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### **Leafcutter testimony**

Dennis, from New York, conducted his own leafcutter bee test last year. Here is what Dennis had to share:

I did an experiment this year (my first raising bees) with the leafcutters. I have always had a vegetable garden at my home. This year I put in a smaller garden at my home office, which is a house I own next door to my home. I had two bee chalets and an observation house at my home office, and no bees at all at my home garden.

My home office garden seemed to produce almost DOUBLE the volume of tomatoes, peppers, butternut squash and other vegetables as my home garden! The only difference I can discern, since the two gardens are only a few hundred feet apart (separated by a 7' tall solid vinyl fence), is the presence of the leafcutter bees at my home office garden.



I asked him for a bit more information to ensure that we were looking at an "apples to apples" comparison. Here's his response:

My office garden consisted of 26 different varieties of heirloom tomatoes, numerous types of both hot and sweet peppers, butternut squash, zucchini, cucumbers, and asparagus.

When I would compare a given plant of a particular type of tomato in the office garden to the same type (from the same seed) in the home garden, there was no question that the former was much more prolific. There were by far many more tomatoes on each plant and they seemed bigger and much more healthy than the same plants at my home garden.

In 20+ years of vegetable gardening, I have never seen as many tomatoes on a given plant as there were on most of the plants at my office garden. Several of the plants started to topple over from the weight, although they were enclosed in cages, such that I had to use bungee cords to connect each cage to the surrounding cages for support! Overall, my production of tomatoes was much greater at my office garden, although it is probably about half the size of my home garden.

The peppers also did much better at the office garden, as did the butternut squash. I did not notice too much of a difference in the zucchini or cucumbers of which I had only about 1/2 dozen plants in total, and probably no difference in the asparagus (which was in its first year, so it was hard to tell).

Since both gardens are oriented directly toward the south with full, unfettered access to sunlight all day, and contain the same organic garden soil from the same source, I cannot think of any other difference between the two gardens that would account for the difference in productivity, other than the bees. As you can see from my prior emails below, I am "sold" enough on leafcutters to expand my beekeeping efforts to my home garden, as well as to recommend you to numerous local farmers and other home gardeners.

Thank you Dennis, both for your efforts and your testimony! While I didn't experiment at my own house as Dennis did, I have too many tomatoes as well and wind up bringing a bunch to my neighbors and office teammates.

## What type of leaves are best for summer bee



A healthy yard has insects in them; pests and predators, harmful and beneficial.

Birds need caterpillars and grub to eat, lady bugs need aphids, and bees need pollen to gather and consume. A yard that is balanced with nature has food for all insects, birds, lizards, and other animals. Nature has it figured out. When we fight what we *think* is right, we're playing around with a force larger than we are.

Thus, when you find a hole in a leaf, please avoid running for chemicals to eradicate a "pest."

If you find holes nibbled in leaves, it might be a pest, or it might be caused by a hole-nesting bee.

The leafcutter bee cuts neat holes out of leaves. The leaf will probably not be too thin or thick, and not too full of veins as they are hard to cut through. A rose leaf is a great example, but it is not the only leaf that works. Look at a rose leaf's thickness. If you have lilacs, that's a similar thickness leaf. What else is similar in your yard? (*photo to left by Roberta Gibson*)

Other summer hole-nesting bees use chewed up leafy bits combined with saliva to create a separation between their pollen/egg chambers. When bees use chewed up leafy bits instead of cut circles like the leafcutter, I suggest it may look like pest damage.

Summer bees use a variety of resources to separate their pollen/egg chamber. Some bee species use resin from trees and others use cotton from plants. I wonder what's around you?

Small bees use small holes. Big bees use bigger holes. When trying to find out if hole-nesting bees want to nest in your backyard, try out a variety of holes sizes. The [pollinator pack](#) is designed for that purpose.



You might find grass sticking out of holes. Those holes are being filled by beneficial solitary wasps that have found grubs or caterpillars from your yard and stuffed them in the holes. This is OK. It's natural!



Here's a photo from [Jamie Newton](#).

You can see a grass blade being carried by a scary looking solitary wasp. These wasps eat pollen and use holes to bring paralyzed insects to each cell of the nest where an egg is deposited. They are quite adept at weaving grass blades!

**A Father's Day suggestion!**

If you haven't caught the summer theme yet... it's leafcutter bees!

Here's a summer gift that might be perfect for that hard-to-think-of-something-useful gift for dad.

Consider our new Bee Cabin, two 20-hole trays, 50+ leafcutter bees, and our booklet. All for \$79.95. We'll mail it out on Monday, June 15th to arrive before Father's Day, June 21st.



[Order one!](#)

## Mason Bee season is over... next steps!



Your mason bees should have laid their last eggs by now and died. Their wings can only flap so many times! You can protect the new mason bee eggs for next year's pollination by protecting the holes from predators.

Birds, raccoons, and many bugs would love to eat your developing mason bee larva. Place your nesting tubes, reeds or wood trays gently into a [BeeGuardian](#) or similar bag someplace safe such as a garage or shed. Store the holes so that the mud end is up. (If an egg is jostled loose, it falls into the pollen mass at the back of each chamber.) This safe place should have normal ambient temperatures.

**Do not open any nesting material.** If you find bees have laid pollen balls *between* holes rather than *in* them, you can carefully move both pollen and egg into a cup and watch the larva grow and eat the pollen. They'll spin their cocoons in front of you.

