Stahlman Beekeeping Notes For 2022

National Honey Month

Honey -- a product of the hive.

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More on Honey

These four samples of honey show the color range one can see in honey from light to dark.

Honey is sold and packaged in a number of ways. Often in 8 oz. or 1-pound containers.

Pint or Quart jars are commonly available.

Jars must contain certain information to meet state laws. See earlier newsletters for information.

The density of honey is determine by a Pfund meter. They are quite expensive – electronic devices have replaced the old Pfund mechanical device. One can purchase comparable honey patches to match up with a honey sample.

Table 1. Color Designations of Extracted Honey

USDA Color Designation	USDA Color Standards	Pfund Scale Millimeters	Optical Density*
Water White	Water White or lighter	8 or less	0.0945
Extra White	Water White to Extra White	8 including 17	.189
White	Extra White to White	over 17 including 34	.378
Extra Light Amber	White to Extra Light Amber	over 34 including 50	.595
Light Amber	Extra Light Amber to Light Amber	over 50 including 85	1.389
Amber	Light Amber to Amber	over 85 including 114	3.008
Dark Amber	Darker than Amber	over 114	---

* Optical Density (absorbance) = $\log_{10}$ (100/percent transmittance), at 560 nm for 3.15 cm thickness for carmel-glycerin solutions measured versus an equal cell containing glycerin.

Honey will usually be placed in one of these 7 classes. Often when entering honey at a show, the beekeeper will be asked to enter the honey in a class. The classes are determined by the color density in mm (millimeters).

There is a lot of information on the web concerning honey. The best information I have found is from "The Hive and the Honey Bee 2015 Edition and the 1992 Revised Ed.

The hobby beekeeper is often asked to describe the honey they have for sale. Don't worry about scales and precise measurements for moisture content. The general color determined by the four color sample shown above will more than satisfy a customer. Often taste is more important! Moisture levels should be of some concern! Learn to do the bubble test.

The bubble test:

Turn a bottle of honey upside down and see how fast the bubble moves upward. Very fast movement upward indicates a higher moisture level. One indication of high moisture in honey is leakage around the cap of a jar or bucket.

With this particular jar of honey, I was able to count 1 – 2- 3- 4- 5- 6- 7 as the bubble rose to the bottom of the one pound jar of honey. Temperature of honey also affects its movement. This bottle was tested at a room temperature of 76° F. I have a refractometer which accurately measures moisture levels in honey.

This sample of honey measured at 17.3 %. A moisture levels over 18.6 % can result in honey fermenting. Most beekeepers do not own or have access to a refractometer, thus it is possible to get a good idea of the moisture in honey by using the bubble test.

Local honey is far more attractive to a buyer. First, it is not imported honey. One can check the labels on store bought honey and find any number of counties listed as the point of origin. Local honey likely includes pollen imbeaded in the honey that will help with allageries. Highly processed honey does not! It is processed – heated and passed thru honey presses that remove much of the pollen and yeast that cause honey to granulate. The packers generally blend batches of honey to arrive at a mild tasting honey with uniform color. Amber honey could contain both lighter honey and darker honey depending upon how the packer decides to pepare the product for market. They also add the term "Organic" to push up the price.

Beekeepers selling honey need to be concerned with:

Granulation: Simply put, granulation is a liquid honey turning to a solid state. Some honeys grandulate quickly such as canola, and others like tupelo which some say will not grandulate.

Fermentation: Honey is hygroscopic which means it will absorb moisture if left standing in open containers.

Some of the ways beekeepers market their honey:

Extracted honey (Honey in the liquid state – moisture level below 18.6%)

Creamed honey (Fine crystals of grandulated honey free of foam)

Chunk honey (Chunks of comb honey in a container with liquid honey)

Comb honey (Natural capped comb packaged to be used as is)

Cut comb honey (Natural capped comb cut from frames and sold in plastic containers)

See the examples below:

Liquid honey: Most honey sold is liquid honey extracted from frames of capped honey. It is usually removed from comb by uncapping cells of honey and spun out of the comb in an extractor. It is then strained to get wax, and other debris of any kind removed from the honey.

Creamed honey: Making creamed honey requires special steps to create it. It was perfected by E.J. Dyce at Cornell University in 1931. Information on how to make creamed honey can be found on-line.

Chunk honey: Sold in jars containing honey comb and liquid honey. It allows one to sell comb honey in a very attractive format!

Comb honey: Special supers holding what are called section boxes are required. Thin foundation is placed in these sections: wood or plastic. Bees fill the cells with honey and the product is sold as is. Comb honey production requires skill, extensive labor, and equipment to produce it.

Cut Comb honey: This is comb honey like above except it is cut from standard frames using thin wax foundation. It does not require special sections (rounds or wood), the extra labor or special equipment.

