

# Buzzing About Bees

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Oh honey, honey! September is National Honey Month and we are celebrating all things sweet. While we love chatting with our member producers about their products and get their expert opinions, this month we wanted to see the process of honey production and bee keeping for ourselves – up close and personal! To do just that, we headed to Minnesota Grown member Deer Lake Orchard in Buffalo, MN and met up with member Dustin Vanasse of Bare Honey LLC.



**Dustin shared that the bees would be happiest** in the cool morning hours, so we set out before sunrise. The foggy, early morning proved to be an excellent backdrop for the day we had ahead. Deer Lake Orchard is set up against - what else? - Deer Lake and its rolling hills took our breath away. As we donned our bee keeping suits the birds were chirping and we couldn't help but think of how wonderful it must be to run an apiary. For many, beekeeping, at least in the hobbyist sense, is quite a romantic notion! So just how did Dustin and his wife Grace get into beekeeping full time?

"Grace and I worked in the food and agricultural industry for nearly 20 years. We were both raised on family farms and our love for food and the environment led us to the kitchen," says Dustin. Dustin has collected experience in places like Trinidad, Thailand and Uruguay, and in prestigious restaurants in Las Vegas, Tampa, San Diego and Minnesota. Grace worked and gathered experience as a pastry chef and cake decorator before taking over at the acclaimed Buttercream cake bakery in 2006.

While Dustin was studying at the University of Minnesota's Carlson School of Management and the College of Food, Agriculture, and Natural Resources, he and Grace decided to take a closer look at where our food comes from and how they could do their part in creating a more sustainable food production system. For them, the answer was bees.

Because we know how important pollinators are for our food supply, and that they are such a buzzword (no pun intended), we had to ask Dustin how he keeps his bees healthy too. He attributed a lot of it to their pedigree! "At Bare Honey we believe the time-tested method of breeding stronger bees





## Meet the Farmers



Laurie Schneider Photography

### **Bare Honey, LLC**

Dustin and Grace Vanasse  
And Family  
St. Paul, MN

### **Why do you feel it is important to purchase honey locally?**

Today, over 60% of the honey Americans consume is imported honey. Many imports have been found to contain banned chemicals, or have been overly heated and ultra-filtered to the point of being devoid of character. Most local beekeepers, like Bare Honey, offer raw honeys that are full of healthy enzymes, pollens and FLAVOR. Basically, all the good stuff! Simply put, LOCAL HONEY TASTES BETTER!



### **What is your favorite way to enjoy honey?**

I have young ones at home, so I prefer my honey to be "creamed," which is simply a method of crystalizing the raw honey so as to make it spreadable. Creamed Honey spreads keep my kiddo's from drizzling a sticky mess all over our breakfast table.

### **Why are you MN Grown members?**

Minnesota Grown is the truly unique! I can't think of any other state that supports us small producers the way the Minnesota Department of Ag. does with the MN Grown program. First off, the directory is a fantastic resource where folks can find us small producers. But it does not stop there, the staff at MN Grown have always gone to bat for the small producer at the capital, or have been champions of the local foods movement. I truly believe that MN Grown has been crucial to igniting the local foods movement here and throughout the country. Without the MN Grown program, we all might still believe that the best tomatoes in the world come in a can from Italy, rather than a delicious heirloom variety grown on farm in Minnesota!

is the key to overcoming the many problems that plague bees today. We breed a heritage bee from Russia. Most American beekeepers have been breeding Italian honey bees since they were first imported to the New World in 1859. Their Italian bees were and are excellent honey producers, and show a gentle temperament making them the most popular race of honey bee in North America. But Italian honey bees are susceptible to two deadly parasitic mites, the tracheal mite and the varroa mite. Some research has shown that Russian bees are more than twice as resistant to varroa mites as other honey bees. Moreover, they are highly resistant to tracheal mites, the other mortal enemy of bees."

Since 2009, Bare Honey has grown to 350 hives throughout the Twin Cities, kept on CSA farms and orchards to meet the demand for their product.

**After a short hike to the first hive,** Damon, Bare Honey employee and apiarist apprentice, prepared the smoker while Dustin inspected the boxes. The smoker is used to calm the bees and has been known to do so since ancient times. We wanted to know why.



