

Organic Beekeeping in Australia

by Colin Goodwin, March 2017

Introduction

Over recent years there have been reports of fake or contaminated honey finding its way onto the international market. Examples include fake “Manuka” honey, sugar-based fake honey from Turkey, and honey contaminated with antibiotics from China and Argentina.

<http://www.theaustralian.com.au/news/world/the-times/bee-careful-that-manuka-honey-may-be-fake/news-story/dd23d211468b87dc35544e86fe161f20>

<https://www.accc.gov.au/media-release/accc-acts-on-victoria-honey-misrepresentations>

<http://www.foodsafetynews.com/2011/08/honey-laundering/#.WPAU2dLfpdg>

<http://www.smh.com.au/articles/2003/11/16/1068917675774.html>

Furthermore, there have been numerous media reports discussing colony collapses in developed countries which are often attributed to the use of agricultural chemicals – notably the neonicotinoid pesticides.

[Europe should expand bee-harming pesticide ban, say campaigners](#)

It is not surprising then that there has been a reaction against agricultural chemicals finding their way into foodstuffs, and a consequent growth in the market for organic certified honey around the world.

This trend is also visible in Australia. Today most large supermarkets around the country carry several brands of organic certified honey. While most is Australian-produced, organic honey can be imported into Australia and sold.

Organic Beekeeping Practices

It is possible for any beekeeper to adopt many of the practices of Organic Beekeeping. Doing so should mean that their product is safer and (hopefully) better. However it will also mean that their processes will be different from the mainstream industry and perhaps more expensive due to higher costs and lower productivity.

Organic beekeeping differs from conventional commercial (and conventional amateur) beekeeping practices in that organic beekeepers avoid contamination of the hive (and thus honey, pollen and wax from the hive) from external and internal contaminants, avoid contamination of honey during extraction, processing and bottling, and adopt different approaches to bee-husbandry (the care and selection of bees).

External Contamination

Organic beekeepers avoid accidental contamination by locating their hives well away (at least 5km) from sources of dangerous chemicals. Such sources may include conventional orchards and crops (which are typically sprayed with pesticides and fungicides), livestock dip sites, urban areas, sanitary landfills, garbage dumps, contaminated water, golf courses (which use herbicides to kill weeds) and GMO crops.

To verify that their apiaries are not within reach of dangerous chemicals they commit to their Organic Certifying Organisation (see below) to prepare maps showing all facilities within a 5km radius of their apiaries.

In practice this means that organic beekeepers are very limited in the sites where they can place their hives (e.g. national parks, very large grazing areas). This is even more challenging for migratory beekeepers who need a succession of such sites to move their hives between. (If hives are moved to a site that does not meet organic criteria, the subsequent honey harvest cannot be sold as organic, and in some regimes this restriction persists for 12 months.)

Internal Contamination

Organic beekeepers avoid introducing contaminants into the hives by using hives made from natural materials, avoiding or minimising the use of foundation, feeding bees only organic honey or pollen, and restricting the use of chemicals to treat disease and clean/sterilise hive components and tools to a short list of approved benign chemicals.

This can mean avoiding the use of plastic hives, plastic frames, and plastic “foundation”. With wooden hives painting the inside of the hive is done with vegetable oils, paraffin and beeswax mixtures rather than commercial paints.

As wax from many countries is traded around the world, imported foundation and foundation/wax sold by non-organic beekeepers is not used. Preferably bees are left to build out comb on empty frames (though some standards allow the use of “starter strips” on the top of frames), or organic beekeepers can make their own organic foundation.

They will avoid feeding bees altogether (which involves keeping more capped honey in the hive for the bees to use), and only in emergencies will they feed their bees with their own organic honey and pollen.

When it is necessary to use chemicals to treat disease or to sterilise hives and tools, safer chemicals such as caustic soda, lactic, oxalic or acetic acid, formic acid, sulphur, and etheric oils are used. If possible non-chemical techniques (e.g. steam cleaning) are preferred.

