



The Hidden Dangers of Imported Beeswax



Introduction

It's an exciting time for beeswax wholesalers as the market for its use in cosmetics, natural candles, pharmaceuticals, foods, and other uses is rapidly expanding. In the U.S. alone, demand for wholesale beeswax has doubled since 2012. Honeybee colonies in the U.S. are working to satisfy demand, with producers in Texas helping to lead the charge.

But it's not enough.

Demand and price competition combined means many business owners in search of wholesale beeswax are finding it overseas. China, South America, and Africa are major exporters. In fact, China led the global beeswax market in 2014 by exporting 11,000 tons, much of it to the U.S.

Beeswax is already more expensive than synthetic waxes like paraffin, so finding a "deal" when it comes to wholesale beeswax is understandably hard to pass up. However, there's more than meets the eye when it comes to beeswax prices, especially when it comes to imported beeswax.





The Beeswax Industry's Dirty Little Secret

The beeswax industry remains vastly unregulated, which means that even U.S. producers can (and do) make unsubstantiated claims about their products without repercussions. This has led to revolting practices, with some countries completely misrepresenting their standards entirely. Some of the worst practices include:

1. "Cutting" pure beeswax with additives like paraffin to dramatically reduce the production cost of the product.
2. Insufficient or inconsistent cleaning and filtration of the beeswax, which means the contaminants that are said to be removed aren't.
3. Using pesticides and contaminants banned in the U.S. but still present in the exporting country.
4. "Farming" bees by exclusively feeding them sugar water instead of allowing the bees to forage naturally, which can reduce beeswax quality (not to mention the health of the bees).
5. "Organic" beeswax that isn't organic at all. Some countries allow producers to label certain products like beeswax as being organic when, in fact, it may be more contaminated than a typical non-organic sample from the U.S.

On the last point, The Washington Post reports that, under USDA rules, a company importing an organic product must verify that it has come from a supplier that has a "USDA Organic" certificate, but the product does not need to be traced back to the farm. In 2017, The Post exposed how the practice goes awry: A shipment of 36 million pounds of soybeans originating in the Ukraine and then shipped through Turkey was fraudulently labeled organic and most was distributed to mills and farms months before a problem was suspected.

"Even when the USDA has responded to complaints of questionable imports, action has come too late to prevent the products from reaching consumers," The Post reports.



Other Risks of International Suppliers

We know that sourcing is difficult to check when your supplier is across the globe, but what are the other risks of buying internationally? For starters, environmental conditions will impact the quality of your beeswax. A study by Yale University revealed that air pollution—specifically high CO₂ levels—decreases the nutritional value of pollen. Water pollution poses another big threat to bee health. Pesticides that wash away from farms end up contaminating the water that bees drink. To produce one kilogram of beeswax, bees must consume 8 kilograms of honey. Suffering in poor environmental conditions makes it much harder for bees to keep up high beeswax production.

Then there's the lack of global standards in pesticide regulation. Many other countries allow pesticides that are banned in the U.S. China and Brazil are among these countries, and they also happen to be two of the leading exporters of beeswax to the U.S.

China

China is both the largest producer and consumer of pesticides in the world. Consumption in China alone accounted for 1/3 of the world's pesticide usage in 2017. The impact of this can be seen in declining bee health.

In fact, there are areas of China that no longer have bees. So how, despite the declining bee population, has China's production of bee products continued to rise? Research has found that rising demands are being met through controversial beekeeping practices. Some Chinese farmers are forced to hand pollinate their crops. One common method is feeding the honeybees sugar water instead of letting them naturally pollinate. Another controversial practice includes harvesting immature honey. In the U.S., beekeepers generally do not harvest their honey until its moisture level is 18.6% or less (the legal definition of honey). In comparison, the US International Trade Commission found that some Chinese beekeepers speed up production by harvesting honey that is at 30-40% moisture. To get the honey to the required moisture level of 18.6%, Chinese beekeepers have been known to use processors to vacuum the excess moisture. The process leaves a bitter taste in the honey. Contaminated honey has entered the U.S. from China in the past as well. In 2011, Time reported that there was a risk of lead being present in Chinese-imported honey due to Chinese manufacturers storing their honey in lead-soldered containers.

Brazil

Brazil authorizes the use of many pesticides that are banned in the U.S. As a major agricultural producer, Brazil's pesticide use is pervasive. This means that their bees often have widespread exposure to pesticides, and those pesticides have the potential to end up in beeswax. According to Reuters, Brazil's pesticide use has caused physical harm to residents. Usage of a pesticide at an elementary school left 30 students and staff hospitalized. On top of loose regulations, violations are common. A study of pesticide residue in food across Brazil revealed that 29% of the 1,665 samples tested contained pesticides that failed Brazilian standards. Some samples contained pesticides that were banned. Paraquat, a pesticide that has been banned by the European Union and restricted by the U.S., is widely used in Brazil. Paraquat is considered "highly poisonous" and is linked to kidney, liver and heart failure.





