

Here come the bees.

Welcome to SBH Bronx Health Talk produced by SBH Health System and broadcast, albeit remotely, from the beautiful studios at St. Barnabas Hospital in the Bronx. I'm Steven Clark.

Right now there are four colonies of bees, each colony housing about 60,000 bees – that's a quarter of a million bees – living harmoniously on the rooftop farm of the SBH Health and Wellness Center, which officially opens in the fall.

This

rooftop farm also produces vegetables that are being harvested by Project Eats which runs a number of urban farms throughout the city. The center which is across the street from St Barnabas Hospital will also include a medical fitness center, a teaching kitchen, an urgent care center and various clinical offices.

Today, however, we're going to talk about bees and with me today is Eric Hanan from Bee Haven Bees, and the beekeeper in chief at the rooftop farm. Welcome Eric. So let's start out by telling us a little bit about the bees that are now calling the rooftop farm home.

*Well these are Italian honeybees and we installed them in the spring. We installed nucleus colonies where you have a queen, lots of the queen's worker bees, the female bees, and a bunch of drones, the male bees, all in a four or five frame package that we install into the regular size larger boxes that are located on the roof. We feed them a little bit of sugar water to get them off to a strong start in the event that there may be some foul weather. Once they're placed up there they've got plenty of food to eat and once the queen realizes that she's got plenty of food and resources she'll start laying eggs like crazy to the tune of about 2,500 eggs a day and those eggs turn into full-size worker bees about 21 days later and they start their life about three weeks inside the colony working at different tasks and the second three weeks of their life for a total of about six weeks is spent running two miles in every direction to gather nectar and pollen and produce honey.*

You know Eric, I find your background very interesting. You were a TV producer for many years. What drew you into the life of bees?

*Well, working in television as a news magazine producer I was constantly exposed to different fields of work and professions and got some great access to different livelihoods. I always kind of had a tug though to be a gentleman farmer I guess or being outdoors more than in the office writing and editing and while I enjoyed a 20-year stint at various networks learning a lot and getting a lot of fulfillment out of that profession, I answered the tug after meeting a fellow beekeeper at a sheep shearing festival out in western New Jersey. He had an observation beehive where you can see the honey bee behind glass and I was hooked. We became friends I took a class on beekeeping with the state and learned some basics and with his help I was an apprentice and we formed this business so I went from a hobby of keeping a honeybee colony in my backyard to now 80 plus honeybees all across the tri-state area.*

What do you find especially remarkable about the microsystem of bees and how they work together?

*Well they have something called a youth social existence where they operate in complete harmony to take care of whatever needs to be done inside that beehive. It's all for one, one for all. Depending on the season they will heat up the hive and keep the queen at about 93 degrees in the coldest days of winter by eating honey and changing those sugars into energy and heat. In the hot summer days like today they will spend time cooling the hive by fanning from the entrance uh you'll see the bees fanning air in five and other bees that we can't see that are inside the hive will be fanning from the opposite direction and blowing air out if wax needs to be made for cells. They concentrate on that if an intruder attempts to get into the hive like another bee that doesn't belong or a rodent or i don't know some type of raccoon they will defend the hive together. every decision is made collectively and it's kind of a beautiful thing to watch.*

Yeah I guess we don't have to worry about raccoons coming to the rooftop Farm. I know a few weeks ago you came up to the rooftop farm and you collected 150 pounds of honey. How does that 150 pounds of honey that you removed from the rooftop farm end up becoming 400 jars of the honey that now is in the process of being sold?

*Well we harvest what we deem as a surplus supply of honey that the bees have Produced. They do such a good job at making honey that they end up bringing back more nectar and honey than they could possibly ever eat over the winter, but if we leave enough for them to survive the winter we're able to take that surplus honey off and in this case the bees did very very well in a short amount of time and we pulled a box of those four box hives from each one of the four colonies and I can bring them back to my honey house. We take those frames of honey out of the boxes. We use a multi-tined fork to carefully remove the caps on each one of those wax cells to expose the honey. Those frames end up going into a centrifuge which is an extractor and the centrifuge spins the honey goes flying out of the cells and onto the sides of the centrifuge down into the bottom and we simply put it through a sieve and into the jar.*

Right now this was the summer harvest right?

*Yes, we're calling it that.*

When is the next harvest?

*Well if the bees continue on their current trajectory I anticipate getting a surplus honey flow in the fall and that honey is typically a completely different product because of the different flowers that are available. It's a darker, typically darker color almost like a Coca-Cola color whereas the spring honey that we just pulled was light and it will have a different taste and smell and viscosity. Certainly the color is completely different so by the end of September or so we'll take a look up there and if we can if we can get some surplus honey without removing too much for the needs of the bees which come first we'll do that second harvest. Since this is the first time we've had them up there it's kind of a crap shoot as to whether or not that's going to work but we'll find out soon enough.*

In the future is there also a spring harvest?

