

Extracting Honey

Beekeepers will start using a super for bees to store honey for the beekeeper to harvest when 'honey flow' starts. Time here in Lewis County is variable depending on your hive location(s) when nectar flow is strong, and weather which can affect when nectar flow is heaviest. Many beekeepers add supers around blackberry bloom time, as blackberries are a major nectar source in our area. Some beekeepers prefer to use 1 less frame in their super (i.e., 9 frames instead of 10) which allows the bees to draw the comb out further, thus making using an uncapping knife easier as the caps extend beyond the frame rather than being flush with the frame edge. Before extracting, the cappings covering the honey must be removed or opened to allow honey to flow out. It is recommended that frames be 80% capped before extracting to avoid your extracted honey containing too much water.

Tools used to uncap frames of honey (from Langstroth type hives):

- Uncapping knife – this can be a knife that is serrated on both sides, or a heated electric uncapping knife. The manual knife generally works better if it is dipped in hot water before and during use. Frames are set on a supporting bar across the top of a tub called an uncapping tank. The bar has a small pointed nail or screw protruding to hold the frame in place while uncapping. There is also a plastic uncapping tool that fits on top of a 5 gallon bucket to support the frame while cappings are removed and fall into the bucket.
- Uncapping fork – this is used instead of a knife to puncture or scrape off the caps. A somewhat messy tool. It can be used after a knife, to open any cells not uncapped by the knife.
- A pin roller – this is rolled across the caps and punctures each cap
- A capping slicer is a tool that has an adjustable depth; this is useful for frames where the caps don't protrude above the frames enough to use an uncapping knife. It looks like a fork with a small pan underneath
- A comb shovel – this is generally used to remove all the comb from the frame; it scrapes the cappings and honey off the foundation. There can be a moderate amount of honey left on the foundation using this tool so allowing scraped frames to sit in a tub for a day to allow excess honey to drain off is helpful.

Another method used to extract honey is the "crush and strain" method. This is used to extract honey from a top bar hive, or wire foundation frames. It can also be used on frames with foundation by using a comb shovel, or even a spoon. If you have a frame of capped honey that has an area of brood or pollen, or old foundation you want to replace, you can extract just the capped honey with a spoon or shovel.

Cappings, comb and honey are all put in a food safe container and mashed to separate the honey, then poured onto a strainer that has been placed over a bucket or other food grade container. This is allowed to sit until all the honey has drained out. Cappings are removed from the strainer and the process repeated until all the honey has been strained. This method can be faster if you have 2 – 5 gallon buckets with lids. The bottom bucket's lid will have the majority of the center cut out, leaving a support rim for the top bucket to sit on. Cut several large (approx. 3 inch, or a lot of approx 1 inch holes cut in the bottom of a second bucket which will be the top bucket. A 5 gallon paint strainer bag will be placed in the top bucket. the top bucket is placed on top of the bottom bucket, then honey and cappings are put in the

top bucket. Honey will drain through the strainer bag, through the holes in the bottom, and through the holes in the bottom bucket's lid into the bottom bucket which is your collection bucket. (see picture)

Extractors

Extractors are either manual (hand crank to extract), or electric. Extractors can hold only 2 frames, or more. Prices range from a few hundred dollars to thousands. Frames are held in a radial position like the spokes of a wheel, or tangentially where the frames set along the extractor wall. Frames in a tangential extractor need to be rotated partway through extraction while frames in a radial extractor do not require rotation. The extractor has a 'honey gate' near the bottom edge which allows the honey plus bits of comb and other debris to flow into a bucket or collection container placed below the extractor. Generally a strainer of some sort is placed on top of the bucket to strain the honey. Be sure the honey gate on the collection bucket is closed tight before you begin extracting! The honey gate on the extractor is generally left open during extraction but watch that your strainer doesn't overflow.

Bottling Honey

There are a variety of containers available to bottle honey. Glass jars are ideal; they can be sterilized, come in a variety of sized, and are reuseable. Plastic 'honey bear' squeeze bottles are popular. Honey is sold by weight; not all quart jars, for example, hold the same amount or weight. It is important to use a kitchen scale (digital makes it easy) and weigh each jar empty, then full, to determine the net weight of honey. Labeling guidelines can be found here: cms.agr.wa.gov. Many non commercial beekeepers label their honey with their apiary name, honey type (wildflower is common), net weight, and an email or phone number. It can be difficult to note a specific flavor such as clover or blackberry unless your hives are located by a large area of a specific nectar source since bees will fly 3-5 miles for a nectar source.

Crystallization

Any honey can crystalize; it can even crystalize in a capped frame in the hives, the bees are able to add water in order to consume it. In simple terms, honey is sugar and water; there is more sugar than the water can hold. That is, there's not enough water in the honey to keep the sugar dissolved forever. Temperature, moisture content and particles such as wax bits can affect crystallization rates. If your honey crystalizes, simply warm the jar in a pan of water on very low heat that doesn't exceed 140 degrees in order to maintain beneficial properties.

After extraction

Some beekeepers set extracted frames out by their apiary for bees to clean remaining honey off the foundation prior to storing; some beekeepers feel this dries out the comb where bees aren't likely to reuse that comb the next summer. Others store their frames 'wet' for use next summer. Either way, it is a good idea to freeze your frames for 24 hours whenever possible to kill any wax moth eggs or larvae that may be present. Paramoth (paradichlorobenzene) can be used when storing frames and supers, or storing frames in a clear tub in a room with windows where they will be cold is another alternative. Wax moths don't like light or cold. Do not use naphthene ('moth balls'); it is possible to find paradichlorobenzenein sachet type individual packets as an alternative to loose product on a paper

plate. Paramoth is placed on a paper plate on top of tightly stacked supers and frames with a lid covering so the fumes permeate the stack. It is necessary to air equipment out at least 2 days prior to reusing the following summer.