

Honey Bee Laboratory Services

Veterinary Diagnostic Services



Laboratory tests for several major bee diseases are now available in Manitoba (see below for tests and fees). This service is a joint initiative involving three groups within Manitoba Agriculture and Resource Development: Veterinary Diagnostic Services (VDS), the Provincial Apiculture Program and the Crop Diagnostic Centre. Implementation of this testing was supported by assistance from the National Bee Diagnostic Centre (Grande Prairie Regional College), the University of Manitoba Department of Entomology and the University of Guelph Animal Health Laboratory.

Contact Us

- Phone: 204-945-8220 in Winnipeg
- Email: vetlab@gov.mb.ca
- Website: manitoba.ca/agriculture/vds

Location

VDS is located in the Agricultural Services Complex on the University of Manitoba Fort Garry Campus at 545 University Crescent.

Billing Information

Beekeepers will need to work with a licensed veterinarian in order to access these services. Beekeepers can bring samples directly to Veterinary Diagnostic Services, or drop them off at their veterinary clinic. Discuss this with your veterinarian beforehand, as some clinics may use couriers that will not ship live bees. For a list of available veterinarians please visit:

<http://manitobabee.org/hive/2551/list-of-veterinarians-willing-to-work-with-honey-bees/>

Copies of lab reports will be sent to the veterinarian and to the beekeeper/apiary.

VDS will bill the veterinary clinics for lab services. Apiaries will be billed by the veterinary clinics. This is the billing approach used by VDS for all animal industries.

Tests and Fees

The following tests will be available for adult bee and brood samples. See the sampling guide for each test's required sample type. Testing for Manitoba apiaries is subsidized by the Government of Manitoba. Fees for service are intended for partial cost recovery, not profit.

Varroa Mite Count \$20.00

Nosema Count \$20.00

Nosema Detection & Identification: PCR assay for *Nosema apis* and *Nosema ceranae* **\$42.40**

American foulbrood (AFB): bacterial culture for *Paenibacillus larvae*, includes antibiotic susceptibility testing **\$40.00**

European foulbrood (EFB): PCR assay for *Melissococcus plutonius* **\$23.32**

Honey Bee Virus Tests (PCR assays)

Acute Paralysis Panel – includes tests for **Acute bee paralysis virus (ABPV)**, **Israeli acute paralysis virus (IAPV)** and **Kashmir bee virus (KBV)** **\$42.40**

Deformed wing virus (DWV) **\$23.32**

Sacbrood virus (SBV) **\$23.32**

Black queen cell virus (BQCV) **\$23.32**

Additional Notes about PCR Assays

PCR: Polymerase Chain Reaction, a molecular genetics method used to detect a microorganism by amplifying and detecting a targeted section of DNA or RNA.

Some of the bee virus tests are still in development (validation, etc.). We may forward samples to a reference laboratory early in the 2020 season while we complete this process. This will not affect the fees given above.

Sampling Guide

Varroa Count

- At least 300 adult bees (1/2 cup) from brood frame; live or in 70% ethanol.

Nosema Testing (count and PCR)

- At least 120 adult bees, ideally older bees from the entrance or honey frames. Live or recently dead. Keep dead bees frozen if not submitting to the lab on the day of collection. Dead bees can be placed in a screw-top plastic container or Ziploc bag.

AFB culture and EFB PCR

- Diseased brood frame, or a 10 x 10 cm portion with at least 15 diseased cells. Wrap in brown shipping paper or newspaper and place in a cardboard box. Do not use plastic bags.

- At least 200 adult bees – live or recently dead. Keep dead bees frozen if not submitting to the lab on the day of collection. Dead bees can be placed in a screw-top plastic container or Ziploc bag.

Viruses (any number of PCR tests)

- At least 100 live adult bees and/or samples of diseased brood.

Sample Containers

Containers must be labeled with:

- Owner or Apiary Name
- Colony I.D.
- Sample Type