*Well typically the spring harvest is pretty much guaranteed unless the health of*

*the hives fall into a poor state but the spring honey flow in our northeast area is typically pretty strong. There's lots of flowers, lots of nectar producing sources from trees and plants and shrubs and weeds. The fall is a little less usual but sometimes again because we did so well in the spring. I think maybe there's not a lot of competition and our honeybees over at St Barnabas have free rein. The spring harvest is pretty much a guarantee the fall harvest is a little less likely sometimes.*

What does the science tell us about the benefits of honey in general?

*Oh, my gosh, it's great for you. It helps rejuvenate your health basically. Local honey is good to help eliminate seasonal allergies because you're getting all those pollens in liquid form that help inoculate you against the airborne pollens, but there are tons and tons of often times anecdotal research about health benefits both topically for wounds and burns but also internally for different cancers, soreness on your throat, it's antibacterial. There's another product in the hive that you don't get a lot of press on but it's called propolis and it's a gluten sticky substance and they use that material to seal holes or gaps in their beehive particularly during the winter to eliminate any wind and draft and that propolis is being used in pharmaceutical and medical situations where for example Johnson and Johnson will harvest a pharmaceutical grade propolis and use it to coat the ribs of open heart surgery patients.*

Yeah so it fits in very well with the mission of the health and wellness center which is really to transform the health of the Bronx. Perennially the Bronx finishes in 62<sup>nd</sup> and last place in New York State when it comes to health outcomes so this is really part of the solution that we're offering here.

*It's such a healthy local product there's no adding or subtracting to it, you're simply pulling it off the beehive and getting it into the jar similar to tapping a maple tree you don't add or subtract from that maple syrup, well in that case you boil it down but with the honey you simply extract it at room temperature. It takes its time getting through the sieve and into the jar. Well now there's also a benefit in just having a lot of bees around for the neighborhood. Everybody's gardens*

*should do better if they're fruit or vegetable producing gardens those vegetables will both be a larger better shape and more plentiful. The bees are responsible according to the United States Department of Agriculture for one out of every three bites of food that we eat. So without the honeybees California, for example, there would be no almond harvest, the almonds groves are completely dependent on honeybees and in the Bronx all the trees uh apples and whatever are around are benefiting from those honeybee pollination services and they're going two plus miles in every direction of that rooftop so they're covering almost 10 000 acres of property from the center of the roof.*

Are there turf wars among bees? I mean you're bringing these New Jersey bees to live here with Bronx bees. Is there any concern?

*I've heard a little bit about honeybees competing for the same resources as local bees but those are native bees to whatever area they're in and I don't know a lot about it, but given the success that we've had so quickly and early this spring I think that there's plenty of resources for any bees whether they're native uh local bees or honeybees so we're in good shape there.*

Is there any reason that people who are you know who live within proximity of the rooftop farm have to worry about being stung because they're more bees in the area?

*I found that bees are extremely hesitant and docile when it comes to stinging Anybody, particularly when they're not protecting their beehive. So if a bee is out foraging for nectar or pollen on a flower and a person comes along, he will Leave well before the person gets close to it. If, however, a person with bare feet happens to step on a honey bee on a dandelion or a clover by accident the bee thinks that it's life is being threatened and its last course of action is to sting and it really is a last course of action because once that honeybee stings it loses its own life and they seem very conscious of that fact so unless they're defending the beehive and unless they are sending out a pheromone that says we have an intruder and we need to protect the queen and protect our resources those things are very very reticent to sting.*

So it's a suicide mission.

*Basically it is.*

Have you worked with other medical centers or hospitals before, bringing bees to some facility like this?

*Yes, probably half a dozen different hospitals. I currently have Hackensack umc, also part of that Hackensack group is a hospital very close to my home in Essex County Mountainside Hospital in Montclair, we're in Englewood Hospital, we're also in Valley Hospital both in Paramus and Ridgewood, got honeybees on a lot of rooftop properties at hospitals where some of the hospitals in Jersey at least have signed a healthy food pledge that includes a sustainable local healthy source and in this case the honeybees are sustainable local on the roof and they provide this healthy food source so there's interest and money to promote this type of program.*

Is there any concern about these killer hornets out there? I'm sure you've read about them.

*I did just on Sunday CBS Morning News did a show on those killer hornets and apparently there have been like five sightings out in Washington state and they've got the attention of entomologists and some of the other local folks out there and they are taking steps to identify them and get them out of there before they cause too much damage so far they've seen five or six of these and they're all the way in Washington state. They seem like some nasty two inch long hornets that really do some damage yeah it's a little scary I guess huh the murder hornets yeah they've got some name.*

Right well Eric I want to thank you for joining us today on SBH Bronx Health Talk. This was really interesting. Thank you. For more Information on the bees or on services available at SBH Health System visit [www.sbhny.org](http://www.sbhny.org) and thank you for joining us today.