In this photo by Ken Corkum, you can see the egg cemented to the pollen mass by a bit of nectar/saliva. The larva will eat all of their available pollen, grow to be a large larva, and then begin to spin a cocoon later this month.



The picture below is of a mason bee larva caught mid-spinning. This should happen later this month. When it is complete, you won't be able to see through the thousands of silky strands. (The brown "string" is larva poop.)



### Poor performing mason bee thoughts

A few mason bee raisers contacted us to let us know that they had no mason bees nest at all. First, I'm sorry to hear that. More importantly, we want to share why this may have happened.

When asked, we typically respond with the following:

1. Little or no success is likely due to a lack of clayey-mud. Too many people look outside, see brown dirt, and ignore what we're saying. *Dig a hole, look at the soil.* If it's sandy/loamy, find clayey dirt (or buy some of our dry mud) and stick it on the shady side of the hole. Keep it moist...
2. We're learning that mason bees may not like chemical smells. Turf builder and other fertilizers, herbicides, fungicides, etc. potentially smell bad to these gentle bees and as a result the bees may fly off to nest elsewhere. I don't have scientific evidence to support this, but I believe it's a big deal. Your neighbor's chemical practices could be impacting your success.
3. The bees might be nesting elsewhere in your yard this season.
4. The house location might be wrong... it needs to be on a warm morning sun wall. We had a customer complain of little activity. We suggested that she move her bee houses from their somewhat shady location to a sunnier location. She called to report that her bees were now very busy. Many of us know how much more energized a little sunshine makes us feel!

There could be other reasons for lower success... birds eating your bees, too much wind, or a number of other smaller reasons. Think through these scenarios as potential solutions.

For leafcutter bee success, read through this list again. Substitute mud for correct leaves. Thanks!

## Introducing a cuckoo bee



Kevin, from New York, sent us this photo of a bee that came out of his mason bee tubes. It's beautiful!!! I sent the picture to a peer of ours, Dr. Cane, in the Logan Bee Lab. Dr. Cane said that, while beautiful, it's a pesty cuckoo bee and should be discouraged from nesting around mason bees.

A cuckoo bee is a lazy bee. It waits until a mason bee finishes the 25-30 trips of gathering pollen and lays its egg on the pollen. It may also kill the mason bee egg before laying its egg. If confronted by the resident mason bee, it curls up into a ball and waits to escape to lay its eggs in another pollen mass.

Outward beauty we know is not always a true sign of character.

## Mason bees in the news

Two different news segments aired recently which we found truly exciting.

Laura, one of our mason bee producers on Long Island, placed bees into a nearby orchard. Here's the segment from [MyFoxNY](https://www.myfoxny.com). Way to go Laura!



Another news story recently aired in Virginia. We have been teaming with Dr. Lisa Horth from Old Dominion University who has been using our mason bees in strawberry fields for two years. Although her paper isn't published yet, she has reported larger strawberries in the field pollinated by mason bees vs. fields without mason bees. Here's the segment from [ABC in Virginia](#).



President Obama's [recent government proposal](#) to help pollinators is a HUGE step forward. While it predominantly addresses honey bee health, it does contain the words "and other pollinators." That's awesome. With awareness comes change.

## A note on organic soil

We have an innovative company very close by us in Woodinville, WA. Kip Hussey, and his son Tad, run *Keep It Simple Organics*. They have been learning/practicing deep knowledge about organic soils for years and I believe they are very close to being the best source of organic growing products I've come across to date.

Here's a copied paragraph from Tad:

I walk through my local grocery store and very little of what I see on the shelves I would actually consider "food." How much of it has been over-processed, genetically modified, or inundated with fats and sugars to make it more palatable for consumption? We pay a premium for "organics" in the supermarket, yet even then we don't know if the fruits or vegetables were grown in mineral-rich soils. If the minerals aren't in the soil how can we expect them to be in our food? Our food supply has been so highly commercialized with the focus being on yield and shelf life, rather than nutrient density, flavor, overall nutrition.

We hope to team with *Keep It Simple Organics* in the future.

I've learned that plants grown in organic soil have thicker cell walls than those grown in "modern" soil. Pests will attach themselves to poor soil plants because they can suck nutrients easier through the thin walls. Gardeners will then have too many pests and may spray... which can also kill microbes in the soil, causing poorer soil that people place chemical fertilizers on... It's a vicious cycle that should be interrupted.

## BeeWithMe Update ~ what metrics are needed?



Behind the scenes, we're busy working on the web "framework", or the coding that makes the website work.

Within the website will be forums, discussions, Q&A features... However, we need more than just social media; this website will be about *creating change*. The goal is a unique and intriguing website that is useful and ultimately protects our food supply.

Our intent is to teach earth-centric truths (i.e. pests are a natural part of a balanced eco system, soils can be naturally enriched, the use of chemical fertilizers and pesticides can be replaced with organic, less toxic alternatives, native plants make sense, etc.) that will lift gardeners from knowing "little" to knowing some "earth-friendly basics."

Our dilemma is that we know mason bees well, but know little of everything else. We need to collaborate with other experts.

What organization or individual do you know that is an expert in organic or sustainable basics? Please email us any ideas and contact information that you may have.

We want to get this right. Collaborating with experts is not only important, but critical.

### **In our next issue...**

- I'm not sure yet...
- BeeWithMe update

Thank you for caring about raising solitary bees! Your success is important to us.

Dave Hunter, Owner

For archives of previous editions click on [Crown Bees Newsletter Archives](#)