

GENERAL NATIVE SOLITARY BEE INSTRUCTIONS

PLACEMENT OF YOUR BEE HOUSE

Bee houses are designed to protect from rain and wind. Our houses can be used for both spring mason bees and summer leafcutter bees, just change the nesting material. Mason bees are larger and require larger nesting holes than the tiny leafcutter bee.

- Select a location that faces the early morning sun to awaken and warm your bees.
- If summer temperatures are very hot, ensure house is in afternoon shade for your leafcutter bees.
- Hang house on a sturdy wall, fence, or flat surface.
- Position the house at eye level, about 5-7 ft. (1.5-2 m) from the ground, for easy viewing and to protect the bees from pests and predators. If you have a bird house, position your bee house out of its line of sight. Birds love to munch bee larvae.
- Locate the house within 100 - 300 ft. (30-91 m) of a pollen source.

PLACEMENT OF NESTING TUBES/REEDS OR REUSABLE WOOD NESTING TRAY

- **Nesting tubes or reeds:** Place tubes or reeds in bee house with open ends facing out. Push some nesting tubes deeper into the house for an uneven "3-D" pattern. This helps the bee find her nest, who finds her hole initially by sight, and then by smell as she crawls into her selected nesting hole. If using reeds, you don't need to arrange them, they're naturally different sizes. (Note: We do not recommend using the white inserts without a BeeTube or protective casing. Pests can penetrate the thin paper.) At season's end, remove filled tubes or reeds from bee house. For tubes, use the end cap viewing hole to identify used tubes. Place tubes and reeds in the BeeGuardian bag (*see instructions*).

8mm Tubes and Reeds for Mason Bees Place tubes or reeds in bee house in mid-March or early April when DAYTIME temps are mid-50°F (or warmer) and blooms open. Spray InvitaBee Plus+ ™ to attract and retain bees. See <i>InvitaBee instructions</i> . Add your bees.	6mm Tubes and Reeds for Leafcutter Bees Place tubes or reeds in the bee house in late spring/early summer when DAYTIME temps are mid-70°F or warmer and blooms open. Spray InvitaBee ™ to attract and retain bees. See <i>InvitaBee instructions</i> . Add your bees.
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- **Reusable wood tray:** With the open holes facing outward, insert the nesting tray into the bee house as far back as possible. This protects the bees from direct rain. To help the bee find her hole, the tray is lightly burnished to make the holes more distinctive. Place cocoons on trays.
- **Medium or Large Tray:** Elastic bands hold your wood tray set together. Use these sturdy, reusable bands during the bee season and when storing the tray set. **Note: Do not remove the cardboard on the back of the trays. This closes the back side of tray holes to help protect nesting females and their eggs from pests.** At season's end, remove filled tray set from bee house. Store tray set in the BeeGuardian (*see instructions*). After harvesting, reuse or replace the cardboard backing for next season. Secure it with tape, string or rubber band. Bind the tray set with the provided elastic bands and store in dry location until next season.
- **Small Tray:** Adhesive tape holds your tray set together. Do not remove the tape during the first season. At season's end, remove filled tray set from bee house. Store trays in the BeeGuardian (*see instructions*) until harvest. To harvest cocoons, carefully remove the tape to separate the tray set. Save the tape and reapply it after harvesting to seal sides and back. This protects nesting bees & eggs from pests. Electrical or duct tape can be used. Store tray in dry location until next season.

Nesting Tray for Mason Bees Use the wood tray with large holes. Place in bee house about mid-March or early April. Spray InvitaBee Plus+ ™ to attract and retain bees. See <i>InvitaBee instructions</i> . Add your bees.	Nesting Tray for Leafcutter Bees Use the wood tray with small holes. Place it in the bee house about early June. Spray InvitaBee ™ to attract and retain bees. See <i>InvitaBee instructions</i> . Add your bees.
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WHAT TO DO WITH YOUR BEES

<p>Mason Bees for Spring Pollination: Ship Feb 1-April 15 (USA), subject to availability. Feel free to look inside the box at the hibernating bees. Large cocoons are female and small cocoons are male.</p> <p>Refrigerate until spring blooms arrive: Transfer the cocoons to your HumidiBee™ and place it in the refrigerator to keep your cocoons slumbering. See <i>HumidiBee instructions</i>. Remove cocoons when day temperatures reach 50-55°F (10-13°C) AND there are OPEN blossoms for the bees. Without pollen and nectar, the bees will not survive. Place cocoons loosely on top of, or behind the nesting holes (not <i>in</i> each hole) in your bee house. As they emerge from their cocoons, they'll crawl over the nesting holes, and head out into your garden in search of nutritious blossoms. Bees must be placed outdoors for emerge by May 1st as their stored fats will be depleted. Note: emergence may take up to 3 weeks, depending on daytime temperatures. Dig a spade-sized hole near your bee house for a mud supply. Clayey mud is critical for nest building and success. See <i>Mud Mixture instructions</i>.</p> <p>Store developing bees at end of season: When bee activity stops (mid-June), place nesting holes, with filled holes facing up, in your BeeGuardian. This protects developing bees from pests. Store the bag in a garage or shed. See <i>BeeGuardian Instructions</i>. Harvest bees in the fall. Refer to Crown Bees' online instructions or fall Bee-Mail.</p>
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Leafcutter Bees for Summer Pollination: Ship May 1-Aug 15, subject to availability. Crown Bees incubates leafcutter bee cocoons so they are delivered ready to pollinate.

