Residues and Resistant Strains in Beekeeping

While scientist and beekeepers alike work on developing strains of bees that are resistant to many of the problems that besiege them, the problems themselves are developing resistance to the controls beekeepers are using.

Foulbrood bacteria have, in many cases, learned to live with the antibiotics beekeepers have thrown at it.

Varroa mites have developed resistance to Apistan, CheckMite+ and Amitraz. For testing for resistance: http://www.ars.usda.gov/Services/docs.htm?docid=7474

Partly this has been caused by the overuse and the misuse of the products. Partly it is due to having few solutions to problems and relying on them strongly.

While researchers work hard to give us bees that can fight their own problems, beekeepers must not make it harder for them by systematically using hard chemical. Not only do the chemicals leave residues in the hive that, in turn, gives the pathogen a better chance to become used to it, but it also makes it harder for the bees to "learn" to deal with the problems themselves.

It is critical that beekeepers wean themselves and their bees off the dugs they've been using and move toward more sustainable beekeeping practices. Integrated Pest Management includes using chemicals when necessary but concentrates on using all the available tools cautiously and appropriately. This will both minimize the resistance build up of the pests and diseases. (See the fact sheet on Integrated Pest Management.)

At the same time, scientists are finding out that many of the chemicals being employed to control mites are leaving chemical residues in the wax in the hive. Not only is this adding to the problem of resistant parasites, it is also adding other problems for the bees and adding to the risk of finding chemicals in a product we sell as pure and healthy.

Chemical residue in the wax has been shown to cause fertility problems for both queens and drones. It has also been found that that chemicals will migrate into supers and eventually show up in the honey product.