

“Do you still not see or understand? Are your hearts hardened? Do you have eyes but fail to see, and ears but fail to hear?”

— Mark 8:17-18

There are all sorts of jokes floating around about how 2020 is the year to see things clearly. As beekeepers, maybe we should go along with that theme and declare 2020 “The Year of Diligent Monitoring.”

It is a rare beekeeper these days who fails to acknowledge that Varroa mites are the foremost threat to honey bees in our generation, but the response to that acknowledgement seems to be hit-or-miss. Even the most novice beekeeper will “inspect” her colonies periodically, often once a week in the beginning, but does that inspection include assessment of the level of Varroa mite infestation? Why not? If it is Varroa that are most likely going to kill our colonies, shouldn’t monitoring the Varroa status be Step One in any inspection routine? But I don’t see that as an actual priority among most hobby beekeepers. Why not?

I’m going to treat anyway

One excuse that I hear from folks who don’t take the time to monitor mite levels is, “I’m going to treat anyway, so why bother monitoring?” That excuse may, or may not, have been valid 20 years ago but unfortunately it isn’t adequate today for three important reasons:

1. It assumes that you know when treatment is needed. We all know that the best time to treat is in the “fall”, which for a beekeeper begins in August. That way we can have clean and healthy nurse bees raising our winter bees. I completely agree with this goal of an effective treatment strategy. We need our winter bees to be healthy and Varroa-free, and this treatment timing is part of that plan. But – it does no good to treat in August if your bees all died in July.
2. It assumes that only one treatment is needed. Years ago, I was able to treat my



NCDA&CS Apiary Inspector Lewis Cauble has a You-Tube video describing how he does Varroa mite assessments in the comfort of his air-conditioned kitchen.

colonies in August and they would sail through winter and into spring just fine. By the next August, they needed treating again. However, with the increase in popularity of beekeeping in my area, I get inundated with late-season “mite bombs” (see October 2018’s “[Have You Been Bombed?](#)”). In recent years I’ve been required to apply miticides three or four times per year: once in early spring, before honey supers go on; once in early summer, after honey supers come off; in early fall (August), to get healthy nurse bees raising healthy winter bees; and again in late fall (late September/October) to combat the influx of Varroa-laden “mite bomb” bees. I would love to be able to scale back the number of times that I must apply miticides but I won’t know if I can do that without monitoring Varroa levels.

3. It assumes that the treatment works. Without post-treatment assessment, we don’t know if the treatment we applied was sufficiently effective. We don’t even know all of the many factors that are involved in allowing our miticides to work as intended, but common sense suggests that things like strict adherence to label directions, colony size, colony composition, Varroa infestation level, Varroa population composition (phoretic versus reproductive), temperature, humidity, amount of honey bee drift, hygienic characteristics of the

bees, level of control among neighboring colonies and who-knows-what-else must come into play. So even something that “should work” may not work as well as expected during any particular application. In addition, a treatment may cause a significant reduction in infestation but the infestation level was so great to begin with that the end result still isn’t good enough. In these cases, another round of treatment, perhaps with a different substance, is necessary.

I’m NOT going to treat anyway

The corollary to “why monitor if I’m going to treat?” is “why monitor if I’m not going to treat?” I don’t see nearly as many so-called “treatment free” beekeepers these days as I did ten or fifteen years ago, but some are still around, and a few new ones pop up every day. This type of beekeeping falls into two different camps:

1. Sincere, dedicated beekeepers who are desperately trying to avoid the miticide treadmill, or at least reduce our dependence on it
2. Lazy, stupid beekeepers who have no understanding of, or respect for, the living creatures that have been entrusted to their care

If you are in the second group... well, you probably aren’t reading this so there is nothing that needs to be said. But if you are in the first group, you face an immense challenge. It would be wonderful if your colony genetics and bottom-tier Integrated Pest Management practices actually keep Varroa infestations in check. **But is it working?** For these beekeepers, monitoring is perhaps even more critical than for their more conventional colleagues. If their high-dollar Varroa Sensitive Hygiene (VSH) queens’ workers aren’t keeping mites under control, then they’ve wasted their money. They need to clean up their infestations and then requeen immediately with a different genetic line. Likewise, if their passive Varroa strategies aren’t making a significant impact, they must find effective alternatives.

