

### **Got foulbrood?**

The National Bee Diagnostic Center is collecting suspected foulbrood samples (EFB and AFB) to contribute to a Canada-wide study. But first, we need your help.

The goals of this research are to 1) develop better foulbrood diagnostic techniques (especially for EFB), 2) better-understand the factors contributing to active vs. benign infections, and 3) compare virulence of different bacterial strains as well as their susceptibility (or resistance) to antibiotics. We hope that this will lead to faster, more reliable diagnoses and more targeted treatment strategies.

To do this, we need a broad sample of the different bacterial strains found in Canada. If you identify a colony with a suspected foulbrood infection, please consider sampling affected larvae and submitting the samples to us (instructions below). The success of the project depends on collecting an adequate number and diversity of samples to get a good representation of the population.

If you suspect you have EFB or AFB in your colonies, please sample the affected brood according to the instructions below. Your contributions will make this study more powerful and will help make us all better-equipped for dealing with these diseases in our apiaries.

Sincere thanks,

Patricia Wolf Veiga

Acting Manager/Diagnostic Technician  
National Bee Diagnostic Centre  
Beaverlodge, Alberta

## Instructions for Sampling and Submission

Print this form and include it with your sample shipment to:

National Bee Diagnostic Center  
P.O. Box 1118  
1 Research Road  
Beaverlodge, Alberta  
Canada T0H 0C0

Only sample brood specimens you suspect are infected with EFB or AFB. When you identify a colony with a suspected foulbrood infection, tag the colony with a number or other unique identifier. Samples can be taken one of two ways, but in both cases, remove as much of the brood cell contents as possible to ensure the lab has enough material to work with.

1) Using a toothpick, remove the suspect brood cell contents and place in a small plastic sleeve or piece of Saran wrap. Samples can include one or more larvae per sleeve, as long as they are all from the same colony. Label the sleeve or Saran with the colony's identifier (use tape – writing on plastic may rub off). Insert the plastic/sleeve into a standard postal envelope. Alternatively,

2) Use the BD Diagnostic Swab Collection and Transportation kit. If you would like a kit, please contact Patricia Veiga ([pwolfveiga@gprc.ab.ca](mailto:pwolfveiga@gprc.ab.ca)), Liz Huxter ([lizandterry@gmail.com](mailto:lizandterry@gmail.com)), or Heather Higo ([heather.higo@gmail.com](mailto:heather.higo@gmail.com)). Suspected brood should be collected using the flocked applicator tip or the plastic end of the swab (use it like a toothpick) and added to the liquid transport media in the screw-cap tube. Samples can include multiple larvae per tube, as long as they are all from the same colony. Label each tube with the colony's identifier.

For this study, do NOT mail pieces of comb. **Always ship samples to the NBDC via Xpresspost** (signature NOT required). Regular post may take too long for the samples to be viable by the time they reach the NBDC.

1) Contact information

- a. Name:
- b. Address:
- c. Phone:
- d. Email:

2) Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ (mm/dd/yyyy)

3) What sampling method did you use (circle one)?

Toothpick      NBDC kit

4) Which disease(s) do you expect the samples harbour (circle one)?

EFB

AFB

Not sure

5) What symptoms did you observe?

---

---

---

6) How many colonies did you sample and what are their identifiers (e.g. colony number or code)? Please indicate if these are follow-up samples or new samples. If they are follow-ups, please retain the same identifiers as before.

---

---

---

7) What was the outcome of the sampled colonies? (check one)

- Symptoms disappeared without treatment
- Symptoms disappeared with treatment (describe below)
- Symptoms remained 2 weeks after treatment (describe below)

Treatment:

---

8) What are the GPS coordinates of your apiary? These can be obtained by going to Google Maps and clicking on the desired location. A small box should pop up near the bottom of the screen with an approximate address followed by the latitude and longitude coordinates (e.g. 49.271162, -123.257601). Please enter these coordinates for your sampling site. If you are unable to obtain these coordinates, please provide the most specific description you can (e.g. street address, nearest municipality, etc)

---

Make sure you record your time spent travelling, inspecting, and sampling, as well as any additional costs incurred on the webform (<https://tinyurl.com/yauttudm>) to track the in-kind contributions by beekeepers to this project. Alternatively, fill out the hard copy (next page) and include it with your sample shipment. Thank you for contributing to the NBDC Foulbrood Study!

### In-kind Contributions

Please enter your in-kind contributions on the webform (<https://tinyurl.com/yauttudm>) or fill out the information below and submit it along with your samples.

- 1) How much time (h) did you spend inspecting and sampling colonies for the NBDC foulbrood study? Include all travel and inspection time.

---

- 2) How many colonies did you inspect?

---

- 3) How many samples did you submit to the NBDC?

---

- 4) How much did it cost to ship the samples?

---

- 5) Were there any other costs incurred (gas, supplies, etc.)? If so, what was the total value?

---

- 6) Is there anything else you would like to tell us?

---

---

---

---

---