

VARROA DESTRUCTOR MITE

Foragers Beekeeping Club



Varroa Destructor Mite

- ▶ Originally native to Asia feeding on Asian honey bee (*Apis cerana*)
- ▶ European settlers brought the European Honey Bee (*Apis mellifera*) to Asia, becoming susceptible to the mite and then infested colonies were then exported back to Europe, from where it has spread globally
- ▶ Now in all parts of the world except Australia

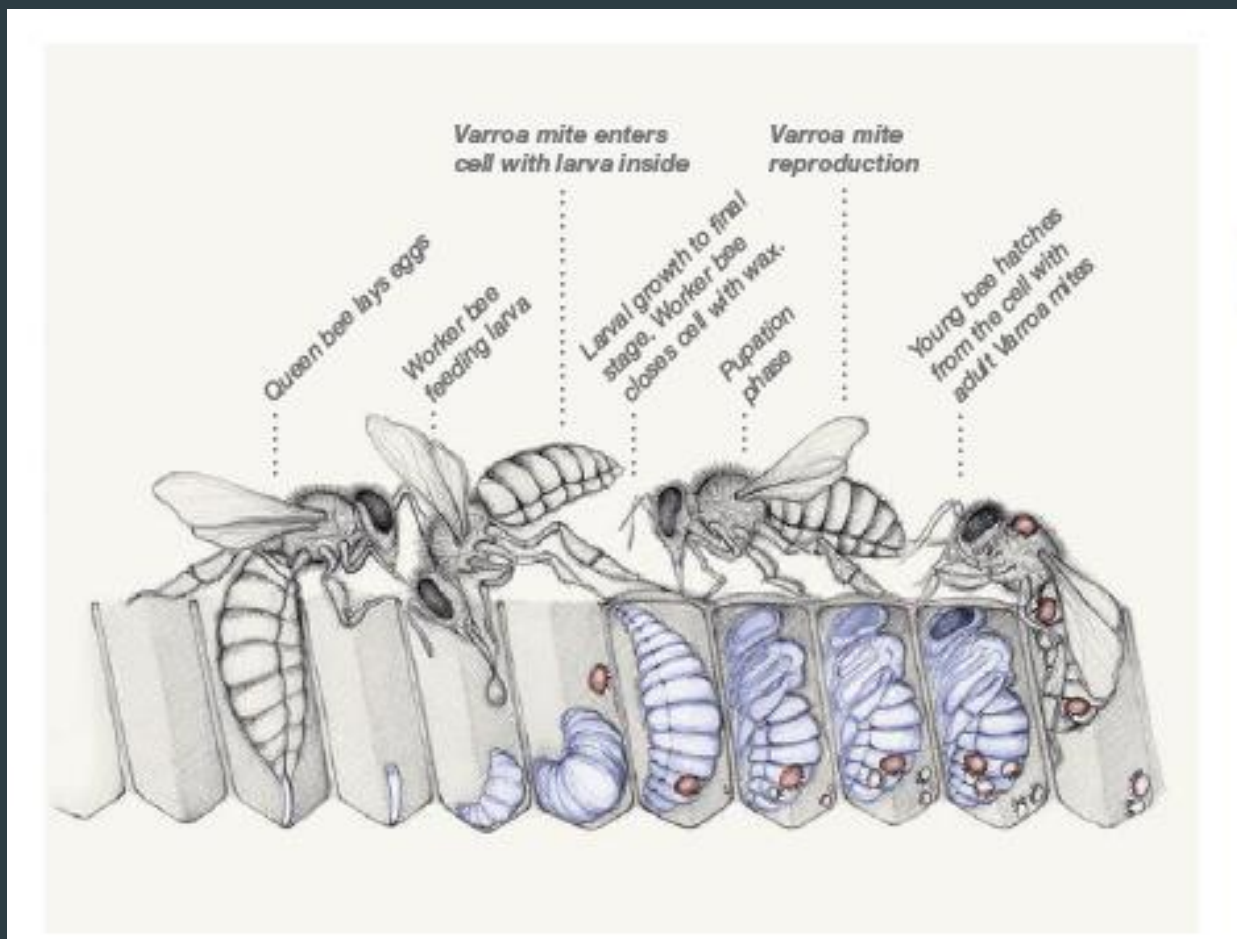


Varroa Mite & Honey Bees

- ▶ Most devastating pest for the European honey bee
- ▶ Current research shows that the mite causes damage by feeding off of the honey bee's fat tissue
 - ▶ Honey bee's fat tissue is important for their immune function, pesticide detoxification, overwinter survival, and other important processes.
- ▶ For decades, it was believed the mite fed on the honey bee's hemolymph (bee's equivalent to blood) and vectoring viruses