Let me be perfectly clear: a “live and let die” approach, whereby beekeepers do nothing with respect to Varroa management, replacing their dead-out colonies every spring and allowing Varroa mites to breed unencumbered and spread to all other colonies in the vicinity is not only irresponsible but reprehensible. It directly thwarts the goal of developing a state of co-existence between bees and mites. By substantially increasing the Varroa load in a region, these people are undermining the efforts of those who are trying to nurture bees who can, hopefully, deal with mild infestations without assistance.

So, unless you want to be the source of death and doom for your neighborhood, beekeepers who don’t intend to apply miticides as a first-line of defense must engage in a frequent monitoring program and use effective means to address the issues that are discovered. Everyone must control their Varroa mites; the strategy you use is your choice as long as it is effective. And the only way to know that is by monitoring. If you aren’t going to employ an effective Varroa control strategy, then please give up beekeeping and try a different hobby. (See February 2019’s “[Maybe We Shouldn’t Keep Honey Bees After All](#)” for more on this topic.)

It’s too hard

A major obstacle to conducting periodic Varroa mite sampling is that for some people, it just seems too difficult and/or time consuming. However, those people aren’t doing it right! There is no reason whatsoever for proper mite sampling to be unduly burdensome. It is far easier than many of the chores we do as beekeepers.

If you are under the misconception that Varroa sampling is difficult, then please review the Honey Bee Health Coalition’s free handbook, “[Tools for Varroa Management: A Guide for Effective Varroa Sampling and Control](#)” and especially watch their video <https://www.youtube.com/watch?v=lgPft9FQxLc> showing several techniques that make

sampling simple. The sugar-shake assessment is also explained in step-by-step detail in March 2016's "[I Don't See Any Mites.](#)"

Still not easy enough for you? NCDA&CS Apiary Inspector Lewis Cauble collects samples in the bee yard but doesn't process them on site. He stores the samples in Zip-Lock baggies, then does his counting procedure at home, in air-conditioned comfort, whenever he has free time. Watch his video to learn how he collects samples <<https://youtu.be/cBfkFdul1BY>> and how he does the actual mite counts <<https://youtu.be/Bc6-WzBFLQ4>>. Note that the equipment he uses is just about as simple as you can get.

For a perspective on how a commercial beekeeper does quick-and-easy mite sampling on thousands of hives, watch Randy Oliver's video <<http://scientificbeekeeping.com/how-to-perform-an-alcohol-wash/>>. A description of how to construct his fancy wash cup is found at <<http://scientificbeekeeping.com/an-improved-but-not-yet-perfect-varroa-mite-washer/>>. If you want fancy but aren't in the mood for a DIY project, you can purchase an alcohol-wash system at your local bee supply store.

Any more excuses?

According to EAS Master Beekeeper John Gaut,¹ "[Varroa] mite management is more than just treating and hoping for the best." Instead, it requires:

1. Understanding the biology of the varroa mite
2. Understanding the population dynamics of the colony and mites
3. Developing a plan that includes testing and treatment
4. Executing the plan
5. Assessing the results and developing an improved plan, incorporating any new information

The question for each of us is whether we will step up to the plate and bee-KEEP rather



The Varroa EasyCheck combines a sampling cup with a strainer, making alcohol washes very simple. Or make your own system with just a jar and strainer.

than just bee-HAVE. In 2020, being a bee-KEEPER requires effective management of Varroa mites – they are an integral component of modern colony dynamics and are here to stay. Is our vision clear on that?

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¹ John Gaut, "Mite Management: A Successful Beekeeper is a Successful Mite Manager", New Jersey Beekeepers Association Newsletter, vol 30,

issue 1, pp 10-12.
http://www.njbeekeepers.org/Site_Docs/Newsletters/Volume32Issue1.pdf