

APPENDIX C

Traps

Traps will not control or eradicate CBB, but they can be used as an optional monitoring tool to determine when CBB populations may be increasing and to help indicate when to start sampling. Visual inspection or sampling (e.g., the “Revised Thirty Trees Sampling Method – 2016”) is better than trapping for detection, determining infestation estimates, and finding “hot spots” because traps may not catch CBB until populations are high. Dozens of virtually identical beetles (e.g., tropical nut borer from macadamia nut trees) may be attracted to the traps and may skew numbers. If used, trapping should be part of a program that includes visual inspection and sampling of coffee cherry on your trees to verify catch.

1. How do I best use traps for monitoring?

- At a minimum, start trapping immediately after the harvest season to detect mass movement of CBB.
- Verify observed trap catch increases by sampling cherry or by visual survey before spraying *Beauveria*.

2. Which trap should I use?

- Homemade traps with inward-facing flaps and commercial broca traps are equally effective.
- Cleaning at least yearly and painting traps may help to extend life.
- Visible trap colors aid in locating traps in the field; red traps appear to be favored by CBB over white ones [3,10].
- While deployed, traps should be supplied with an attractant lure and kill solution at all times.

3. How many traps per acre do I use?

As few as five traps per acre can help as a tool for monitoring CBB activity; more may increase effectiveness in the monitoring program. Use as many traps as you can service without having to sacrifice activities like strip-picking, spraying *Beauveria*, and harvesting.

4. Where should I put my traps?

- Hang traps on coffee trees, stakes, or poles in the field to monitor CBB activity.
- Hang traps along the farm border to aid in early detection of CBB in previously non-infested fields.
- Once a farm is infested with CBB, distribute traps throughout the farm.
- Hang traps between 2 and 5 feet from the ground; most CBB are trapped at this height.

5. What should I use to kill CBB in my traps?

Soapy water is recommended, but traps must be serviced regularly.

- Use a few drops of unscented dish soap per cup of water to break surface tension so CBB cannot crawl out of the cup.
- Insecticidal or pest strips (ex: Hercon® Vapor-tape™ II) are also allowed in traps.
 - Drainage holes in collection cups keep pest strips from becoming saturated.
 - Toxicants are effective for up to 12 weeks; cutting them in half reduces their effectiveness to 4 weeks.

6. Which attractant should I use in my traps?

A mixture of methanol and ethanol is the best available CBB attractant [12].

- Use a 1:1 or 3:1 methanol to ethanol solution in a vial with a 2 mm hole, or
- 3:1 methanol to ethanol solution in a disposable pouch.

7. How often should I be monitoring and servicing my traps?

Service traps as often as local conditions dictate.

- Monitor traps for CBB activity at least every 2 weeks.
- Research indicates that trap catch is highly influenced by rainfall events [11].
- Change lures every 4–6 weeks.

- Inspect vials for holes which may allow attractants to leak out or evaporate too quickly.

8. When do I stop trapping?

Once young cherry develop on the trees, the “Revised Thirty Trees Sampling Method for CBB Monitoring – 2016” is more effective for monitoring than trapping, and trapping can cease.

9. Instructions for building home-made traps:

- <http://www.ctahr.hawaii.edu/Site/CBBTrap.aspx>
- <https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=2626&dt=3&g=12>