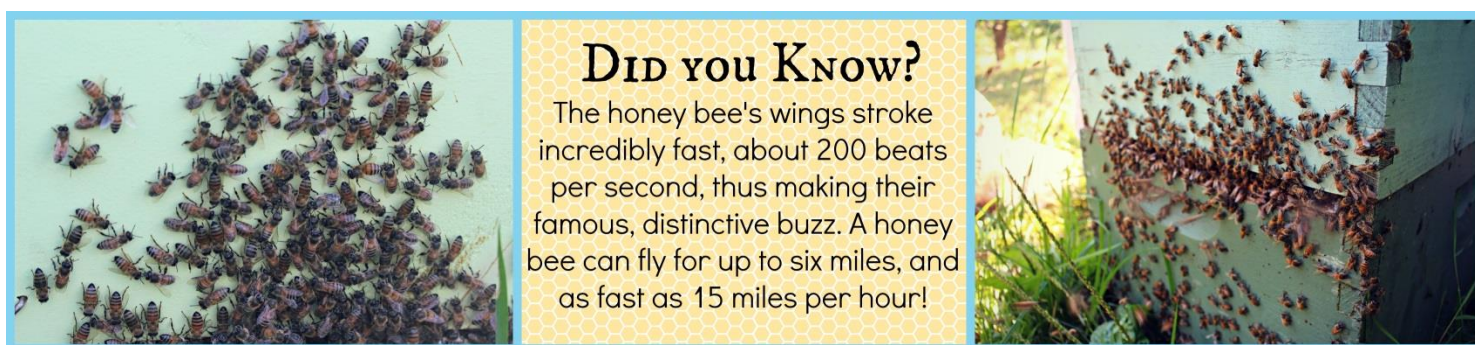
According to Dustin, "Bees communicate through scent. They, especially guard bees, give off pheromones when a beekeeper visits and the smoke masks the alarm signals. The smoke gives us time to work while their defensive response is interrupted." Additionally, the



smell of smoke results in the bees' diverted attention as they feed in anticipation of abandoning their hive in the case of a fire.

To communicate by pheromones, honeybees must have a very strong sense of smell. They have 170 odorant receptors, compared to only 62 in fruit flies. These incredible olfactory skills help bees to recognize members of their colony, communicate socially within the hive, and find food. Their sense of smell is so precise that they are able to tell whether or not a flower carries pollen from dozens of feet away!

Honeybees live in a highly organized society, and their ability to communicate so efficiently is just one example of this organization. Bees typically live in colonies that include a queen, hundreds of drones and 20-80,000 female worker bees. No single bee is able to survive on its own and each bee must carry out its specific roles in order for the hive to be successful. Let's take a look at the roles of the bees in the hive.



## *Roles of a Bee*

### **Queen Bee**

The queen is the only fertile female in the entire community and is the only member able to lay fertilized eggs. She emits a pheromone that keeps other female workers sterile and will alert the bees that she is healthy. The queen mates early in her life and will lay eggs as needed (up to 2,000 a day). She will live 3-5 years, but as she begins faltering in production the hive will start looking for a replacement queen by feeding royal jelly to larva. Those larvae who feed on royal jelly alone will become queens!



### **Drone**

A drone is hatched from an unfertilized egg and does not have a stinger or the proper body type to collect nectar for honey production. They live solely to mate with the queen bee.

### **Worker Bees**

These make up the largest population of the colony and are all females. They are guided by a biological clock that determines their specific job. These jobs include:

- **Cleaners:** Worker bees can become cleaners of brood cells at just 1-2 days old and will be responsible for cleaning and polishing empty cells. These cells will store eggs, nectar or pollen. The queen inspects their work and will make them do it again if it doesn't meet her standards.
- **Undertakers:** As the bees age, their jobs progress from cleaners to undertakers. They are in charge of removing dead bees and disposing of the bodies as far from the hive as possible to avoid health threats.

- **Nurses:** The next role for a worker bee is to incubate and care for the larvae. On average, a nurse bee may check a single larva over a thousand times a day! They also tend to the queen, making sure she is fed royal jelly, and feed the drones a mixture of pollen, honey, and royal jelly.
- **Builders:** Worker bees that are about 12 days old are mature enough to make beeswax and construct honeycomb. Honeybees are efficient and clever! Of all shapes, including squares, circles, triangles or rectangles, honeycombs use the least amount of wax and are the most practical structures for the bees to build.
- **Temperature Controllers:** These bees are responsible for keeping the temperature of the hive ideal for living and working. When the hive is too warm, they will retrieve water to fan on others. They ventilate the hive by fanning their wings and will congregate in a cluster to keep warm when the weather cools.
- **Guards:** This is the final tasks of a worker bee before it is ready to head out to the field. The guards are responsible for checking the returning bees for their familiar scent and allowing only members of the hive to enter.
- **Foragers:** When they are about 14 days old, the bees are old enough to leave the hive at sunrise and search for pollen and nectar from flowers surrounding the hive. They typically make about ten trips a day, each lasting about an hour, and return home at sunset. Bees will die at 6-8 weeks old, usually in the field. During the winter, however, bees hibernate in their hives and live on stored honey until spring.



