

Beekeepers & Veterinarians Working Together for Healthy Bees & Safe Honey

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Why Are Beekeepers Calling Me?

- Beekeeping is a growing hobby in the USA
- New Beekeepers tend to have heard about the problems bees are facing and want to “do something to help”
- Beekeeping is a steep learning curve & Beekeepers are starving for information
 - Clubs or Businesses that Teach Classes, books, & the internet
 - **TN Master Beekeeper classes (a good source of information)**
- Beekeepers have as much angst about calling a veterinarian as veterinarians have about seeing honey bees.
 - Commercial Beekeepers make a living taking care of honey bees
 - Worry Fees are too high, veterinarian won't have knowledge

Why Are Beekeepers Calling Me?

- Honey Bees are fed Oxytetracycline, Tylosin, or Lincomycin mixed in Sugar to control diseases of brood.
- Antibiotics have been fed to bees for many years with no oversight and have been used as the untrained person saw fit.
 - “ I had a real tough time with mites, so I had to feed Tylan to clean them up”
- About 1 in 14 beekeepers used antibiotics in a 2015 management survey by the Bee Informed Partnership (~350/5000). These beekeepers average almost 1000 hives.

Why Are Beekeepers Calling Me?

- The FDA has brought Veterinarians and Beekeepers together
- Seize the opportunity
- Bees need Preventative Care, Parasite Control, Disease Diagnosis and Disease Treatment.
- Beekeepers need Education and Knowledge.
- Veterinarians have an ideal background to provide these.

Indications for Antibiotics

- Bacterial Diseases
 - American Foulbrood (AFB)
 - Spore Forming - cannot be treated with Antibiotics
 - A source of infection for other bees
 - Burn the Hive & Destroy Equipment, etc.
 - **TN requires the hives to be destroyed & a Reportable Disease**
 - European Foulbrood (EFB)
 - Can use other measures to Rid the Hives of this disease
 - Can Treat and Cure with Antibiotics (2nd line of defense)
 - Use Water Soluble Products

Writing A VFD for AFB or EFB

- Not Warranted-Doesn't Make Sense
 - 50 lb Bag
 - Bee Suppliers were making a Premix before Jan 1st
 - Unable to purchase premix now
- More practical to use Water Soluble Products for Tx
- Oxytetracycline - Terramycin & Pennox are labeled
- Extra-Label Not Legal
- Both are set-up in Global Vet Link
 - Species: Invertebrate
 - 7000 G/TON

Oxytetracycline - Only VFD Drug Approved

- **Brand Names:** Terramycin & Pennox
- **Dosage:**
 - 200 milligrams per colony.
- **Indication:**
 - Control of American Foulbrood caused by *Bacillus larvae*, and European foulbrood caused by *Streptococcus pluton* susceptible to oxytetracycline.
- **Withdrawal Time:**
 - Remove at least 6 weeks prior to main honey flow.

Oxytetracycline (Terramycin) Label

HONEY BEES		
<p>Control of American Foulbrood caused by <i>Paenibacillus</i> larvae, and European Foulbrood caused by <i>Streptococcus pluton</i> susceptible to oxytetracycline</p>	<p>200 mg/colony</p>	<p>See Mixing Directions below</p>
<p>Warning: Remove at least 6 weeks prior to main honey flow.</p>		

Mixing and Use Directions for Honey Bees

Due to the high drug concentration of this product, an intermediate mixture must be prepared for use in bees. To prepare this intermediate mixture add 7 lb of Terramycin 100MR to 200 lb of powdered sugar and mix well. This mixture contains approximately 200 mg of oxytetracycline hydrochloride activity per oz.

Dusting Directions: Apply 1 oz (200 mg oxytetracycline) of this mixture per colony. Apply the dust on the outer parts or ends of the frames.

Syrup Directions: Use 1 oz (200 mg oxytetracycline) of this mixture per 5 lb jar containing 1:1 sugar syrup (equal parts sugar and water w/w) per colony. Dissolve in a small quantity of water before adding to syrup. Bulk feed the syrup using feeder pails or division board feeders or by filling the combs. Prepare fresh syrup for each application.

Administer in 3 applications of sugar syrup or 3 dustings at 4- to 5-day intervals. The drug should be fed in the spring or fall and consumed by the bees before main honey flow begins to avoid contamination of production honey.

Extender Patty Directions: Use 4 oz (800 mg oxytetracycline) of this mixture mixed with 165 g of vegetable shortening (Crisco® or equivalent) and 330 g of sugar. The patties are placed on the top bars of the brood nest frames.

Contraindication: Dusting of uncapped brood cells has been reported to cause death of larval honey bees. Do not dust uncapped brood cells.

Water Soluble Prescription Drugs Approved

- Oxytetracycline, Tylosin and Lincomycin available for use in honey bees by prescription
- **Oxytetracycline Most efficacious (TM 343, Pennox 343) – Recommended**
 - **Used TM 10 B4 Jan 1 – not available now, has caused some problems**
- Only approved for treatment of AFB, and not approved for EFB
 - Extra Label Drug Use is allowed with a prescription under ELDU regulations.
 - Visit AABP's guidelines for VCPRs & for Prescription Writing Guidelines
- For treatment of EFB or AFB, oxytetracycline can be mixed with powdered sugar according the labeled instructions and applied to the top of the frames of the brood nest following the dosage and timing on the label.
 - Do not dust uncapped brood cells – can cause death
 - Oxytetracycline degrades rapidly in a sugar syrup – prepare a fresh syrup solution daily
- With any antibiotic use, make sure records are kept of the dates of treatments, drug, dosage, prescribed withholding time, and identity of the hives.

