

# European Foulbrood

**Causative Agent:** *Streptococcus pluton* (Bacteria)

**Range:** Wherever European honey bees occur (some reports from African bees as well)

## Life cycle:

- This disease is more often a problem in the spring.
- Only fatal to young uncapped larvae.
- Later stages can be infected but the disease only affects the silk glands, and capping may be sparse but is not fatal.
- Fatalities typically occur when the bees are only 4 or 5 days old.
- After the larva dies the bacteria enters a spore stage. Unlike American Foulbrood this stage cannot survive extended periods of time (typically no more than 6 months).
- Dead larvae remain soft, pliable and usually twist/curl in the cell. Workers can easily remove the cadavers.
- Progression of color: white → yellowish white to brown → dark brown/black.
- Consistency of dead brood is watery (rarely sticky or stringy) and granular.

## Management:

- European Foulbrood is most common a few weeks after a colony loses a high number of the adult workers due to pesticides or other causes. If a cause can be identified, steps should be taken to avoid it reoccurring in the future.
- Treatment with Oxytetracycline can kill this disease but several precautions must be taken to prevent the contamination of honey and other products.

## Misconceptions:

Odor is not a reliable method of distinguishing this disease

Irregular brood pattern can be a sign of a problem (but not necessarily European Foulbrood)

## Other Useful Sites:

[Information and Pictures of American, European and Sac brood Diseases](#)

[Mid-Atlantic Apiculture Research & Extension Consortium Disease Control](#)

## References used:

Root, A. I. (1990) The ABC & XYZ of bee culture 40<sup>th</sup> ed. A.I Root Co. Medina, OH.

Morse, R.A. & R. Nowogrodzki (eds). 1990. Honey bee pests, predators and diseases. Cornell University Press Ithaca, NY.