



## IN THE APIARY

The Small Hive Beetle, *Aethina tumida*, is a honeybee pest indigenous to South Africa. Adult beetles are considered opportunist scavengers and seem to prefer weakened or “stressed” colonies to lay their eggs. SHB larvae consume brood, pollen, and honey. Females can lay up to 2000 eggs during their lifetime and in tropical conditions there can be up to 6 generations/year. The beetles cannot be eliminated once they are established however beekeepers can adjust their hive management and extraction techniques to reduce the impact of this pest.

The SHB has the potential to infest honey-houses and spoil honey. Consequently beekeepers need to increase their cleanliness and modify their storage methods to minimize the damage caused by SHB larvae.

### MANAGEMENT PROCEDURES

### REASONS

- Place hives in direct sun → Sun-exposed hives seem to do better against Varroa mites and also SHB than hives placed in the shade.
- Keep only 1 deep or 2 westerns as brood box during winter → Keep colonies strong. The hive will need many bees to face the SHB. SHB takes advantage of the inability of weak hives to patrol the comb.
- Keep only “queen-right” colonies → Make sure you have good laying queens. Re-queen queenless colonies or colonies with queens that are producing drone layers. Remove colonies with laying workers.
- Use queen excluder → Keeps pollen and larvae restricted to the brood chamber, a space which is frequently patrolled by worker bees.
- Keep 1 honey box during winter → This is a temporary recommendation to keep the bees as crowded as possible to improve patrolling and detection by worker bees. Frequently harvest the honey.
- Replace or repair brood boxes with cracks or holes. Use entrance reducers on weak hives. → Minimize entrance routes to the hive.
- When feeding pollen patties, use 1/2 of patty to make sure the bees will consume it in 2 days. → SHB feeds and lays eggs on pollen patties so unused patties will allow eggs to hatch and larvae to reach maturity.

- Check hives every two weeks if possible

→ If given the right condition, SHB can attack and destroy hives very quickly. Regular monitoring of colonies will allow you to get rid of dead colonies before SHB larvae reach maturity. However, to reduce hive stress and minimize the release of alarm pheromones. We recommend beekeepers take only a “quick look” by popping lids.

## IN THE HONEY HOUSE

- Keep extraction areas clean. Power wash equipment. If possible, store frames with pollen and brood in the freezer.
- Preferably extract honey within 1 day of harvesting. Wet combs should be returned to the hive as soon as possible and wax cappings should be kept in sealed containers if not melted immediately.

→ Any frame with pollen and brood will provide food for the beetle.

→ Avoid massive egg-hatching of SHB. The beetle eggs hatch within 24–36 hours after being laid by the female beetle. You want to avoid a larval infestation on your honey-house.

## FREQUENTLY ASKED QUESTIONS

- What to do if you have a “dead-out” colony due to SHB?

→ Remove dead hives from the apiary and freeze or burn infested combs. If lots of larvae are pupating in the ground, consider drenching the soil with GardStar® 40% EC. However, this product is toxic to bees so you must follow the label instructions and be very careful during application. Soil treatments should be used with caution, the SHB will eventually be very common in the environment and the best defense in the long run will be to keep the hives strong.

- What does *varroa* have to do with SHB?

→ The best defense against SHB is a strong colony. Keeping mite levels low helps keep the colony strong.