**As Damon runs the smoker,** Dustin pulls the boxes of honey-filled comb from the tops of the stacks. He moves quickly, rhythmically with the confidence of a seasoned beekeeper that is in tune with the needs of his little livestock. It is easy to tell that he knows the best way to keep them free of stress as the honey is harvested. We take turns carrying the boxes to the waiting trailer where they are stacked inside and will be transferred to Bare Honey's facilities in Maplewood. Somewhat surprisingly, each of these boxes is filled with 30+ pounds of honey, making the repetitive trips to the trailer a poor job for a hobbyist who is not looking to put in a little sweat equity for the sweet reward.





## Why Honey?



Honey had been a very valued sweetener long before sugar became widely available. The production of this sugary staple flourished in Greece and Sicily and animals like bears and badgers have long been raiding hives. In fact, honey is the only insect-created food with therapeutic, medicinal, nutritional and cosmetic value.

Honey is a remarkably versatile and widely used substance. But what is even more remarkable is the way it is made. Sugar, trace enzymes, minerals, vitamins and amino acids create a sweetener unlike any other. Not to mention that it offers many health benefits when used in moderation. But before we get into those benefits, let's take a look at the way honey is made.

As we continued to carry bee boxes to the trailer, Dustin told us the process of honey production. "It is said that it takes one bee its entire life to harvest 1/12 of a tablespoon of honey. That would be the entire life of 250 bees per pound. I am not sure if that's 100% true, but it sure does make us grateful for each jar!"



### DID YOU KNOW?

The average worker bee produces about 1/12th teaspoon of honey in her lifetime.

Once the nectar is gathered from the plants, the bee stores it in an extra stomach where it mixes with enzymes and then passes it to another bee's mouth via regurgitation. This is repeated over and over until the nectar becomes partially digested and is then deposited into a honeycomb.

Here, the bees fan the liquid with their wings to help the water evaporate and create the thick golden substance we know as "honey". The bees then seal the honey comb with another secretion that hardens into beeswax.

This is where Dustin comes in to collect boxes, like we are today. There are more than 300 kinds of honey in the U.S., each with a unique color and flavor that is dependent on the source of the nectar. When it comes to flavor, Dustin put it best. "The word "honey" could be compared to the word "fruit." That is, just like

all fruits have a different color and flavor, the flowers that produce those fruits also have unique flavored nectar." Light-colored honey tends to be milder in flavor while darker-colored honey, like Bare Honey's raw wildflower honey that we are collecting today, tends to be more robust in flavor.



Dustin went on to share how important buying local is when it comes to quality honey with rich flavor. "Most large national honey packers use a blend of honeys from around the globe to create a standard "honey" flavor

in their product. When you buy from a local beekeeper, your honey is most often harvested from a specific hive site. Thus, your honey only contains the nectars and pollens from the flowers around the apiary. Honey bees naturally visit a variety of flowers, so your honey will always have a mix of nectars. However, in most areas there are flowers which have a stronger flavor than most. This is how you end up with honeys that have unique and delicious flavor profiles.”

**Once the honey is collected** and the boxes are loaded into the trailer, we head back to the entrance of the orchard. The honey will now make the trip to Maplewood where it is kept in a sort of “sauna” in order to make the honey more easily run from the combs. The combs will then be placed in an extractor where the honey will be spun out of the combs and into large barrels. Dustin and Grace will finish the production by infusing natural flavors into some of the raw, local honey and then jar it for consumers like us!



### *Honey Health Benefits*

Honey is the only food that includes all the substances required to sustain life, including enzymes, vitamins, minerals, and water. It’s also the only food that contains “pinocembrin,” an antioxidant that has been associated with improved brain functioning!

Honey contains a slew of health benefits, leading to its common nickname, “liquid gold.” It’s been known to contain various health benefits and nutritional and medicinal value for centuries. More than just a common kitchen staple, it is loaded with antibacterial and antifungal properties. Honey has even been found buried with the pharaohs in Egyptian tombs!