How to Be a Wise Consumer

To ensure the beeswax you purchase is the actual quality you assume it is, you need to retrace its journey right to the hive. Beeswax suppliers should be able to tell you exactly where their raw beeswax is coming from. They should be able to describe the process the beeswax goes through to be cleaned and filtered, especially if they claim that it's pure, food grade, or organic.

Ask these questions of your beeswax supplier to help uncover its true purity:

1. Do you use any imported beeswax in your products? If so, how can I be assured that the purity of the beeswax is what you say it is?
2. How do you source your beekeepers? Do you know what their standards are when it comes to ensuring their beekeeping practices are reputable?
3. Is your beeswax "cut" with additives like paraffin?
4. How is the beeswax filtered and processed?
5. Can I try a sample of your beeswax before I make a decision?

If your beeswax supplier struggles to answer any of these questions, use caution in proceeding.



Looking For Samples

If your beeswax supplier does provide a sample, look for:



Color and Scent: If you're purchasing yellow beeswax with the natural color and honey smell preserved, be sure it looks and smells like you would expect. Pure beeswax should have a faint honey scent. If you're savvy enough, you should be able to also smell traces of what the bees have been pollinating—prairie grasses, wildflowers, etc. Avoid anything that smells like chemicals or plastic, which could mean the beeswax is low quality or was cut with another substance like paraffin. One easy test to remember: Crayon smell = paraffin.



Feel: Other telltale signs beeswax has been "cut" with additives like paraffin are excessive waxiness and flakiness. We received a sample of "pure beeswax" from a company in China once that felt just like paraffin. It practically fell apart in our hands and there was little to no honey scent present.



Texture: Because of its natural oils, beeswax will have different textures. Break your beeswax and look at how it crumbles. If the break is smooth, it has likely been "cut."



Bloom: Leave your beeswax for about a week or two and check for something called bloom. Pure beeswax is full of natural oils that will rise to the surface, creating a film or bloom on your beeswax. Bloom can be wiped away with a cloth, but it should reappear again after another week or so. Bloom appears much slower when beeswax has been cut.



Vet Local
Beekeepers



Filter and Clean



Clarity Test

Our Beeswax

At The Beeswax Co., we carefully vet local Texas beekeepers so that we know exactly where our beeswax originates. We go directly to their workspaces, so that we can inspect for cleanliness and good beekeeping practices. To obtain cleaner wax, we only buy capping wax, which is the freshest wax in the comb. The younger the wax is, the less time contaminants have to accumulate. After the wax arrives at our shop, we melt it down and clean it. Our wax goes through multiple filtration cycles until it is thoroughly cleaned to food-grade quality. We confirm our beeswax's cleanliness by checking for clarity and viscosity. We perform final quality tests with the first samples of each batch. Our process has been refined over many years, and we are happy to share with you what we've learned.



We're Happy to Help

We want you to get your hands on the highest quality beeswax possible and insisting on using domestic beeswax is a great start. It's simply easier to trace the beeswax to its origins that way. Domestic beeswax suppliers who don't import or "cut" their beeswax, however, are at a disadvantage when it comes to cost comparison. It's up to you to weigh quality standards versus price when it comes to the beeswax you purchase.

Have questions? Want a sample? Just ask!

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Resources

Scientific American's article "Organic Honey is a Sweet Illusion"

Washington Post's article "The labels said 'organic.' But these massive imports of corn and soybeans weren't."

Yale University's article "How Rising CO2 Levels May Contribute to Die-Off of Bees"

Bumblebee.org's explanation of bumble bee behavior

USDA's blog post "Pesticide Residue Detection in National Science Lab Beeswax"

USDA's site for Honey Bee Surveys and Reports

Garner's "Global Beeswax Market Analysis 2012-2017 and Forecast 2018-2023"

A study by Medici SK, Castro A, Sarlo EG, Marioli JM and Eguaras MJ on "The concentration effect of selected acaricides present in beeswax foundation on the survival of *Apis mellifera* colonies." J Apic Res 51:164-168 (2012)

A study by US International Trade Commission on Honey From China Epoch Time's article "After Bee Die-Off, Chinese Apple Farmers Resort to Hand Pollination"

Time's article "Tainted Chinese Honey May Be on U.S. Store Shelves"

Reuters' article "Why Brazil has a big appetite for risky pesticides"

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