

# Betterbee<sup>®</sup>

Beekeepers Serving Beekeepers

## Varroa Screen & Tray Use 24 Hour Drop Varroa Test

Congratulations on the purchase of a Varroa Monitoring screen and tray! These are crucial pieces of equipment to properly monitor your varroa mite levels. The Varroa Screen and Tray can be used with a solid bottom board or with optional plastic rims to support the monitoring tray when used on hive stands without a solid bottom. Please read instructions below for proper placement and use on the hive.

### Components:

- Varroa Screen
- Hard Plastic Tray
- Plastic Rims (Optional)

### Placement on the Hive

#### 1. For Use with Solid Bottom Board:

- Some manipulation of the hive is required for installing the varroa screen and tray. The varroa screen will ultimately be placed on top of the bottom board, below your lowest hive body.
- First, take the solid bottom board and rotate the end without rim towards the back of the hive.
- Then, place the varroa screen on top of the bottom board, the end without the rim facing the front of the hive. This is the hive entrance of the hive. There is now an opening for the plastic tray between the bottom board and the varroa screen at the back of the hive.



- Once the varroa screen has been installed, you can replace the hive bodies, medium supers, inner cover and outer cover.

## 2. For Use with Plastic Rims (Optional)

- a. This is similar to the installation with the bottom board. Plastic rims are nailed to the underside of the varroa screen to provide a shelf for the plastic tray.
- b. The varroa screen will sit directly on top of the hive stand, the end without a rim facing the front of the hive. This is the entrance of the hive. The hive bodies and medium supers are then placed on top of the varroa screen.

## 24 Hour Varroa Mite Monitoring

Now that your Varroa Monitoring Screen is in place, you can start to monitor your varroa mite levels. Mite levels fluctuate within the hive based on the honeybee brood cycle and time of year, so it is important to monitor often. A certain percentage of varroa mites fall off bees when transferring from bee to bee. When using a varroa screen, the mites fall through the screen and onto the monitoring tray. Because the bees are entering the hive over the top of the varroa screen rather than the bottom board, the mites are trapped and consequently die. Counting the number of mites that fall will give you an idea of the varroa mite levels changing within the hive. We recommend keeping a bee journal or calendar to record and analyze your mite levels.

### Varroa Mite Monitoring

1. First, clean and then prepare your plastic tray by covering one side with a light coating of petroleum jelly or oil. This makes the board a little sticky and therefore harder for the mites to move.
2. Next, place the tray between the bottom board or plastic rims and varroa screen at the back of the hive. Leave tray for 24 hours.
3. Remove tray after 24 hour period and count mites. Mites can be very difficult to see and identify. We recommend using a magnifying glass and a bright light source. They are reddish-brown with a smooth hard outer shell. See picture below:



- Once you have completed your mite count, record it in your bee journal and compare it to other counts. Note increases and decreases. Try to determine the cause; did you treat recently? Has the queen's laying changed due to weather factors? Did your hive experience a queenless period?
- Determining Treatable Levels: The mite count may be high enough to considered a mite treatment to reduce the mite numbers. We use the Ontario Tech Transfer Team Chart to determine treatable levels. See chart below.

**Ontario Tech Transfer Recommendations**  
*Treat when your mite count exceeds these numbers:*

<b>Monitoring Method</b>	<b>Number of Varroa Mites in May</b>	<b>Number of Varroa Mites in August</b>
Sugar Shake or Ether Roll	1 mite/100 bees	2 mite/100 bees
Alcohol Wash	2 mites/100 bees	3 mites/100 bees
Monitoring Tray	9 mites/24 hr drop	12 mites/24 hr drop

- There are many options for treating mites. When considering these treatments it is important to consider your mite levels and your apiary's unique needs. Please refer to our catalog or call for assistance in choosing a mite treatment.