Oxytetracycline - Terramycin 343 (TM 343)

- For control of American Foulbrood caused by *Bacillus* larvae
- 200 mg/colony
- The drug is administered in 3 applications of sugar syrup or 3 dustings at 4- to 5-day intervals. The drug should be fed early in the spring or fall and consumed by the bees before main honey flow begins to avoid contamination of production honey.
- Remove at least 6 weeks prior to main honey flow.
- **CAUTION:** Use as sole source of oxytetracycline. Prepare fresh solutions every 24 hours. Special Note: The concentration of drug required in medicated water must be adequate to compensate for variation in the age of the animal, feed consumption rate, and the environmental temperature and humidity, each of which affects water consumption.

Tylosin (Tylan)

- For the control of American Foulbrood (*Paenibacillus* larvae)
- Colonies should receive three treatments administered as a dust in confectioners/powdered sugar.
- Mix 200 mg tylosin in 20 g confectioners/powdered sugar. Use immediately.
- The 200 mg dose is applied (dusted) over the top bars of the brood chamber once weekly for 3 weeks.
- The drug should be fed early in the spring or fall and consumed by the bees before the main honey flow begins, to avoid contamination of production honey. Complete treatments at least 4 weeks prior to main honey flow.

Limitations

- Antibiotics should be fed early in the spring or fall and consumed by the bees before main honey flow begins to avoid contamination of production honey.
- Remove at least 6 weeks prior to main honey flow.
- Use tylosin only in the fall and not in the spring. Tylosin should only be used according to directions as a powdered sugar mixture immediately after mixing.
- Honey stored during medication periods in combs for surplus honey should be removed following final medication of the bee colony and must not be used for human food. To reduce spread, honey from bee colonies likely to be infected with foulbrood should not be fed other colonies.
- Each state has specific regulations relative to disease control and medications. TN Beekeepers must destroy hives if AFB is diagnosed.
- Off label or extralabel use of medicated feed products including VFD products are not permitted. However, in general, enforcement action will not be recommended or initiated when the use is consistent with FDA Compliance Policy Guide 615.115 – Extralabel Use of Medicated Feeds for Minor Species.

Bee Resources

- The State would like a List of Veterinarians interested in working with bees. Please let us know if you are interested and we will get you on the list. Send an email with contact info to drhaganwillis@gmail.com
- www.BeeVets.com can register on that list too
- TVMA VFD Resource Page & Archived Webinars
- Christopher J Cripps, DVM, Betterbee, the Northeast Center for Beekeeping, chris@betterbee.com, 518-290-3168
- AVMA Resource Page
 - <https://www.avma.org/KB/Resources/Pages/VFD123.aspx>
 - Honey Bees 101 for Veterinarians & Webinars

Working Together for a Greater Cause

Improve Wellness
of the
People in our Profession

Veterinary Professional Wellness- A Personal Account

- TVMA Charge this year to Visit Every Practice
- September 2016 AABP Conference
- Practice Act addition for CE credit for Wellness
- February 2017 MCVC – Wellness Tracks
- March 2nd-5th 2017 Emmaus Walk
 - Contact Me for more detailed information
 - 931-409-1159 or drhaganwillis@gmail.com
- Practice Transformation Movement

Wellness & Balance

- Work Together!
- Know the Resources Available
- Get help, Talk to SOMEONE
- Take Care of Yourself & Your Family
 1. Sleep Time
 2. Physical Time (Exercise)
 3. Focus Time
 4. Time-In (Spiritual Time)
 5. Downtime (Do Nothing)
 6. Playtime
 7. Connecting Time
 8. Good Food



Veterinarian & Support Staff Help Resources

- Suicide Prevention 24/7 Hotline **1-800-273-8255**
- TVMA (Tennessee Veterinary Medical Association)
 - Wellness Website, Karen Collins Wellness Chair:
www.tnvetwellness.org
 - Wellness Webinar: <http://tvmanet.com/webinar/>
 - Tennessee Medical Foundation **615-467-6411**
 - TVMA office **931-438-0070**
 - Veterinary Social Work Helpline: **865-755-8839**
- TVMA Large Animal Chair Person & Middle TN Area Representative
 - My Personal Cell: **931-409-1159**
- AVMA (American Veterinary Medical Association)
 - Wellness Website:
<https://www.avma.org/ProfessionalDevelopment/Personal/PeerAndWellness/Pages/default.aspx>
 - PetpoisonHelpLine Webinar: <http://www.petpoisonhelpline.com/veterinarians/webinars/avma-life-co-sponsored-webinars/>

A Call to Serve

- TVMA Large Animal Interest Group
- Chair
- Group Member - Meet to be proactive, come up with solutions for problems, and/or make decisions
- Task Force
- Email drhaganwillis@gmail.com if interested in any of the above.