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**EUROPEAN FOULBROOD (EFB)** has been detected via visual identification and rapid test by two (2) Northwest Georgia Beekeepers Association Club Members. Local County Agriculture Extension Agents were immediately contacted and conducted a site visit and colony inspections, confirming diagnosis. EFB is not reportable in Georgia.

European foulbrood (EFB) is a widespread, contagious bacterial disease affecting honeybee larvae. Caused by the bacterium *Melissococcus plutonius*, it spreads when nurse bees feed contaminated food to young larvae, which then starve to death in their cells.

European foulbrood is accelerated by cool and wet conditions, which makes sense for the number of detections we have seen and heard about in NW GA/Chattanooga area. The first two weeks of May have been cooler on average than previous years (48.42 average daily minimum temperature compared to 55 degrees last year and 57 the year before according to the UGA Weather Network Lafayette station). The cool temperatures coupled with the much needed, but heavy rain caused perfect conditions for EFB bacteria to multiply and show symptoms in hives. As we head into a short dearth, if the weather continues to stay cooler and we get rain, more local keepers may see symptoms of EFB in their hives with that risk decreasing as we go into summer. (Dr. Allison Johnson)

#### **What to look for:**

- A lag in colony number buildup can be an initial indicator
- Spotty brood pattern. This includes spotty/sparse capped cells, but more importantly areas of open larvae and eggs with mixed-aged larva.
- Lack of 6-8 day old larvae – the diseased larva are being removed by hygienic bees
- Misshapen, twisted, translucent, yellowing to darkening older (6-8 day old) larvae – this is a major sign that the colony is battling a high bacterial load
- Smell – infected colonies can be odorless, sour, to foul
- EFB is a bacterium that is highly contagious and can persist on skin and equipment, waiting for the right conditions.

#### **What to do:** *In no particular order*

- Heavy feeding 1:1 for 3-4 weeks
- Ensure abundant pollen supply– supplement as needed – feed as much as the bees can consume quickly to avoid small hive beetle.
- Shake /swarm to new frames and equipment.
- Re-queen.
- Practice biosecurity, firing tools between inspections, changing gloves, using alcohol based sanitizer on hands, gloves, tools, etc.
- Sterilize frames and boxes prior to re-use. Do not re-use comb.
- Continue to rotate out old comb on a regular basis.
- If you suspect EFB, contact your Bee Club and Extension Agent for assistance and determination of reportability.

There are many resources on EFB. Do your research to determine your best course of action. In many cases, EFB is resolved by the colony and goes unnoticed by beekeepers.

*Sources: Dr. Allison Johnson, ANR Agent Dade, Cody Bowling ANR Agent Catoosa, Shane Kornberg ANR Agent Whitfield, Wade Hutchinson ANR Agent Walker*

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Mixed age, mishapened, twisted, discolored larvae with a spotty/sparse capped brood pattern.

Diseased brood is being removed by middle aged bees and the queen is relaying wherever she finds space.

This is not a healthy brood pattern.

Photo: @Noogahoneypot



Discolored larva, becoming translucent. Healthy larvae is pearly white

Photo: D. Drummond

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Discolored larva (yes, that is a black larva), desiccated larva, sunken cappings indicating the larva is dying in the cell. Note the spotty/sparse capped brood pattern.

Photo: D. Drummond



Larva removed from cell, mushy and yellowing

Photo: D. Drummond

Sparse capped brood, there are eggs, larvae of mixed ages in open cells. Clear laying pattern with like age eggs/larva is a sign of a healthy colony

Photo: @Noogahoneypot



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Twisted, off color, desiccating larvae

Photo: @Noogahoneypot (both photos)