Raw honey is the unpasteurized version of commonly used honey and differs in its filtration, which helps extend shelf life. A tablespoon of honey contains 64 calories, is fat-free, cholesterol-free, and sodium-free according to the [National Honey Board](#).

Honey should not be consumed by infants under 12 months of age, as the very natural state of honey is best eaten by those with a mature digestive system. Consuming honey after this age can offer many benefits!

Honey is known to have anti-inflammatory effects and the ability to soothe coughs. Coughs are soothed by the product's thick consistency. Honey makes a great all-natural cure! Additionally, consumption of honey may reduce seasonal allergy symptoms. It is also an excellent source of all-natural energy, at just 17 grams of carbohydrates per tablespoon. The natural, unprocessed sugar is a great source of a quick boost of energy and is used by athletes before and during workouts for fuel.

Honey is also loaded with the antioxidants that help prevent cellular damage and loss within the brain. Increasing your honey intake may be a great step in maintaining and boosting short-term memory!



For sleepless nights, honey may be the solution! Similar to sugar, honey can cause a rise in insulin and result in a release of serotonin. This results in improved mood and happiness. Honey also contains amino acids, including tryptophan. When tryptophan enters the brain it is turned into melatonin, a sleep aid. Grandma's clever trick of warm milk and honey? It really works!

Honey is a natural antibiotic as well and can act both internally and externally. It can be used to treat minor wounds and burns by disinfecting them from major species of bacteria. Honey has been used for these purposes for over 2,000 years! Time has certainly done its part to prove honey's worth and make it a staple in our lives.

What's more? Kept away from moisture, honey is the only food that does not spoil while in an edible state! Delicious, healthy *and* it lasts forever? Yes, please!

### *Where to Purchase*

Using their raw wildflower honey as a base, Dustin and Grace have turned their attention to creating pure, natural and unique honey and honey infusions. From Lavender Blossom and Vanilla Bean to Creamed Cinnamon or a Bee Pollen Fortified Honey, Bare Honey has it. They have even developed a product with chili peppers – perfect for grilling and marinating! Today, the company offers their seven standard honey varieties on farms, in restaurants and groceries throughout the state, and you can find honey sticks and limited varieties at the Midtown Farmers Market and the Minneapolis Farmers Market Annex on the weekends. Keep your eyes peeled for their tagline, “Bringing Honey Beyond the Drizzle” as you search for their products this fall!

But, as we said before, with over 300 kinds of honey in the United States, the possibilities are seemingly endless. Honey is not a difficult product to find, however for the best taste and the greatest benefits you are going to want to invest in fresh, local honey. That's where Minnesota Grown comes in! The online Directory lists [72 producers of local honey](#), and many can be found at farmers markets and at retail stands. Whether you are looking for a rare, single-sourced and savory buckwheat, or a light clover honey, Minnesota Grown members can meet your needs!

**Our final question for Dustin was simple.** What is your favorite part about raising bees? “Working with any livestock is special. I grew up on a cattle ranch, so keeping livestock is in



my bones. My grandfather always taught me that if you keep your animals with love, the products that they produce will treat you with that same love. So, I guess my favorite part of beekeeping is the relationship that you develop with your animals, the one of a steward,” shared Dustin. He knows that caring for other living creatures is a big responsibility, but when it comes to choosing bees over cattle, Dustin does it for the mystery.

“I really enjoy the complexity of the hive. That is, as beekeepers we don't view a single bee as the "animal." Rather, we view the hive as the animal, and each individual bee like a "cell" in our human body. Each bee performs a unique function inside the hive to maintain the colonies health and virility. The complex workings of the hive will never cease to fascinate me. Every year "science" seems to discover more and more about the complex workings of the bee hive. However, it's the unknown, the mystery of what will be discovered next that truly keeps me going.”

Beekeeping then, even for the Vanasses, must carry some romance. You know what? We like the mystery too.



As always, look for the Minnesota Grown logo when purchasing honey to guarantee your product high quality and Fresh From Your Neighbor!  
**Find your producer at [www.MinnesotaGrown.com](http://www.MinnesotaGrown.com)!**



A special “Thank You!” to Minnesota Grown members, Dustin and Grace Vanasse of [Bare Honey, LLC](#).

Additional Sources: [National Honey Board](#), [Mercola.com](#), [Bare Honey](#), [Benefits of Honey](#)