

“One of the first duties of a Scout is obedience to authority. He must obey his orders in the first place and put his own amusement or desires in the second.”

– Robert Baden-Powell

I have a friend who escaped Afghanistan when Kabul fell to the Taliban in 2021. Giving me a ride recently in his “new” car, he commented that there are a whole lot of traffic rules to remember here in the US. “Yes,” I said, “they keep everything running smoothly.” He smiled and said with a sigh, “Yes, I guess they do.”

Any disagreement so far?

What should we do when we don't like the rules, or when we think we have a better way of doing things than we are being told to do? Do the rules really apply in those situations too?

Within the past few years, there have been a growing number of beekeepers who, inspired by a well-known beekeeper, citizen-scientist and popular author, have told themselves that EPA regulations are, in the words of Captain Barbossa in *Pirates of the Caribbean*, “more what you'd call ‘guidelines’ than actual rules.” A popular application of this perspective has been to make homemade oxalic acid extended-release strips, use generic product not labeled for sale as a pesticide, and follow off-label application schedules that have been proven to be ineffective both by university researchers and in common practice. The populist advocate for these practices tells people to follow the law, then with a grin and a wink gives a full description of how to make his latest miticide recipe in their own kitchen.

This bravado was even adopted by a couple of state agriculture agencies (not North Carolina); they issued statements saying that their beekeepers can pretty much do as they like with respect to pesticide regulations.

¹ US EPA, “Advisory on the Applicability of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and Federal Food, Drug and Cosmetic Act (FFDCA) for Substances used to Control Varroa Mites



Would you buy a jar of this honey? Would you sell a jar of this honey or give it to your friends and family?

Fortunately, EPA responded to this march toward anarchy by issuing an advisory¹ to eliminate popular confusion about what is and isn't required with respect to following pesticide regulations in the bee yard.

Patrick Jones, Division Director of NCDA&CS Structural Pest Control and Pesticides Division and who is himself a beekeeper, spoke to my local county beekeepers' association to explain the advisory. He emphasized that the relevant Federal law, the *Federal Insecticide, Fungicide, and Rodenticide Act* (FIFRA), is all about protecting beekeepers, the public and the environment, even if it that means protecting us from ourselves. All we need is one headline-filling horror story of someone being harmed by a homemade or improperly-applied pesticide concoction to give NC honey a bad reputation that could last for generations.

The Director said that at the Federal level, EPA's primary concern is related to the distribution of unregistered pesticidal products. They want to prevent the distribution of untested, potentially unsafe substances. The

in Beehives”, <https://www.epa.gov/system/files/documents/2024-02/bee-advisory.pdf>

whole reason for the existence of the Agency is the very real history of such products being distributed across the country and causing harm.

In addition, the EPA prioritizes compliance with label directions. The difference between a toxic substance and a harmless one is its concentration and method of application. Ordinary water is a great example – it either kills or refreshes depending on how and how much it is used! The maxim, "*Sola dosis facit venenum*" ("The dose makes the poison") is paramount.

Director Jones explained that FIFRA does allow the use of unregistered pesticide products that are solely confined to someone's "own use." He gave the example of setting out a tray of beer in the back yard to kill slugs. Beer isn't registered as a pesticide, but the gardener is using it as one. That's okay (nobody is going to be fined or arrested) as long as the use is purely personal.

For beekeepers, "own use" would apply if, for example, someone has a backyard hive and they are the only person who ever consumes the hive products. However (***and this is the vitally key point***), the concept of "own use" evaporates once the beekeeper sells or distributes honey, wax, bees, queens or other hive products, including pollination services. Note that "distributes" includes giving them away outside of the beekeeper's household. I suspect that very few if any successful beekeepers have never sold a jar of honey or given one away to a coworker. Once we do so, our choices about what we put into our hives are no longer purely personal; they now affect the public, the group that EPA and NCDA&CS are devoted to protect.

Another important point made by the Director is that beekeepers are not holier-than-thou with some God-given right to flaunt the law. We beekeepers commonly scream about growers, gardeners and mosquito-control companies who, according to us, stray from the legal labeling requirements. Yet we have beekeeping colleagues who not only don't believe that pesticide laws apply to them, they

preach illegal practices at county chapter meetings and on chapter e-mail forums. Many of these practices, such as putting roach poison in hives to kill small hive beetles, cause rational-thinking beekeepers to cringe in horror (who would put anything into a hive that isn't known to be safe to eat in honey?), yet the number of their proponents seems to grow.

