

SECTION 8 – OTHER HIVE PRODUCTS

Honey and beeswax have been the main harvest from beekeeping and remain the mainstay of the activity. However, there are other hive products which can provide an income.

Pollen

Beekeepers need no specific skills to harvest pollen providing there is a plentiful supply. Pollen collection is more successful in dry areas as humidity increases the danger of contamination of collected pollen with moulds (fungi).

The composition of pollen varies according to the plant source. As it is collected by the bees, they moisten it with a little honey or nectar when packing it into pollen loads on their hind legs. In this way it gains some antibiotic properties. Unlike honey, pollen is not stored in the hive in quantities greatly in excess of the colony's needs. It can be



FIG. 88. As a bee flies from flower to flower she fertilizes (pollinates) the plants.



FIG. 89. The bee puts pollen in the baskets on her hind legs (see fig. 21). This pollen can be collected at the hive entrance in a pollen trap.

harvested by fitting a pollen trap across the hive entrance. This is a restriction which knocks off the pollen loads as the bees scramble through.

The trap consists of a grid which can be made from 5 mm ($\frac{1}{8}$ inch) wire mesh under which there is a pollen-collection tray covered by a finer mesh (4.2 mm, $\frac{1}{8}$ inch) to prevent the bees getting to the fallen pollen pellets. The floor of the pollen tray must be designed so that any water can escape and air circulates to prevent deterioration of the product. For the same reasons it needs to be checked and emptied frequently. The bees need pollen stores to feed their brood so traps should be removed at regular intervals otherwise the colony will be short of food.



FIG. 90. Pollen trap. Commercially-produced pollen trap that fits in front of the hive entrance.

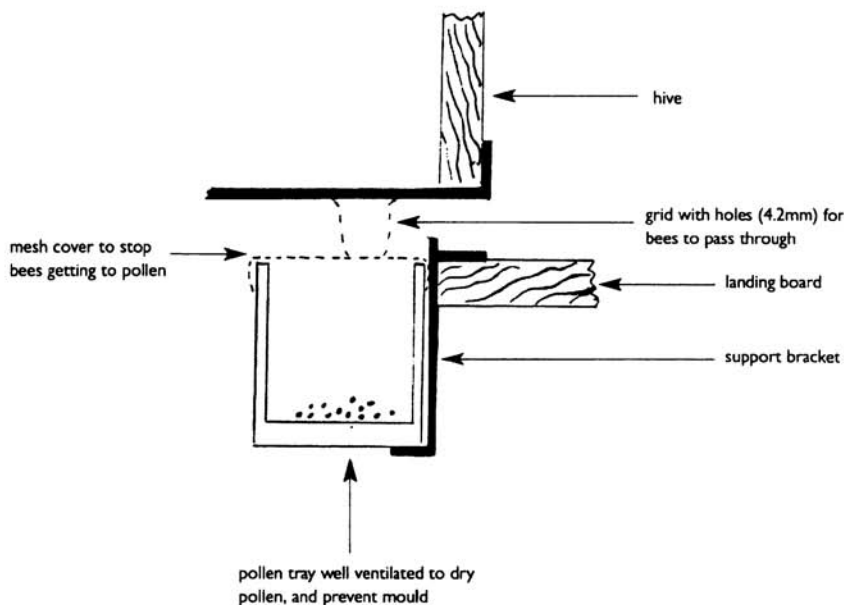


FIG. 91. Diagram of a pollen trap.

Air-dried pollen can be kept at a cool temperature for a short period but it can be difficult to store, soon absorbing moisture, coagulating and fermenting.

Bee pollen is bought by traders who may prefer pollen that is yellow or orange as it is said to have a better flavour than dark pollen.

There are many claims made for the effects and benefits of pollen which is used in traditional medicines and food supplements. However, one should be aware that the majority of reports are not from specific studies but from personal experiences unsupported by analytic evidence.

Claims include improved physical performance, increased vitality and appetite, reduction of high blood pressure, curing of colds and acne. There is some scientific evidence that shows pollen to be effective in treating prostate cancer. However, making



FIG. 92. Pollen that has been collected at the hive entrance.

unsubstantiated medical claims or using suggestive labels and descriptions to market pollen is wrong, untruthful and unethical. It must be totally avoided.

The nutritional benefits of pollen should be of interest to all those who have an unbalanced or deficient diet. However, there is a problem in incorporating pollen into food and that is that it can aggravate the widespread allergies that there are to the substance.

Finally, pollen collection by bees and subsequent analysis is used as a method of monitoring environmental pollution. This may not be of great significance to the rural beekeeper but it does show that pollen can contain contaminants and therefore pollen, or any hive product, should not be collected in heavily industrialized areas or where crops have been sprayed with pesticides.

Propolis

This is resin that honey bees collect from living plants and use alone, or with beeswax, in the construction or modification of their nests. However, beekeepers harvesting propolis should be aware that occasionally other substances such as paint or tar may be collected.

Propolis is sticky and soft when warm but hard and brittle when cold. It is entirely plastic between 25°C and 45°C (77°F and 113°F). It has been found that purer propolis is deposited at the top of the hive than on the hive floor. Beekeepers can use this to advantage by placing a sheet with slots or holes smaller than the bee space at the top of the hive or down the side. The bees will consider this the boundary of the nest and will proceed to close the holes with propolis.

The propolis can then be harvested by scraping it off or, if available, placing the complete sheet in a freezer for 24 hours.



FIG. 93. Propolis is the substance used by bees to seal the gaps around the edges of the hive or frames. It is used to fill any gap smaller than a bee space.

The brittle propolis will then fracture off. Flakes and pieces of propolis can be stored in the dark in airtight containers away from excessive heat. A simple purity test is to crunch up a sample and shake it with some warm water in a glass jar. Any waste material present will float to the surface.

Propolis is bought and sold by specialist traders. Traditionally, it is used for waterproofing, stopping leaks, an adhesive, drum-tuning, bow-string preparation and in herbal medicines. It can also be used as bait in catcher-boxes to trap swarms.

Generally speaking, most uses require it to be in liquid form. It therefore has to be dissolved. The most common solvent for food, medical and cosmetic applications is ethanol (ethyl alcohol). For home-made extracts it is possible to use gin, vodka, rum or whisky as the solvent. Even water extracts show some of the bactericidal and fungicidal effects, and wound-healing properties associated with this product.

However, extraction needs a great deal of care and some practised skills in order to obtain a standardized and quantifiable product with some degree of quality control. Propolis extract has several uses as a food preservative, anti-fungal additive, ingredient of cosmetics and as a medicine. However, care should be taken when marketing the product not to make unsubstantiated claims or to present hearsay as fact.

More specialist hive products

Other hive products are royal jelly, bee venom and bee brood. However, these can be very specialist areas which are best left to the beekeeper who is already extracting the maximum profit from the colonies in the products already discussed and has, through practice and experience, developed skills to a high level.