

Frequently Asked Questions

What is American Foulbrood?

- American Foulbrood (AFB) is the most serious brood disease of honey bees. It is caused by a spore-forming bacteria, *Paenibacillus larvae*.

What does it look like?

- Spotty Brood Pattern (not always specific to AFB)
- Perforated brood cappings of the brood cell
- Wax cappings that are sunken in
- Dead larvae exhibiting a gooey, mucus-like consistency that settles to the bottom of the brood cell
 - This is a condition specific to AFB. Place a match stick or thin twig into the cell, rotate the stick 360° and slowly pull the stick out of the cell. If the material in the cell stretches out to a length of 2.5 cm or more, it is infected by AFB. No other brood disease displays this symptom. American foulbrood does not always display this symptom. If it is early in the infection, the dead larvae will not be gooey enough. In later stages the dead larvae will harden and dry. If this symptom is encountered, it is most definitely AFB
- Black hardened scale that adheres to the wall of the wax cell
- Foul smell
 - There may be a foul odor which has been described as “fishy” or “rotten”

Symptom guide from Bee Informed: <https://beeinformed.org/2013/10/21/american-foulbrood-afb/>

USDA quick summary: <https://www.ars.usda.gov/northeast-area/beltsville-md-barc/beltsville-agricultural-research-center/bee-research-laboratory/docs/american-foulbrood-disease/>

YouTube video: <https://www.youtube.com/watch?v=OnfLPfOeyeA>

Where has American Foulbrood been reported in San Mateo County?

El Granada
Half Moon Bay
Pescadero*
San Mateo
Tunitas Creek

*confirmed AFB - sample sent to USDA Bee Lab

What should I do if I think I have it?

- Call our office (650) 363-4700 and we can send Apiary inspectors to check and take a sample. There is no fee for this service.
- If it is confirmed that your hive has AFB, the only solution is to kill the colony, seal the hive against robbing, burn and bury the hive.

Since it's so contagious, how do I prevent spreading it?

When handling your hives, please implement biosecurity practices to mitigate the spread of disease and parasites:

- Use disposable gloves and change them between apiary locations
- Clean and sterilize hive tools and suits between each apiary location.
- Use a disposable tool like a matchstick or toothpick to investigate potentially infected cells. Do not use a hive tool

- Do not collect honey from an AFB infected hive. It will contaminate extraction equipment and serve as a new infection pathway by robber bees.
- Resource for Prevention and Management for AFB:
<http://www.omafra.gov.on.ca/english/food/inspection/bees/afb-mgmt.htm>

Where do I send a sample? Can I use a VITA kit?

- Please refer to this site for How to Submit Samples: <https://www.ars.usda.gov/northeast-area/beltsville-md-barc/beltsville-agricultural-research-center/bee-research-laboratory/docs/how-to-submit-samples/>
- The Bee Lab made a YouTube video with details for submitting samples to the lab:
https://www.youtube.com/watch?v=vto9e5b_5uM
- Send samples here:
Bee Disease Diagnosis
Bee Research Laboratory
10300 Baltimore Ave. BARC-East
Bldg. 306 Room 316
Beltsville Agricultural Research Center - East
Beltsville, MD 20705
- VITA kits are available for purchase from Bee supply stores. According to the USDA Bee Lab, the kits are reliable with a positive result, but can give false negatives.

Is there a cure for AFB?

- NO! AFB infected bees and associated hive material (comb and frames) MUST be burned then buried. You cannot cure a colony with AFB with antibiotics and doing so will lead to antibiotic resistant strains of AFB.
- Hive components (hive bodies, covers, bottom boards, supers, related appliances) may be thoroughly scorched to disinfect once wax and propolis is removed.

Do I need a burn permit, and how do I get one? What can be burned?

- Our department can issue Agricultural Burn Permits for hives with AFB. We are currently looking into all disposal options and once we have more details, we will post it on our website.
- The Bay Area Air Quality Management District (BAAQMD) is allowing for the burning of all parts of the hive for colonies that are infected with American Foulbrood – that includes painted/treat wood (hive bodies) and plastic contained in frames. The required forms and process will be posted soon on our department's website. The only fee in this process is to the BAAQMD for a notification fee of \$138.

I've checked my hives and do not have AFB, how can I prevent getting AFB?

- There are preventative treatments (antibiotics) for non-symptomatic hives located in areas where AFB has been found recently. A Veterinary Feed Directive (VFD) is required to buy the treatments. We have a list of certified vets for CA, but none are local. A local beekeeper obtained a prescription from a local vet and was able to purchase some.

For additional questions, please call our main office at (650) 363-4700 during our office hours (Monday – Friday from 8:00 AM – 5:00 PM).