Delivered when summer blooms arrive: You may find that some of your bees have emerged in transport, and will be crawling in the LeafGuardian™, our protective mesh bag. It's okay, they're ready to go to work! Bees fly best when day temperatures are 75°F+ (21°C+). Place the closed LeafGuardian in your refrigerator for 10 minutes to cool down your active bees. Then open the bag and place it on top of the nesting holes in your bee house. For the Chalet, you can place it in the attic shelf. Be sure there's nearby flowering plants, fruits and veggies. Leafcutters cut holes in non-fibrous leaves to build their nests.

Store developing bees at end of season: When bee activity stops (end of Aug), place nesting holes, with filled holes facing up, in your BeeGuardian This protects developing bees from pests. Store the bag in a garage or shed. See *BeeGuardian Instructions*. Harvest bees in early winter. See online instructions, or in fall Bee-Mail.

CROWN BEE ACCESSORY ITEMS

HUMIDIBEE™

- Store cocoons in your refrigerator using the HumidiBee, a humidity controlling case. It holds about 1,500 mason bee cocoons. Check to make sure the black pad is on top of the green water absorbent "blanket". Place cocoons on top of isolating black pad. Add 1-2 tablespoons (15-30ml) of tap water onto the black pad. Don't worry about getting water on the mason bee cocoons as their silk casing is waterproof. Each month, check the green sheet for dampness. If dry, add water. Store your cocoon-filled HumidiBee in the refrigerator away from the air supply vent that blows in from the freezer compartment. The temperature should be around 34-38° F (1-3°C).
- Moldy cocoons indicate a nearby mold source. Mold is an airborne spore originating from cheese or other food. Don't panic about your mason bee health. Remove mold with a short 2-3 minute soak in a mild bleach solution of 1 teaspoon (5 ml) of bleach to 1 cup (237 ml) of water. Gently blot cocoons dry before returning them to the HumidiBee.
- Use caution when storing cocoons in a refrigerator with ripening fruit that produces ethylene gas. A garage refrigerator with apples, bananas, etc. may need to be opened periodically to allow gas to escape and to introduce fresh air.
- Hibernating bees survive about 6-7 months on stored fats, and after that will begin to expire. For that reason, release mason bees no later than May 1, and release leafcutters no later than August 1.

INVITABEE Plus+™ for Mason Bees, INVITABEE™ for Leafcutter Bees

Crown Bees developed the InvitaBee Plus+ spray to attract spring mason bees and summer leafcutter bees to your bee house. Mason bees and leafcutter bees both use their own scent pheromones to mark and find their nesting site. Research has shown that the Invitabee Plus+ for Mason Bees is attractive to any of the 350 different species of mason bees in the *Osmia* genus.

- Ensure that you spray **InvitaBee Plus+** on the correct size nesting material: larger (8mm) holes for mason bees, smaller holes (6mm) for leafcutter bees.
- For mason bees, do not spray until day temperatures are 52-55°F (11-13°C).
- Add the 5 natural lake bed reeds on top of your nesting holes in the bee house. This also *visually* attracts bees.
- Wearing gloves, point the nozzle of the mister towards the holes and spray about 10 pumps onto the front of the nesting holes. Place out your bee cocoons.
- Keep the remaining 10 pumps for use on another hole set.

MUD MIXTURE for Mason Bees

The mason bee seals each egg chamber with mud. She prefers a clayey mud and without proper moist mud, bees will fly off. This mud mixture can be added to your soil to ensure you have a more correct consistency for your bees. Mason bees prefer to gather mud from the sidewall of a hole in the ground. Dig a small hole, a spade-sized deep/wide, and about 20 ft. (6 m) from where your bees are nesting. If there are frogs or birds nearby that might eat your mud-gathering bees, place chicken wire or hardware cloth (with no smaller than ¾" (19mm) holes) over your mud hole.

Soil Type	Mud Mixture Ratio	Precautionary Measures
Loamy or sandy soil	Equal parts of dry mason bee mud and existing soil	Although this is normal dried clay, when mixing it with your soil, add water to reduce dust. Avoid inhaling the dust. Wear a dust mask for respiratory concerns.
Normal looking soil	One part dry mason bee mud to two parts soil	
Clayey soil	No need to mix in mason bee mud	

In a bowl, mix the dry mud and soil with water. It's okay to add too much water as it will dry out later. Place about 1 inch (25mm) thick of mud mixture on the southern side of your dug hole. (This reduces drying out due to sun exposure.) Keep the mud moist. In dry climates or very sandy soil, water the ground and mud each morning with a hose.

BEEGUARDIAN™

The BeeGuardian mesh bag is an easy way to protect your developing bees from pests. At the end of the season, place nesting trays, with filled holes facing up, in the bag and tightly close it. Store out of direct sunlight in a garage or well ventilated shed in average temperatures for your area. Developing larvae can be left in this protective environment until cocoon harvest time. Don't place the spring mason bees in a cool location, as they need the summer heat to develop into bees. Bag is machine washable and dry, low heat.

For detailed instructions visit www.crownbees.com. Be sure to sign up for **Bee-Mail** for tips on when to do what.