

Stahlman beekeeping notes for 2021

Issue # 32 What just happened to July?

It is gone! Summer management—"Look ahead and plan for fall!"

What makes a good hive of bees at this time of the year?

- A hive must be strong – full of bees – still lots of brood in all stages of growth.
- A meaningful population of drone bees.
- Strong hives are more resistant to pest and diseases!
- All new foundation put into the hive earlier is drawn out!
- The honey harvest is bottled! Some of the readers of these notes may still have time to get a fall honey crop. However, with late flowering nectar and pollen plants, the thought should be to build up hives with honey stores.
- Most likely a strong hive is robbing from other hives if it has a good amount of honey stores and a lot of bees to feed. (Strong survival instinct)

Robbing is still an issue here! I have placed robbing screens on my weak hives! I am not using any outside feeding at all. (It will attract bees from other beekeeper's hives – thus introducing by chance mites, SHB and any disease issues out there to your bee hive location!)

Check hives for robbing activity! Time to replace entrance reducers if you removed them from weak hives.

There is still time here in North Carolina to make some splits. The key to raising queens in late summer is the availability of drones to mate with virgin queens. As long as drones are in hives, one can raise queens.

If you have not treated for Varroa mites, you need to check mite levels. **[The success of overwintering a hive begins NOW!](#)**

About Solar Wax Melters:

I am taking advantage of these hot days to render much of the old comb I have been removing from my hives.

A solar wax melter can render old melted comb into a nice golden yellow block of wax. Over many years, I have taken old comb from my hives and tried to recover as much beeswax as

possible. The solar wax melter is limited to its size. My wax melter will handle three frames at a time. It takes a good hot day with direct sun to make it work well.

However, with all the cocoons (mostly black infused with propolis and debris) it is hard to get 100% of the wax. I am also aware that beeswax color is affected by pollen usually responsible for the yellow color of most rendered beeswax.

When beeswax is secreted from the wax glands of the honey bee it is white. We note how the color of comb in a frame changes as it ages (especially if brood is raised in the comb). Old comb becomes contaminated over time as evidence of chemical samples show.

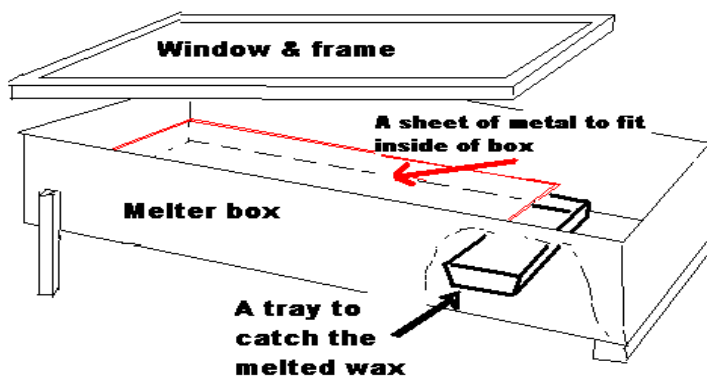
Beeswax melts at about 147 ° F but it will vary from 144 to 150 °F (62 to 66 °C).

Iron containers used to melt bees wax cause serious staining to the wax. I have been told that brass, zinc and copper also cause some damage. Stainless steel is best for heating beeswax during processing. But greater damage is done by over-heating the bees wax during processing.

One problem with melting beeswax in metal containers is the discoloration that occurs from the slum-gum that floats above water. Wax floating among slum-gum is strained and the wax takes on a brownish cast. In some cases, the wax takes on a disagreeable smell.

Wax is highly flammable. Heating wax is best done in a double boiler and never over a kitchen stove! Too many beekeepers have had serious damage to homes or barns when the wax boils over. A number of years ago, the Walter T. Kelley Company lost its entire wax production facility in a fire.

This is one plan for a solar wax melter.



The size of the window will determine all other dimensions. The sheet metal will hold burr comb, wax from cappings, etc. The window lid must fit tight to hold in heat from the sun.

I visit thrift stores searching for large panes of glass. The size of the box is determined by the size of the frame. The beekeeper making a solar wax melter has a number of options in its construction. But the basic principle is to trap heat from the sun to melt the wax.

