

*“Technology is nothing. What’s important is that you have a faith in people, that they’re basically good and smart, and if you give them tools, they’ll do wonderful things with them.”*

— Steve Jobs

*“It is essential to have good tools, but it is also essential that the tools should be used in the right way.”*

— Wallace D. Wattles

One of my bee school students sent me an advertisement for some beekeeping equipment that she had seen on Facebook Marketplace, asking if it was a good deal or not. The seller had posted, “I have 10 complete frames as well as new never used honey frames. I don't know a lot about it. I purchased this with the intention to do bees but I have too many other things going on right now.” The pictures showed hive boxes, a basic set of tools and ten pretty, green, all-plastic deep frames.

That reminded me of a fellow I once met in a bee supply store. His buddy had tried to keep bees but they had all died. This fellow was going to work together with him to try again and was buying some new equipment. He insisted on buying a box full of pretty green frames; those were the ones that his buddy liked.

Sigh. This would be a good time to remind everyone that a good education doesn't cost – it pays! – and to encourage people to take a look at the article [“Get Thee to a Bee School!”](#) But I feel obligated to write more than three paragraphs. Plus, those pretty green frames are a bit of an enigma... what are they for?

### **The right tool for the right job**

It is somewhat common for beekeeping equipment producers to sell drone-sized plastic frames/foundation that is colored green. This can be a big help – the bright green color shouts, “Whoa! This foundation is special! Don't get it confused with the regular stuff!” Unfortunately they don't stamp it with a warning or attach a user manual that fully explains the intended purpose. The new



How do you choose frame and foundation types for your hives? Do you pick the prettiest one? Maybe that shouldn't be the deciding factor. Photo: Bailey Bee Supply

beekeeper wanders into a store and sees black, yellow, white and green foundation... pick one! Green is prettier.

The purpose of foundation with larger drone-sized cell imprints is to induce the bees to raise drones on that foundation instead of workers. Since honey bees prefer to have about 10% of their brood area reserved for drone production, giving them a dedicated space for drones tends to reduce the number of drone cells that they squeeze between the bottom bars of the top box and the top bars of the bottom box, as well as every other bit of random free space within the hive.

Even more clever, since *Varroa destructor* would generally rather feed on drone pupae than worker pupae, providing a frame of drone comb is like inserting a Varroa trap. Once the drone cells are capped, with reproductive mites under the cappings, the frame is removed and put in the freezer to kill the mites... and the drones (see [“Drones Don't Get No Respect”](#)). Just don't leave the capped drones on the hive long enough for the young bees to mature and emerge or you'll have ended up raising and freeing lots of mites too. Unfortunately, not only is this strategy not particularly effective, it can only be used during drone-production season, which in our area corresponds with swarm season and our main nectar flow.

Yet another legitimate use for drone foundation is to deliberately raise a lot of drones. If someone is raising queens, they will likely place drone-mother colonies some distance away from their mating nucs, arranged

so that no matter which way a virgin flies, she'll likely encounter the drones with which the queen-raiser wants her to mate. Having drone comb in those colonies is one way to ensure that the drone population is plentiful.

### What could go wrong?

Conversely, if a colony only has drone comb, what eggs will the queen lay and what brood will the workers raise? Drones. Just drones. Drones aren't workers. They don't work, at least not in the conventional sense. They don't forage. They don't raise brood. They don't attend the queen. Not only will a colony of nothing but drones never grow, they'll starve.

### What about the color brown?

Another bee supply store item that causes confusion is brown and looks like a queen excluder. Uses for queen excluders are covered in "[Queen Excluder/Honey Excluder](#)". But look carefully... your reading glasses may be useful for this... the brown plastic "queen excluders" have narrower spaces between the plastic dividers than the other options do. Is there a reason for that?

Well, the reason is that those aren't queen excluders at all. If a beekeeper were to put one between the brood boxes and the honey supers, they'd get zero honey. Zilch. Nada. Why? Because instead of being a queen excluder, the device is a propolis trap. Hopefully we were all taught in bee school that bees fill large open spaces with comb and they caulk up little bitty spaces (too small for a bee to pass through) with propolis. If a beekeeper has a use for propolis, perhaps selling it as a supposed health-related item or ingredient for furniture polish, a propolis trap is a handy piece of equipment. Put it over the topmost frames in the hive and the bees, if they feel cooperative, will fill in all of those little open spaces with propolis. Jane Beekeeper can then remove the device, put it in the freezer overnight, then pop all of that now-brittle propolis right off of the grid. But the worker bees cannot pass through the gaps so don't use it as a queen excluder.



Sometimes the bee store has more options than we know what to do with. Look at all of these queen excluders: yellow plastic, wood-bound wire, frameless wire.... Wait, how about that brown one on the end? That's pretty. Let's get it to go with our green frames!

### How can we know?

Beekeepers, generally, aren't stupid people. We've got jobs, driver's licenses, can tie our own shoes, etc. But presented with a constant supply of new-and-improved items, it isn't any wonder that we get confused about the function of familiar-looking equipment. What are we to do to avoid getting the wrong tool for the job? The best answer is to ask. Ask the shopkeeper. Ask an experienced beekeeper buddy. Ask your apiary inspector. Isn't it better to get a good laugh with a friend than to use a propolis trap as a queen excluder and get no honey?

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