

## Are There Pesticides In My Tea?

By Alicia Armeli

Curling up on the couch with your favorite book. Listening to the rain patter on the roof. Waking up in the morning to sunshine peeking through your window. What do all these things have in common? They are rituals made even more pleasant with a hot cup of tea. Legend says tea originated in China thousands of years ago, discovered by Shennong, the ancient Chinese Father of Agriculture.<sup>1</sup> Since then, the soothing ritual of drinking tea has spread all over the globe.

Tea, especially green tea, is said to have numerous health benefits. Containing inherently high levels of antioxidants called catechin polyphenols, green tea is known to have anti-cancer and antibiotic properties.<sup>2</sup> With preventative health benefits such as these, it would seem drinking tea would be a no-brainer. But with recent reports showing many teas containing pesticides, could this once calming ritual now give cause for concern?

### **Pesticides Found In Green Tea**

When we talk about the benefits of eating pesticide-free foods, it's usually produce that comes to mind. However, recent studies have shown that consumer diligence is a must, even when it comes to tea.

Because green tea is vulnerable to various pest problems, it's common for farmers to use many different pesticides.<sup>3</sup> A study published in *Food Chemistry* tested green tea for the presence of eight different pesticides: cyhalothrin, flufenoxuron, fenitrothion, EPN, bifenthrin, difenoconazole, triflumizole, and azoxystrobin. To no surprise, each of the pesticides was found in the tea. Interestingly, the authors of the study also found the transfer of some of the pesticides, like difenoconazole, to increase from tealeaves to brew the longer it steeped.<sup>3</sup> Since tea must be infused before consumed, this poses a problem. According to PAN Pesticide Database, difenoconazole is listed as a "possible carcinogen" and a "suspected endocrine disruptor."<sup>4</sup>

Although cyhalothrin was not seen to infuse into the tea brew<sup>3</sup>, there's still cause for concern. Reports show it to be an "undetermined carcinogen."<sup>5</sup> This poses a threat to farm workers who cultivate the tea before it reaches your cup. Inhaling cyhalothrin can cause convulsions, labored breathing, and shortness of breath while contact with the skin and eyes can have caustic effects. Farm workers handling crops treated with cyhalothrin have reported facial tingling and burning—sometimes lasting for days.<sup>5</sup> Cyhalothrin is also highly toxic to bees and fish. Studies show that it may even accumulate in the flesh of the fish<sup>5</sup>, thus having the possibility of ending up back on your dinner plate.

### **Going Organic**

Increasing awareness surrounding pesticides found in tea provides one more reason to go organic. But what does organic mean? Many believe organic means pesticide-free. However, pay attention to the following statement provided by the USDA:

*"Organic food is produced without using most conventional pesticides; fertilizers made with synthetic ingredients or sewage sludge; bioengineering; or ionizing radiation."*<sup>6</sup>

Reading that statement over, I couldn't help but notice the word "most." Organic foods are produced without the use of **most** conventional pesticides, which means the use of pesticides is still permitted. What's more, even if the pesticides applied are considered "natural," this isn't an automatic green light to safety. According to Oregon State University Extension, "Least toxic pesticides that are labeled as natural or organic are not necessarily harmless to humans or the environment."<sup>7</sup>

### Next Steps

When choosing tea or anything you consume, organic is the better choice. But when it comes to the source of your food, knowledge is power. Look locally and talk to farmers directly about their farming practices and your concerns as a consumer.

Discuss topics such as sustainable crop production, which uses little to no pesticides and works naturally with the land. According to the GRACE Communications Foundation, "Sustainable crop production is in contrast to industrial crop production, which generally relies upon monocropping, intensive application of commercial fertilizers, heavy use of pesticides, and other inputs that are damaging to the environment, to communities, and to farm workers."<sup>8</sup> Don't be afraid to ask questions. Farmers markets are great places to become familiar with local growing practices.

Start researching tea manufacturers who show dedication to the purity of their products and responsibility for details like eco-friendly packaging. These companies will make their standards public and well known. Seek out businesses who are members of organic trade associations and who care for the people who cultivate their product.

The only way to completely be sure your tea is pesticide-free is to grow it yourself. With a little patience, a tea garden could be yours—even indoors. Go online and search your local libraries and bookstores for resources to help you get started—because at the end of the day, it's a (pesticide-free) cup of tea that makes everything better.

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