



# BRIDGEND BEEKEEPERS GWENYNWYR PEN-Y-BONT

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## Fact Sheet 2.

### Rendering and Purifying Beeswax

As part of the normal beekeeping year, beekeepers accumulate wax from replacing old brood frames and from cappings at extraction time.

#### **Brood Frames**

Each year it is recommended that a beekeeper replaces a third of the frames in the brood box. It is important that the frames are replaced for several reasons.

1. Old frames may harbour disease in the form of spores and fungi
2. Cells in old frames become smaller in size resulting in stunted bees.
3. Old frames are said to encourage swarming.

Brood frames will be darker in colour and contain debris from brood rearing. The resulting wax is usually mixed with capping to make new foundation; either making it yourself on a small scale or in part exchange for commercial packs of foundation.

#### **Cappings**

These are produced as a by product of the extraction process. They are usually light in colour, have little debris imbedded and of fine quality. When rendered they are used for cosmetics, fine candles and moulded blocks for fishermen and stichers.

#### **Common Methods of Extraction**

Wax is a very valuable commodity. It is important that your rendering process doesn't waste wax or damage the quality. Whatever method of extracting you decide on, always wash the wax in cold water to get rid of as much honey as possible before you start extracting.

- Hot Water Extraction
- Steam Wax Extractor
- Solar Wax Extractor

### **Hot Water Extraction**

This is the most common method used by beekeeper worldwide. It is cheap, easy to monitor and requires no specialist equipment. Use Stainless Steel, Aluminium or Copper equipment only. **Do not use** Zinc, Pewter, Tinfoil or Galvanized Iron as these metals will darken the wax.

Use rainwater **NOT tap water**, as tap water can make your wax 'spongy'.

Put your wax into an old pair of tights, weight the tights and submerge in a large pan of clean water or an old clothes boiler. Bring to the boil. The wax will filter through the tights and float to the surface leaving most of the debris behind. Once all the wax has melted turn off the heat. As the water and wax cools, the wax will solidify into a block on top of the water.

### **Steam Wax Extractor**

Here a basket is placed into the main part of the tank and filled with wax. There is a communicating outer tank filled with water. The water is heated to produce the steam. The steam melts the wax. The wax flows out of a nozzle into a collecting bowl. The debris is collected in the basket.

Can be difficult to clean, and is expensive to buy. Members are able to borrow a steam extractor from the Association.

### **Solar Wax Extractor**

Eco friendly as it uses the sun's heat to melt the wax. Expensive to buy but relatively easy to make from scrap wood and double glazed glass. In Wales will only be suitable for the summer months!

Wax is placed in a double glazed and insulated box. The box is propped on an angle and pointed into the sun.

The wax melts and runs down the metal strip through a metal filter into a collecting vessel. If the sun is too strong you run the risk of overheating the wax, *even setting it alight*. If the sun is not out, it doesn't work.

The only method that can sterilize frames if you can get the box gets hot enough. Solar Wax Extractors produce the cleanest wax.

### **Further Rendering and Purifying.**

Whatever method you use to extract your wax except solar, you now need to further render the wax to remove any residual debris, just repeat the process until you achieve the desired quality. You can reduce the debris trapped in the wax by cooling the wax SLOWLY.