

Beekeeping Basics

Do My Honey Bees Need a Veterinarian?

by MEGHAN MILBRATH



When my dog was due for a rabies vaccine, I took him to a veterinarian to get his shots. When I needed to sell some sheep to a farmer in Indiana, I called a veterinarian to get a health certificate. When my bees got sick, I never needed to call a veterinarian — until recently. Even though honey bees are animals that get sick, have nutritional issues, and need health certificates, honey bees in the United States historically haven't been under veterinary care. However, in 2017, new federal regulations have brought veterinarians and beekeepers together for the first time. As a beekeeper, you should know how to work well with a veterinarian so that you can ensure that you have access to all the tools you need to keep your bees in their best health.

You really only need to work with a veterinarian if you need antibiotics. Right now, the role of veterinarians is very limited — they provide the paperwork so you can legally purchase antibiotics. If you don't need antibiotics, you don't need to find a veterinarian for your bees. Hopefully in the future, after more veterinarians get involved in honey bee care and more veterinary schools have honey bee programs, we will be able to call a vet with honey bee nutrition questions, or for recommendations on mite controls. But for now, their role is just to provide legal access to antibiotics. Health certificates will still be issued through your state apiarist, who usually works through the Department of Agriculture. Miticides, which are technically pesticides and not antibiotics, are still available for purchase directly from bee supply companies.

You need to have a relationship with the veterinarian first. Licensed veterinarians can only prescribe medications for animals with whom they have a veterinarian-client-patient relationship (VCPR). Most states use the federal definition of a VCPR, but some states will have even stricter requirements. The federal VCPR definition is below:

1. A veterinarian has assumed the responsibility for making medical judgments regarding the health of (an) animal(s) and the need for medical treatment, and the client (the owner of the



A beekeeper applies oxytetracycline to a colony with European foulbrood. Before the antibiotic could be purchased, they had to call and have a veterinarian email a VFD to the bee supply company.

- animal or animals or other caretaker) has agreed to follow the instructions of the veterinarian;
2. There is sufficient knowledge of the animal(s) by the veterinarian to initiate at least a general or preliminary diagnosis of the medical condition of the animal(s); and
3. The practicing veterinarian is readily available for follow-up in case of adverse reactions or failure of the regimen of therapy. Such a relationship can exist only when the veterinarian has recently seen and is personally acquainted with the keeping and care of the animal(s) by virtue of examination of the animal(s), and/or by medically appropriate and timely visits to the premises where the animal(s) are kept.

It is up to the veterinarian to make sure that the VCPR requirements are met. It is really important that you cooperate with them — if you ask a vet to prescribe an antibiotic without letting them get to know you and your bees, you are asking them to put their license at risk, so be reasonable, and make sure that they can put together a good file for their records. They don't have to come out and inspect every hive, but they do need to know the basics of your operation: how many colonies you have, where those bees go, and how much knowledge you have as a beekeeper about bacterial diseases and antibiotics. If you already have a veterinarian for other animals, they may just need to talk to



Students at Michigan State University College of Veterinary Medicine practice hive handling skills in one of Michigan beekeeper Jim Baerwald's commercial beekeeping yards. Beekeepers from all over the state opened up their operations and their hives for the students so they could get hive handling experience in a variety of scenarios during their three-week honey bee rotation.

you about your bees and their needs. If the relationship is brand new, the veterinarian may have to come for a visit, talk with you, and see your bees before they feel comfortable writing an order for antibiotics. Once a relationship is established, the veterinarian will have more flexibility, and may be able to provide an order over the phone or email, depending on what is allowed in their state.

Your veterinarian does not have to be a bee expert. A veterinarian's license covers them for all sorts of animals, and it is impossible for someone to be an expert in every species. While some veterinarians choose to specialize, their license is broader than their specialty. The license of your horse veterinarian also covers them to work with your dog, your pet bearded dragon, and your bees. When they are in veterinary school, vet students not only learn about animal health, but they also learn how to use good resources to find answers. If they don't automatically know about the nutritional requirements for your bearded dragon, they will know where to look, and who to talk to. It isn't important that your veterinarian understands swarm control, or can raise queens. They just need to be comfortable that when they write an order for antibiotics that it is in the best interest for you and your bees. There are more and more resources for veterinarians to learn about bee health, including online continuing education classes, and a best management practices document by the American Veterinary Medical Association.

There are many different types of beekeepers and many different types of veterinarians. A small hobby beekeeper may prefer to work with a small animal veterinarian who is used to working with cats, dogs, and other pets, and can provide each hive with individualized attention. A commercial beekeeper will likely be happier working with a large animal vet, who is used to working with large herds of animals, and dealing with food animals that are in high risk situations. While most small-scale, stationary beekeepers will rarely see bacterial diseases in their hives, many commercial hives will be put in situations that are high risk for epidemics, in contact with thousands of other colonies. Large animal vets often work in similar situations with animals who are shipped, under stress, and in large herds. They can recommend disease prevention and control plans that will take into account risk and the potential for disease spread.

