

ECONOMIC ADULTERATION -- TECHNOLOGY AND RESEARCH

Determine the extent of economic adulteration in the US honey supply¹

Which part of the consumable supply is adulterated?

retail? roadside stands? processed food products?

What kind of adulterant is used?

What is the level of adulteration?

Is honey from one geographic region adulterated more often than another?

Finance equipment for new SIRA technology at Coastal Science Laboratories

What fees are involved?

What turn-around time could be guaranteed?

What data would be collected and for what purpose?

Collect more data on the chromatographic procedures (what kind of data?)

laboratory confirmation

AOAC approval

expanded national and international data-base

Publish the research on the chromatographic procedures

Expand data bases for SIRA -- international and US samples

Drop the limit of detection on current detection technologies

Develop technologies that can detect lower limits of adulterants

Analyze collection of pure honey using current adulteration detection techniques

Determine if the bound galactose found in honey is or is not raffinose.

¹ A range of nine to 48% (average of 25%) has been recorded among test samples.

Strengthen ISIRA database, and design a statistically based sampling procedure to determine marginal (5 to 10%) adulteration.

Develop screening tools (*particularly for beet sugars*)

inexpensive

accessible (i.e. on-site or rapid turn-around)

relatively accurate

(i.e. low number of false negatives,

higher number of false positives acceptable)

Set up on-site capabilities to monitor for added corn sugars using the TLC test, or color method for HMF.

Develop confirmatory tests

single test for multiple inexpensive sweeteners

less expensive than current tests

faster turn-around time

greater accuracy (lower limit of detection)

ECONOMIC ADULTERATION -- POLICY AND PROGRAMS

Discourage illegal activities

Increase enforcement by federal or state authorities

collect and present data

develop tests that they will use

Develop "model" program to sue under RICO

Encourage testing in industry²

Develop model sampling strategies for any aspect of industry which we may wish to survey
(producers, packers, imports, domestic, total industry)

What is the relationship between economic adulteration and the price of honey?

Expand pure honey collection

Shepherd HPLC and GC procedures through AOAC

Imported honey requires consistent, continued and more intensive attention.

² *opportunities for free or inexpensive testing have, historically, been ignored*

PESTICIDE RESIDUES

*** the pesticide residues of interest will change on a regular basis ***

TECHNOLOGY AND RESEARCH

Screening assays -- need to be inexpensive, accessible, and relatively accurate

Hoersch-Roussel, \$10,000, ELIZA, shared costs

Surveys -- need to monitor imports and domestic supply

Improved efficiency of recovery of pesticides from honey -- can this be a generic program

POLICY AND PROGRAMS

OTHER NEEDS

Instrument for on-site measurement of moisture and color.

Instrument dedicated to the accurate on-site analysis of honey for HMF.

Is there a need to stimulate research and train scientists capable of doing honey chemistry research?

Do we want to start a fellowship program?

Do we want to reactivate a honey research program at USDA? (\$500 K per year)

Equipment that detects parameters of honey quality, particularly for export

Do we need to re-educate government about the importance of pollination?

Does honey industry need access to more information on a regular basis?

Survey honey for microbial quantities and qualities

Develop demand for pharmaceutical grade honey?

PROFITABILITY

Identify the major market forces that limit the price of honey -- industry round-table? economic study?

Trade policies make the US a "honey sink" for the world and severely limit ability of domestic beekeeper to make a living -- can we do anything about this?

"There is no price incentive for a quality product."