Bee suppliers sell the plastic containers. Comb cutters are sold to cut comb to the size of the plastic containers.

Marketing honey for sale allows beekeepers to add eye appeal!

For hobby and sideline beekeepers -- selling honey products can be profitable. Remember that labor, bottles (containers), equipment (hives and bee replacement), medication, feeding bees and time spent finding customers is often not considered when figuring the real profit in selling honey.

While commercial beekeeping outfits with thousands of colonies are selling honey at wholesale prices determined by market demands, those with time to package and sell honey can ask for far more per pound of honey. Tupelo or Sourwood honey are in the high demand category.

Locally produced honey in glass one-pound containers in the Raleigh area sells for $12.00 to $16.00 a pound. The honey sold by the big retailers Costco, B J's, & Sam's sells for ½ of that.

I am often asked, "How much should I sell my honey for?"

For a beekeeper just trying to break even (pay for the equipment, package bees to replace dead-out, various treatments and feeding during the year to keep a hive alive) the price should be higher than those producing larger quantities of honey. The goal is to make something above the cost of the operation.

If one has three hives of bees that produce an average of 50 pounds of honey, it would seem to me that it might be wise to sell honey for one dollar an oz. A one-pound jar would sell for $16.00. ($16.00 x 150 pounds of honey = $2400.00)

That is not profit!

Expenses in equipment:

It will depend upon how new the equipment is and condition of comb. Often this is a one-time expense but 3 hives in two deep brood boxes with two honey supers, a feeder, robbing screen and other capital equipment (extractor, tank, and misc. equipment) the cost could exceed $2000.00!

Reoccurring expenses:

Bottles and containers for the honey crop, package bees to cover dead-outs, medication and sugar for feeding, milage to the nearest bee supplier or other tasks connected with honey sales (cars or trucks take fuel to go anywhere), and of course the cost of maintaining the property where the bee equipment is kept (stored), phone and insurance on the property and if you report a profit on honey sales --TAXES!

Oh! I guess you should count the labor expenses as well. How many hours does one spend on each hive in hive management? How about extracting time? How about clean-up time? How about paper work and phone time? Customer relations! Does one count the dues spent to join a local and state bee organization? How about expenses to keep current on bee issues like subscribing to a bee magazine or going to a state bee meeting – overnight stays in hotels, meals, and transportation!

How much honey do you give away free?

Follow up on bees drawing foundation in late summer. I received this information from Clay Ottoni who lives in Michigan. He keeps bees in Central Michigan. He also provided me with some pictures to share with you.

Good evening Dana, Just a quick FYI follow-up: This August on three of my stronger hives I was able to get each to draw out (fill & cap) a box of 10 medium foundation frames in the Thumb of Michigan in less than two weeks by feeding 3 gallons of 1 to 1 syrup in a wooden top feeder every time the feeder was out (starting 8.13 and then filling it on 8.16 & 8.23). The girls did have about four acres of buckwheat in bloom, which they did utilize in the mornings. A neighboring farmer had dry beans in the area. We been in a mild drought since June. So, again, contrary to convention it is possible to get bees to draw comb during a dearth.

Bee well and safe, Clay

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I appreciate Clay's input and hope that some of use can put his practice in Michigan to use.

I met Clay I believe in 2016 or 2017 when I gave a bee talk at the Michigan State University Ag. Center for the Michigan State Beekeepers Summer meeting. Clay and I have continued to share information since.

He added : Attached are a couple of pics of one of the hives that drew out the top box last month -- I pulled the FormicPro today and am restarting the syrup but now at 2 to 1. I was also placed half of my hives on pallets so I can move them with my tractor and forks this winter. You may use the pics if you'd like. The key is to be sure your hive is strong -- with a lot of young (14 - 17 day old) bees that are young.

This is the value of developing relationships I call networking with beekeepers. As I say, over and over, I learn something new every day.

In trying to get my bees ready for winter, I have found it important to feed especially during the summer months rather than wait until winter is almost upon us.

My hives have large bee populations. I am putting hives up off the ground and placing entrance reducers on them now. The Apivar strips will be removed in another week. I have had top feeders on each hive and feed sugar syrup 1:1 to each hive once a week since taking off honey.

I would also like my friends to know that I have sold my bees in Franklin County and I now have only four hives to take care of. The heat this summer took its toll on me. What a delight it is to just walk out the door to know I am doing every thing the bees need to get them ready for winter. My hives have one deep and one medium box for the winter. I have screened bottom boards, and a top feeder for each hive. The hives are set on an individual pallet cut to fit a single hive. The hives are spead out and all equipment will eventually be painted forest green to help hide them from individuals passing by. They are spread out to help establish some distance to prevent drifting and hopefully like Covid, a space to help prevent the spread of mites and hive beetles.

Issue # 39 will be published when I return from Scotland on schedule September 24.