My important take-aways from Director Jones' presentation can be summed up as:

1. Whether a substance is subject to EPA and NCDA&CS oversight is determined by the user's intent with respect to the product. Any product can be considered a pesticide if the distributor, seller or user views it as a substance that kills a pest.
2. EPA and NCDA&CS aren't concerned with "own use" of unregistered pesticide products but it is highly unlikely that your beekeeping practices meet that definition. Furthermore, NCDA&CS draws the line with respect to "own use" when raw agricultural products are concerned. If an agricultural product leaves the producer's property, it draws NCDA&CS's attention and their obligation to protect the public becomes of utmost importance.
3. FIFRA and NC law say that it is illegal to use any registered pesticide in a manner that is inconsistent with its label. This is where the mantra, "The Label is the Law" comes from. A caveat is that it is permissible to use less than the EPA label directions dictate (e.g., half the dosage, one application instead of two) but not to use more than is allowed (e.g., doubling the dosage or increasing the number of applications contrary to directions).
4. A product that isn't a registered pesticide but has the same or similar ingredients as a registered pesticide cannot be used as a pesticide. Unless the specific product's ingredients are tested and approved with respect to safety, there is no assumption or guarantee that additional substances in the product won't adulterate the honey or wax.
5. The obvious issue with unregistered pesticides is that they have not been tested

with respect to safety concerns, important among which are acceptable tolerances in food and wax. For example, what is the acceptable level of roach poison in honey? Does a beekeeper using roach poison to kill small hive beetles have any idea how much of that is getting into his honey and wax? Has the guy on You-Tube showing everybody how he does it tested the proper dosage and application method so that there is no risk of harm? Of course not.

6. Tolerances of potentially harmful substances are defined by EPA. Registered products are proven to be compliant with respect to not exceeding those tolerances when they are applied according to the official product label. Unregistered products, including products with similar ingredients that are not produced and sold with the intent of being pesticides, cannot be assumed to comply with those food safety tolerances, nor can registered products if they are used more frequently or in greater quantity than allowed.

What’s the big deal? As mentioned, the staff at EPA and NCDA&CS are devoted to protecting the public from harm (including beekeepers). Even if someone has enough hubris to think that they know better than government regulators, do they genuinely believe that every lightly-educated person sitting next to them at a bee meeting does too?

Willingness to do the smart thing is supported by easily-accessible information on how to do so. A list of all NC-approved pesticides, along with their official labels containing directions for their use, are posted on a NCDA&CS-sponsored website (<https://www.kellysolutions.com/nc/>). We can search for a specific product, active ingredient or pest. For example, selecting “Search By Pest” and inputting “Varroa mite” yields all of the products we can use for that pest. There is a variety of them, applicable for any season, colony strength or treatment philosophy. Videos describing their proper use can be found at the [Honey Bee Health Coalition](https://www.honeybeehealthcoalition.com/) website.



The following selections will search the North Carolina Dept. of Agriculture & Consumer Services databases of pesticides. This information is compiled solely from pesticide registration data submitted by companies who wish their products to be sold in the state of North Carolina, combined with data from the EPA with regard to ingredients, pests and sites.

Please select from the following options

- | | |
|---|---|
| Search by Company Name (Registrant) | Search by Company ID Number |
| Search By Product Brand Name | Search By Product EPA Registration Number |
| Search By Pest | Search By Site |
| Search By Pesticide Type | Search By Formulation Type |
| Search By Active Ingredient | Search By Multiple Criteria |
| Show All EUP Products | Show All RUP Products |
| Show All SLN Products | Show All 25(b) Products |

Full information on all pesticides approved for use in NC can be found at <https://www.kellysolutions.com/nc/>.

I’m sure that everyone reading this agrees with the fundamental issues involved. We want to produce safe products that our neighbors, friends and family can enjoy. We recognize that “the dose makes the poison” and would never knowingly risk harming anyone... but would we be cavalier about doing so in a “don’t ask”/“don’t tell” manner? That’s what the rules are for – the testing has already been done; the safety recommendations have already been made. All that we as beekeepers must do is say, “Thank you very much” and follow them. I challenge you to not only do so but to also loudly object when our fellow beekeepers flaunt this common-sense approach and put all of our reputations in jeopardy. Director Jones and his staff can only work so many hours in a day and can only do so much. Only a statewide change in beekeepers’ attitudes will make a real difference.

Many thanks to Patrick Jones for reviewing this manuscript and for his 40-plus years of service to North Carolina’s NCDA&CS Pesticide Division.

Randall Austin is a NC Master Beekeeper who keeps a few honey bee hives in northern Orange County, NC. He can be reached at s.randall.austin@gmail.com.

Note: All previous articles are archived at https://baileybeesupply.com/educational_resources/ Copyright 2024, no reproduction in whole or in part without permission of the author, except for noncommercial, educational purposes.