

Tips for CBB

Integrated Pest Management



Coffee Berry Borer damage can be very serious, or it can be reduced to 2-5% of your crop. With a multi-pronged approach to control, you can greatly minimize loss. This is a short list of recommended practices. The best practice? Harvest your coffee; 75% of CBB will be removed.

Spray the *bassiana* Fungus (commercial Botanigard/Mycotrol)

After 20 years of research around the globe, the fungus is the only recommended pesticide for CBB. It is not a silver bullet, but it will significantly reduce populations. It is important to “be your own scientist” when it comes to your farm. Inspect your coffee often. As young cherry matures, the CBB will often wait at the end of the bean. When the bean begins to harden, the beetle will begin to drill. Even if your cherry is green, inspect it regularly. If you see CBB (see our pictures) on the cherry, consider spraying the fungus. Don’t wait for damage to occur.

- Record date when first major flowering appears on the trees.
- 60 and 150 days after flowering, mix 1 tablespoon fungus per 4-gallon backpack sprayer, saturate the soil and any downed beans on the ground plus foliar-spray cherries on the tree. Also spray mulched trees or pulp piles. Between soil and foliar, spray up to 50 gallons per acre.
- Fungus can be mixed with soap/oil, Neem, EM, foliar fertilizers, Bt, as well as some herbicides (for soil application only) but not Roundup/glyphosate or fungicides. Avoid foliar treatment using sprays that have contained herbicides.
- Rock-covered farms should focus spray on any visible soil or between cracks where beans may lodge.
- Mauka farms with longer seasons may need to add an additional spray at 210 days or when CBB are present.
- Fungus has added benefit of effectiveness on Twig Borer and fire ants.
- To protect bees, avoid spraying when flowers are present on the tree.
- The fungus grows best with moisture so humid, overcast days are ideal. Try to avoid spraying in the heat of the day.
- Remember, spores are live, so use water mixture promptly and store bottle in cool location.
- *Monitor your cherry regularly and repeat as needed. There is no harm to multiple treatments and fungus will not affect taste of coffee nor harm workers.*

Field Sanitation and Worker Education

Simple sanitation is vital, and can be cost-effective with a few preventative measures. Many CBB experts consider it the most effective form of control. The beetle can live in raisin for up to 5 months without feeding.

- Do a “final round” gleaning of the field to break the life cycle. In a well-picked field, it should take approximately 16-24 man-hours to glean old crop from 5 acres of trees.
- Remove all raisins before pruning each tree. One beetle can multiply into 200 if left behind.
- All CBB-infested beans or floaters should be placed in black garbage bags and left in the sun

for several days. The heat will kill the beetle. Freezing will also work.

- Train your harvesters not to discard green beans out of the picking bucket. Also train them to spot *La Broca* (Spanish for CBB) damage so that they may report trouble areas.

Maintain Traps

Traps won't greatly reduce pest populations, but will help identify trouble spots on your farm.

- Use along border locations with wild or untended coffee
- Use around mills or processing areas where CBB may be migrating out of fruit.
- Traps are most effective when CBB is on the move during the growing season. This is typically May-August, but CBB will also move when beans are disturbed during harvest.
- Traps work best when placed 4-6 feet off the ground and at least 12-20 traps per acre.

Small Processors

About 50% of the beetle will survive through processing and travel on to the parchment stage. That means care must be taken through all stages to prevent reinfestation.

- Use traps near mill and dry deck areas
- In India, they recommend that the trees closest to the mill be picked last. That ensures escaping beetles do not migrate too far into the fields looking for ripe coffee.
- Floaters should be bagged and left in the sun or frozen to kill the beetles. Or, dipped in boiling water for two minutes to kill all stages of the beetle.
- If bringing coffee from other farms, return bags directly to farmer to prevent cross-contamination. Or, bags can be boiled to kill hitchhikers.
- Cover your pulp piles immediately after use.
- Consider additional fungus treatments on soil and trees near to the mill.
- Be sure to dry all coffee to below 12% moisture as the beetle cannot penetrate the bean at that hardness.
- Use Grainpro bags to prevent moisture absorption and potential recontamination during storage.
- If you buy coffee, talk to your farmers about IPM and be sure they understand all the options.