Annual MBA Meeting

There are only four more monthly meetings before we host the Annual MBA Meeting. The dates are November 4 -5th at SW MS Community College in Summit. Please plan on committing some of your time to help us have a very successful meeting. Plan on attending for you own benefit. We have some really wonderful classes lined up.

Nectar → Honey

- Nectar is a dilute solution of fructose, glucose and some sucrose
- Bees add the enzyme invertase to nectar, regurgitate the mixture into honeycomb, and evaporate the excess water
- The fully ripened and capped product is a complex mixture that we call honey

Pfund Color Scale

(based on Absorbance at λ=560 nm)

- Water white – 0.0945
- Extra white – 0.189
- White – 0.378
- Extra light amber – 0.595
- Light amber – 1.389
- Amber – 3.008
- Dark amber

Aromas and Flavors

- Difficult to define this qualities
- The taste common to all honeys is probably the result of sugars and gluconic acid
- Aromas caused by some plant volatiles (which slowly disappear the longer honey is stored)
- Darker honeys often have more dissolved plant oils
- Darker honeys usually have more minerals

Honey = 17 % water + 83 % solids

Honey is a supersaturated sugar solution with approximately 17.1 percent water

(98 % of the solids are sugars)

Average Composition

Component	Average	Range
water	17.2	12 - 23
Fructose	38.4	31 - 44
Glucose	30.3	23 – 41
Sucrose	1.3	0.2 – 8
Other sugars	8.7	2.8 – 20
Organic acids	0.57	0.17 – 1.17
Ash (minerals)	0.17	0.02 – 1.03
Nitrogen	0.04	0.00 – 0.13
pH	3.91	3.42 – 6.10
Total	100.59 %	

According to the United States Standards for Grades of Extracted Honey, honey may not contain more than 18.6 percent moisture to qualify for U.S. grade A (U.S. Fancy) and U.S. grade B (U.S. Choice). Grade C (U.S. Standard) honey may contain up to 20 percent water; any higher amount places a honey in U.S. grade D (Substandard).

A recommended temperature for pasteurization of honey is 145ºF for 30 minutes. At this temperature diastase has a half-life of 16 hours and invertase only 3 hours. At first glance this might seem to present no problems, but it must be remembered that unless flash heating and immediate cooling are used, many hours will be required for a batch of honey to cool from 145º to a safe temperature.

People who store honey are in a dilemma. They must select conditions that will minimize fermentation, undesirable granulation, and heat damage. Fermentation is strongly retarded below 50ºF and above 100º. Granulation is accelerated between 55º and 60º and initiated by fluctuation at 50º to 55º. The best condition for storing unpasteurized honey seems to be below 50º, or winter temperatures over much of the United States. Warming above this range in the spring can initiate active fermentation in such honey, which is usually granulated and thus even more susceptible

http://beesource.com/resources/usda/honey-composition-and-properties/

http://www.honeybeeworld.com/forum/viewtopic.php?t=1353

http://www.beeculture.com/kimandjimshow/

http://honeybeehealthcoalition.org/varroa/