

# A Guide To: Propagating Flat Bark Beetles to Augment Field Populations

## **Materials:**

- Large plastic tub with lid – “rearing container” (provided). A mesh is glued to the inside of the lid. This will allow for airflow, while keeping the beetles contained.
- Cracked corn (e.g. feed store)
- Cornmeal (e.g. grocery store)
- Flat bark beetles (*Cathartus* sp.; *Leptophloeus* sp.) in a small plastic container (provided). Under the lid is a mesh to contain the beetles while allowing for airflow into and out of the container.

## **Preparing the beetle diet:**

*You will need to purchase additional cracked corn and cornmeal.*

- Freeze all corn materials for at least 3 days and then thaw to room temperature prior to use. Other insects such as weevils may be present in the corn at the time of purchase and we want to kill these by freezing.
- Once thawed, place four parts cracked corn over one part cornmeal in the larger rearing container (tub provided). Fill about half the tub with this diet. Mixing of the cracked corn and cornmeal is not necessary.
- Keep the remainder of the cracked corn and cornmeal in the freezer for future use when replenishing the beetles’ food source. Remember to thaw to room temperature before providing corn materials to the beetles.

## **Transferring beetles to the rearing container:**

- Approximately 75-100 flat bark beetles are provided in the small plastic container with the white screw-top lid.
- Take this container and tap the bottom in a downward motion on a flat surface. This motion will dislodge beetles crawling on the mesh at the top of the container and encourage the beetles to fall back down onto the corn.
- Quickly unscrew the lid, remove the mesh and pour the contents (all corn and beetles) into the rearing container (larger plastic tub). If beetles remain on the mesh or container, use your finger to gently brush them into the tub.
- Transfer and cover the tub quickly as the beetles will fly out.

## **Placement of the rearing containers:**

It is important that the rearing container with flat bark beetles be kept in a low humidity environment as mold can develop on the corn. A dehumidifier is not necessary unless you have a mold problem. Approximately 80° F is ideal. Keep the container out of direct sun and excessive heat/cold. If you are unable to start your rearing kit promptly, please keep the small plastic container of beetles in a similar type of environment.

## **Releasing beetles for field augmentation:**

Your beetles will begin reproducing immediately in either plastic container and may already have flat bark beetle larvae. Although you can leave the beetles in the small plastic container for a short period of time (e.g. 1-2 months), the intent of the kit provided is for you to propagate mass quantities of flat bark beetles in the larger rearing container. After your population increases (you want thousands) in the tub, which will take several

months, you can begin releasing beetles in and around your orchard.

- Scoop out adult beetles and corn from the rearing container and place them in the crotch (a “v” created by 2 branches) of the tree or on the stump, or in an area with over-ripe and raisin (dried cherries) coffee in the tree. The beetles will fly when disturbed or encouraged to leave the container and will not stay in the corn for long when released.
- Release approximately ½ to ¾ of the beetles and save the rest for further rearing.
- Replenish the cracked corn and cornmeal in the rearing container, cover, and return the tub to a warm, dry area.

**Contact:**

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Visit <http://hawaiicoffee.weebly.com/predators-of-cbb.html> to learn more about flat bark beetles and to view a short video on how to set-up your kit.

*The research currently available indicates that this experimental methodology may help to reduce Coffee Berry Borer (CBB) numbers. However, there is too little information available at the present time to offer any guarantee that this will occur under every situation, or that it will contribute to an improvement in coffee production or quality, or that it will have any negative impacts on coffee. These instructions may change as new research information becomes available.*

