



Honey and Its Uses¹

Malcolm T. Sanford²

Honey is one of the oldest sweets known to man. References to it in literature are legion. Israel was described in the bible as a land "flowing with milk and honey". The ancient Romans paid taxes in honey as did the Aztecs of Central America. The Roman's love god, Amor, dipped his arrows in the sweet, and the Hindu god of love's bow was strung with a chain of bees.

Beekeeping is big business in Florida. The state is usually one of the top two honey producers in the nation, about 30 to 40 million pounds per year. With honey production comes the intangible, yet so valuable, service of pollination by the honey bee. It's estimated this insect pollinates 90 agricultural crops, and in the process, is responsible for much of the richness and variety of our diet.

The predominant sugars in honey are fructose and glucose. These are simple sugars, easily assimilated by the body. Often they are sweeter than table sugar or sucrose and so less honey may be required to solace a "sweet tooth". Honey also possesses trace ingredients important to the human diet: vitamins, minerals, amino and organic acids. Thus it's a more complete food than other sweeteners like processed table sugar or corn syrup.

All honeys are not the same. They come in an infinite variety of colors and aromas, depending on the floral sources from which they are derived. In Florida some of our most distinct honeys are: gallberry (red in color, tangy), tupelo (clear, extremely slow to crystalize), mangrove (light, very sweet) and orange blossom (clear to red with a citrus tang).

Often, honey is associated with folk remedies. In some cases this reputation is deserved, in others it's open to question. The sweet actively absorbs water from bacteria and fungi, retarding their growth and reproduction. Honey has been used successfully as a wound dressing because of its bactericidal properties, the result of hydrogen peroxide produced by the enzyme, glucose oxidase. It is also superior first aid for burns; the honey seals off the injured area to air currents, reducing pain and possible infection.

At times, the use of honey by diabetics is touted. Although some persons suffering from carbohydrate (sugar) metabolism can consume honey safely, many cannot. Diabetics should **never** eat honey except under the direct supervision of a physician. Although honey has been used successfully for many years in children's diets, the honey industry now recommends

1. This document is ENY102, one of a series of the Entomology and Nematology Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date July 1, 1987. Reviewed May 1, 2003. Visit the EDIS Web Site at <http://edis.ifas.ufl.edu>.

2. Malcolm T. Sanford, professor, Department of Entomology and Nematology, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL 32611.

it not be fed to **infants under one year old**. Only very few in this age group are susceptible to infant botulism, but because of this, uncooked or unprocessed food such as fresh produce and honey are not now recommended in their diet.

Several kinds of honey products can be found in the market place. Liquid or extracted honey in jars predominates. However, specialty shops may also sell honey in the comb, one of the least processed food items available anywhere. Section (comb) and cut-comb honey come in round- and square-shaped containers. Chunk honey is comb honey submerged in liquid honey -- the best of both worlds to some persons. Spun or creamed honey, finely crystallized and incorporated with air, to provide consistency and texture, may also be on grocer shelves.

Honey can be stored indefinitely without refrigeration. Only if diluted with water, will yeasts and other micro-organisms attack honey. It should, therefore, be stored in dry locations. Some honeys are more prone to crystallize or "sugar" than others. The optimum crystallizing temperature is 57 degrees. Thus, it is recommended to store honey at about 50 degrees F. to retard crystallization.

If honey crystallizes, it has not spoiled. It can be reliquified easily by placing the container in warm-to-the-touch water which melts the crystals. Overheating honey can easily scorch the sweet.

Although honey is usually eaten as is or used as a spread, many persons cook with the sweet. It can be used to flavor, or simply to sweeten a dish. Honey is preferred in baked goods to keep them fresher longer. It is also responsible for delicious crusts or glazes on meats and other dishes.

Because honey is a liquid, a general rule to follow when using it as an ingredient is to reduce the liquid in the recipe by one quarter cup for every cup of honey used. Honey is also easily caramelized, and so must be cooked at relatively low temperatures in some recipes.

There is always natural variation between honeys. Some kinds may be sweeter than a like volume of sugar or other kinds of honey. The predominant flavor in some honeys can materially

enhance or detract from certain dishes.

Experimentation and constant tasting for that special nuance or "je ne sais quoi" in a recipe therefore, is the rule when cooking with honey. But it is often this variety, responsible for creating unique dishes, that makes cooking with honey exciting and rewarding.

Finally, honey can be used as a base for alcoholic beverages. Honey wine is called mead and can range from the dry table variety to a sweet after dinner to a fortified aperitif.

The Beekeeping Industry pays assessments to implement a honey promotion effort. This is accomplished through the National Honey Board which publishes a wide variety of information on honey use. The Board has produced a video tape called, "*Just Add Honey*," and has a database of recipes, many of which are used in its promotional activities. To contact the Board, call 1-800-553-7162.

The Board's Honey Technology Program also publishes a database (available on diskette) entitled "*International Honey Bibliography and Abstracts*." Persons interested in this bibliography or general use of honey in foodservice, should contact the Honey Hotline 1-800-356-5941, Monday-Friday, 8:00 am to 5:00 pm Pacific Time.