Veterinary licenses are for a particular state. Each veterinarian is licensed to work in a particular state. They may have multiple licenses if they live near a border, and a few states have reciprocity agreements. However, a veterinarian will usually only be able to prescribe antibiotics for bees that are in that state. You can bring antibiotics with you when you travel (just like you would bring medications for your dog when you go on a trip), but your home veterinarian likely won't be able to prescribe antibiotics if a problem arises when you are in a completely different state. If

you are going to be moving your bees to another state, make sure you have a plan before you need antibiotics. Talk to your veterinarian about the risks that you expect in the other states, or establish a relationship with a vet in each location. Remember, once a good relationship is established, a veterinarian will have a lot more flexibility to work with you.

You need to get some paperwork from your veterinarian before you can purchase antibiotics. The new regulation requires that you get an "order" from a veterinarian. This order can be one of two kinds: a veterinary feed directive (VFD) or a prescription. The type of order (VFD or prescription) depends on the label on the antibiotic, determined by the manufacturer. Drugs that are available through a prescription can be purchased at a pharmacy — usually the veterinarian has access to a pharmacy that can provide the right amount. Drugs that are available through a VFD can be purchased through licensed distributors. Most of the bee supply companies have done the paperwork to become licensed distributors, so you can still purchase antibiotics from them. You just need to have the vet send the paperwork. Right now, only one type of antibiotic is available through a VFD, the rest are available through a prescription. It is up to your veterinarian to get the appropriate paperwork; you don't really have to worry if it is a VFD or a prescription. You just have to follow the directions that they provide.

You can only use antibiotics for bacterial diseases. Honey bees have two main bacterial diseases: American foulbrood (AFB), and European foulbrood (EFB). Other diseases, like parasitic mite syndrome, nosema, sacbrood, and chalkbrood are not caused by bacteria, so antibiotics will not work for them. In the United States we have one antibiotic that is labeled for EFB: oxytetracycline/Terramycin (OTC). This antibiotic and two additional antibiotics (tylosin/tylan, and lincomycin hydrochloride/Lincomix) are labeled for AFB. Many other antibiotics are effective against foulbrood diseases, but are not labeled for honey bee use due to their importance in human health applications. Most beekeepers prefer to use OTC first, because it has a shorter withdrawal time than Tylosin. However, there is some antibiotic resistance to OTC in AFB, so some beekeepers need to use Tylosin. There is no resistance for



Secondly, honey bees have all sorts of threats to their health. Once we have more trained veterinarians, we will have so many more experts that we can approach for advice on parasite control, nutrition, and all sorts of other honey bee health issues. Many veterinarians are looking for more experience with bees. Take the time to talk to them about your operation and to teach them about honey bee biology and behavior. Contact your vet and see if they want to get hands-on experience in the bee yard. If you have a veterinary school in the area, partner with them to give students more time working with hives. The more that veterinarians know about bees and beekeepers, the better they can work with us to keep our animals healthy.

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Veterinary students in the MSU honey bee rotation talk to Michigan beekeeper Wes Greene. It is important for veterinarians to not only understand bee biology and disease diagnosis, but to also understand how beekeeping businesses operate, and the challenges that beekeepers face.

OTC yet in EFB. All of the versions of Tylosin and Lincomycin are available only through a prescription, but some versions of OTC are available through a VFD.

Overview of working with a veterinarian

1. Talk to a veterinarian to set up a working relationship. Ask what they need for a VCPR, and provide them with enough information so that they can create a file for you, and understand your operation.
2. If you suspect that you need antibiotics, contact your veterinarian. They will let you know what information they need to fill out the necessary paperwork. The amount of information will depend on your scenario and the veterinarian. A veterinarian may ask you to send a sample to the Beltsville laboratory for confirmation, or they may trust your judgement in diagnosing disease or identifying high risk scenarios if you have a strong working relationship.
3. The veterinarian will write out either a prescription or a VFD. If it is a VFD (for OTC), they will usually email it to the bee supply store, and you can place your order for the antibiotics. If it is a prescription, they can usu-

ally help in getting the antibiotics through their pharmacy.

While it may seem like an extra hurdle and expense for beekeepers to work with veterinarians, it is important to remember that the veterinarians didn't ask for this new policy change (they may not want to work with you either, so be nice!). In fact, these policy changes regarding antibiotics were really targeted at the animals that use tons of medications: pork, cattle, and chickens. Honey bees got covered under this new legislation even though they use such a relatively tiny amount of antibiotics, because technically they are food producing animals that use medically important drugs (medications that humans use too). They basically got caught under the umbrella of the policy. Because this regulation was not written with bees specifically in mind, it has been a little slow for everyone to understand the new system and develop guidelines.

While it may be more difficult to access antibiotics in the short term, working with veterinarians will be great for bees in the long term. First, it is really important that we use antibiotics well, and having veterinarians involved can help us make sure that we aren't using them in a way that can lead to more resistance or risking honey becoming contaminated.