

# BEE KEEPING AND HONEY PRODUCTION

## Introduction

Ireland has a long history of producing quality honey and was a major exporter of comb honey up to the mid 20th century. Bees have also been a significant support for pollinating orchards and berry fruit. While honey is the primary output of bee keeping, there is also a commercial market for producing bee colonies and mated queen bees. The beekeeper's year has very clear seasonal tasks and labour demands for the production of honey. Honey can only be made by strong bee colonies and therefore, bee health and husbandry is a priority. Weekly inspections are required for hives during spring and early summer. The work must be carried out during daylight hours and in fair weather. Inspection work is skilled and requires making on-the-spot assessments of colonies. As the season progresses you may begin to harvest honey. The majority of honey harvesting happens in August and September, when it can be extracted and stored in bulk containers for bottling at a later stage. Autumn management of the hives prepares bees for winter when inspections are not required. Most aspects of bee keeping require a degree of physical strength. It should be noted that some people are allergic to bee stings or can develop sensitisation to bee stings. Apiary sites (places



*A honey extractor spinning honeycomb.*

where bees are kept) are an important aspect to increase productivity. A minimum of two apiary sites are advised to help deal with pest and disease issues that can occur. The sites must meet the needs of the bees, have plentiful foraging through the season and be within easy travel and access. Crop types such as oilseed rape and peas are high yielding in nectar, but bees need careful management at times of crop spraying. Forage of clover, hawthorn and bramble, as well as heather, are some of the most important nectar-yielding wild plants. There may be many locally important sources of nectar and a diverse range of plants and habitats will be most beneficial.

### Route to market

Most honey is sold directly to local retailers. Artisan food retailers and farmers' markets can attract higher prices for premium quality and well-presented produce. Heather and comb honey are specialist products that command the highest price premium. A beekeeper could also develop a range of allied products, for example candles and cosmetics. Online retailing and developing a brand could be a rewarding marketing method. Sale of part or all bulk honey wholesale is an option, which eliminates bottling, marketing and distribution. Any beekeeper selling honey must be registered to do so by the Department of Agriculture, Food and the Marine (DAFM).

### Training

A beekeeper should acquire basic bee-keeping skills and be competent before scaling up their business. There are many short courses available for beekeepers, or some week-long intensive courses in Ireland and the UK. For safe handling of food products, it is advised that Hazard Analysis and Critical Control Point (HACCP) training be undertaken.

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## Facts and figures

- The value of the honey produced in Ireland in 2019 was estimated by the DAFM to be €4,296,000, based on production of 205 tonnes. In 2016, Ireland imported 4,086 tonnes of honey.
- Wholesale honey price is estimated at €10,460/tonne or greater, depending on honey type. There are a small number of larger professional honey producers and an estimated 3,000 registered bee keepers in Ireland.

Teagasc has calculated an average yield over three years, of 20kg per year per hive. Honey yields vary from year to year, depending on weather, genetics of the individual colony and forage in the locality. A competent part-time bee keeper should be able to manage up to 150 hives (ref. Bee Farmers' Association, UK). Profitability will depend on size, efficiencies and economies of scale.

## Bees, hives and stock

Bee colonies and hives are required as a basic consideration. Traditionally, timber hives have been used; however,



Heather honey hives.

polystyrene and plastic hives are becoming increasingly popular. The main advantage of plastic is that it is low weight and can have high insulation properties.

Bee colonies can be purchased in small numbers; however, the commercial availability is low and costs are high. For a commercial beekeeper, it is more suitable to expand their colony numbers through their own methods of hive division, etc., over a number of years. It is possible to purchase queen bees of high provenance. The skilled beekeeper can breed their own queens each year. This is an important aspect, as requeening can promote highly productive colonies and eliminate some other issues. Any bees imported into the country must have a phytosanitary certificate, which the DAFM must be notified of prior to import.

## Supports

The DAFM provides supports and annual capital grant aid of 40% to appropriate developments.

The Local Enterprise Office may provide support for development of a commercial bee keeping businesses.

## Honey extraction

Honey is normally extracted from comb using machines that 'spin' the frames. The frames must first be uncapped, which removes the protective wax cap from the top of the honeycomb. The extraction machines use centrifugal forces to spin the honey from the frames. Depending on scale, both aspects can be automated; however, there is still a high level of labour required.

## Honey processing

Following extraction, honey can be stored in sealed containers for processing at a later time. This may include blending honey from different batches or apiaries to achieve a uniform product. Honey will naturally set and will likely require warming in a dedicated unit for several days prior to bottling.

Bottling of honey and labelling can be completed by hand or automated.

Honey extraction and processing needs to be carried out in sanitary conditions. A dedicated honey house is valuable for meeting strict food-handling legislation and ensuring the quality of the product. The honey processing rooms should be well lit and insulated, with wash-down walls, floors and ceilings.

Sufficient space for storing and handling large quantities of supers, boxes and equipment will be needed, as well as circulation space.

Food safety regulations are applied to honey throughout the EU. Producers must meet strict standards for production and labelling of foodstuff.

### Further information

For further information please contact, Dónall Flanagan, Nursery Stock/Ornamentals Specialised Advisor at:

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The following resources are also helpful:

<https://irishbeekeeping.ie/>

<https://www.agriculture.gov.ie/farmingsectors/beekeepinghoney/>

<http://nihbs.org/>

Fact sheet produced by Dónall Flanagan, Nursery Stock/Ornamentals Specialised Advisor.