My solar wax melter has wheels for moving so the full rays of the sun can do the job of melting the wax.



I need to point out one other feature of my wax melter. At the point that the beeswax melts and drips into the pan below, I funneled the metal so any dripping wax would fall directly into a smaller pan.

I folded the extra metal around a strip of queen excluder to avoid some of the comb from falling into the pan. The folded metal and the queen excluder add strength to the flashing used in construction of the

bed for the wax to melt. This melter has served me well and I look for hot summer days to process comb that I yearly recycle – about 50 frames each year.



Moving the wax melter is important for getting the maximum amount of heat from the sun.

I cut old comb from the frames before the wax melter begins it's work. Comb on top of comb in a solar melter results in the bottom layer of comb receiving dripping hot wax and cooling – this results in slower operation of the melter.

I use a thermometer, to check the heat in the melter. It will vary during the day – being the hottest during high noon.





The tray I use is a common aluminum bread pan. I buy them at the Dollar store. Note the difference in color of the wax harvested from the wax melter. The bright yellow wax came from old comb with a lot of pollen in some of the cells. I generally get a small cake from each batch of comb.

The un-melted comb cools in the evening. By the next morning, I turn the remaining comb over. The brood cells at that time can be easily broken up and exposed for another day. When the melter is no longer collecting beeswax from this batch, I place the remaining slum-gum in a heated water

bath (large aluminum turkey cooker over a burner) at 170 ° F. It is surprising how much wax is still retained by the slum-gum. I do not want the water to boil!

Processing wax can be a messy operation. I suggest it be done outside where spills, dripping water, and accidents will not cause a lot of concern. **If hot wax accidentally gets on skin serious burns can result.**



Slum-gum from the solar wax melter can be placed in a cloth bag which is then placed in a turkey cooker. An electric heater makes it easier to control the temperature of the water.



The bag is held under the water as beeswax melts from the slum-gum.

I use several ¾ inch strips of wood (held in place by clamps) to make sure the bag does not float to the surface. The wax in the slum-gum will rise to the surface of the water and when cooled, can be removed.



If some wax remains, the operation can be repeated but without pressing the slum-gum, the beekeeper will not collect all the beeswax.

I then remelt a number of small batches of the processed wax in the solar wax melter to get larger cakes of wax. This results in bleaching of the comb into a very light color. The sun does all the work – it just takes time and a little manipulation over several days.

I put old comb into the solar wax melter in the morning. Let the melter work during the day. The next morning turn the slum-gum

over – close the lid on the wax melter and wait until the wax melter is no longer working – the sun goes down.

Getting slum-gum out of the solar wax melter!

Remove all slum-gum on the metal sheet in the wax melter.

- Place the slum-gum into a cloth bag while still warm. It crumbles quite easily.
- Prepare the cooker (start the electric heater and fill the cooker with clear water.)
- Place the bag with slum-gum in the cooker – make sure the bag is completely submerged.
- Wait until the water reaches 170° F and let it work for an hour or so. Just make sure it does not boil over. **Do not leave it unattended while heating!**



3rd day: take all wax recovered and place it back in the solar wax melter. Let the sun melt all the wax into a single container. Just make sure the container is large enough to collect all the melted wax.

Use caution when working with hot wax! That is why you see welding gloves in this photo. The bread pan is full of nice clean yellow wax -- it is hot! It is also liquid.

It will take overnight to cool. I have learned to let the wax set up over night before I attempt to remove it from the wax melter. Once it has hardened, I remove the beeswax from the bread pan – little secret (I put just a little water in the bread pan before wax starts to melt into it). I turn the bread pan upside down on a clean surface and let the sun warm the metal bread pan. The wax block will fall free from the pan.



I must confess that I have not bothered to get into soap, cosmetics, etc. But over time, anyone with a solar wax melter could accumulate a good amount of very clean light beeswax. Light beeswax is sold in hobby stores for over \$10.00 a pound.

One can buy a solar wax melter, but building one is very easy. Many plans can be found with an internet search [solar wax melter].

The cost for my wax melter was only for a picture frame with glass from a thrift store for less than \$5.00. The rest was made with scrap lumber and some aluminum flashing I picked up at a home construction site. The wheels and handle were free.