



UNIVERSITY OF
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IFAS EXTENSION

Honey Adulteration¹

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Florida law defines honey as, "... only the natural food product made by honeybees from the nectar of flowers or the saccharine exudation of plants, containing no additives". The law also requires all products labelled "honey", to be pure honey as defined above.

Adulteration, or the addition of foreign substances to honey, is not new. One of the first books on honey by Sir John Hill in 1759 addresses the subject: "Beware of honey with a dishonest mixture of flour and other ingredients". Over a hundred years later, adulteration was still on the minds of those concerned about glucose added to honey. The glucose was made by boiling sugar syrup with sulfuric acid, then adding lime. In the process, some acid and lime was invariably mixed into the honey along with glucose.

The rise of the comb honey industry in the early 1900's may have been partly in response to honey adulteration. It is exceedingly difficult to adulterate a product sealed under a layer of wax. Over the years, many substances have been added to honey as adulterants: flour, paraffin, glucose, sucrose (table sugar) to list a few. Early on, beekeepers concerned about adulteration solicited help from the United States Government. Their efforts and those by others

concerned with the food industry, finally resulted in the birth of the Food and Drug Administration (FDA).

Most honey adulterants are easy to test for and the adulteration problem seemed to have been almost eliminated until the 1970s. With the development of corn syrup products, adulteration again became an issue. High Fructose Corn Syrup (HFCS), a product with the major constituents of honey present in about the same proportions, is now routinely available and at prices far below those for honey.

With the advent of HFCS, there was no way to prove whether in fact honey was mixed with corn syrup. Adulteration therefore, became extremely profitable because the possibility existed to mix 80% to 90% corn syrup in honey without being detected. Fortunately, a procedure has finally been developed. The test will detect not only corn syrup adulteration, but also cane syrups processed by the honey bee.

How can the beekeeper help in this new fight against adulteration? First of all he/she must be aware that feeding bees sugar syrup and/or corn syrup can lead to adulteration. In addition, the beekeeper must become the eyes of the "self-policing" program.

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Suspicious samples of honey should be sent in for testing. The criteria below for selecting samples that might be adulterated are not concrete proof that the sweet is in fact mixed with corn syrup, but experience has shown adulterated honey to have one or all of the following characteristics: 1.No flavor, just sweet 2.Very light or very dark 3.Molasses flavor 4.Consistently low price In addition most adulterated honey seized in the past has been packed in a "Mason" jar with a "rustic" label. It is emphasized again that none of the above criteria are proof of honey adulteration. The only real evidence comes from testing using defined techniques certified by the National Association of Chemists.

_____ Name of Sender

_____ Address

Samples suspected of being adulterated should be sent along with a description of the product on the form below to The Secretary, American Beekeeping Federation, P.O. Box 1038, Jesup, GA 31545.

DATE: _____

DESCRIPTION OF HONEY SAMPLE: (copy information on printed label including size of package, brand, name & address of packer or distributor, etc.)

_____ WHERE PURCHASED: _____ DATE

PURCHASED: _____

CODE # ON JAR OR LABEL: _____ IF ONLY PACKER'S

NAME APPEARS ON LABEL, NAME AND ADDRESS OF DISTRIBUTOR: (in known)

_____ REASON WHY HONEY IS SUSPECTED OF BEING ADULTERATED:
