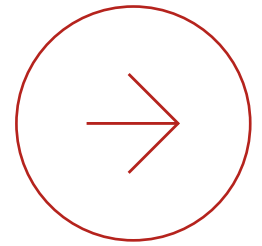


# How to take samples for Plan Bee



Our national honey bee genetic improvement program, **Plan Bee**, is offering free genetic testing to bee breeders who are collecting **performance data**.

This includes not only commercial queen breeders, but also those who breed queens for themselves.

## Getting started

### Step 1

#### Determine what samples you will collect

Please provide samples for colonies you have collected performance data on. We recommend at least 10 colonies from each apiary that you would like to sample from. Genetic data can be collected from different sources. A valuable sample can be obtained from either of the following (in order of preference)

- 10 drone pupae
- 6-9 drone pupae

Initial testing indicates that we can get good quality DNA from any age pupae – but we will update you in future as to the best age.



### Step 2

#### Collect and pack samples

- Using the tweezers uncap the cell
- Using the tweezers pull the pupae out of the cell, trying to keep the head intact (heads give us better quality DNA than legs or thorax)
- Place the samples in a labelled tube
- Record the details on the sample sheet.
- Wipe the tweezers with alcohol wipes or sanitiser wipes between colonies to ensure that tissue from the last colony doesn't get mixed into tissue from the current colony.



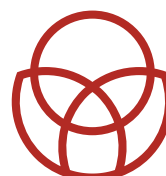
If possible, take an ice box with ice blocks or ice cubes or a car freezer to keep the samples cold while working and in transit. Store samples in the freezer once you're home.

**Note:** Plan Bee can provide you with the following apparatus:

- Labelled tubes
- Tweezers
- Alcohol wipes
- Sample sheet



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### Step 3

#### Send us the samples

Get in touch with Plan Bee to organise the delivery of samples on dry ice. Do not post samples as postage will degrade the DNA.

### Step 4

#### Processing – let us do the work!

We are working with service providers to optimise DNA extraction procedures so that we can get the best data possible to drive Plan Bee. This means that we've been saving your samples until we can be sure that we can get you results. The Plan Bee project team will be in touch with more information on receiving results in the coming months.

#### Don't forget to reach out

**Getting assistance:** We understand that implementing new procedures can be daunting, and that you have businesses to run. Bee breeders can register for assistance in performing colony evaluations and sampling for genetic testing. Please use this form to register your interest or contact Nadine Chapman on [nadine.chapman@sydney.edu.au](mailto:nadine.chapman@sydney.edu.au) or **02 9351 2267**.



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