

#### **5.2 Honey Storage**

Honey must be stored under air tight, dark conditions at a steady cool temperature. Plastic containers are not permitted for storage.

#### **5.3 Quality Analysis**

The legal requirements and criteria listed in appendix 1 must be fulfilled.

### **6. Bee Health**

A bee colony should be able to correct any occurring imbalances out of its own resources. Measures taken by the Demeter beekeeper should aim to reinforce and maintain its vitality and capacity for self-regeneration. The occasional loss of colonies particularly susceptible to certain pests and diseases should be accepted as a necessary part of natural selection. Where the implementation of pest and disease control measures is unavoidable, only those treatments listed in appendix 2 may be applied.

### **7. Certification**

Certification of a Demeter beekeeping operation will be granted if the beekeeper or the person responsible can demonstrate sufficient aptitude and show that the Demeter Standard requirements are being met. Hive products and beehives may be tested for prohibited substances if felt necessary.

If residues are discovered their cause will have to be addressed and the problem removed through consultation between beekeeper and assessment officer.

### **8. Conversion**

A conversion plan is required leading to full certification after, at most, three years. "In conversion to Demeter" status may be granted if 12 months have elapsed since the last application of prohibited substances and if the old wax used in the combs has been excreted or replaced by wax of certified organic origin. This initial wax replacement is not necessary if an analysis of the original wax undertaken at the start of the conversion period or during the first year of conversion, can demonstrate its purity. This means that wax from the original combs must be shown to contain no residues from prohibited substances. The assessment officer may require wax samples to be taken. .

Standards guidelines must be followed when the first year of conversion begins. The following derogations are allowed during this period:

- Partitioned brood chamber
- Separation Barriers
- Existing brood chamber combs made with waxen midribs. These must (at least 30%) be replaced with natural comb by the end of the first year of conversion.

### **9. Trading with Bought-in Products**

The sale of bought in products on market stalls or in farm shops is possible in principle. It should be noted however that:

- Separate records must be kept for bought in products.
- Their identification and in particular their origin and manner of production must be clearly stated.
- Home and bought in products must be accounted for separately.
- Products from conventional sources may only be stocked if a similar product is unavailable from Demeter or organic certified sources.
- Products from conventional sources must be clearly labelled as such.
- Products from Demeter or organic sources and those from conventional sources cannot be offered for sale simultaneously.

### **10. Demeter Hive Product Identification**

If the bee-keeping department of a Demeter farm develops beyond home supply and its products are marketed more widely, it is necessary to observe the national organic regulations concerning bee keeping and hive products. Identification of hive products in whatever way Demeter may be mentioned (e.g. "honey from a Demeter farm"), is only permitted if the products come from a certified Demeter beekeeping operation. This requires observance of the Standards for Demeter Beekeeping.

For the identification of Demeter hive products, the guidelines issued by Demeter International or the relevant national organisations should be followed. All labelling requirements for bee products are to be detailed in the Demeter International labelling standards (see sections 4.1 and 4.5.1).

### **Appendix 1 Measurable Honey Quality Requirements**

Water content - measured according to DIN/AOAC - 18% maximum and for heather honey 21.4%.

The HMF content - measured according to Winkler - 10 mg/kg maximum .

The Invertase level - measured according to Hadorn - must be at least 10 (except honeys with a low content of enzymes like honey from acacia).

### **Appendix 2 Allowable Treatments and Permitted Substances**

Brood removal, warmth treatment, artificial swarming, herb teas, formic acid, acetic acid, lactic acid, oxalic acid, non-transgenic bacillus thuringiensis, sodium carbonate for disinfecting of 'American Foul Brood' organic produced sugar, salt.

Colonies requiring emergency treatment must have their harvest removed before hand.

Products originating from treated colonies cannot be marketed using the trade mark during the same season.

### **Appendix 3 Transportation, Decanting, Heating.**

#### **Transportation Containers**

Using containers of artificial materials for honey is only permitted for the purposes of transportation and special contracts.

#### **Decanting of Honey:**

In the event that yields of particular kinds of honey exceed the average amount sold during a year, honey may be stored in larger containers and transferred later into jars for retailing so long as the following conditions are met:

- At least the average amount of each kind of honey sold during the year must be filled into the retail jars (glass or metal) immediately after harvest and before it starts to consolidate. Where wholesaling and export is concerned this is of course not possible.
- Full documentation is needed to show how much of which kind has been filled into what size of container.
- Honey should only be heated to a stage where it can flow (creamy consistency). It should then immediately be filled into the appropriate jars.
- Under no circumstances should the honey be liquidised.

It is important in the context of this derogation that exact records are kept of warming the honey and decanting it. The full details including date, quantity and process need to be accessible to the assessment officer.

Only an indirect warming of the honey can be considered. Heating beyond 35 °C is to be completely avoided.