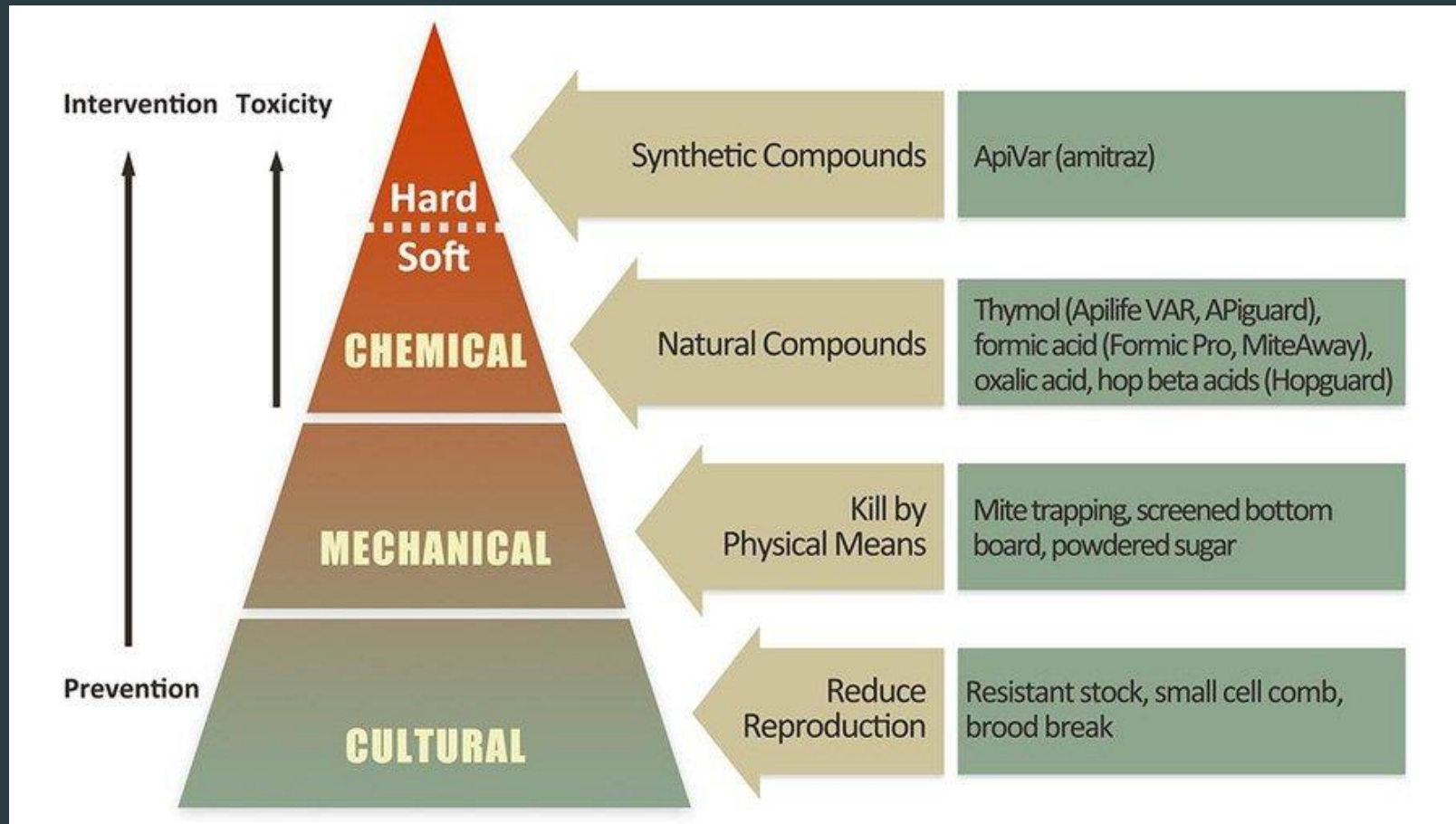
Varroa Mite Lifecycle



Varroa Mite Monitoring

- ▶ Sticky boards – count the number of mites that fall onto the board; not precise method
- ▶ Sugar roll – collecting bees in a jar, covering with powdered sugar, rolling, waiting and shaking out varroa mites; should do twice to get accurate count.
- ▶ Alcohol wash – similar to the sugar roll, except covering them in alcohol and then counting the mites after the wash; all of your honey bees die that are in the jar

Varroa Mite Treatments/Control



References

- ▶ Robyn Underwood-Margarita López-Urbe-Robyn Underwood-Margarita López-Urbe - <https://extension.psu.edu/methods-to-control-varroa-mites-an-integrated-pest-management-approach>
- ▶ “IPM 7 The Arsenal: ‘Natural’ Treatments - Part 1.” *Scientific Beekeeping*, 26 Feb. 2018, scientificbeekeeping.com/the-arsenal-natural-treatments-part-1/.
- ▶ Ramsey, Samuel D., et al. “Varroa Destructor Feeds Primarily on Honey Bee Fat Body Tissue and Not Hemolymph.” *PNAS*, National Academy of Sciences, 29 Jan. 2019, www.pnas.org/content/116/5/1792.