Processing Contamination

Organic beekeepers avoid introducing contaminants into honey during extraction and bottling. Honey is stored below 45 degrees Celsius and is not stored under conditions which pose the risk of contamination from containers or surrounds. Equipment used for extraction and bottling is made of stainless steel. Galvanised drum storage is used only for minimal times to prevent zinc absorption. Samples of honey are kept for later inspection if necessary.

Wax must come from cappings from organic honey, or comb which originally used organic foundation.

Bee Husbandry

Organic beekeepers attempt to improve the genetics of their stock by preferring varieties of bees suited to their climate and region, producing their own queens (or purchasing queens from local organic queen breeders), and not mutilating queens by wing-clipping or marking. Drones are not routinely destroyed.

Organic Certifying Organisations

Simply adopting the practices of organic beekeeping does not entitle a beekeeper to label and sell their product as “Organic”. To do so they must also be registered with, and regularly inspected by an Organic Certifying Organisation (“CO”).

Currently there are six such organisations in Australia. Reporting requirements and fees vary considerably between the different CO’s.

- ACO (Australian Certified Organic)
 - <https://aco.net.au/organiccertification/bee-keeping/>
 - <http://austorganic.com/australian-certified-organic-standard2/>
- NASAA (National Association for Sustainable Agriculture Australia Limited)
 - <https://www.nasaa.com.au/>
 - <https://www.nasaa.com.au/publications/nasaa-organic-and-biodynamic-standard.html>

The following CO’s test to the Australian National Standard for Organic and Biodynamic products, the mandatory standard for the export of organic products, though increasingly being used for domestic certification. <http://www.agriculture.gov.au/export/controlled-goods/organic-bio-dynamic/national-standard>

- Demeter/BDRI (an international brand represented in Australia by the Biodynamic Research Institute)
 - <http://www.demeter.org.au/>
 - <http://www.naturalbeekeeping.com.au/DI%20bee%20stds%20Demeter%20Biodynamic%2012-e.pdf>

(Note that Demeter refers to the Australian National standard, as well as their own international standard. Also Demeter is oriented towards bio-dynamic farming practices, and registered producers typically sell a range of organic products, not just honey.)

- Organic Food Chain
 - <http://www.organicfoodchain.com.au/>
- Safe Food Production Queensland
 - <http://www.safefood.qld.gov.au/>
- Ausqual
 - <http://www.ausqual.com.au/certification-services/organics.aspx>

(Note that Ausqual is a subsidiary of Aus-Meat Limited. As well as being a CO for organic producers, it also runs the B-Qual certifying and quality control organisation for AHBIC (Australian Honey Bee Industry Council).)

By registering with one of these organisations, and meeting a stringent list of reporting requirements as well as passing regular inspections, and paying their fees, the organic beekeeper earns the right to use the CO's logo on their product.

Typical fees include setup fees (for application processing and initial inspection), annual or biennial audit fees, and industry levies (based on the volume of sales). These fees can add up to \$2,000+ for a small producer. (As an example, the Australian Certified Organic fee schedule can be found at <http://aco.net.au/wp-content/uploads/2016/04/Fee-Schedule-v3.1.pdf> .)

Note that the beekeeper must still meet the requirements of their local council regarding food safety, inspections, registration as a food producer, and pay their registration/inspection fees.

Conclusion

Amateur beekeepers may consider whether they wish to use some of the organic beekeeping practices in their own apiaries. While some of the practices (e.g. the restrictions on locations) may be too difficult; other practices such as focussing on natural materials for hives, and minimising the use of foundation, may be easier to introduce. This subset of the organic practices is often called "Natural Beekeeping".

The practices encouraged in Organic Beekeeping (and Natural Beekeeping) offer an alternative to the use of more and more chemicals as beekeepers deal with the never ending challenges of pests and disease.